Multinational Business Review

Entrepreneurship and innovation in China: a global perspective

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We wish to extend our deep gratitude to Mr Chang Soo Huh, Chairman of GS Holdings Corporation, Korea, for his dedicated support of and commitment to the Boeing Institute of International Business as well as Multinational Business Review.

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Multinational Business Review
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EBSCO Discovery Service
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A global perspective of entrepreneurship and innovation in China

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Abstract

Purpose – This paper aims to study largely recent aspects of entrepreneurship and innovation in China. It synthesizes the research in the current special issue (SI) of Multinational Business Review (MBR) on this topic. In addition, this paper differs from other work on this topic in examining entrepreneurship and innovation from a more global standpoint with relevant international effects.

Design/methodology/approach – The paper provides an overview of the literature on entrepreneurship, innovation and key related topics such as firm and economic growth, as well as linking this research to related international works. It also summarizes the papers of the SI.

Findings – The authors’ analysis suggests that the study of entrepreneurship and innovation should be placed in the context of a country’s economic development and institutional environment as well as the firm internationalization trajectories and business models. In addition, the authors believe that a good understanding of economic growth in a transition economy like China (which is a key goal of China’s recent emphasis on innovation) is facilitated by understanding the comparative advantages and disadvantages of an economy with respect to the global innovation system.

Originality/value – The authors’ study explores the local-global and parent-subsidiary connectivity and co-evolution of firm strategies and the institutional environment in entrepreneurship and innovation in emerging and transition economies. The authors summarize and synthesize the papers in this SI to provide the results as well as some directions for future research in the domain of entrepreneurship, innovation and new venture creation, which is believed to be a key engine of economic growth in the coming years.

Keywords China, Innovation, Entrepreneurship, Emerging economies, Economic growth

Paper type Research paper

Introduction

Companies that want a glimpse of the future of mobile commerce should look not just to Silicon Valley but also to the other side of the Pacific [in China]. The Economist (2016).
Since its reform and opening up some four decades ago, China has largely been viewed as a country primarily of imitation (Lewin et al., 2016; Wang et al., 2008). It is widely granted that China as a transition economy, in comparison to more developed economies, lacks many of the proper legal and socio-cultural institutions that are thought to be conducive to entrepreneurship and Schumpeterian innovation (Abrami et al., 2014; McCraw, 2007). Yet, concerns about China’s ability to invent and see new innovations all the way through to the market go back to the Needham Puzzle of historian Joseph Needham (Augier et al., 2016). That is to say, the paradox that China fell behind Western Europe in technological innovation at the dawn of industrial revolution despite the former’s human capital and a record of pioneering inventions such as the compass, gunpowder, the bellows, paper and printing. The most frequently mentioned explanations for the Needham Puzzle include weak internal markets as well as a lack of property rights that would have incentivized entrepreneurs and protected innovations from appropriation (Landes, 1998, 2006). This coupled with the long Chinese history of totalitarian control and a centralization of power came to hurt the freedom, ingenuity and new venture creation that embody technological and economic development (Ahlstrom, 2010, 2014; Balazs, 1966). Others have added that the inherent conservatism of Confucianism embodied in the doctrine of the mean (中庸之道) may act as a cultural disincentive for deviations from tradition and innovation (McCloskey, 2010; Zhou, 2011). This also manifests in tight controls in the workplace, which hinder innovation (Hamel, 2007; Wang et al., 2008), though this problem may be less pronounced in small businesses in China (Ahlstrom and Wang, 2010). In addition, ancient China’s reliance on analogical inference rather than deductive and adductive logic may inhibit the development of theoretical and experimental sciences (Sun, 2009), and it is thus also thought to impact economic development, particularly as these sciences have become increasingly important to innovation and new product development (Mokyr, 2016).

Perhaps not ironically, some of the above rationale that explains ancient China’s failure in entrepreneurship and innovation have been echoed recently by scholars who hold less than an optimistic view of modern China’s future of becoming a country of innovation (Lewin et al., 2016). This view agrees with the past literature about Chinese culture’s emphasis on power distance and harmony, often at the expense of discussion, trial and error experimentation and creativity (Cheng, 1999; Wei et al., 2015; Zhang and Zhong, 2016), though others have challenged the strict cultural explanations and look toward different institutions that encourage (or inhibit) innovation (Ahlstrom and Wang, 2010; McCloskey, 2010). For instance, the recent tendency toward increased centralization of power in China is viewed by some as problematic with respect to innovation given the level of complexity in interaction required in a more innovative society. Innovation and new venture creation typically require a decentralization of decision-making, wide access to financing, flexible organizational controls (Chiu et al., 2016; Hamel, 2007; Redding, 2016; McCloskey, 2010) and the key social validation of innovative actions (McCloskey, 2016; Wang et al., 2008; Wei, et al., 2015). Such a decentralization of power and more flexible organization controls may be paramount to a country with vast regional differences in innovation capacity and seeking to develop funding models that encourage and incentivize indigenous innovation (Zhou et al., 2016). This likewise acknowledges the importance of different regions and their (differing) impact on firms and their performance (Rugman and Oh, 2010).

Abrami et al. (2014) add that innovation in China differs somewhat from the West in that it emphasizes a top-down, more centralized approach. They consequently wonder if China
can turn itself into a global innovation leader, given the current institutions and common commercial practices. Finally, the weak Chinese intellectual property regime and the even weaker subsequent enforcement remain to be a major obstacle to domestic investment in research and development (R&D) and particularly those that require long-term significant investment (Lewin et al., 2016).

Despite the obstacles, however, entrepreneurship and innovation are viewed as a key for China’s future growth (Ahlstrom, 2010; Woetzel et al., 2015), particularly when the two traditional economic engines – low-cost labor and heavy capital investment – are perhaps not as effective growth drivers as they once were (Liu et al., 2017). According to McKinsey, China needs to generate a 2 to 3 per cent increase in annual gross domestic product (GDP) directly from innovation and new ventures to maintain a 5.5 to 6.5 per cent increase in annual GDP for the next decade (Woetzel et al., 2015). This helps to explain China’s recent initiative of promoting “Mass Entrepreneurship and Innovation by All” (大众创业万众创新) as the national strategy for economic restructuring and improving or resolving the tension between traditional commercial and government practices and the urgent need to encourage innovation and new venture creation in China.

As such, this special issue (SI) of Multinational Business Review (MBR) sought to address this key issue by presenting a call for papers in 2017 on a global perspective of entrepreneurship and innovation in China as part of the University of San Francisco China Business Studies Initiative’s 2nd International Conference on “China Innovation and Global Integration” May 17-19, 2017 in Langfang, China. Rather than focusing strictly on indigenous innovation or purely local initiatives, this SI encouraged papers with a more international and global perspective on encouraging and bringing more innovation to China. The MBR SI invited submissions that investigated ongoing innovation and entrepreneurship trends in China and in particular examined the tension between China’s traditional commercial and governance culture and the innovation imperative. We received a number of submissions, many focusing on more cross-border factors and the facilitation of innovation. Submissions addressed a range of areas and particularly highlighted the notion that innovation and new ventures are not confined to local laboratories or indigenous technology (Liu et al., 2017). Innovation and technology cross borders and are developed in alliances as much as in labs (Ahlstrom et al., 2014; Landes, 1998; Woetzel et al., 2015). The roles played by the government policies at national, provincial and local levels were addressed, as were ways in which Chinese entrepreneurial ecosystems connect with and contribute to the existing global entrepreneurial ecosystem and submissions examined conceptually distinct archetypes of innovation in China. Additional background research and the papers of the SI are summarized in the following sections.

Overview of research and special issue articles
China’s recent initiative of promoting “Mass Entrepreneurship and Innovation by All” is a major national policy by the central government to encourage entrepreneurship and indigenous innovation at different levels of the society. During the National Science, Technology and Innovation Conference convened in 2016, the Chinese Government has promulgated a top-down national strategy on innovation-driven development. Through the Outline of the National Strategy on Innovation-driven Development and the 13th Five-Year Science and Technology Innovation Plan, the Chinese Government has formed a comprehensive strategic blueprint on the future S&T innovation and identified the strategic goal of making China a country driven more by innovation and less by imitation. By recognizing the tension between invention, innovation and traditional Chinese commercial
culture, the government has invested in a variety of projects and grants to university and research institutes.

As a testament to the national strategy, China’s venture capital funds totaled US$338 billion in 2016, the biggest in the world, which is a mix of public and private funds (Shen, 2016). Shenzhen, once a fishing village before China’s economic reforms, is nicknamed by The Economist as “the world capital for hardware entrepreneurs” and a “global hub of innovation in hardware and manufacturing.” The Economist also calls the surrounding area including Hong Kong, Macau and Shenzhen as “Silicon Delta,” implying the emergence of the Shenzhen Bay region as a world center of entrepreneurship and innovation at a magnitude comparable to the Silicon Valley in the USA. The former CEO of Uber, Travis Kalanick, even mused that China may soon surpass Silicon Valley in innovation.

Resolving the tension and encouraging innovation
This progress likely suggests that China may finally be able to overcome, at least partially, the obstacles that have plagued entrepreneurship and innovation in China for centuries (and are arguably still at play) through several approaches (Breznitz and Murphree, 2011). First, while China keeps imitating the West to develop its domestic institutions such as a proper intellectual property rights (IPR) regime, the Chinese entrepreneurs may have created a unique way of addressing problems associated with a formal institutional void (Puffer et al., 2010). It is argued that China is on the way to voluntarily improve its IPR protection as it sees the needs to protect home-made IPR (Cheng and Huang, 2016; Huang, 2017), just as what the US did when the US transformed itself from an IPR violator to an IPR protector in the late nineteenth-century (Peng et al., 2017a, 2017b).

Situated in a transition economy with underdeveloped formal institutions, Chinese entrepreneurs can use informal institutions such as guanxi and develop a balances between informal and formal institutions that better fit the environment (Puffer et al., 2010). For example, social capital is a critical factor for Chinese entrepreneurs to access private equity financing (Batjargal and Liu, 2004), as financing in China is often directed toward state-owned enterprises (Bruton et al., 2015). It is also more effective for the Chinese venture capital investors to rely more on having the proper connections and monitoring the funded firms’ activities as a substitute for regulatory controls, as does in the West, due to China’s nascent legal system and problematic enforcement of judgments (Ahlstrom and Bruton, 2006; Bruton and Ahlstrom, 2003). The co-evolution of the strategies of Chinese entrepreneurs and their institutional environment may result into a unique style of entrepreneurship and innovation with the Chinese characteristics.

Second, unlike China’s historical intellectual isolation due to its own view of the supremacy of the Chinese civilization (Augier et al., 2016), modern China has actively sought foreign knowledge and talents to build up its own innovative capabilities. Ever since China’s reform and economic opening some forty years ago, the Chinese market has attracted enormous amounts of foreign direct investment (FDI) from multinational enterprises (MNEs). Not only are foreign MNEs in China one force of innovation activities in China, it has been determined that FDI knowledge spillovers create significant innovation benefits for the local firms in China as well (Li et al., 2010, 2013; Zhou et al., 2016), as they can learn from the multinational corporations (MNCs) to develop technological innovation more tailor-made for the Chinese customers. At the same time, Chinese Government at different levels have also been strategic at attracting global top-notch scientists, academics and high-tech entrepreneurs (Zhao and Zhu, 2009). One notable example is the “Thousand Talents Program” (千人计划) that was launched in 2008 by the Chinese Government to recruit top
scientists from overseas universities and research institutes to create a world-class research talent pool that can help produce valuable research for the innovation economy in China. A more recent example is the merger of State Administration of Foreign Experts Affairs that is responsible for certifying foreign experts to work in China with Ministry of Science and Technology, to streamline the process for foreign talents to participate in major research projects in China. A Chinese immigration system similar to that of the US may be established in the coming years.

Third, as latecomers to many markets, the newly minted Chinese MNEs aggressively seek to leapfrog the technology innovation frontier by spending heavily in R&D and by actively investing in advanced economies to acquire key strategic assets, resources and leading-edge technologies (Clegg et al., 2016; Fu et al., 2018; Li et al., 2016; Li et al., 2017; Peng et al., 2016). Guided by the “Go Out Policy” (走出去), China’s outbound foreign direct investment exceeded inbound foreign direct investment for the first time in 2014. One key objective of the Chinese MNEs’ international expansion is to acquire critical technologies and know-hows to enhance their innovation capabilities at home (Luo and Tung, 2007). Despite the overall inferiority of these companies in achieving original and frame-breaking innovation (Liou et al., 2016), they can be particularly good at “componovation”, a concept coined by Yadong Luo and colleagues which refers to the ability of combining outside technologies obtained from the global open markets with their own resources to create product innovation with lower cost and/or slightly better features (Luo et al., 2011). For example, Huawei is found to use longer-term joint innovation partnerships with governments, universities and other industry stakeholders to create customized technologies that meet the practical needs and resource constraints of target customers overseas (Hensmans, 2017).

Could it be possible for China to make such progress in transforming itself into a country of innovation despite all the obstacles? To explore answers to this big question, we believe that scholars will need to adopt a global perspective that not only considers China’s comparative advantages and disadvantages in the global innovation system (Binz and Truffer, 2017) but also China’s position in and connections to, the global clusters network (Bathelt and Li, 2014). We believe that an assessment of China’s future growth prospects, particularly with respect to innovation should consider both its further global integration and ongoing trends in the domain of entrepreneurship, innovation and new venture creation. In particular, a global perspective is much needed for a better understanding of China’s innovation and entrepreneurship, particularly in a comparative international context. Is there a unique Chinese model of innovation and entrepreneurship, or are there characteristics observed in China but generally applicable to the other economies? For example, will China’s experience of using patent subsidy programs to create the explosion of Chinese patenting (Li, 2012) be applicable to the other economies? Again, a global perspective of entrepreneurship and innovation in China is needed for answering questions like this, and this motivates the present SI of MBR.

Contributions from the papers in this special issue
Among the submissions we received, the authors of five papers were invited to revise and resubmit. All submissions underwent regular double-blind review process and decisions were made on the fit with theme of the special and quality and potential contribution of the paper. Three of these papers were finally accepted by the review process and are included in this SI and are summarized in Table I.

These three papers address various aspects of the following select questions in our call for submissions. These questions included:

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Innovation strategy with global perspectives; how do Chinese firms use global resources to develop innovation capacity and shift from technology imitation to innovation? What is the dynamic relationship between firm innovation strategy and the institutional environment in China? Do institutions enable or retard firm innovation strategy (Dunbar and Ahlstrom, 1995; Garud et al., 2002)? How do entrepreneurial and innovative Chinese firms create firm specific advantages by leveraging country specific advantages in domestic and host countries?

- Business model innovation in China with global perspectives; how do China’s tech giants and/or startups create successful business model innovation?

- Two-way traffic innovation; what are the roles played by MNEs in China innovation and entrepreneurship? How do knowledge transfer and reverse knowledge transfer function between parent firms and overseas subsidiaries? And how does strategic asset FDI in host countries enable innovation in home countries?

Sun et al. (2018) contribute to the debate on entrepreneurial decision-making and how innovation in business models could help entrepreneurs to weather the uncertainty and fast-changing global environment. Based on extensive research in three Chinese high-tech firms,
Qihoo, Xiaomi and Alibaba, they found that business models in these firms tend to emerge from simple rules that the entrepreneurs and founders learn from their experience. Simple rules guide entrepreneurs to exploit opportunities in the marketplace and help business models evolve through market feedback, especially in internationalization, to form a positive circulation for further business development. This study draws our attention to the fact that in the fast changing and dynamic global business environment, traditional strategic theories such as positioning view and the RBV may become insufficient in explaining strategic behavior of firms, especially innovative and entrepreneurial firms. Simple rules, as Eisenhardt and Sull (2001) noted a number of years ago, may offer a much needed alternative to explain the fluidity and fast pace in entrepreneurs’ decision-making process and rapid innovation in business models. This opens up an avenue to future study on entrepreneurs’ behavior and their business model innovation in complex, turbulent, uncertain global business environment where technology becomes rapidly obsolete.

Qian et al. (2018) study based on a sample size of over four thousand firms explores the relationship between import of strategic resources and government subsidies in Chinese firms and offers an in-depth look at how state ownership and regulatory environment may moderate this relationship. The authors found that the firms with more subsidies from the government are more likely to engage in importing strategic resources. While subsidies were helpful, state ownership of a firm had a fairly strong negative moderating effect on the relationship. The higher the percentage of ownership of a firm controlled by the government, the less likely the firm would acquire strategic resources from abroad. However, the finding on development of regulatory infrastructure is somewhat tenuous and may indicate it is an inhibiting factor on the effect of government subsidies on imports, which indicates profound impact of institutional environment (or lack of it) on firm behavior (Yang et al., 2013).

This study empirically demonstrates the positive effects of institutions on imports of strategic resources, which circles back to China’s national policy of mass entrepreneurship and innovation (大众创业万众创新) and an efficiency perspective of institution-based view of firm strategies. This study has some important policy implications. Given the current trade protectionism movements emerging around the world, the Chinese Government’s support of imports through state subsidies could earn credits among its trading partners and encourage other countries to keep their doors more open. The findings in this study could stimulate research on technology imports and global competitiveness in the high-tech sector as well as the influence of institutions on growth of the high-tech innovation sector by means of importing technology.

Building on previous studies on the relationship between subsidiaries and parent firms, Tattara (2018) specifically examines the role of subsidiaries in MNC innovation process. The author uses the multiple case study approach to investigate 16 subsidiaries of Italian MNCs in China and India and find that the importance of the local subsidiaries could be swept up if managers of local subsidiaries leverage opportunities presented in local market to gain power in the broader MNC organization and assume larger mandates; it enriches our understanding of the relationship between subsidiaries and MNEs when subsidiaries are engaging (not engaging) in capability building in the local business context vis-à-vis the general strategy of the MNE. It explores how a lack of standards in the host country and a lack of reliable suppliers might condition the behavior of a HQ, which likely limits subsidiary action.

This study empirically demonstrates that the development of dynamic and innovative capability is closely linked with the role played by subsidiaries in the value chain and with the level of dual embeddedness being able to draw on their MNC networks, while being part of a locality, taking advantage of local knowledge in host countries. It contributes to the
Discussion

Research in economics (Ács et al., 2009; Romer, 1990; Geroski et al., 1993; McCloskey, 2010) and management (Ahlstrom, 2010, 2014; Christensen and Raynor, 2013) has demonstrated the importance of a range of innovation and new venture creation to the growth of firms and economies. The Chinese Government has recently recognized the importance of increased innovation in Chinese firms especially as China seeks to avoid the notorious middle income trap that has ensnared a number of economies (Agenor, 2017; Gill et al., 2007; Liu et al., 2017). How can China get that improved innovation that often seeds entrepreneurial growth? There is, for example, evidence that improved intellectual property rights lead to economic growth (Gould and Gruben, 1996). Recent evidence suggests having property rights is important, but having active enforcement is equally important, if not more so (Alexiou et al., 2016). That is, a fuller understanding of the institutional and sociocultural context is important. This SI has discussed the positive role played by MNE subsidiaries, especially in importing key resources and know-how as well as integrating these properly into the firm’s intellectual property scheme while being fully cognizant of intellectual property rights both in and out of China. The SI suggests other future research topics that can help further identify factors that encourage (and highlight those that may discourage) innovation and new ventures in China.

The key focus addressed in this SI concerns the special features of innovation and entrepreneurship in China in comparison to the more developed economies such as in the Organisation for Economic Co-operation and Development. First of all, it may be good to examine definitions and even categories of innovation and entrepreneurship, particularly in the context of China’s economic reforms. A well-known and successful Chinese entrepreneur, Chen Dongsheng, once said that the first imitator is also a sort of innovator. Given an emerging economy’s relatively backwardness in technological development, to fill the substantial imitative gap provides a lot of opportunities for entrepreneurs to different degrees as technology arbitrageurs cross borders. In that sense, innovation, entrepreneurship and globalization are inherently linked. Shenzhen, the special economic zone near Hong Kong, has become an innovation center and a cluster of entrepreneurial firms and funders of various types, which is likely linked to its openness and global connections. Companies such as Tencent and DJI are good examples of the firms developing there, as are several venture capital and private equity firms in China (Cumming et al., 2017). This is reflected in the 2015 McKinsey report on China Effect of Global Innovation, in which, consumer-oriented innovation represents a key skill that indigenous Chinese companies would like to develop (Woetzel et al., 2015).

Secondly, China’s national innovation system may also play a unique role in nurturing additional domestic entrepreneurship and entrepreneurial clusters. The state sector in many cases has acted as an incubator that generates substantial number of enterprises. Companies such as Huawei, ZTE and BYD were established by those who had worked for state-owned enterprises to gain technical knowledge and business experiences. Other state-linked firms such as Pearl River Piano and microwave maker Galanz have quietly developed respected brand names, indigenous technology and competitive global businesses.

The third factor is that China has the tailwinds of what is often called third industrial revolution. As those hierarchical organizations as represented by old type SOEs are subject to reforms, new organization emerged much faster than in the West. New communications, transportation and financing technologies have facilitated new firm formation and growth.
Even microfinancing, crowdfunding and fintech have started to gather some steam in China (Cumming et al., 2016; Newman et al., 2017).

The size and rapid growth of the market nevertheless has provided a hot-bed for entrepreneurship and has drawn much attention from investors. The growth of the market can accommodate more new ventures and increase the likelihood of success of entrepreneurs. While in a mature economy, it is the new emerging sector that provides opportunities for entrepreneurship. When a large economy like that of China grew for many years at double digits, it provided strong incentive to be adventurous and innovative. In the past 40 years, a less bureaucratic institution, as Deng Xiaoping’s white or black cat theory suggests, has provided vast opportunities for entrepreneurship and innovation. Thus, contextualizing the study of entrepreneurship and innovation in China can provide a live laboratory for future research in this area.

A further interesting research issue, related but not exactly the same is China’s corporate entrepreneurship. As a quarter of industrial output is still attributable to the state sector, how to make these SOEs more innovative is a challenge. Some recent studies that the SOEs in transition such as mixed ownership have produced some promising outcomes (Zhou et al., 2017). Scholars may find a bonanza of research topics and data by exploring the corporate entrepreneurship phenomenon in Chinese SOEs that are compelled to transform themselves through entrepreneurial and innovative activities.

While the Chinese Government has made several policies to encourage innovation and entrepreneurship, there are still many challenges to overcome. One obstacle is resistance from government agencies, such as Ministry of Science and Technology, which are deeply entrenched in and more incentivized by the planned-based economy than market economy. Scholars could examine the agency problems in national innovation system and such deeply rooted system may impact innovation and entrepreneurship activities and process.

At a more micro-level, such as research laboratories, different set of problems persist with innovation and entrepreneurship activities, such as the poor incentive system. Lead scientists and managers tend to take credit for innovation as opposed to the junior researcher who may have been the prime contributors in the project (Wang et al., 2008). This creates a disincentive for internal corporate ventures as researchers are not rewarded sufficiently for their work. Future research has to further address the dynamics of hierarchy, control and how researchers might be incentivized to develop new products and assured they are rewarded for their innovation efforts. It may be fruitful for researchers to study factors related to successful and unsuccessful laboratories and internal corporate ventures in China, their organizational structures, incentive system and other management issues.

Similarly, future research needs to investigate the linkage between academia and industry. Evaluation of researchers based on publications and patents has led to tremendous increase in the number of publications and patents but few have been transformed into commercial applications and products (Liu et al., 2017). Such evaluation system and lack of trust among the actors are hindering collaboration between industry and academia. Future research along the lines of Harvard economist Josh Lerner (2009) on sovereign wealth funds and regional development plans is needed in China, particularly in the context of the many special economic and trade zones set up over the years (Lerner, 2009). We also encourage researchers to examine innovation, change and new venture creation in the Chinese diasporas around the world to see the effects of different institutional environments on innovation and entrepreneurship activities and outcomes (Ahlstrom et al., 2004; Liu et al., 2013). Such research can help to unpack crucial barriers to innovation and entrepreneurship and how we can better understand the mechanisms for improved innovation and entrepreneurship (Liu et al., 2017).
There are also concerns in the market behaviors that need addressing in future research. First, private firms especially SMEs are still being discriminated. Second, the companies are dedicated to rent-seeking but are reluctant to invest in risky R&D. The second problem lies in the Chinese Government’s continued preference for “indigenous innovation” or “techno-nationalism” as opposed to open innovation. Many researchers have argued that indigenous research itself is not what is crucial but rather the movement of Chinese firms up the “smile curve” of value-added[2]. China rests largely at the lower middle of the bowl-shaped smile curve in many industries, implying that China is very effective in (and focuses on) late stage manufacturing and particularly final assembly (Ahlstrom et al., 2006). Policymakers in China and indeed elsewhere around East Asia would like firms to move up the smile curve by internalizing higher value activities such as design, basic research and branding (Oh and Rugman, 2006; Woetzel et al., 2015).

But not only at the upstream side of the smile curve, policymakers in China are encouraging firms to focus more attention on the downstream part of the curve, hence China’s going out policy. That is, after the final assembly of a product, the firm in China should not just ship the product out to a distributor and forget about the transaction (Mathews, 2017). Policymakers in China are encouraging their firms to get more involved with the marketing, parts and turnkey operations using their products, often overseas. This move downstream in the value chain from final assembly (in the case of manufactured goods) is also toward higher value-added activities, often dealing more closely with customers and customer service (Ahlstrom et al., 2006; Bhidé, 2008). Although there have been a lot of policy pronouncements on this, as well as some research suggesting this is happening (Zeng and Williamson, 2007), recent research questions Chinese firms’ commitment to expanding vertically along the value chain toward higher value-added activities, as opposed to horizontal diversification, for example such as BYD’s problematic diversification from a pretty good business in batteries into the very difficult market of electric cars (Randall et al., 2018). Research could cover a range of topics regarding this problem from the motivations of top management in Chinese firms, to the government’s role, up to strategic choices, institutional factors and globalization of Chinese firms (Hertenstein et al., 2017; Peng, 2003).

Conclusion
Our paper adopts a global perspective to study China’s innovation and entrepreneurship in a comparative international context. We explore the macro and micro environmental drivers, trends and challenges for China’s innovation and entrepreneurship strategies vis-a-vis its counterparts in other countries. Facing the renewed worldwide anti-globalization, will China’s innovation and entrepreneurship agenda derail? Will it be linked to the global innovation clusters, such as Silicon Valley in the USA, to generate pathway to global supply chain and to fuel China’s global integration agenda, such as China’s Belt and Road Initiative?

Rather than focusing on strictly indigenous innovation and entrepreneurship, this SI encouraged papers with a more international and global perspective on encouraging and bringing more innovation to China. We especially welcomed papers that examined the roles played by the government policies at national, provincial and local levels and investigated Chinese entrepreneurial ecosystems that connect with and contribute to the existing global entrepreneurial ecosystem. We believe that the papers included in this SI provide preliminary insight into what promises to become an important research agenda and stimulate interest, and international business scholars to explore local-global linkages in innovation and entrepreneurship, as well as specific questions relating to the internationalization of firms in emerging and transitional Asian economies (Mathews, 2017).
Furthermore, the co-evolution of the strategies of Chinese entrepreneurs and their institutional environment that may result into a unique style of entrepreneurship and innovation perhaps more feasible in both transition and emerging economies could be a proverbial gold mine for researchers and practitioners to explore in the years to come. Much research is needed on innovation and new venture creation in China. We started out asking “Is there a unique Chinese model of innovation and entrepreneurship, or are there characteristics observed in China but generally applicable to the other economies?” The papers in our SI and our introduction paper fairly well address the first part of the question in addressing unique aspects of China’s innovation systems. However, we have not fully answered the second part of the question, as papers did not direct comparative aspects directly. We do believe that the lessons learned in China are quite learnable and thus applicable in other countries (Li et al., 2010). Research on emerging economies should address innovation and new venture creation in China as well as policy innovations to see what might work in different environments.

As such, we highly encourage researchers to explore further questions posed earlier and particularly the second question (above) in much greater depth. Beyond that, case studies that follow firms from their early days in particular might help researchers examine multiple levels of activity from financing and early product development to marketing, managing institutions and the government and even international expansion (Peng, 1997). Entrepreneurship and innovation in China represent dynamic domains for both researchers and practitioners alike and added international and institutional dimensions in China may add challenges and offer new opportunities for research in and about China.

Acknowledgements
This SI, “Entrepreneurship and Innovation in China: A Global Perspective”, grew out of University of San Francisco China Business Studies Initiative’s second International Conference on China Innovation and Global Integration, May 17-19, 2017 Langfang, China, which took a look at current issues related to China’s strive for entrepreneurship and innovation as well as global cooperation. We invited the authors of the best papers from that conference to submit to the MBR SI as well as others who could not make to the conference, subject to our standard double-blind review process. We are happy to share the outcomes of this conference with a much wider audience.

The guest editorial team is grateful to the Editors-in-Chief, Professors Daniel Shapiro and Chang Hoon Oh, for embracing their idea of the SI and for their strong support and guidance throughout this process. The authors also wish to thank all the reviewers for their contribution to the SI. Although there are many other people the authors want to thank for their contributions, the authors would like to give special recognition to Dean Elizabeth B. Davis, School of Management at the University of San Francisco for her unwavering support of the China Business Studies Initiative and its 2nd International Conference, as well as that of Dean Dongmin Chen, Peking University School of Innovation and Entrepreneurship. This support enabled the conference and provided support to the faculty who have contributed to this SI.

Notes
1. China has realized the problems of an imitation strategy and has promulgated several new policies to encourage innovation and entrepreneurship. Yet there are still many challenges to overcome including the central government’s continued preference for indigenous innovation as opposed to more open innovation (Bruton et al., 2015; Liu et al., 2017).
2. The stylized “smile curve” was first proposed by the founder of Acer, Stan Shih. It is a stylized, bowl-shaped version of value-added curves thought to exist in many industries whereby the lowest value added in a whole value chain of activities is often thought to be in the middle (base) of the smile shaped curve. That is, the later manufacturing and final assembly steps tend to produce the lowest relative value in the whole process. The highest value-added activities are usually at the upper left and rights sides of the smile curve. These not only include early stage R&D, design and branding but also the often overlooked but important downstream activities of turnkey systems design, after-sale parts and service, repairs, warranties and customer service and related marketing activities (Ahlstrom et al., 2006; Bhide, 2008). The most difficult activities (at the upper ends of the smile curve), conceiving, designing, selling and servicing products, are the most difficult and carry the most return to firms.

References


Innovation in China


Further reading


Yip, G.S. and McKern, B. (2016), *China’s Next Strategic Advantage: From Imitation to Innovation*, MIT Press, Boston, MA.

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Government subsidies, state ownership, regulatory infrastructure, and the import of strategic resources
Evidence from China
Gongming Qian and Bin Liu
Department of Management, Chinese University of Hong Kong, Hong Kong, and
Qingtao Wang
Department of Marketing, City University of Hong Kong, Hong Kong

Abstract
Purpose – Although there has been much research on government support for export in China and other emerging economies, considerably less attention has been given to government subsidy-related importing activity in China. This study aims to propose that the government subsidies as the source of financial resources produce a significant increase of imports, as the firms are more likely to engage actively in importing technology-related products which are conducive for China’s future innovation. However, state ownership in firms negatively moderates this relationship and holds back technology imports. Improved formal regulatory institutions do not help to improve but rather weaken this relationship.

Design/methodology/approach – To investigate how government policy affects imports of strategic resources in China, all of the listed firms on Chinese stock markets (from 2008 to 2014) have been selected, the firms that are engaged in exporting and importing activities. The data from the China Stock Market & Accounting Research database have been selected and merged with those of the General Administration Customs in China. A panel analysis has been done with several robustness tests.

Findings – First, the study indicates that government subsidies are a driving force for the development of importing activities. Second, it finds conflicts of interests between government subsidies and state ownership of a firm, as increased ownership will weaken and even negate the positive effect of a government policy, thus negatively affecting the national competitiveness in the long run. Third, it is important to take into account the issue on different levels of institutional development, even allowing for the fact that a nationwide government policy is applied to the firms located in all corners of the country.

Research limitations/implications – The authors suggested a regional difference in regulatory development but did not find the proposed direction. In their future study, the authors will validate and generalize this intriguing substitutitional effect. They expect the results will help the government to ensure that it can fulfill a policy (e.g. regulation) down to every gross-roots organization so the development of regulatory infrastructure will help the firm to obtain and accumulate strategic resources through increased imports of them. Another direction of their future study will explore how government policy will prompt the firms to increase their spending so that they can possess plenty of “stamina” for their future development.

Practical implications – Different levels of institutional development exist in China even allowing for the fact that a nationwide government policy should be applied to all firms within the territory. This certainly has impacts on technology imports and thus creates difficulties for firms located in the western parts of China about which the government is particularly concerned. The government needs to ensure that its policies (laws and regulations) can be fulfilled down to every gross-roots organization so that the development of regulatory infrastructure will help the firm to obtain and accumulate strategic resources through increased imports of them.

The authors are grateful for the helpful comments of the editors and the two anonymous reviewers.
infrastructure can be inclusive and pervasive, given its influence on technology importation and indigenization.

**Originality/value** – Both of the theoretical and empirical work centered on policy initiatives and particularly government subsidies in emerging economies that significantly influence imports of strategic resources, a means with which the firm is better able to maintain and develop its competitive advantages, particularly in an economy with institutional void. Relatedly, the results on a causal relationship help envision a transcending trajectory of China’s economy, suggesting that businesspeople should capitalize on the policy advantage so that they are better able to sustain their long-term development. The results also present implications for policymakers to encourage and support strategic move toward such import endeavors.

**Keywords** China, Entrepreneurs, Institutional theory, Institutional voids, Government subsidies, Imports, Government policy

**Paper type** Research paper

**Introduction**
Over the past 40 years, the Chinese Government has evolved in policy terms, from a defender of protectionism to an advocate of economic globalization, the process of a change starting from the “closed-door” policies before 1978 to the current “Belt and Road Initiative” starting in 2013. Paradoxically, the 2016 Brexit vote in the UK and subsequent anti-globalist movements around the world could spark a wave of antagonistic policies toward large exporters, such as China (Short, 2016). Against this backdrop, a pivotal question to be addressed is: How large exporters such as China can continue to manage (and even improve) their commercial positions in international trade in the face of antiglobalist movements?

Some have argued that China may gradually suffer some trade-related stagnation as a result. On the one hand, it has relied heavily upon exports for its economic growth. In 2016, for example, 20 per cent of China’s overall GDP was contributed by exports of goods and services (World Bank, 2018). On the other hand, almost all of the major importing countries have imposed or started to impose more strict and countervailing trading rules (Beshkar and Chilton, 2016; Bown, 2017). Like individual firms, each country has heterogenous and path-dependent competitive advantages as explicated in the resource-based (Barney, 2001) and comparative advantage views (Maneschi, 1998; Porter, 1998). Because China’s government provides subsidies that allow Chinese firms to export more “Made-in-China” products, most of these firms could hardly change their export-oriented activities quickly because of path dependencies and previous export-oriented investment.

Yet in contrast to the great bulk of research on the exporting of Chinese firms with government subsidies (Eckaus, 2006; Kalouptsidi, 2018; Lim et al., 2018), considerably less attention has been given to the other side, that is, on **importing activity** in China. In contrast to the traditional function of acquiring raw materials and components from international sources for resale purposes (Kotabe and Murray, 1990; Swamidass, 1993), import sourcing recently has pertained to firm-level strategic decisions especially during environmental uncertainty periods (Skarmeas et al., 2002; Swamidass, 1993). In other words, firms in China are showing more readiness to import strategic resources, defined as brands, technologies, machines, intellectual property and even foreign talent that could substantially influence their future performance, rather than focusing solely on raw material acquisition (Ferdinand, 2016; Swamidass, 1993). The examination of this importing activity is important, as it helps to further illuminate the landscape of international business in China.

Strategic (and particularly technology-related) resources are the fundamental cornerstone of the sustainable development of emerging economies in entrepreneurship, innovation and economic development (Ahlstrom and Bruton, 2002; Bruton et al., 2008). However, not all firms are able to import strategic resources because of resource or hard
currency constraints, issues which have not been thoroughly examined especially for emerging economies such as China. Drawing on the institutional void perspective (Khanna and Palepu, 2005), this study proposes that the government subsidies as the source of financial resources would produce a significant increase of imports, as the firms are more likely to engage actively in importing technology-related products which are conducive for China’s future innovation (Yu et al., 2014). However, state ownership can negatively moderate this relationship, and state ownership continues to be strong in China (Bruton et al., 2015). Regulatory institutions may moderate the relationship, which will be examined in this study in terms of reforming the institutional infrastructure.

To investigate how government policy affects imports of strategic resources in China, this paper identified all of the listed firms on Chinese stock markets from 2008 to 2014 that were engaged in import—export activities, using data from the China Stock Market & Accounting Research (CSMAR) database, merged with those of the General Administration Customs in China. In explaining rationales behind the import of strategic resources, we centered our theoretical and empirical work upon policy initiatives and (particularly) government subsidies in emerging economies that significantly influence such imports. Relatedly, the results on a causal relationship should help envision a transcending trajectory of China’s economy, suggesting that businesspeople should capitalize on the policy advantage so that they are better able to sustain their long-term development.

This study makes several contributions to the existing literature. Empirically, we provide strong evidence of the positive effect of government subsidies on imports of strategic resources, which are requisite for both innovation and technological development (e.g. product upgrading and replacement). The finding has important practical implications for policymakers, as government subsidies do help the firms to gain access to strategic resources required for improvement of existing products and technologies and development of new (advanced) ones. Theoretically, we enrich an efficiency perspective of institution-based view of business strategies as an increasing percentage of state ownership, in fact, decreases the original incentives from government subsidies that intend to alleviate institutional voids and encourage transformation and innovation. Meanwhile, we also provide an additional evidence that fine-grained differences in institutional developments at a regional or provincial level do matter in research (Gong et al., 2011; Poncet and Batisse, 2004).

**Literature review**

Institutional theory is helpful in addressing economic and managerial issues, pertinent particularly to those of developing economies as a whole (Bruton et al., 2010; North, 1999). Defined as structures and rules of human interactions (North, 1999), institutions influence the behaviors of management and organizations, often pushing organizations toward isomorphism with established structures and actors in an economy (DiMaggio and Powell, 1983; Scott, 2001). Organizations can also choose to react differently in strategic terms to legitimacy pressures (Ahlstrom and Bruton, 2001; Oliver, 1991). Incrementally, institutional change influences the evolution of the society and the economy on multiple levels (North, 1999), in which firms try to comply with the rules to gain legitimacy, imitate fellow firms to mitigate uncertainty and follow well-accepted norms (Ahlstrom et al., 2008; DiMaggio and Powell, 1983). Generally, institutions can be categorized as either formal or informal ones that orchestrate transactions by politics, laws and society (Gao et al., 2010; Peng et al., 2008).

Echoing this institutional logic, scholars have proposed that institutional voids are prevalent in transition economies characterized by weakly developed legal systems, capital
and labor markets (Hoskisson et al., 2000; Puffer et al., 2010). Specifically, institutional voids are evidenced by the absence of sufficient market mechanisms and unpredictable regulatory systems (Khanna et al., 2005). In other words, the lack of a more developed economy and uncertainty about government rules and regulations create uncertainties and hinder development in transition economies (Khanna et al., 2005; Zhou et al., 2017). Under such circumstances, firms have neither (sufficient) strategic resources to compete effectively nor eagerness or capabilities to acquire strategic resources from those advanced countries (Söderblom et al., 2015). Rather than following explicit and legitimated rules, norms or perceptions, businesspeople will be confronted with greater difficulties in acquiring strategic resources when they are embedded in an institutional void (Ahlstrom and Bruton, 2006).

Yet, as implied in the definition of institutional voids, the government and its supports can function as a supplement in the filling of some voids (Hoskisson et al., 2000). In particular, we deem subsidies from the government as de facto catalysts as they enable the firm to become more proactive in acquiring resources from the outside when it encounters resource deficiencies in its country. This is largely because governments in emerging economies will influence businesses through resource allocation and policy enactment (Musacchio and Lazzarini, 2014; Zhou et al., 2017).

Hypothesis development

Despite the fact that competitiveness has evolved over time in China, the subsidies from the government are extra financial resources for Chinese firms to seek out rare and inimitable resources from the outside. Indeed, China is among (few) countries that are openly decisive in providing subsidies to its national firms to compete abroad (Broomfield, 2003). In parallel to the positive impact of government subsidies on exports in China, government subsidies for imports are also provided with specified guidance for reimbursement and rather strict rules to follow (e.g. the “Go Out” policy and the “Belt and Road” infrastructure initiative) (Wijeratne, 2017).

Such guidance and rules create normative standards to imitate among the rivals as no one wants to lag behind, and most want to improve their knowledge of uncertainty and risk that appear in markets with institutional voids (Ahlstrom et al., 2003; Scott, 2001). Moreover, the firm is more likely to take an outward-looking perspective as government subsidies provide it with adequate funds required to search for the information from abroad. Such searching endeavors are important as these facilitate more imports of strategic resources, and consequently help in enhancing the firm’s sustainable competitiveness (Barney, 2001; Barney and Hesterly, 2010). Herein, we hypothesize:

H1. Government subsidies are positively related to imports of strategic resources by Chinese firms.

However, the above argument does not seem to agree with the proposition that state-owned enterprises are importing more than their domestic (non-state-owned) counterparts. Contrary to the proposition, we also suggest that an increased percentage of state ownership of a firm would lead to a lower volume of imports of strategic resources. Admittedly, a higher percentage of state ownership of a firm indicates a stronger connection with the government. The firm would therefore obtain more resources (e.g. subsidies) from the government, and the problem with resource constraints or deficiencies will be less likely to occur. However, organizational behaviors are not only determined by the external environment but also affected by internal structure and sources of power (Liu et al., 2013; Wry et al., 2013). As embodied in assumptions, values and beliefs, institutional logics
pertaining to the ownership structure of a firm would determine the ultimate choices and actions over a specific managerial decision (Greve and Zhang, 2017; Thornton and Ocasio, 1999). It is suggested that a firm with more of its shares controlled by the government would be influenced more heavily by political considerations rather than by economic or related objective functions (Dunbar and Ahlstrom, 1995; Wang et al., 2008; Zhou et al., 2017). In possession of more abundant financial resources, however, the firm also has to comply with the informal administrative mandates rather than pursue market-driven activities (Puffer et al., 2010; Zhou et al., 2017).

Although this type of state-linked firm still follows the general prediction in above discourse (Bruton et al., 2015), the percentage of state ownership provides significant impediment to decision-makers trying to focus more on economic and efficiency considerations. In addition, with higher percentages of state ownership, the firm's top-level managers or board members are not selected by merit but are instead appointed by higher authorities; managers are agents for government organizations rather than being selected from line employees (Ramaswamy, 2001; Xu and Zhang, 2008). Intuitively, they might have weak strategic capabilities (Zhou et al., 2017). Even if the majority of them are qualified supervisors, they still have to prioritize political orders so they generally lack a strong motivation to seek out strategic resources (e.g. new technologies) but rather are experienced in obtaining more staple commodities ranging from oil, copper, iron ore to wheat and others as encouraged by the government (Plumer, 2014).

It is evident that managers of firms in emerging economies such as China and Russia tend to emphasize the reciprocal relations with higher authorities rather than on the rationality of economic goals, such as higher return on assets or the maximization of shareholder wealth (Lerner, 2009; Puffer et al., 2010). In other words, under the state socialism, strategies of state firms in emerging economies such as China’s primarily reflect central planning and political connections rather than profitability or competition (Greve and Zhang, 2017; Peng and Delios, 2006; Shinkle and Kriauciunas, 2012). In short, it is more likely that state-controlled firms in possession of abundant financial resources would still conform to the political interests of higher authorities to preserve their positions and thus be less willing to import more strategic resources (and sometimes of less-certain value). We therefore hypothesize:

\[ H2. \] Increased state-ownership percentage will negatively moderate \( H1 \) such that the higher the state-ownership percentage, the weaker the positive relationship between government subsidies and imports of strategic resources by Chinese firms.

On the basis of the notion of institutional voids, it can be further argued that the development of regulatory infrastructure will positively affect the relationship proposed above (Liu et al., 2017). Specifically, certain laws and regulations are enacted simultaneously around the country but the strictness in their implementation can turn out to be dramatically different (Zhou et al., 2014, 2017). Such differences are reflected in local governments’ inspections and penalties/sanctions, normative standards in compliance with the regulations and (cognitive) beliefs that every competitor is restrained by the same and fair rules (DiMaggio and Powell, 1983; Scott, 2001). In that sense, stricter formal rules will drive up not only the costs of purchasing supplies (goods and services) but also the costs of skirting the laws (Gao et al., 2010; Peng et al., 2008). The asymptotic advancements in regulatory infrastructure further diminish the space for rent seeking and encourage firms to compete for resources and capabilities, certainly including imports of strategic resources from abroad (Armstrong and Sappington, 2006). This action helps firms not only in
strategically controlling costs but also to in ensuring quality, obtaining technologies and maintaining flexibilities (Swamidass, 1993). That is to say, firms locating in a place with more developed regulatory institutions are more able and likely to acquire more strategic resources from abroad (Porter, 1998). That is due partially to increased costs in local markets, caused by legitimacy compliance, and partially to the increased ability of the organization to use subsidies for the acquisition of strategic resources. We therefore hypothesize:

H3. Regulatory infrastructures will positively moderate H1 such that the more advanced the regulatory infrastructure, the stronger the positive relationship between government subsidies and imports of strategic resources by Chinese firms.

Figure 1 summarizes the above hypotheses. The two moderator variables, state ownership and regulatory infrastructure, will weaken and strengthen the positive relationship between government subsidies and imports of strategic resources, respectively, as indicated.

Methods

Sample

The data for this study were obtained from both the CSMAR database and the General Administration Customs in China. Most of our sample firms operated in technology-related industries. As entrepreneurship and innovation are viewed as catalysts for China’s future growth (Ahlstrom, 2010; Liu et al., 2017; Wang et al., 2008), we limited our analysis into Chinese firms that were listed from 2008 to 2014, as those listed firms during the period were most innovative and growing (He et al., 2014). The firms chosen should also be engaged in importing activities in each year during the studied period. Because the finance industry is highly sensitive to large short-term economic swings (Kim et al., 2004), we excluded it and used only five industry categories (groups) specified by China Securities Regulatory Commission, which included commerce, conglomerates, industrials, properties and utilities. We ended up with an unbalanced sample with 466 firms in 2008, 551 in 2009, 708 in 2010, 583 in 2011, 853 in 2012, 890 in 2013 and 616 in 2014, overall 4,667 firm-year data entries.

Variables

Our dependent variable is import amounts of strategic resources. To better portray the strategic attributes of such resources from outside China, we focused mainly on those that are important strategically to firm innovation and competitiveness, such as advanced machinery (e.g. numerical controlled machine tool), equipment (e.g. mechanical, electrical and office) and technology (Zhang and Xu, 2016). They were measured as the natural log of imports of all these strategic resources. Admittedly, foreign governments have concerns over exports of “sensitive” products, and may restrict such exports such that imports by Chinese state-
controlled firms are reduced (i.e. Li et al., 2017). However, our operationalization of the dependent variable is appropriate in this regard because those imports represent the advanced technologies that were not related to the sensitive technology categories, such as defense and national security operations. In addition, our sample contained very few firms in the “sensitive” (e.g. defense and national security) industries. We obtained the firm-level import data that specify their function and type from the annual reports censored by General Administration of Customs in China before merged with the CSMAR database.

To operationalize regulatory development, we adopted sub-indices measuring the development of market intermediaries and the legal environment from China’s National Economic Research Institute, as the dataset captures provincial differences (Gao et al., 2010; Zhou et al., 2017).

Following previous studies (Arend, 2014; Barber and Lyon, 1997; Combs and Ketchen, 1999), we also controlled for the variables that might possibly influence imports of strategic resources by a firm. They included firm size, experience, unabsorbed slack and prior performance. Firm size is measured by the book value of equity capital, experience by the number of years a firm had been in operations, unabsorbed slack by asset liability ratio in prior year and prior performance by gross profit rate in prior year, respectively. To partial out influences other than state ownership of a firm, we controlled the firm’s connection to government, which is measured as the natural log of the number of top management team members (including chief executive officer, chief financial officer and board directors) who had retired from government departments (Lester et al., 2008). Finally, we also controlled for industry, incorporating their industrial segments, and the year dummies variable.

Results

Table I reports the summary statistics for all of the variables. Initially, there seems to be some amount of intercorrelation between variables. To check multicollinearity, we examined the variance-inflating factor (VIF) scores of the predictors for each hypothesis test. The average VIF score is 1.24, and the range of VIF scores of the predictors is 1.10 to 1.56 – substantially below the rule-of-thumb cutoff point of 10 for regression, thus suggesting no multicollinearity problems (Ryan, 1997).

We test the three hypotheses using the five regression models shown in Table II. The regression analysis is hierarchical, adding one (more) variable each time. Model 1 is the base model, which includes the effects of all of the control variables. Models 2, 3 and 4 test the three hypotheses (H1, H2 and H3), respectively. Finally, Model 5 comprises all of the model variables.

H1 states that government subsidies are positively related to imports of strategic resources by Chinese firms and was tested in Model 2. As predicted, the result in Model 2 shows that the coefficient for government subsidies is positive and significant ($\beta = 0.1170$, $p < 0.01$). We therefore conclude that a firm with government subsidies is more likely to import strategic resources. For every one unit of increase in government subsidies, the import of strategic resources increased by 8.45 per cent.

H2, which is tested in Model 3, predicts the moderating effect of state ownership of a firm, that is, the higher the state ownership percentage, the weaker the positive relationship between government subsidies and imports of strategic resources by Chinese firms. The results in Model 3 indicate that the coefficient of the interaction term is negative and significant ($\beta = -0.1420$, $p < 0.05$). This provides support for H2 because state ownership percentage changes the direction of the relationship between government subsidies and strategic resource imports from positive to negative. Figure 2 illustrates that strategic
### Table I. Descriptive statistics and correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Import value</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Government subsidies</td>
<td>0.1640***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) State ownership</td>
<td>0.0066</td>
<td>0.0526***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Regulatory development</td>
<td>-0.0336*</td>
<td>-0.0030</td>
<td>-0.2190***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Firm experience</td>
<td>0.0324*</td>
<td>0.0969***</td>
<td>0.0214**</td>
<td>0.0343*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Firm size</td>
<td>0.3080***</td>
<td>0.4390***</td>
<td>0.0890***</td>
<td>0.0277</td>
<td>-0.0044</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Unobserved slacks</td>
<td>0.1270***</td>
<td>0.1770***</td>
<td>0.1890***</td>
<td>-0.2110***</td>
<td>0.2580***</td>
<td>0.0971***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) Prior performance</td>
<td>-0.1210***</td>
<td>-0.0653***</td>
<td>-0.1280***</td>
<td>0.0848***</td>
<td>-0.1720***</td>
<td>-0.0223</td>
<td>-0.5080***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) Government relationship</td>
<td>0.0489**</td>
<td>0.1440***</td>
<td>0.1270***</td>
<td>-0.0059</td>
<td>0.0388*</td>
<td>0.2550***</td>
<td>0.0854***</td>
<td>0.0122</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** *p < 0.05; **p < 0.01; ***p < 0.001
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Government subsidies</td>
<td>0.1170*** (0.027)</td>
<td>0.1470*** (0.029)</td>
<td>0.4170** (0.173)</td>
<td>0.5130*** (0.177)</td>
<td></td>
</tr>
<tr>
<td>2. State ownership</td>
<td>0.1080 (0.119)</td>
<td>2.4270*** (0.910)</td>
<td>0.1090 (0.119)</td>
<td>2.6700*** (0.918)</td>
<td></td>
</tr>
<tr>
<td>3. Regulatory development</td>
<td>-0.1420 (0.207)</td>
<td>-0.1420 (0.207)</td>
<td>1.8860 (1.174)</td>
<td>2.3010* (1.182)</td>
<td></td>
</tr>
<tr>
<td>4. Government subsidies × State ownership</td>
<td>-0.1420*** (0.055)</td>
<td></td>
<td></td>
<td></td>
<td>-0.1570*** (0.066)</td>
</tr>
<tr>
<td>5. Government subsidies × Regulatory development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.1230* (0.070)</td>
</tr>
<tr>
<td>6. Firm experience</td>
<td>0.0310* (0.0170)</td>
<td>0.0270 (0.017)</td>
<td>0.0260 (0.017)</td>
<td>0.0270 (0.017)</td>
<td>0.0250 (0.017)</td>
</tr>
<tr>
<td>7. Firm size</td>
<td>0.0000* (0.000)</td>
<td>0.0000 (0.000)</td>
<td>0.0000 (0.000)</td>
<td>0.0000 (0.000)</td>
<td>0.0000 (0.000)</td>
</tr>
<tr>
<td>8. Unobserved slacks</td>
<td>0.6040*** (0.229)</td>
<td>0.4900** (0.231)</td>
<td>0.4880*** (0.231)</td>
<td>0.5100** (0.231)</td>
<td>0.5110** (0.231)</td>
</tr>
<tr>
<td>9. Prior performance</td>
<td>-0.5300* (0.319)</td>
<td>-0.5350* (0.318)</td>
<td>-0.5480* (0.318)</td>
<td>-0.5240* (0.318)</td>
<td>-0.5350* (0.318)</td>
</tr>
<tr>
<td>10. Government relationship</td>
<td>0.0330 (0.044)</td>
<td>0.0270 (0.044)</td>
<td>0.0250 (0.044)</td>
<td>0.0280 (0.044)</td>
<td>0.0250 (0.044)</td>
</tr>
<tr>
<td>11. Industry effect</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
</tr>
<tr>
<td>12. Year dummies</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
</tr>
<tr>
<td>Constant</td>
<td>14.3320*** (0.388)</td>
<td>12.9220*** (0.753)</td>
<td>12.4630*** (0.777)</td>
<td>8.0040*** (2.922)</td>
<td>6.4400*** (2.973)</td>
</tr>
<tr>
<td>Observations</td>
<td>4,659</td>
<td>4,659</td>
<td>4,659</td>
<td>4,659</td>
<td>4,659</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.0529</td>
<td>0.0655</td>
<td>0.0633</td>
<td>0.0692</td>
<td>0.0709</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses; *** \( p < 0.01 \); ** \( p < 0.05 \); * \( p < 0.1 \)
resource imports increase with government subsidies at a faster rate of low state ownership than high state ownership.

However, we did not find support for $H3$, as indicated in Model 4. Here, the coefficient of the interaction term is negative and marginally significant ($\beta = -0.1230$, $p < 0.1$). The result suggests that the development of regulatory infrastructure does not help strengthen the relationship between government subsidies and strategic resource imports, but rather weaken it. As illustrated in Figure 3, strategic resource imports are positively associated with government subsidies and the relationship is less positive with high levels of regulatory infrastructure than with low levels of one.

Finally, in Model 5, we find that the signs and significance levels of our key (individual and joint) variables are fully consistent with those found in the other models.

Figure 2. Interaction effect between government subsidies and state ownership

Figure 3. Interaction effect between government subsidies and regulatory infrastructure
Robustness tests

Study robustness was tested in different ways with results shown in Table III. First, we adopted the frequency of strategic resource imports as an alternative (dependent) variable. The results are fully consistent with those of the previous test, as the individual effect of government subsidies being positive and significant ($\beta = 0.1310, \rho < 0.1$), the interaction effect of government subsidies and state ownership being negative and significant ($\beta = -0.0590, \rho < 0.01$), and the interaction effect of government subsidies and regulatory infrastructure being negative though not significant ($\beta = -0.0320, \text{n.s.}$). Therefore, they confirm and support both $H1$ and $H2$ but do not support $H3$. Second, we chose the non-state-controlled firms (i.e. the firms that did not have any state ownership) as the subsample and examined their imports of strategic resources. If our previous prediction still holds, the effect of government subsidies should remain positive. Again, the result is fully consistent with what we found earlier ($\beta = 0.4540, \rho < 0.05$). Third, to diagnose possible selection bias, we applied a Heckman two-stage model. More specifically, we used the full sample of all listed firms and examined whether our sample suffers from selection bias that may hurt the reliability of the results. This analysis was conducted with 14,198 firm-year data entries; 1,285 for 2008, 1,551 for 2009, 1,914 for 2010, 2,179 for 2011, 2,338 for 2012, 2,406 for 2013 and 2,525 for 2014, respectively. We found the consistent results for $H1$ ($\beta = 1.4180, \rho < 0.01$) and $H2$ ($\beta = -0.2550, \rho < 0.01$) with an insignificant rho value ($\rho = 0$), suggesting the absence of selection bias problem in our sample (Yiu et al., 2014).

Discussion

Using an institutional perspective, our study is among the first to examine the relationship between government subsidies and importing activities. We found strong support for the positive relationship between government subsidies and firm imports (of strategic resources). In other words, the firms with more subsidies from the government are more likely to engage in importing strategic resources. It is particularly the case for those with resource constraints and operating in weak institutional environments. Yet we also found the while subsidies were helpful, state ownership of a firm had a strong (negative) moderating effect on the relationship; that is, the higher the percentage of ownership of a firm controlled by the government, the less likely the firm would acquire strategic resources from abroad. The result is fully consistent with that hypothesized based on the institutional perspective. However, our results show that regulatory infrastructure negatively (rather than positively) moderates the relationship, which is contrary to the prediction though such moderating effect is not significant. This suggests that development of regulatory infrastructure (being different in the different regions of China) is an inhibiting factor on the effect of government subsidies even though the latter (individual) effect is fairly standard in application. This new finding begs for a re-examination of the issues regarding the effect of institutional voids (Acemoglu and Robinson, 2012), formal and informal institutions, and how they may be managed (Ahlstrom et al., 2003; Bruton et al., 2003). We further suggest that in large emerging economies such as China, there can exist the unbalanced development of market intermediaries intertwined with the advancement of regulatory infrastructure. In those circumstances, the regional (e.g. provincial) regulatory development would possibly exhibit a substitutional effect on the need of a firm to import abroad. Instead, local markets would provide the firm with the sources to obtain similar or alternative strategic resources, the sources that serve as a shelter to voids (Hoskisson et al., 2000; Khanna et al., 2005). In other words, while advancement in regulatory infrastructure would lead the firm to comply with regulations and policies, we believe that substitutional effect may weigh more heavily
<table>
<thead>
<tr>
<th>Variables</th>
<th>Import Frequency</th>
<th>Non-state-owned sample</th>
<th>Heckman</th>
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</thead>
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<tr>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td>Model 4</td>
</tr>
<tr>
<td>1. Government subsidies</td>
<td>0.1310* (0.071)</td>
<td>0.4540** (0.203)</td>
<td>1.4180*** (0.210)</td>
</tr>
<tr>
<td>2. State ownership</td>
<td>1.0890*** (0.364)</td>
<td>4.1870*** (1.286)</td>
<td></td>
</tr>
<tr>
<td>3. Regulatory development</td>
<td>0.6010 (0.476)</td>
<td>2.0930 (1.348)</td>
<td>7.5180*** (1.357)</td>
</tr>
<tr>
<td>4. Government subsidies × State ownership</td>
<td>0.0590*** (0.022)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Government subsidies × Regulatory development</td>
<td>-0.0320 (0.028)</td>
<td>0.1280 (0.081)</td>
<td>-0.2550*** (0.079)</td>
</tr>
<tr>
<td>6. Firm experience</td>
<td>0.0100* (0.008)</td>
<td>0.0080 (0.008)</td>
<td>0.0410** (0.018)</td>
</tr>
<tr>
<td>7. Firm size</td>
<td>0.0790 (0.093)</td>
<td>0.0640 (0.093)</td>
<td>0.0000 (0.000)</td>
</tr>
<tr>
<td>8. Unobserved slacks</td>
<td>-0.0840 (0.129)</td>
<td>-0.0890 (0.129)</td>
<td></td>
</tr>
<tr>
<td>9. Prior performance</td>
<td>0.0180 (0.018)</td>
<td>0.0150 (0.018)</td>
<td></td>
</tr>
<tr>
<td>10. Government relationship</td>
<td>0.0840 (0.129)</td>
<td>-0.0100 (0.055)</td>
<td></td>
</tr>
<tr>
<td>11. Industry effect</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
</tr>
<tr>
<td>12. Year dummies</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
</tr>
<tr>
<td>Constant</td>
<td>2.6040*** (0.175)</td>
<td>0.2980 (1.199)</td>
<td>12.5430*** (0.838)</td>
</tr>
<tr>
<td>Observations</td>
<td>4,659</td>
<td>4,659</td>
<td>3,448</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.0424</td>
<td>0.0599</td>
<td>0.0872</td>
</tr>
</tbody>
</table>

**Notes:** Standard errors in parentheses; ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$. 

**Table III.** Robustness tests
than the compliance effect, thus leading to a negative moderating effect of regulatory infrastructure as in $H3$.

**Contributions**

Our study contributes both empirically and theoretically to the literature, as it helps in understanding the policy and institutional factors that may affect the behavior and performance of importing activities in an emerging economy with institutional voids.

The paper contributes empirically by showing that government subsidies are a driving force for the development of importing activities. This is important as we have, in recent years, observed the transformation from a unitary, monotonous export-oriented (dominant) structure to a (more) balanced one emphasizing both exporting and importing. The undergoing transformation would affect the international competitiveness and performance of local Chinese entrepreneurs. Conversely, more Chinese firms have been capitalizing on Chinese Government policies to increase imports of strategic resources from abroad. This momentum has become even stronger particularly after the “Belt and Road Initiative” in 2013. Such policy-driven initiative can also be taken as a useful experience for governments of other emerging economies when they decide to use fiscal incentives to direct the flow of imports and exports.

Second, this paper contributes theoretically by suggesting that government policy (e.g. subsidies) and state ownership are related, to a certain extent, to each other, but their roles for internationalizing Chinese firms turned out to be markedly different. More specifically, government subsidies are a driving force for import expansion, whereas (increased) state ownership is an inhibiting one. It is a curious finding that there are seeming conflicts between government policy and state ownership of a firm, as increased ownership weakens and even negates the positive effect of a government policy, possibly hurting firm competitiveness. Therefore, the government should reduce its direct control over the firm by decreasing its percentage of ownership in the firm, a finding consistent with major studies on state ownership in other disciplines (Li et al., 2014).

Third, our study also contributes by widening knowledge on institutional theory. More specifically, it is important to take into account the issue different levels of institutional development even allowing for the fact that a nationwide government policy is applied to the firms located in all corners of the country. This is largely because institutional development may affect the firm even with government subsidies to engage in imports of strategic resources. The government needs to pay greater attention to the problem with the strictness of policy implementation though a given laws or regulations applied evenly to firms around the country.

**Limitations and future research**

This paper has certain limitations, which suggest avenues for future research. First, we suggested a positive effect of regional difference in regulatory development but we found an oppositional effect. In our future study, we will validate and generalize this substitutional effect. We expect the results will help the government to ensure that it can fulfill a policy (e.g. regulation) down to every gross-roots organization so that the development of regulatory infrastructure will help the firm to obtain and accumulate strategic resources through increased acquisition of them. Second, similarly, there is the problem with low spending on the indigenization of strategic resources once they have been acquired from abroad. Future study could explore how government policy will prompt the firms to increase their spending so they can possess plenty of “stamina” for their future development – a very old question that is prompting fresh examination under the “new normal” emerging in world commerce.
(Hitt et al., 2016; Nair and Ahlstrom, 2008). Third, the related question is whether government policy (e.g. subsidies) will encourage the firms with previous imports of strategic resources to export more of such resources after proper absorption and indigenization (Zou et al., 2018). These practical questions and mindful issues should be addressed in future research and communicated widely to researchers and policymakers (Abrahamson, 2008).

## Conclusion

Although there has been much research on government support for exporting activities in China and other emerging economies, considerably less attention has been given to government subsidy activity for imports by Chinese enterprises, particularly with respect to technology importation and indigenization. The government in China concurs with the importance of innovation and technology development, whether locally developed or externally sourced (Ahlstrom, 2010; Zhang and Xu, 2016). This study proposes that the government subsidies as the source of financial resources can produce a significant increase of imports, as a firm is more likely to engage actively in importing technology-related products which are conducive for China’s development and further innovative activity. However, we also found that increased state ownership in firms negatively moderated this relationship and it can negate the effect of government subsidies on technology imports. Interestingly, improved formal regulatory institutions also negatively moderated the relationship as well. Advanced local (provincial) regulatory institutions suggest a possible substitutional effect over the compliance effects; that is, the firm concerned will be more likely to fill in the void by using domestic suppliers for strategic resources, thus reducing the incentives to import them directly from abroad.

Different levels of institutional development exist in China as a nationwide government policy may be selectively applied to firms around the country. This certainly can have an impact on technology imports and thus create difficulties for firms located in the western parts of China, which are less developed and have experienced less legal and economic reform. The government in China is concerned that its policies (laws and regulations) can be uniformly fulfilled down to the grass-roots level so that the development of regulatory infrastructure can be inclusive and pervasive, especially given its influence on technology importation and indigenization.

Can government sustain China’s import growth in recent years? Our answer is as follows:

- Government-initiated subsidies directly fill in those institutional voids and significantly encourage more imports of strategic resources.
- This effect is moderated by state ownership in firms and local regulatory advancements.

In other words, other conditions being constant, it depends, to a large extent, on how much the subsidies can provide and to what degree the government will concurrently reduce its control over business enterprises. The interaction among subsidies, less heavy-handed government control and imports to China are important and may have a role not just in contemporaneous economic performance and poverty reduction but also in the longer-term competitiveness of indigenous firms (Bruton et al., 2015). Our theoretical framework reveals that such moderating effects stem from the simultaneous impact of efficiency and institutional characteristics. In sum, if the current study were to provide one takeaway message, we would like it to be that the explanatory power of institutions is further improved when institutional theory is integrated with efficiency perspectives and the more nuanced identifications of local or regional institutional differences.
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Building (or not building) dynamic capabilities: the case of Italian subsidiaries in China and India

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Abstract

Purpose – The purpose of this paper is to examine the process of capability building at subsidiary level and the forces preventing such process. The paper discusses and tests three propositions governing this process.

Design/methodology/approach – This research is based on multiple case studies. A case study research is most useful when addressing issues about which little prior theory has been developed or empirical evidence collected.

Findings – Subsidiaries in Asia operate in a way substantially different from those in the West. Specifically what ways do market specificities in Asian economies serve to either inhibit or positively encourage the development of a subsidiary? What are the circumstances which could induce subsidiaries to outsource production?

Research limitations/implications – Future research should explore the regional effect on MNE subsidiary types and different flexibilities exhibited in the value chain. What are the specific aspects (macro and micro) that explain variations of business strategies at subsidiary level both over time and between countries?

Practical implications – Multinational enterprises (MNEs) should be aware of the strong potential for capability development at the subsidiary level. This increased awareness ought to induce consideration in MNEs about how best to encourage such know capability development and how to leverage these capabilities for a better MNE performance.

Social implications – Managers who knew the host country languages and culture, and have outward-looking attitudes, are in advantageous positions to learn about new opportunities.

Originality/value – The paper offers empirical insights into the state and drivers of subsidiary performance in Asia. Specifically it shows how neglect of external conditions can act to open people’s eyes and foster a capability-building process within subsidiaries.

Keywords Dynamic capability, Case studies, Subsidiary, Joint ventures, External conditions, Small-size MNE

Paper type Research paper

What determines dynamic capability building (or not building) by a subsidiary of a multinational enterprise (MNE)? Being able to build capabilities in a dynamic environment requires the ability to develop, integrate and, if necessary, reconfigure sets of skills, assets and routines capable of addressing an evolving context (Teece et al., 1997). Most of the existing literature has looked at host country resources and subsidiary-specific advantages (Birkinshaw and Hood, 1998; Rugman and Verbeke, 2001; Schilke et al., 2018); MNE-specific advantages and their (relatively) easy transfer across borders; headquarter’s behaviour; and the ability of subsidiary management to identify changes in the environment, build opportunities and develop sets of capabilities they consider strategic (Helfat and Peteraf, 2009; Teece, 2014; Teece et al., 1997). The particular literature on subsidiary capabilities has predominantly focused on knowledge transfer from the parent, and on subsidiaries
becoming centres of excellence via engagement in advanced research and innovation (Ambos et al., 2010; Ambos and Reitsperger, 2004; Andersson and Forsgren, 2000; Frost et al., 2002; Ghauri et al., 2005).

We take a different approach in that we are interested in and why seemingly minor technological changes, changes in organization (Crossan and Apaydin, 2010; Damanpour and Wischnevsky, 2006) and in management attitudes (Birkinshaw et al., 2008; Vaccaro et al., 2012) and techniques (Ahlstrom, 2010, 2014; Bloom and Van Reenen, 2006), can have strong effects on organizational and subsidiary competitiveness. More specifically, we study how subsidiaries build these capabilities, ensure they evolve in changing environments and analyse a sequence-building process consisting of successive phases: sensing, seizing and transforming. Each phase is related to a set of dynamic shaping factors. These factors are combinations of external triggers, and internal enablers such as investments in specific assets, organizational designs, leveraging on local resources and effective governance routines (Donada et al., 2016).

We use an integrative perspective that requires explicit consideration of local resource organization and external influences, but also taking into account how subsidiaries are integrated within global MNE networks and how this might result in giving the networks stable competitive advantages. To better understand the role of subsidiaries in the MNE innovation process, the article draws on case studies of 16 Italian MNE subsidiaries located in China or India and discusses their evolution in relation to a capability-building process. China and India are countries characterised by very different cultures, institutions and policies, which in their effects—such as in respect of a lack of effective demand, high transport costs or high import duties—at the micro level put in danger our subsidiaries’ intended roles and undermined their ability to carry out their intended tasks. In response, some subsidiaries undertook initiatives to escape their difficult situations, namely, leveraging on capable management, building new capabilities to improve their external positions and entering the value chain as autonomous players.

The existence of imperfect markets, particular and different social norms, and the need for personal contacts, as well as direct knowledge of a host country, encouraged subsidiaries to move towards autonomy (Meyer et al., 2011). Local managements assumed entrepreneurial roles and subsidiaries took advantage of local resources, re-engineered production and, at the same time, reinforced their positions within their MNE networks. But this did not happen in all our cases. For example a lack of standards in the host country and difficulties in enforcing quality controls convinced one HQ that subsidiary-level initiative might undermine the MNE’s overall reputation, and so could not be allowed to proceed. Other subsidiaries, mainly component producers, went on working according to the headquarters’ requests, and were not given much autonomy because they did not need it.

As such, this article seeks to make three contributions. First, it enriches our understanding of MNE strategy through a conceptual analysis of the relationship between subsidiaries and MNEs when subsidiaries are engaging (non-engaging) in capability building. Second, it identifies the process through which the role of the subsidiary may change, how this change may include the development of capabilities to leverage the local business context and how this change may co-exist with the general strategy of the MNE. Third, it discusses how lack of standards in the host country and a lack of reliable suppliers might condition the behaviour of a HQ and thereby limit subsidiary action. These distinctions are often overlooked in large-scale surveys and variance studies (Ambos et al., 2016) and are a contribution that a more finely grained qualitative study can make to international business studies (Dougherty, 2018; Witt and Redding, 2013).
The remainder of the article is organized as follows. In the second section, we discuss the role of subsidiaries in MNE organization. In the third section, we review literature on dynamic capability development among subsidiaries and how they may change their contribution to the success of an MNE. In the following sections, we present several empirical case studies and discuss the main results of the analysis, building upon capability theory and the literature on entrepreneurship and internationalization. Finally we highlight the main results and then conclude, commenting on the implications for management practice and future research.

**Foreign markets, resources and subsidiary strategy**

The global economy is characterized by a geographical dispersal of sources of innovation, and by possibilities to organize production in ways that benefit from being able to access local networks of suppliers that can offer components or materials at cheaper prices (Nguyen and Rugman, 2015). The economic literature suggests various ways of looking at the strategic roles of subsidiaries. While, initially, subsidiaries were simply considered to act as instruments of their parent MNEs, having neither autonomy nor capacity for carrying out strategic actions on their own, subsequent research has shown the reality to be far more complex. It has been found, in fact, that subsidiaries have often operated with a greater degree of freedom than is officially held (Andersson et al., 2007; Mudambi and Navarra, 2004). In short, the modern MNE is now increasingly considered a differentiated network, where entrepreneurial initiatives are expected to originate in the subsidiary itself, facilitated by a favourable corporate context. Consequently, it is important to reflect on the possibility for dynamic capabilities to develop at the subsidiary level rather than just at corporate level, and/or to consider to what extent these levels interplay (Delany, 2000).

Subsidiaries can take advantage of the socially embedded capabilities of local actors, reconfigure local resources and create new routines through which managers and others integrate these advantages into the MNE’s network (Lazarova et al., 2017). In the light of the management and strategic challenges faced by US MNEs, Bartlett and Ghoshal (1989, 1998) defined subsidiaries according to their access to country-specific location advantages, on the one hand, and to their internal competences, on the other. They developed an influential typology based on two dimensions: the strategic importance of the local environment (location advantages) and the competences (firm-specific advantages) held by the subsidiary, whether transferred from inside the MNE network or developed autonomously. Subsidiary competences may be in technology, production, marketing or other areas. How a subsidiary fares, jointly, on these two dimensions will then determine its relative degree of autonomy, and is critical to its performance. On the basis of this model, an enormous literature bank on the topic has developed (Ferraris, 2014; Rašković et al., 2014; Rugman et al., 2011).

The movement of MNEs from advanced into developing countries, and the organizational learning therein, is discussed by Cuervo-Cazurra and Genc (2011) and by Trapčzyński and Banalieva (2016). Other works have focused on the roles and development of sourcing strategies and their relationships with subsidiary profitability for MNEs in Asia. Country-specific location advantages can be difficult to harness in markets culturally highly different from Western markets, and in some sectors very weak (certain markets need to be created), and difficult (Ahlstrom et al., 2014; Collinson and Narula, 2014; Kotabe and Zhao, 2002; Verbeke and Yuan, 2016; Zhan and Luo, 2008). Different social structures, implicit regulatory regimes, dispute-resolution systems anchored in local customs and traditions and poor-quality definitions among local suppliers, make the implant of subsidiaries a difficult and risky business (Peng et al., 2008). MNEs are attracted to Asia by the availability of cheap resources.
and rapidly growing markets, but the transactions costs associated with engaging in these markets are relatively high, particularly for small-sized firms that do not have access to relevant information because of language and institutional barriers (Elg et al., 2017). Subsidiaries in these countries are expected to act entrepreneurially Birkinshaw and Hood (1998): new markets must be created, resources must be searched out and organized and implicit rules teased out, and for this, there needs to be an adequate mandate and positive support from corporate headquarters (Taggart, 1998).

Building dynamic capability at the subsidiary level

Dynamic capability theory highlights a firm’s ability to reconfigure its asset structure as being the key source of its sustainable advantage (Teece et al., 1997). It is not only the bundle of resources that matter, rather it is necessary to consider organizational resources beyond their role as static sources of competitive advantage, as the firm faces continuous changes in the environment (Ambrosini and Bowman, 2009; Teece et al., 1997; Winter, 2003). Firms that reconfigure their resources faster than their rivals to capture newly emerging market opportunities are more likely to achieve superior performance; competitive superiority is sustainable if advantages that are built are distinctive and difficult to replicate.

Dynamic capability is sometimes considered to be an elusive and difficult-to-operationalise concept (Eisenhardt and Martin, 2000; Pavlou and El Sawy, 2011; Ridder, 2012). Teece et al. (1997) framed the dynamic capabilities perspective broadly as one of processes, positions and paths. A firm pursues paths or strategic opportunities through the use of managerial and organizational processes that are ways of coordinating and combining patterns of activities, shaped by the firm’s position, that is, its existing asset base. Teece (2007) then provided a three-phase sequence model of the dynamic capability-building process where each phase, namely, sensing, seizing and transforming, corresponds to a purpose and is conditioned by a set of factors that shape the process of capability building.

Sensing refers to the recognition of market and technological opportunities outside the firm. Seizing refers to the act of mobilizing the firm’s resources to capture value from those opportunities. It requires the ability to combine knowledge from both inside and outside the firm’s boundaries so that the resources which have been identified as relevant for exploiting the new opportunities can be used with others in a complementary fashion, thereby realizing all their potential. Transforming refers to the continuous alignment and realignment of specific tangible and intangible assets of the firm, in response to the dynamic evolution of the market. This requires that managers constantly streamline, improve and alter the firm’s organizational practices. Examples of transforming are product improving, increasing the efficiency of internal processes and outsourcing. Product renewal can require new pools of technical and organisational knowledge to provide the (modified) product with new functionalities (Lane and Maxfield, 2009). A more radical type of transformation involves firms moving to new products and entering a new value chain altogether (Zhang and Pearce, 2010).

Each phase, namely, sensing, seizing and transforming, corresponds to a combination of external triggers and internal enablers, including agent skills and resources that evolve according to the changing environment. External elements comprise institutional, industry, market and technological factors that characterize changes in the environment from which resources are originally drawn. External factors can be a driving process to dynamic capabilities and are considered very important for authors such as Eisenhardt and Martin (2000), Zollo and Winter (2002) and Ridder (2012). Therefore, we can state the first of three propositions, which will be assessed through our interviews and case studies:

P1. External conditioning elements can be a trigger to capability development.
Despite the acknowledged importance of external factors for capability development, they have not been explicitly addressed in empirical studies (Eriksson, 2014). In contrast, internal factors, acting as enablers, have been more extensively studied. In the case of subsidiaries, internal factors could include investments in outsourcing, organizational designs favouring access to complementary resource endowments, ability to exploit the rapid growth of demand and assimilate new information about consumer tastes and governance mechanisms able to organize HQ support (Vannopoucke et al., 2014). With respect to external factors, subsidiaries are strongly influenced by specific characteristics of the host country, implying a need to become fully embedded in local culture and practices. In MNEs, there has been a widespread trend in management practice to increase subsidiary empowerment, with subsidiary managers being encouraged to act entrepreneurially, and to take advantage of host country specificity (Cuevo-Cazura and Genc, 2016; Ferraris, 2014; Mudambi and Navarra, 2004; Rašković, 2014). Subsidiary managers are given the ability to select new assets and to reconfigure the asset structure of the subsidiary, so that the subsidiary can develop capabilities which drive development (Birkinshaw and Hood, 1998), improve performance (Subramaniam and Watson, 2006) and influence the MNE as a whole (Augier and Teece, 2009; Narayanan et al., 2009). Therefore we propose:

\[ P2. \] The more subsidiary management is embedded in the host country, the more it can contribute to capability building.

A number of articles have examined how the success of foreign subsidiaries has depended on the contributions of individual managers working locally (Ahlstrom et al., 2008; Bruton et al., 2000; Macedo-Soaresl and Schubskyll, 2010). Dynamic capabilities reside in a large measure with the subsidiary management team, but are impacted by the organizational processes, systems and structures that the MNE has created to manage its business. This stream of research has contributed to the insight that HQs should work closely with their subsidiaries to develop appropriate systems of coordination, evaluation and knowledge sharing between HQs and subsidiaries and among the subsidiaries themselves (Achaouacou et al., 2014; Pu and Soh, 2017). At the subsidiary level, a critical managerial task is to develop interaction between the leveraging of the local resource base (including the use of outsourcing and engagement in distribution in the host country) and the MNE’s specific advantages. Small-size subsidiaries leverage on MNE specificities and brand names, but there are also subsidiary specificities that can contribute to the MNE’s long-term success. The weight of the subsidiary in the network, its initiative-taking and its profile building increase the supportive attention of the HQs and are important to smoothing the process of capability building. From this we can state our third proposition:

\[ P3. \] Subsidiary strategic intent and HQ support are important elements in capability building at the subsidiary level.

**Research methodology**

This study is based on qualitative field research carried out in and after 2009. It involved interviews with managers of 16 subsidiaries in China or India, additional interviews at the HQ level, discussions with managers of public and private support institutions and the study of relevant documentary material.

Qualitative data and methods are most useful when addressing issues about which little prior theory has been developed or empirical evidence collected (Hinkin, 1998; Anteby et al., 2014).
Such is the case when it comes to understanding dynamic capabilities and how they can develop at the subsidiary level. The collection and analysis of data are able to consider many variables of interest, and take into account multiple sources of evidence, as well as address a range of theoretical propositions. Given the novelty of the field of study, the methodological choice of carrying out multiple case studies was appropriate, as it permitted the checking for consistency of similar results, and allowed the researcher to make comparisons and identify patterns across cases (Eisenhardt, 2014; Yin, 2014).

**Purposeful Sampling.** The managers of the subsidiaries interviewed were initially identified from contacts with their parent HQs. Initially, 13 interviews were conducted with subsidiaries belonging to MNEs. Suggestions from subsidiaries in China subsequently increased the sample size to 16 firms. Sampling was purposeful (Coyne, 2008): the selected subsidiaries shared a certain number of features, and the macro and micro economic conditions in both the locations of the MNEs’ HQs and in the markets where the subsidiaries operated could be adequately compared (Ragin, 1987; Buckley, 2016). The subsidiaries in our sample were established as green field investments in China or India by small- or medium-sized manufacturing MNEs after the year 2000. Their HQs were in Italy (Veneto), and all operated in traditional mature markets.

Thirteen of the subsidiaries were 100 per cent controlled by an Italian parent company; the remaining three had participation by Chinese firms. The parent company was in all cases but two, family-owned. Seven of the subsidiaries belonged to medium-sized groups. These included a mechanical engineering group that had five subsidiaries in China and India, a cotton textile group and a technical textile group. Of these three groups, the first two were quoted on the Italian stock exchange. All three groups had subsidiaries in several countries. The remaining nine subsidiaries belonged to small groups, with each group having a single subsidiary in China or India, although all the HQs already had international expertise and were following a strategy of continuous geographic expansion. All the MNEs were challenged by their entrance into Asian markets which presented them with an entirely new environment.

**Interviews.** Initially, various Veneto-based HQs were asked for permission to visit their foreign plants and to carry out detailed interviews with local managers. Not all agreed to our request: reasons for refusal related to difficulties connected to subsidiary reorganization, pressure and consequent lack of time (two firms); general lack of time (one firm); confidentiality problems (two firms); and difficulties in organizing the interview with the subsidiary (one firm). Refusals by HQs were for subsidiaries in various sectors (one in furniture, three in mechanical engineering and two in garments), and of various dimensions, and occurred regardless of subsidiary performance. Subsidiary self-selection can introduce bias, but we did not become aware of anything in particular influencing the willingness to participate in the study (Mahoney and Goertz, 2004).

Semi-structured interviews were conducted in Asia and in Italy in two waves between October 2008 and June 2009. All interviews were conducted in either Italian or English. Each interview lasted at least 2 h, in many cases half a day, and in all cases included a tour of the factory, both in Italy and in Asia. In the course of the interviews we collected qualitative and quantitative data. Interviews were conducted by a two-person team, with one researcher (this author) conducting the interview directly while the other recorded notes, and both, at the end of each interview, shared their thoughts and carried out a detailed write-up for each subsidiary. Prior to the interviews, we had drawn up an ideal-type classification of factors suggested by the literature to be important for fostering the development of dynamic capabilities, both in the spheres of production and product commercialization, with which we could compare our findings.
The data collected reflect the perspective of the subsidiaries, which is an often-neglected point of view. But we are fully aware of the role of head office assignment, and of the subsidiary as part of the structure of a MNE, and we interviewed several HQs as well. Interviews at HQ level related to 13 of the 16 interviewed subsidiaries, and took place after having conducted the interviews at subsidiary level. The remaining three HQs repeatedly delayed the arranging of interviews and were dropped (Table AI). These cases are of no direct relevance here as these firms were not developing dynamic capabilities.

Following Mintzberg’s (1979) suggestion, we entered the organizations with well-defined research questions derived from the perspective of capability theory. Our two key overarching questions were:

**RQ1.** How have external triggers, associated with changes in macro-economic and industry conditions, affected managerial policy at subsidiary level?

**RQ2.** How did internal enablers evolve, including people’s skills and missions, dedicated organizational structures, resources and tools?

With the above in mind, the interviews with subsidiary managers were organized around four sub-blocks of questions (Figure 1). The first two blocks aimed to collect information related,
firstly, to the subsidiary's history, objectives, location and resources (including time in existence, its mandate, tools and possible difficulties), second, to the roles and experiences of the interviewed managers (including past experience, relations with HQs, knowledge of local language, local social relationships and embeddedness). The second two blocks contained questions aimed at eliciting the occurrence of strategic change, if any. This included understanding the processes through which strategic change was being implemented with respect to: technology (including the development and use of technical expertise and the reconfiguring, if any, of work organisation); the occurrence of, and relationships with, networks of local suppliers (including those providing raw materials and components); and the character of and changes in sales and marketing strategies (including in respect to addressing markets, a subsidiary's sales organization, lead times in response to orders, the nature of product competitiveness and more).

Information from the interviews with subsidiaries was triangulated (Buckley, 2016) with knowledge acquired from more interviews with managers at HQ level (Table AI). These secondary HQ interviews were personally conducted by the author and occurred subsequent to the subsidiary interviews. In two cases, these HQ interviews provided new information. But, generally, HQ managers tended to minimize any differences in views to those of the subsidiary managements, and presented current situations as if they had resulted from the smooth operation of a planned turn of events. In one case, the HQ management expressed regret that we had been given confidential information, which in our view confirmed the open behaviour of subsidiary management towards the interviewing team.

Direct information from the interviews was complemented by secondary data collected from a large range of sources (Figure 1). We organised interviews in China with two Italian Government agencies that have the role of supporting Italian firms in Asia (The Italian Chamber of Commerce and the Italian Trade Institute), and also with two private firms acting as facilitators for Italian firms wishing to establish themselves in Asia. Additionally, we had follow-up contacts with several people we interviewed, and carried out systematic reviews of press releases (both Italian and local press) and company material (such as balance sheets).

**Processes generating dynamic capabilities and subsidiary roles**

Our qualitative analysis looked at the subsidiaries within both the MNE network and the local business context. This allowed us to identify sensing, seizing and transforming phases, and related them to external triggers and internal enablers (Donada et al., 2016).

**Case studies**

Each case had its own idiosyncrasies, with each subsidiary facing a different set of contingencies and constraints. Our first step in the analysis was to read through the interview texts and aggregate the cases into three groups. The composition of the groups was discussed several times during the process. The groups decided upon were the following:

**Group 1**: In a first group, composed of four subsidiary firms, dynamic capability building was seen by local managements as a potential solution to saving their firms from failing situations caused by planning errors by HQs which had from the very beginning relegated their subsidiaries to marginal positions. The managers of the firms of this group perceived capability building as a deliberate action out of this situation. The group included a firm that was prevented by its HQ from building capabilities, although it had the opportunity to do so.
The firms were:

Subsidiary A, established in China in 2004 to act as a commercial representative of an Italian brand. Its parent company is a manufacturer of office furniture, a world leader in the design and manufacture of office partitions. Subsidiary B, opened in Nanjing, China, in 2005, belonging to an Italian fittings producer, a world leader in the fittings sector for plumbing and heating (for building companies). It has other plants in Italy, Mexico and Romania. Subsidiary C is an assembly plant in China belonging to a welding machines manufacturer which produces welding machines for plastic piping companies. Firm D, a subsidiary of a textile manufacturer, is a producer of special yarns for use in special-purpose applications (ranging from biomedical applications to Formula 1 overall) and filtration fabrics (used in furnaces). It had located to China in response to pressure from its main customer.

Group 2 consists of two firms. The managements of both their subsidiaries, E and F, had broad mandates and subsidiaries pursued successful strategies from the start, taking autonomous actions to make the most of new market and production opportunities. In both cases HQs encouraged local initiative. Both MNEs were joint stock companies and were of larger size than those in Group 1; both MNEs had several subsidiaries abroad and previous international experience, and their investment was substantial.

Firm E was a subsidiary of a producer of cotton textiles, and Firm F belonged to a producer of mechanical components for agricultural machines and earth movers. Firm E was located in Asia to take advantage of local raw materials (cotton) and the low cost of labour. The creation of Firm F came about as a result of a need by the parent to respond to pressure to move to Asia from its main customer (Caterpillar), which was planning to establish a shorter time to market and inaugurate a more efficient replacement policy for the Asia region.

Group 3. A third group of 10 firms is a cluster of subsidiaries which did not wish to develop dynamic capabilities. Most of them were component producers which were established in Asia to produce parts at low cost that were sent back to other units of their MNE networks. Several of them operated on rented premises with a limited investment and a short-term prospect. For these subsidiaries, production simply proceeded in accordance with headquarter plans and local management concentrated on smoothing industrial relations, educating immigrant workers and testing incoming components. These subsidiaries had no incentive to target the local sales market because their involvement in production was limited to producing well-defined, rather simple, semi-manufactured components at low cost; their tasks were strictly assigned by their HQs that continuously interacted with the subsidiaries. These subsidiaries were given little autonomy because they did not need it and exhibited only ordinary capabilities.

The focus in this article is on those subsidiaries which developed or wished to develop dynamic capabilities, namely, those in Groups 1 and 2. Teece (2007) offers an important contribution with regard to the antecedents of dynamic capabilities. He refers to factors or conditions that affect the emergence of capabilities or inhibit their development. These can be internal or external to the organization (Winter, 2003; Ambrosini and Bowman, 2009) and have a micro and/or a macro foundation. Although the antecedents of each capability-building process differ, Teece (2007) argues that capability building always includes a well-defined entrepreneurial component. In the next section, we discuss the antecedents of the capability-building process for Groups 1 and 2, looking at both external triggers and internal enablers.

Group 1, A, B, C and D

Antecedents. External triggers. The aim of A, at the time of its formation in 2004, was to sell in Asia products imported from Italy. This was a complete failure because the Italian
product was too expensive, burdened by import duties and high transport and production costs. Subsidiary B produced brass fittings. It was established to carry out contract manufacturing for its parent, importing forged brass rods of a required standard that were not available locally, and then sending a finished product back to the parent and/or selling it on the host market. However, production was not profitable because the low cost of energy did not compensate for the import duties and the quality premium was not appreciated by local customers. C and D similarly relied on low energy costs, as well as low labour costs, but these did not compensate sufficiently for the high duties on the imports from Europe of raw materials in the case of D and components for C.

At the time of the interviews, recently appointed Italian managers were in charge in all the four subsidiaries, all located in China. All faced external factors not sufficiently accounted for in their HQ plans (namely, transport costs and duties) and were all aware that it was necessary to take initiatives to escape from their failing situations. The failing situations were also eye-openers for the HQs, which in the cases of A, B and D meant a risk of losing the initial substantial investments (C, however, operated on a small scale on rented premises, Table AI).

All the subsidiary managers proposed to turn to using local resources and to sell in China. In the words of the senior manager of Group A:

> When I arrived the turnover was almost nil, the challenge was to organize production locally so as to produce at competitive costs an innovative product, that would place the firm on the competitive edge of a market that was flourishing in Asia at that time. Our office partitions are chosen by architects and clients that have designed the office space of some of the most prestigious buildings in the contemporary architectural landscape.

**Internal enablers.** The initial mandates of the four subsidiaries, A, B, C and D, provided limited scope for action. Set up simply to supply their parents, the scope for the subsidiaries’ purchasing and sale departments was very small. A change in scope accompanied the capability-building process. The manager of C, who had lived long in Asia, and who knew the market and the language, rapidly identified sales potential in the local market, and then responded to the opportunities with a policy of product redesign and differentiation, plus drastic cost reduction. Components previously imported were sourced locally. This latter was a necessary step for being competitive on the local market – in China do as the Chinese do – but it was not an easy step. The manager told us:

> I had to rely on small local producers, mainly family businesses, as my request was limited. At the beginning I received components that were very roughly made, plating was very bad, and returned items reached peaks as high as 80 per cent; and the temptation to abandon China was strong.

At the time of the interview, all components were purchased locally, except for a special hydraulic cylinder that was available only for bulk orders, and was imported. Subsidiary A moved along similar lines. Local subcontractors supplied almost all components, delivering a considerable cost reduction, Firm B also turned to the local market to buy the brass rods that were previously imported. The non-compliance of brass rods to the European strictest standard did not impede selling on the host market, where such standard was not requested.

All four subsidiaries experienced problems of poor quality from suppliers, as local markets for intermediate goods were poor. Firm A faced up to it by imposing strict quality controls, with suppliers being required to work on the factory premises when needed. C’s high rate of rejection of sourced parts was addressed by the manager reinforcing personal ties, emphasising loyalty and trust with the local suppliers (Hitt *et al.*, 2002; Williams and Du, 2014).
Addressing the local market directly was possible if the subsidiary did not interfere with the parent. Enterprise A decided to manufacture an autonomous line of products, under its own brand, FaramGreatWall, a policy pursued also by the manager of the welding machines firm C that also launched a new brand, NewRitmoAsia. The management of the fittings producer B decided to address a new market by making automobile and maritime brass components, as well as articles tailor-made to specific customer demand and abandoned the parent’s traditional market, construction fittings; at considerable effort by local management, a new functionality was added to an existing product (Lane and Maxfield, 2009) which increased considerably its value.

The HQs supported a movement towards autonomy for three of the subsidiaries. For example, in the case of C, its HQ sent a capable technician, able to reorganize the production process using local components. The technician felt he had more freedom of action at the subsidiary level, and he introduced a new ergonomic design (a new handling mechanism); it was a success and it was subsequently adopted by the HQ for products sold in Europe. Also, the reorganisation in A was supported by a director of production sent by the HQ under a four year contract, who proved very capable, and who operated with the help of a locally staffed research unit.

In contrast, Firm D provides a demonstration “a contrario”, where a subsidiary was prevented from developing dynamic capabilities thanks to opposition from its HQ. Moving production to Asia was requested by an important US customer that pressed the Italian MNE for a reduction in lead times. Additionally, a plant in Asia could benefit from low energy costs, closer proximity to the North American market and an undervalued Yuan. In 2008, the MNE parent company experienced a drastic fall in demand from its American customer, while the Asian market was expanding. The Asian subsidiary management sensed the possibility to sell locally but had been given no powers of discretion from their HQ: a possible autonomous local initiative was perceived as conflicting with the parent’s global strategy. Our interview with top management at the HQ was clear on this point. Selling in Asia would have meant competing locally and, because of lower standard requirements, it would have been necessary to abandon the high-quality parameters established by the HQ – parameters which had given the yarns produced by the company a worldwide reputation. The HQ thought a loss of reputation would ensue in the international market and that this would undermine the MNE’s international position. It was felt that the overall balance of benefits and costs would be negative over the long run (Kaplinsky and Farooki, 2010; Puck et al., 2018). The MNE was a family firm, and this result is entirely consistent with the family firm literature which notes that family leaders have to protect their companies’ reputation and care about their network support (Schnee, 2017).

Process of capability building. Our case study findings can be used to illustrate the division of the capability-building process into a succession of three phases: sensing, seizing and transforming.

Firms with sensing mechanisms are said to have “analytical systems to learn and to sense, filter, shape, and calibrate opportunities”, supported by individual capacities (Teece, 2007, p. 1326). In all three of the cases of firms in Group 1 which developed dynamic capabilities (Firms A, B and C), local management sensed both new sales opportunities and supply possibilities. Then a seizing phase exploited and enriched knowledge developed during the sensing phase, and laid the foundations for future capability building. During this seizing phase, managements of A, B and C set up procedures to evaluate and select local suppliers and codified them in operational plans. It was a matter of establishing the right conditions for internal collaborative work at the subsidiary level, and also between the subsidiary and the HQ (Teece, 2007), and for combining internal and external abilities to
overcome technical constraints, and to sort out quality deficiencies, a frequent problem of outsourcing in the host country. In the three cases under study, the local embeddedness of the manager in charge of the subsidiary proved crucial; in small-size subsidiaries, the manager acts frequently as an operational agent, is present “in the field” and positively contributes to significant experiences that open doors to future changes (Stensaker and Langley, 2010). Seizing opened the way to the transforming phase where the considered integration of assets, skills and routines provided the basis for the firm’s capability. The new capabilities were aligned with the strategies of the subsidiaries and their parents, particularly when it came to selling on international markets and for Firms A and C in respect of product market differentiation.

Group 2: E and F

Antecedents. External triggers. For these two subsidiaries, the external triggers encouraging moves towards capability building were mainly macroeconomic in nature. In 2009, manufacturing industry globally passed from a phase of financial market turmoil to one of global recession, and profitability rates declined abruptly. By the early years of the century, the North American and European manufacturing industries had entered an era of outsourcing, in search for low-cost resources, and Asia was one of the main producing locations. During the same years, demand in Asia was growing very fast (IMF, 2009). Some subsidiaries, set up in Asia as outposts to produce at low cost for their parents or directly for Western customers, experienced declines in demand to well below their production capacities, and were induced to turn to growing domestic markets. This was also the experience of Firms E and F.

The manager of F told us:

We suffered a drastic decline in orders from our European customers, and we saw a huge gap in the shirt segment in the Indian market as the customer’s choice is limited to purchasing from brands that are, let’s say, not specialists in shirt making. Today Indians are also demanding shirts at the highest level.

Firm E also suffered an abrupt decline in demand, this time from its most important customer, Caterpillar. Caterpillar had urged its MNE parent to move to Asia to shorten the time to market and provide efficient replacement, but demand was quickly revised downward, and production was far from filling the subsidiary plant’s capacity and losses piled up (the subsidiary’s turnover declined by 52.5 per cent in just one year, 2009). The subsidiary, whose investment was substantial, turned to the local market of earth moving solutions and agricultural tractors.

Internal enablers. The HQs soon realized that their respective subsidiary’s specialized resources, their expertise, their knowledge of the local market and their organizational capacity could become part of their MNEs’ specific advantages and could compensate for the decline in international demand. Both subsidiaries, E and F, sought to compete on the local market by engaging in joint partnerships, respectively, with a local firm and an international one. F entered the market for shirts and, to build an efficient sales network, a second-tier subsidiary, Laguna Clothing, was founded as a joint partnership between the Italian MNE and a shirt-making firm, part of the Aquarelle Group (Kalidasan, 2015). Similarly the management of the China subsidiary E became aware of the potential of the local sales market, and the subsidiary addressed gradually the new opportunity. At the time of the interview, domestic sales were delegated to a Chinese dealer and recently the subsidiary entered a joint venture with a local manufacturer of agriculture machines.
Both these subsidiaries leveraged on the reputation of their parent MNEs’ brands for Italian quality and design. For the two subsidiaries in this group, an initial degree of autonomy was agreed with their HQs to enable local managers to make the most of host market dynamism and to make some minor adaptations of their products to local conditions.

With the two firms’ new marketing policy, the organization of their production was transformed to provide the subsidiaries with a durable competitive advantage on their host markets. Firm E sought to make cost reductions by sourcing cheap raw materials and low cost labour, and exploiting low-cost energy (that the subsidiary was allowed to produce directly). The management of E identified a new product, high-quality shirts, a product entirely new to the parent MNE. Initially, shirts were manufactured in Bangalore in a single plant run by the joint venture Laguna Clothing, and in 2010, a new plant was added, bringing the total capacity to 15,000 shirts per day, using the fabrics produced by the Indian sister textile plant, as well as those of other producers.

The management of the Chinese factory F identified a local market for transmissions for agricultural machinery and seized the opportunity by identifying subcontractors to supply high-quality gears. The factory set up a quality department utilising sophisticated tools, and 40 per cent of the incoming gears were subjected to direct testing to ensure quality standards. This was a new practice for the group, as its HQ normally relied on certified suppliers to strictly observe standards, a practice not possible in China. The management of the subsidiary became aware of the potential of the local sales market but also of the difficulties in entering the market directly. The making of the most of the new opportunities was delegated to a Chinese dealer, Guangzhou Match, with favourable results. Information we obtained from the MNE’s headquarters in 2010 indicated that by that year for the local subsidiary, the value of turnover due to sales in the Chinese market had reached 27 per cent of total turnover. In comparison, at the time of our visit in 2009, the proportion was only 2 per cent. The decision to delegate the sales function to Guangzhou Match was agreed between top managers at HQ and the subsidiary management, with the latter becoming positively involved in making the most of the new market opportunity. Last year, 2017, the subsidiary entered a joint venture with Shandong Juming Group, to establish a joint partnership, NewCo Agrimining Agriculture Equipment Co. Ltd. that intends to buy all the subsidiary’s production.

Particularly indicative of the importance of external factors, as well as the degree of development of the host market, are our findings with respect to the strategy followed by the Chinese subsidiary F’s parent MNE, which also had established a subsidiary in India. Both Indian and Chinese subsidiaries produced basically the same component (tractor transmissions), but in different market contexts and with different social environments. In China, accessing local supply markets was considered a suitable choice, although with the subsidiary exercising tight quality control. In India, however, the MNE developed a vertically integrated strategy, purchasing locally only raw materials, while making all components in-house. The MNE’s HQ had decided to move to Asia with two different strategies tailored to the different host countries, China and India. The different production structures for the same product, but in different markets, show that the level of development in a host environment directly influences value chain flexibility, as a more developed market allows a subsidiary to concentrate on its core business while requiring less fixed investment (Meyer, 2006).

Process of capability building. The two subsidiaries in Group 2 went through the three phases of sensing, seizing and transforming. The sensing phase was a phase of growing awareness, in which macroeconomic external triggers were extremely influential. The macro-triggers had a micro-counterpart in management individual capacity to shape best
exploitation of opportunities. The subsidiaries' managements were able to identify changing needs, and what was required for tapping local resources, such as raw cotton and gears (Teece, 2007). They were also able to implement learning mechanisms targeting local markets.

In the phase of seizing, the subsidiaries' management were able to set new marketing goals and codify them in operational plans (Teece, 2007). Local management ascertained customer needs, identified new product ideas, designed product protocols (including quality control procedures) and developed plans to manufacture and launch new products. As suggested by Augier and Teece, the local management played a crucial role in articulating goals, helping evaluate opportunities, established the right culture and built trust (2009, p. 417). Both sets of subsidiary management embarked on new marketing policies that were understood and accepted by their HQs, and both then followed up with a policy of encouraging the use of local resources (such as raw materials, energy and components) to be competitive on the host country market. In the case of Firm F, pressures towards raising quality were strong and local teams worked together with the HQ to build a quality research centre and staff it. The ability of the firms to achieve sustainable competitiveness in the sales market was reached when the firms entered joint ventures. For E, the motivating rationale was achieving resource complementarities; for F, it was more a case of recovering lost magnitudes. E was quicker to address the new target; for F, progression was more gradual.

In the cases of E and F, transformation came through the development of joint ventures (Zhan and Luo, 2007), supported by their respective HQs, but operating and developed at the subsidiary level. The extension of the dynamic capability literature into the field of joint ventures introduces a new level of analytical complexity. This arises from the fact that joint ventures, as separate and living entities, can develop their own organizational structure and culture, which can then significantly affect the development of their dynamic capabilities. Further investigation on this is left to further research.

Results
The findings from our case studies have been found to be largely consistent with our propositions set out earlier. P1 stated that external conditions can be influential in triggering capability building. We saw that the diverse development of subsidiaries due to differences in external conditions was evident when comparing subsidiaries operating in China and India. Two subsidiaries belonging to the same MNE, producing basically the same component, followed different growth patterns. Also, we saw that a subsidiary's fear of failure due to external circumstances can act as an eye opener, triggering subsidiary reaction, and leading towards capability building at the local level. Four of our subsidiaries were initially established to undertake production activities in China or India for their MNE parents at reduced cost, taking advantage of local labour and components, but their efforts turned out not to be competitive because of an initial neglect of macro- and micro-level constraints (namely, tariffs and transport costs). However, these subsidiaries turned such disruptions into opportunities to learn, grow and move to a different "state" by allocating various resources through an active management policy, in line with dynamic capability theory.

P2 stated that a deep embeddedness of subsidiary management in the host country makes an important contribution to capability building. Our subsidiaries could take advantage of management familiarity with the local economy, local resources, knowledge and opportunities. Managers who knew the host country languages and culture, and had outward-looking attitudes, were in advantageous positions to learn about new opportunities,
to search for cost reductions by organizing competent suppliers and to create new sales niches. The mutual dependency that then arises may be regulated through reputation, social and spatial proximity, family and ethnic ties, although such network and relationship resources are hard to value (Peng et al., 2008).

P3 said that strategic intent at corporate level and HQ participation are important elements in the capability-building process undertaken at subsidiary level. Dynamic capabilities, as stressed by Helfat and Peteraf (2009), need to be “purposefully” created. The cases of the subsidiaries in Group 1 showed that the difficult situations they found themselves in induced local management to battle the “corporate immune system” of the MNE to engage in “subsidiary entrepreneurship” (Birkinshaw and Ridderstråle, 1999). In fact, it was more a case of cooperative problem-solving driven by local management, based on assimilation of local capabilities and culture and supported by the HQ (Lauring et al., 2017). The large investments the parents had made certainly contributed to HQs taking collaborative attitudes.

The behaviour of the two subsidiaries of the second group of firms we examined (E and F) demonstrated their collaboration with their HQs during a process of capability building, invoking the creation of joint ventures with important firms operating in the host markets. In both cases, the process was built and developed at the subsidiary level, but substantial agreement and formal decisions were taken by the respective HQs.

Many of the developments occurring at subsidiary level reflect a growing autonomy of subsidiary managers: affected deeply subsidiary organization; involved a meaningful long-term change in routines; led to a systematic reconfiguration of subsidiary activities; and, in some circumstances, resulted in “reverse” knowledge transfers from subsidiary to HQ (Ambos et al., 2016). Our case studies moreover showed that some subsidiaries succeeded in creating markets for components that did not previously exist, providing fresh empirical evidence to a suggestion made by Penrose (1959), Nelson and Winter (1985) and Teece (2014) of a role for Schumpeterian entrepreneurs in the course of development.

A further key point of our results is the finding of a dual embeddedness of subsidiaries, being able to draw on their MNE networks, while at the same time being part of a locality and being able to re-engineer the production process with the use of local components and local labour (Meyer et al., 2011).

Discussion
Contributions
This article contributes on the theoretical, empirical and management practice levels. Theory has been strengthened by taking into account an emerging economy’s level of development for influencing subsidiary strategy. Theory must now take on board the finding that reliable local suppliers are important for supporting subsidiary action, allowing subsidiaries to focus on their core businesses and engage in capability building. Also, note must be taken of the finding that a lack of standards in the host economy might condition the behaviour of HQs, which might in fact decide to put a halt to subsidiary actions. Moreover, we provide a three-phase sequence model of capability-building process that includes a three-phase sequence of capability building, where each phase (sensing, seizing and transforming) corresponds to a strategic intent and to a set of shaping factors (external and internal to the subsidiary).

Theory has been strengthened thanks to an expansion of our empirical knowledge. Through a rigorous survey design, combined with archival data, we found that subsidiary managers leveraged on external conditioning elements, to reinforce their own autonomy and build capabilities. The literature has so far acknowledged the importance of external factors
for capability development, but they have not been extensively studied. We teased out how external and internal shaping factors complement and interact to influence the development of capability-building processes. These factors are interdependent. For example, the renewal of a subsidiary’s internal organization affects its ability to seize local resources and move towards a transformation of firm structure.

In respect of management practice, our research has stressed that dynamic capabilities need to be purposefully sensed and created. Local management must be motivated to overcome the “corporate immune system” of the MNE to engage in the process of capability building at the local level. Nonetheless, HQ substantial agreement and support was, in all situations examined, necessary. Of particular interest, although limited to two subsidiaries, may be our findings with respect to joint ventures with local firms. We found that market knowledge can be deepened by entering a joint venture with a host country firm and that this can result in a positive influence on improving a subsidiary’s capabilities, not only in respect of marketing but also in production. More generally, managers who knew the host country languages and culture and had outward-looking attitudes were in advantageous positions to learn about new opportunities, to search for cost reductions by organizing competent suppliers and to create new sales niches.

Limitations and future research
Our study leaves a number of questions awaiting future research: What specific aspects (macro and micro) explain variations in business strategies at subsidiary level, both over time and between countries? In what ways do market specificities in Asian economies serve to either inhibit or positively encourage the development of a subsidiary? What are the circumstances which could induce subsidiaries to access local supply markets with confidence? Or move production in-house? Can understanding local conditions help address challenges to locally sourced innovation? (Diyamett and Mutambla, 2014; Wang et al., 2008) The evidence provided by our research, albeit confined to a few cases, has shown that subsidiaries in Asia operate in a way substantially different from those in the West, something that is not always acknowledged (Bruton and Ahlstrom, 2003; McDonald et al., 2008; Ahlstrom et al., 2008). Future research should therefore explore regional differences among MNE subsidiaries, including how they behave in value chains and in developing new product markets.

Conclusion
How and to what extent do subsidiaries build dynamic capabilities? How does diversity in external conditions and macroeconomic turbulence moderate the process of building capabilities within a subsidiary? Our answer is that poor knowledge of host country markets and a neglect of external conditions, at either the macro or micro level, can result in subsidiaries facing failure; subsidiary management may, however, leverage on these difficulties and undertake initiatives to develop new capabilities that enable the firm to escape its failing situation, to the benefit of the MNE network as a whole. Further, it has been found that managerial embeddedness in the host country, the level of autonomy, entrepreneurial behaviour of the subsidiary and HQ support, can all exert positive impacts on a subsidiary’s ability to engage in capability building.

In conclusion, MNEs should be more aware of the strong potential for capability development at the subsidiary level. But our, and their, understanding of a subsidiary’s potential contribution to an MNE is enhanced if there is greater awareness of the complexities that accompany the process of capability building. This increased awareness ought to induce consideration in MNEs about how to encourage such
capability development and how to leverage this capability for a better MNE performance.

References


Further reading


About the author

Giuseppe Tattara, University of Venice, Economics, has published in the most important international journals and contributed to chapters in various books. Giuseppe Tattara can be contacted at: tattara@unive.it
### Table AI.

<table>
<thead>
<tr>
<th>Name of the firm and main activity</th>
<th>Year of establishment</th>
<th>Employees at the time of the visit</th>
<th>Turnover million euro in 2008</th>
<th>Interviewed subsidiary firm</th>
<th>Markets where the offshore subsidiary sells its products</th>
<th>Parent company</th>
<th>Legal ownership/Initial investment in the Asian plant in euros</th>
<th>Subsidiary turnover % parent turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Beijing Faram Great Wall Decoration Materials Co, Ltd. Office partitions/furniture</td>
<td>2002-2003</td>
<td>142</td>
<td>7.5</td>
<td>Top manager and production manager China</td>
<td>Middle and Far East (70%), and China (30%)</td>
<td>Production manager Treviso, 2009</td>
<td>50% controlled by Faram S.p.A and 50% by Beijing Municipality/5m</td>
<td>&lt;10%</td>
</tr>
<tr>
<td><strong>B</strong> General Fittings Zhenjiang Co, Ltd. Brass fittings</td>
<td>2005</td>
<td>99</td>
<td>2.1</td>
<td>General manager and sales manager China</td>
<td>China (25-50%) and Italy (Parent)</td>
<td>Production manager Brescia, 2009</td>
<td>100% controlled by Gambari Srl/3m</td>
<td>&lt;10%</td>
</tr>
<tr>
<td><strong>C</strong> Changsu Ritmo Welding Technology, Ltd. Plastic welding machines</td>
<td>2005</td>
<td>22</td>
<td>0.7</td>
<td>General manager and production manager China</td>
<td>Asia (80%), Italy (20%; Parent)</td>
<td>Public relation manager Padova, 2009</td>
<td>100% controlled by Ritmo S.p.A/0.2m</td>
<td>&lt;5%</td>
</tr>
<tr>
<td><strong>D</strong> FMMG Technical Textiles Suzhou Co, Ltd. Technical textiles</td>
<td>2006</td>
<td>93</td>
<td>5</td>
<td>Production manager China</td>
<td>USA (60%), Italy (40%; Parent)</td>
<td>CEO Treviso, 2010</td>
<td>100% controlled by Fil Man Made Group Srl/20m</td>
<td>&lt;10%</td>
</tr>
<tr>
<td><strong>E</strong> Tessitura Monti India, Ltd. Cotton textiles, shirts</td>
<td>2001</td>
<td>450</td>
<td>17</td>
<td>General Manager, production manager, sales manager India</td>
<td>Europe (60%), Asia (50%)</td>
<td>Treviso, 2009</td>
<td>100% controlled by Tessitura Monti S.p.A/50m</td>
<td>&gt;70%</td>
</tr>
<tr>
<td><strong>F</strong> Carraro China Drive Systems Co, Ltd. Ades, drivelines</td>
<td>2006</td>
<td>138</td>
<td>11</td>
<td>General manager China</td>
<td>China, USA, Europe (Parent)</td>
<td>CEO Padova, 2009</td>
<td>100% controlled by Carraro Group S.p.A/18m</td>
<td>&lt;10%</td>
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<tr>
<td><strong>G</strong> Carraro India, Ltd. Ades, Drivelines</td>
<td>2000</td>
<td>243</td>
<td>28</td>
<td>General manager and technical manager China</td>
<td>India (50%), Italy (50%; Parent)</td>
<td>CEO Padova, 2009</td>
<td>100% controlled by Carraro Group S.p.A/15m</td>
<td>&lt;10%</td>
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*Table continues on the next page.*
<table>
<thead>
<tr>
<th>Name of the firm and main activity</th>
<th>Year of establishment</th>
<th>Employees at the time of the visit</th>
<th>Turnover million euro in 2008</th>
<th>Interviewed person/location</th>
<th>Markets where the offshored subsidiary sells its products</th>
<th>Interviewed person/location</th>
<th>Parent company</th>
<th>Legal ownership/Initial investment in the Asian plant (in euros)</th>
<th>Subsidiary turnover % parent turnover</th>
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<tbody>
<tr>
<td>H Carraro Technologies India, Ltd.</td>
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<tr>
<td>Technical design</td>
<td>2006</td>
<td>42</td>
<td>1</td>
<td>General manager and R&amp;D director</td>
<td></td>
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<td></td>
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<td></td>
<td>India</td>
<td>Italy (100%: Parent AgriCarraro)</td>
<td>CEO Padova, 2009</td>
<td></td>
<td>100% controlled by Carraro Group S.p.A/ 0.1m</td>
<td>&lt;10%</td>
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<tr>
<td>I Colombini China, Ltd.</td>
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<tr>
<td>Children’s bedroom furniture</td>
<td>2005</td>
<td>100</td>
<td>2.6</td>
<td>General manager</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>China</td>
<td>China (90%)</td>
<td>Rep. San Marino</td>
<td></td>
<td>80% controlled by Colombini Group S.p.A/ 5m</td>
<td>&lt;10%</td>
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<tr>
<td>L Dalian Mato Furniture &amp; Components Co, Ltd.</td>
<td></td>
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<tr>
<td>Kitchen furniture</td>
<td>2005-2006</td>
<td>320</td>
<td>7.5</td>
<td>General manager</td>
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<td></td>
<td></td>
<td></td>
<td>China</td>
<td>USA (30%), UK, and France</td>
<td>CEO Treviso</td>
<td></td>
<td>100% controlled by Mobilclan Industries S.p.A/ 10m</td>
<td>&lt;20%</td>
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<tr>
<td>M IRSAP Jintaige Radiators, Beijing Co, Ltd.</td>
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<tr>
<td>Radiators</td>
<td>2005</td>
<td>150</td>
<td>1.9</td>
<td>General manager</td>
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<td></td>
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<td></td>
<td>China</td>
<td>China (100%)</td>
<td>Rovigo</td>
<td></td>
<td>100% controlled by IRSAP S.p.A/ 5m</td>
<td>&lt;10%</td>
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<tr>
<td>N Maschio Gaspardo Agriculture Machinery Co, Ltd.</td>
<td></td>
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<tr>
<td>Gear boxes</td>
<td>2006</td>
<td>56</td>
<td>4.4</td>
<td>General manager and production manager</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Italy</td>
<td>Italy (100%: Parent)</td>
<td>Director of production Padova, 2009</td>
<td></td>
<td>100% controlled by Maschio Gaspardo S.p.A/ 3m</td>
<td>&lt;5%</td>
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<tr>
<td>O MGMiniGears Suzhou Co, Ltd.</td>
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<tr>
<td>Gears</td>
<td>2004</td>
<td>268</td>
<td>9</td>
<td>General manager</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>China</td>
<td>China (20%), USA (80%)</td>
<td>CEO Padova, 2009</td>
<td></td>
<td>100% controlled by GearWorld S.p.A (Carraro Group)/ 11m</td>
<td>&lt;10%</td>
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</tr>
<tr>
<td>P Turbo Gear India Pvt. Ltd.</td>
<td></td>
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<tr>
<td>Gears</td>
<td>2008</td>
<td>231</td>
<td>4.3</td>
<td>General manager and production manager</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>India</td>
<td>India (80%: Carraro plant) Italy (20%: Parent)</td>
<td>CEO Padova, 2009</td>
<td></td>
<td>100% controlled by GearWorld S.p.A (Carraro Group spa)/ 20m</td>
<td>&lt;10%</td>
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</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Name of the firm and main activity</th>
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<th>Markets where the offshored subsidiary sells its products</th>
<th>Interviewed person/location a</th>
<th>Legal ownership/Initial investment in the Asian plant in euros</th>
<th>Subsidiary turnover % parent turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q Xinchang Hydroeast Cleaning Machine Co, Ltd. Pressure washers</td>
<td>2004</td>
<td>11</td>
<td>0.3</td>
<td>Production manager China</td>
<td>Italy (100%: Parent) CEO Padova, 2009</td>
<td>100% controlled by Idrobase Group Srl/ 0.1m</td>
<td>&lt;5%</td>
<td></td>
</tr>
<tr>
<td>R Zamperla Amusement Rides Co, Ltd. Amusement rides</td>
<td>2006</td>
<td>64</td>
<td>5.0</td>
<td>General manager China</td>
<td>China and Asia (100%) Vicenza</td>
<td>100% controlled by Antonio Zamperla S.p. A/ 1.3m</td>
<td>&lt;10%</td>
<td></td>
</tr>
</tbody>
</table>

Note: aWhen the date is missing, no interview took place with the parent company.
Building business models through simple rules

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Robert J. Manning School of Business, University of Massachusetts Lowell, Lowell, Massachusetts, USA

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School of Business, Renmin University of China, Beijing, China

Yanli Zhang
Management Department, Montclair State University, Montclair, New Jersey, USA, and

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Abstract
Purpose – How do entrepreneurs use simple rules to build their business models? Based on an inductive study of three Chinese Internet and technology firms, the authors find that business models emerge from simple rules that entrepreneurs learn from their experience. Simple rules also guide entrepreneurs to actualize and exploit opportunities in the marketplace, and they can help business models evolve through market feedback, especially in internationalization. This paper aims to delve into the black box of entrepreneurial decision-making and offer a better depiction of the business model development process in uncertain and fast-changing environments and thus provide guidance for future entrepreneurs.

Design/methodology/approach – Following the case method (Eisenhardt, 1989; Yin, 2003), the authors first present a thick description of characteristics of three companies and the dynamics of their business models. They then code these descriptions into first-order measures. Finally, they aggregate these measures into abstract constructs. They constantly compare the theoretical constructs and the emerging theory with the existing literature on business models.

Findings – The authors generate three key insights from the findings: business models emerge from simple rules learned from entrepreneurs’ experience, simple rules help entrepreneurs exploit and actualize opportunities in the marketplace and simple rules help businesses expand and evolve business models through market feedback, especially in internationalization.

Originality/value – This paper falls into the intersection of strategy and entrepreneurship – an emerging new field of strategic entrepreneurship – and is concerned with how businesses create and sustain a competitive advantage while simultaneously identifying and exploiting new opportunities. The authors bring people – the individual decision-makers for businesses – back in strategy research and depict a more realistic picture of the behavior of successful entrepreneurs and their business model development process.

Keywords Entrepreneurship, Decision-making process, Business model development, Simple rule

Paper type Research paper

Introduction
The digital revolution and globalization have altered traditional industry structures by lowering barriers to entry and exposing companies to greater competition than ever before. Companies increasingly feel the urge to reconfigure their business models or create new
ones to take advantage of new opportunities (Massa et al., 2017). Many companies have taken the development of new business models a step further by making it a strategic priority and have attributed their success to business model innovations (Fiet and Patel, 2008; Martins et al., 2015). A large number of empirical studies have also shown that business model innovation is key to firm performance (Zott et al., 2011).

There are many definitions and interpretations of business models. These include as attributes of firms, as cognitive or linguistic schemas, or as formal conceptual representations/descriptions of a business function. Although definitions vary, all business models share an emphasis on value creation and matching the demand and supply side (Massa et al., 2017). In this study, we interpret a business model as a cognitive/linguistic schema. We define the business model as “a cognitive structure that operates as a focusing device, making decision-making of boundedly rational decision makers facing conditions of imperfect information and cognitive complexity more efficient” (Massa et al., 2017, p. 83).

Despite the much-emphasized importance of the business model in business and entrepreneurship theory and practice, the entrepreneurial decision-making process in developing business models remains largely a black box (Yang et al., 2018). Based on the cognitive schema interpretation of business models, Loock and Hacklin (2015) proposed that entrepreneurs build business models by following “simple rules” that guide value creation. Simple rules are heuristics or rules-of-thumb that save time and effort by focusing attention and simplifying decision-making (Eisenhardt and Sull, 2001; Bingham and Eisenhardt, 2011; Sull and Eisenhardt, 2015). Eisenhardt and Sull (2001) first introduced the concept of strategy as simple rules and suggested that simple rules enable companies to flexibly capture unanticipated, fleeting opportunities. Based on simulations, Davis et al. (2009) argued that a strategy based on simple rules is essential in unpredictable environments. However, empirical studies that address how entrepreneurs use simple rules in their business model development processes remain lacking. Hence, this study aims to answer the following question:

Q1. How do entrepreneurs use simple rules to build their business models?

We approach this question by examining the decision-making process of three Chinese technology companies in developing their business models.

Overall, this article makes the following contributions. We enrich the cognitive/linguistic schema view of business models by employing multiple-case studies of how entrepreneurs use simple rules in building and evolving their business models. In contrast to traditional strategy theoretical perspectives, such as the positioning view and the resource-based view (RBV), which assume that firms have unlimited cognitive abilities and perfect information, we pay close attention to the individual decision-makers for businesses and provide a more realistic picture of successful entrepreneurs’ behaviors and their business model development processes.

We use a multiple case design and focus on three Chinese technology companies: Qihoo 360, Xiaomi and Alibaba. Based on the data collected through multiple sources including interviews and field observations, we identify the following three stages of business model development:

(1) emergence stage, business models emerge from simple rules learned from entrepreneurs’ experience;
(2) materialization stage, simple rules help entrepreneurs actualize opportunities with the right business model; and
(3) scaling stage, simple rules help business models evolve through market feedback.
Our findings carry significant managerial implications and provide insights into the decision-making process behind business model development under volatile, uncertain, complex and ambiguous environments (VUCA) (Horney and Pasmore, 2010). Consistent with the simple-rules-as-strategy view, we find that simple rules enable companies to create and sustain competitive advantage while simultaneously identifying and exploiting new opportunities.

Simple rules
The strategy field has traditionally focused on tools and frameworks to help businesses make strategic decisions that establish and sustain competitive advantage. However, many of these analytical frameworks have an inherently abstract and static nature and are not easily applied to dynamic environments, such as Porter’s five forces in industry analysis, value chain analysis, and the RBV (Barney, 1991). Moreover, these frameworks are so elaborate that, in reality, they offer little guidance to businesses and their leaders. This is especially the case in VUCA environments that are hard to analyze in an articulate manner and instead call for emergent strategies (Mintzberg and Waters, 1985).

Eisenhardt and Sull (2001) introduced simple rules as an approach to help businesses make decisions under fast-changing and uncertain environments. They argue that managers should focus on key strategic processes and develop simple rules to guide them in such circumstances. They juxtapose simple rules as a third approach to strategy that is based on the logic of pursuing opportunities and is primarily concerned with the question “How should we proceed?” This is in stark contrast to the two traditional approaches to strategy, namely, the positioning approach that is based on the logic of establishing an industry position and the resource-based approach that is based on the logic of leveraging valuable and unique resources. As Bingham and Eisenhardt (2011, p. 1459) pointed out, “in contrast to position and leverage logics, firms using opportunity logic achieve competitive advantage by capturing opportunities sooner, faster, and more effectively than rivals”. In particular, “simple rules’ heuristics may be a more ‘rational’ strategy than analytically complex and information-intensive approaches in unpredictable markets” (Bingham and Eisenhardt, 2011, p. 1461). In the simple rules approach, strategists do not ask elaborate questions such as “Where should we be?” or “What should we be?” Instead, decision-making is simplified to focus on “How should we proceed?” as the simple next step. Without a clear strategy in mind, they “jump into the confusion, keep moving, seize opportunities, and finish strong” (Eisenhardt and Sull, 2001, p. 109). The simple rules approach provides positive representation on how businesses apply strategic frameworks to decisions and situations in a “quick and dirty” way, which is essential in unpredictable (Davis et al., 2009).

Organization scholars have also long pointed out that organizational behavior, particularly decision-making, involves following rules more than calculating consequences (March and Health, 1994; March and Simon, 1958). People tend to use simple heuristics rather than complicated analyses in making key decisions (Bingham and Eisenhardt, 2011). Simple rules are powerful because their simplicity carries an indispensable versatility that is necessary for iteration. Under each iteration, people in organizations apply these general and simple rules to specific circumstances (Ortmann and Salzman, 2002). Iteration comes from the Latin iter (“again”) and the Sanskrit itara (“other”), carrying the logic that repetition and alteration go hand-in-hand (Derrida, 1995; Royle, 2003; Sun and Zou, 2018). Thus, simple rules can be easily repeated and they act as a foundation for decision-making. In addition, simple rules also help businesses coordinate and control organizational activities and guide employee performance. A few straightforward rules can more easily and effectively lead organization members toward the right direction than overly elaborate strategies. Such
simple rules, part of high-performance routines, can become the basis of firms’ dynamic
capabilities (Teece et al., 1997).

In this article, we focus on how entrepreneurs use simple rules to build and evolve their
business models. The research setting of our study is the technology industry of China,
which is a highly dynamic industry featuring fast changes, high uncertainty and ample, yet
fleeting, opportunities (Ahlstrom and Ding, 2014). Within the dynamic and hypercompetitive
technology industry, firms need to constantly evolve their business models to meet the new
opportunities and challenges (Sun and Liang, 2014). Because of the large population and
fierce competition, the technology industry in China is even more uncertain, fast-changing
and unpredictable than in the USA, providing a fruitful research setting.

Methods

Sample and data collection

Using the research setting of the emerging technology industry in China, this study uses a
multiple-case design with the logic of replication. The cases serve as independent
experiments that confirm or disconfirm the emerging theory (Eisenhardt, 1989; Yin, 2003;
Chen and Sun, 2018). Following Eisenhardt’s (1989) theoretical sampling approach, we
studied three Chinese technology companies: Qihoo 360, Xiaomi and Alibaba. As Eisenhardt
(1989, p. 545) suggests, “the goal of theoretical sampling is to choose cases which are likely
to replicate or extend the emergent theory.” We selected these cases because:

- The emerging technology industry in China is extremely dynamic, with companies
  fiercely competing and invading one another’s turf; thus providing an exemplary
  setting in which to study such business environments (Sun, 2009).
- The three firms we chose have successfully emerged as the top Chinese technology
  companies with the evolution of their business models under a changing business
  environment that co-evolved with the country’s rapid institutional shifts (Ahlstrom
  and Bruton, 2010).
- The dynamic nature of the business model evolution in these three cases is well
  suited for examining the process of business model development and the decision-

We collected data from multiple sources, including interviews, field observations,
newspaper databases, as well as articles from The Wall Street Journal in ProQuest Archiver.
Interviews were conducted with top executives from the focal companies, their competitors,
and relevant venture capitalists (Chen and Sun, 2018; Sun and Liang, 2014). The following is
a brief description of the three focus cases.

Case 1: Qihoo 360. Founded in 2006, it took Qihoo, a Chinese Internet security
company, only six years to become listed on the New York Stock Exchange (IPO on
March 30, 2011, had a reverse IPO in China in 2018). Qihoo 360 provides Internet and
mobile security products through its free core security solutions, such as 360 Safe
Guard and 360 Anti-Virus (Sun and Zhang, 2015). With its powerful Free simple rule,
Qihoo 360 quickly defeated its competitors to become the top-rated Internet security
solutions provider in China. It has since expanded into consumer electronics, such as
mobile phones, TV boxes and speakers, among others. Qihoo 360 generates most of its
revenue through online advertising, game services, and Internet value-added services,
leveraging its large and loyal user base.

Case 2: Xiaomi. Xiaomi, a Chinese technology company, was founded by Lei Jun and
seven other co-founders in 2010. Since Xiaomi launched its first hugely popular smartphone,
using a unique approach to R&D and marketing, it has built a culture among its fans. Xiaomi calls its loyal customers “Mi-fans” and creates special fan clubs with “Mi-fan Day.” In an interview, one of the founders suggested that “Xiaomi is not selling a product, but the desire to be a part of something.” As such, they use customer participation as a simple rule. Building upon its smartphone success and loyal fan base, Xiaomi has branched out into other electronic devices such as smart wristbands, TV, and the Internet of Things, among others. In 2014, four years after its inception, Xiaomi became the third-largest smartphone maker in the world after Samsung and Apple. In 2017, it ranked #13 among the World’s 50 Most Innovative Companies by *Fast Company*. Its ingenious business model and fast rise have made Xiaomi a role model within Internet companies in China, as well as in other industries.

Case 3: Alibaba. Founded by Jack Ma with his co-founders in 1999, Alibaba is now the world’s largest online commerce company. Alibaba began as an online platform to connect international suppliers and purchasers. With a simple rule of “making it easy to do business anywhere,” Alibaba grew to be the most popular destination for online shopping around the world. Transactions on its online sites totaled $248bn in 2015, more than those of eBay and Amazon combined. Alibaba has now expanded its services to encompass five related areas: e-commerce, logistics, cloud computing, digital marketing and mobile Internet services.

Data analysis
Following the case method (Eisenhardt, 1989; Yin, 2003), we analyzed data in three steps. In the first step, we presented a description of the three companies’ characteristics and the dynamics of their business models (Figure 3). In the second step, we coded these descriptions into first-order measures to present the commonalities and variations of firm positions, simple rule characteristics, and their interpretations. In the third step, we aggregated the first-order measures into abstract constructs and identified three stages of business model development: emergence, materialization and scaling (Sarma and Sun, 2017). During data analysis, we continuously compared our theoretical constructs and the emerging theory with the existing literature on business models and strategy (Foss and Saebi, 2017; Guo et al., 2016; Massa et al., 2017; Zott and Amit, 2007).

Emergence: business models emerge from simple rules learned from entrepreneurs’ experience
In today’s fast-changing and often-uncertain world, entrepreneurs need to capture unanticipated opportunities to succeed (Eisenhardt and Sull, 2001). Effective entrepreneurs usually do not ask, “What should we be?” (i.e., the eventual goal), but rather “How should we proceed?” (i.e., the next step based on current means) (Eisenhardt and Sull, 2001; Sarasvathy, 2008). As Eisenhardt and Sull (2001, p. 116) wrote in their early paper about the simple rules approach:

> In stable markets, businesses can rely on complicated strategies built on detailed predictions of the future. However, in complicated, fast-moving markets where significant growth and wealth creation can occur, unpredictability reigns. It makes sense to follow the lead of entrepreneurs and underdogs – seize opportunities in the here and now with a handful of rules and a few key processes.

We found that all three companies used the simple rules approach to build their business models, based on the logic of opportunity. In rapidly changing markets, entrepreneurs usually recognize and seize opportunities to provide value through interpreting and using their past experience to develop simple rules (Ramoglou and Tsang, 2016; Shane and...
Venkataraman, 2000). By using this backward-looking process (Gavetti and Levinthal, 2000), entrepreneurs select rules that have worked effectively and use them to guide the building of a business model, as shown during the early development stages of Qihoo 360, Xiaomi and Alibaba.

All three cases also show that the development of simple rules is an experiential learning process (March and Olsen, 1975). This process is illustrated in Figure 1 as a cycle:

- An action is taken using existing rules, often distilled from previous experience;
- the action results in various kinds of outcomes;
- inferences are made from those outcomes; and
- the inferences are used to modify the rules.

Figure 2 shows the early development stages of these three companies and the emergence of their business models through simple rules that entrepreneurs learned from their experience. Experience, which often includes a series of actions and events, serves as the starting point of the interpretation process. Based on entrepreneurs’ early experience, all three companies had their nice first shot, which brought them very positive feedback and consequently

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**Figure 1.**
An experiential learning cycle of simple rules

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**Figure 2.**
Business model emerges from simple rules learned from experience (early stage of development)

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<table>
<thead>
<tr>
<th>Time</th>
<th>Qihoo 360</th>
<th>Xiaomi</th>
<th>Alibaba</th>
</tr>
</thead>
</table>
| 1    | - 3271 and Yahoo!  
       - Qi and Qihoo 360 | - CEO of Kingsoft  
       - Founder of Joyo.com  
       - Investor of Vanel.com and UCWeb | - Teacher  
       - Visiting US (Silicon Valley) |
| 2    | - Free 360 Safe Guard | - MIUI  
       - Xiaomi Phone | - China Pages |
| 3    | - 30 million installations within one year of 360 Safe Guard being launched.  
       - 360 Safe Guard became No. 1 in Internet security by September 2007. | - 0.3 million orders within half an hour.  
       - Xiaomi gained more investment. | - The first officially registered web business of China. |
| 4    | - Free 360 Anti-virus  
       - Free 360 Safe Browser  
       - Free 360 Mobile Safe. | - Xiaomi Phone 1S  
       - Xiaomi Phone 2 | - Chinese Supplier service |
| 5    | - 360 Anti-virus became No. 1 in the anti-virus arena.  
       - 360 Safe Browser became No. 2 in the Chinese market, second only to Internet Explorer (IE).  
       - 360 Mobile Safe quickly became No. 2 in China. | - Xiaomi was the “World’s Fastest-growing Company” in 2012. | - Alibaba became the first Chinese E-commerce company. |
| 6    | - Free | - Customer participation (fans) | - To make it easy to do business anywhere |
| 7    | - Use free products to generate large user volume.  
       - Earn profits from online advertising and value-added services. | - Focus, ultimate, word-of-mouth, fast  
       - Marketing through social media | - Provide a transaction platform for buyers and sellers.  
       - Deliver public speech to promote online business and entrepreneurial spirit. |
prompted further actions. This enables the emergence of their simple rules. These rules then provided the basis for their tentative or temporal business models. We call these business models “tentative or temporal” because they are early iterations in the business model formation and evolution process.

In 1998, Hongyi Zhou founded 3721.com, a Chinese-language Internet search engine company, whose aggressive approach in attaching itself to web browsers had earned Zhou much criticism in addition to fame. He served as its CEO and Chairman until the company was later acquired by Yahoo! in January 2004, and then served as CEO of Yahoo China from January 2004 to August 2005. When Zhou left Yahoo to launch Qihoo 360, initially he visualized it as an online community search company. However, the search did not gather momentum, but a side product of malware-blocking software really took off. Based on market feedback, he reshaped the company’s business model to focus on Internet security. In July 2006, Qihoo 360 launched their nice first shot – free 360 Safe Guard, which protects users from malware. Within one year, 360 Safe Guard had 30 million installations and by September 2007, Qihoo 360 became the top-rated company in the Chinese Internet security arena. Remembering his past stigma with malware, Zhou now took on malware with all his energy. After this initial success, Qihoo 360 took off on a rapid trajectory and launched free 360 Anti-virus, 360 Safe Brower and 360 Mobile Safe – all of which became the top products within their fields in China. Based on these actions and outcomes, “free” became a label for Qihoo 360’s products and also a simple rule for Qihoo 360 to develop new products. On multiple occasions, Zhou emphasized that Qihoo 360’s basic security products and services would be permanently free. This is Qihoo 360’s core value, the promise to Qihoo 360’s users, and the foundation of Qihoo 360’s business model. Its tentative business model, which emerged from this simple rule, is the use of free products to generate a large user volume and leverage this volume to earn profits from online advertising and value-added Internet services, such as web games.

The case of Xiaomi also demonstrates that simple rules entrepreneurs learned from their past experience helped shape its initial tentative business model. Before founding Xiaomi, Jun Lei was a serial Internet entrepreneur and founded Joyo.com – an online bookstore later sold in 2004 to Amazon for US$75m and Kingsoft, a leading technology company that went public in Hong Kong in 2007. He was also a veteran angel investor who invested in Vancl.com, which is famous for Internet marketing strategies and UCWeb. These early entrepreneurial experiences directly led to his famous four principles of Internet business: “Focus, Ultimate, Word-of-Mouth, Fast.” After its founding in 2010, Xiaomi’s nice first shot was the Xiaomi smartphone with its Android-based user interface MIUI. Xiaomi quickly gained popularity because it was a high-quality smartphone that was comparable to the iPhone at a fraction of the cost. Combining the high-quality, low-cost product with its marketing savvy, Xiaomi earned great enthusiasm among its customers. It relied on Internet marketing and fan marketing that was highly effective and cost-efficient. Focusing on online selling and preorders initially, this approach lowered costs and generated a sense of exclusivity and enthusiasm. Xiaomi’s product development process also used very fast iterations and incorporated weekly user feedback that wowed customers and gave them a sense of pride through participation (Sun and Zou, 2018). Summarizing all of this, we can see that Xiaomi’s business model (Figure 3) emerged as a value proposition of making quality technology accessible to everyone, achieved through the four key elements in its implementation: Focus, Ultimate, Word-of-Mouth and Fast.

Alibaba’s initial tentative model also emerged from simple rules learned from experience. Before founding Alibaba, Jack Ma had the rare opportunity to be one of the first people in China to visit Seattle and be exposed to the Internet in its very early days. The power and
potential of the Internet, combined with a lack of Chinese presence on it, gave him the vision to start an Internet company to put Chinese companies online. When he returned from Seattle, he created China Yellow Pages, which was possibly the first officially registered Web business in the country in 1995. However, China Yellow Pages faced fierce competition from a much more powerful state-owned enterprise and was forced to merge with a competitor. Ma lost control of the company and left to join the Ministry of Commerce to help set up their electronic data interchange system—essentially putting trade shows online. Frustrated with the government red tape but encouraged by the success of the online trade shows, Ma returned to Hangzhou and started Alibaba.com in June 1999. Alibaba.com is an online B2B (business-to-business) platform that helps suppliers and purchasers find each other. The Alibaba website quickly gained popularity because it provided a key service in helping small businesses export their products or find suppliers. Thus, Alibaba’s “first shot” was highly successful because of the value it created and, as a result, the company gained recognition and investment. Expanding upon that success, in 2001, Ma made “to make it easy to do business anywhere” a simple rule of the group. With these actions, Ma interpreted his experience into the mission and core values of Alibaba, and thus established the company’s tentative business model.

A similar pattern has emerged from these three cases regarding the origins of simple rules and their role in business model development. Through the interpretation process, entrepreneurs translate their experience into simple rules that guide the development of business models. Interpretation and recognition of patterns from experiences are the beginning of individual or organizational learning (Crossan and Berdrow, 2003; Sun, 2009). Simple rules summarize previous experience (March et al., 1991) and, thus, guide development of business models to actualize future business opportunities (Ramoglou and Tsang, 2016).

Materialization: simple rules help entrepreneurs actualize opportunities with the right business model

The logic of opportunity is at the core of the simple rules approach (Eisenhardt and Sull, 2001; Sull and Eisenhardt, 2015). There are three perspectives regarding opportunity in extant literature:

1. The discovery perspective assumes the preexistence of entrepreneurial opportunities waiting to be discovered (Shane and Venkataraman, 2000).

![Figure 3. The business model of Xiaomi (2014)](source: Portrayed by Jun Lei)
The creation perspective argues that opportunities are created endogenously through an entrepreneurial agency (Baker and Nelson, 2005; Santos and Eisenhardt, 2009; Sarasvathy, 2001; Venkataraman et al., 2012).

The actualization perspective defines entrepreneurial opportunity as the propensity of market demand to be actualized into profits through the introduction of novel products or services using realism philosophy (Ramoglou and Tsang, 2016).

If we use the traditional thoughts of “Xing” and “Shi”[1] in Sun Tzu’s book *The Art of War*, we can integrate the three perspectives into the following ideas: propensities are “Shi,” the un-actualized potentials in the environment, while “Xing” is the crystallization of realized opportunities. In all cases, simple rules were used to analyze the “Xing” through interpreting the experience and exploit the present and future “Shi” (propensity or potential) by guiding the selection process (Jullien, 1995).

Hongyi Zhou once emphasized Qihoo 360’s free security products by saying: “There’s no revenue at all from Qihoo’s security products; these products mainly serve to accumulate our user base and brand recognition, which is critical to our business.” He also emphasized on multiple occasions that Qihoo 360’s basic security products and services would be permanently free. On Qihoo 360’s main website and platform, the words “Permanently Free” instantly caught a user’s eye.

As an example, one business opportunity that Zhou exploited was online advertising, which became Qihoo 360’s main revenue stream and a key component of its business model. Free security products and services attracted a large number of users to Qihoo 360’s platforms that Qihoo 360 was able to leverage to broaden its advertising business. The online advertising market in China has grown rapidly in the recent decade and advertisers have increasingly recognized it as an important component of their overall marketing strategy. This is the “Shi” – the potential opportunity in the environment that is waiting to be exploited. Compared to its competitors at the time, it used “free” as a simple rule and core component of its business model to develop a large user base, which enabled revenue from online advertising. The same reasoning applies to the development of Qihoo 360’s other revenue stream: Internet value-added services. These two key components of Qihoo 360’s business model are both based on its simple rule of Free and the “Xing,” or crystallization, of actualized opportunities.

Xiaomi’s value proposition is compelling: selling high-quality smartphones at or near cost. Xiaomi knew that users in the mid-range market in China aspired to own a high-quality smartphone but could not afford an iPhone or a high-end Samsung smartphone. This represented a huge potential market opportunity or “Shi.” Xiaomi saw this business opportunity and came up with an innovative approach to providing high-quality smartphones similar to the iPhone at a fraction of the cost. With innovative approaches such as R&D with open innovation and user participation, marketing with a heavy focus on social media and online distribution that saved cost, among others, Xiaomi developed its first smartphone with iPhone-like quality and a very affordable price. It wowed consumers and quickly gained a loyal fan following. Within a few years, Xiaomi became one of the top smartphones in the world. By identifying and exploiting the potential market opportunity and filling the unmet needs of a large number of consumers, Xiaomi achieved great success and cemented its position in China’s smartphone market.

Alibaba is highly committed to its simple rule “to make it easy to do business anywhere.” After formally articulating this rule, Alibaba has used it to guide its business model and develop potential market opportunities (“Shi”) into real business ventures (“Xing”). Alibaba
Group was then able to capitalize on the success of Alibaba.com, as well as its experience in the B2B platform, to launch Taobao.com as an online C2C (consumer-to-consumer) platform. Taobao.com was aimed at sellers who wanted to establish a low-cost online presence and to help buyers and sellers find each other. Later, Alibaba launched Alipay to make it convenient and safe to pay online, Tmall as an online platform featuring major brands and retailers with online storefronts, and Juhuasuan as a popular online group-buying marketplace. These all followed the same logic of making it easy for people to do business and expanded Alibaba’s businesses in the process. In this way, Alibaba constructed a strong ecosystem (e-commerce, logistics, cloud computing, digital marketing and mobile Internet services) from the continuous evolution of its business model guided by this simple rule.

Scaling: simple rules help business models evolve through market feedback

Similar rules also guide entrepreneurial firms in their efforts to enter new markets, in addition to scaling up. For example, Bingham (2009) finds that maintaining simple rules leads to a more successful foreign market entry process over time for entrepreneurial firms. In our study, our sample companies also demonstrate that simple rules guided their decisions in the evolution of their business models according to market feedback.

Holding firmly to its “free” simple rule, Qihoo 360 was able to expand further and penetrate new markets. By December 2015, Qihoo 360 was the:

- top-rated PC Internet security product provider in China with 523 million monthly active users, representing a user penetration rate of 98 per cent;
- top-rated mobile security product provider in China with over 868 million smartphone users;
- top-rated PC browser provider in China in terms of time usage with 411 million monthly active users, representing a user penetration rate of 77.1 per cent; and
- top-rated Android mobile app store operator in China with over 750 million smartphone users, according to iResearch.

Qihoo 360 continuously emphasizes the same simple rule of “free” that has served them so well over the years. For example, in its 2015 annual report, the company again reiterated this:

Recognizing security as a fundamental need of PC and mobile Internet users, we offer comprehensive, high-quality Internet and mobile security products free of charge. As a result, we have amassed a large and loyal user base, which we monetize primarily through offering different forms of online marketing and value-added Internet services. Leveraging our large user base, we are developing open platforms on which third-party Internet product and service providers, such as game developers, e-commerce websites and software and application developers, offer their products and services. These open platforms allow us to effectively monetize our large user base through online advertising and revenue sharing arrangements with third parties.

On an international level, Qihoo 360 also stuck to its simple rule of “free” when it targeted North American and Southeast Asian markets in 2013 with products such as 360 Internet Security (PC) and 360 Mobile Security. The company’s internalization strategy has benefitted substantially from the free simple rule and its business model based on this simple rule.

In the case of Xiaomi, it has expanded into many markets, such as wristbands, power outlets, routers, televisions, the Internet of Things, water purifiers and smart rice cookers. It has also built a large ecosystem to “make quality technology accessible to
everyone.” With market expansion and increasing imitation from competitors, Xiaomi also evolved its business model. Since August 2016, Xiaomi has added traditional marketing approaches and distribution channels, including celebrity endorsements and opening offline stores, to complement its previous sales and marketing strategy that mainly relied on e-commerce and social media. In the words of Jun Lei, “Xiaomi is now ongoing the second entrepreneurship,” by evolving its business model amid the fast-changing competitive landscape.

India has been a major foreign market of Xiaomi since 2013. Xiaomi has many Indian fans, especially after Xiaomi 4i was launched (a customized mobile phone for India). As an illustrative example, in 2015, when Jun Lei asked “Are you OK?” in the product launch meeting, those Indian fans were “so crazy,” according to the CEO of Xiaomi Tech. Of the 1,200 fans who had registered to attend the meeting, 1,700 fans actually showed up. By offering higher quality products at lower prices that attracted a huge number of users, Xiaomi has succeeded in the Indian market with its simple rules. Another similar market is Brazil. Such emerging economies with huge market potential to be actualized offer many opportunities for Xiaomi.

Xiaomi has diversified its product line from smartphones into other products such as smart weighing machines and air purifiers. It has already invested and partnered with over 100 companies and offered more than 300 different products Before Xiaomi’s IPO in Hong Kong in 2018, its top management team had a meeting with its shareholders and made a simple rule together: Xiaomi’s hardware business will have an overall net profit margin that will never exceed 5 per cent. Xiaomi’s founder and CEO Jun Lei also expressed that he wanted this margin cap written in the company charter (Yang, 2018). This simple rule of pricing shows Xiaomi’s value proposition – to deliver high-quality yet affordable hardware products to the masses, different from the major competitors Apple and Samsung.

After growing and expanding for 16 years, Alibaba is still holding fast to its simple rules of “making it easy to do business anywhere” and bringing new meaning to it. Compared with JD.com, its main competitor and the second-largest e-commerce company in China, Alibaba’s advantage relies mostly on its open ecosystem. The company creates value and shares value with network participants.

Alibaba’s business model and ecosystem have evolved during its business scaling. Data have become increasingly important for the company’s future, and it has been investing heavily in cloud computing and big data services. As the world moves from an information-technology era to a data-technology era, cloud computing and big data capabilities are the engines for future development. As an example, Alibaba’s affiliated financial company, Ant Financial Services Group, was founded in 2014 to facilitate online payment. It has now evolved to serve the financial needs of small enterprises as well as consumers through credit, using the huge data generated from Alibaba’s payment platforms. Alibaba’s future strategies also include rural development and big data cloud computing, such as improving rural infrastructure. By leveraging mobile Internet technology, big data, logistics and Internet financing, Alibaba plans to make buying and selling easier for a rural population of more than 600 million.

Since its US IPO in 2014, Alibaba has also started its globalization journey. With the simple rules of “making it easy to do business anywhere,” Jack Ma met American president-elect Donald Trump and pitched him with the idea that Alibaba will bring one million jobs to the USA by enabling one million small businesses to sell American goods to China on the Alibaba platform[2]. Jack Ma further gave a keynote speech at the Gateway ‘17 conference in Detroit, inspiring small American businesses and entrepreneurs: “Believe in yourself,
believe in doing business in China” (Gallagher, 2017). Ma also visited Kenya and Rwanda to share insights with African entrepreneurs as the Special Adviser to the United Nations Conference on Trade and Development (UNCTAD) for Youth Entrepreneurship and Small Business. Expanding into international markets with its simple rules, Alibaba purports that “we want to make sure that everywhere we go we can build companies for the locals not for us” (Kuo and Dahir, 2017).

Discussion
This study contributes to the business model literature by providing insights into how entrepreneurs use simple rules in business model building and evolution (Table I). Drawing on three case studies, we find that entrepreneurs develop simple rules from their experiences, use these simple rules to capture opportunities, and in this process these rules then become the backbone of a venture’s business model. Simple rules help businesses best leverage their cognitive resources to the most crucial decisions regarding how to create value and actualize opportunities. From these three cases, we can see that entrepreneurs develop simple rules to help them deal with a VUCA environment – the ambiguity and chaos of environment changes and technology disruption. The entrepreneurs in our three cases further used simple rules to turn the market opportunity into venture growth and scaling, using market feedback to guide and reinforce their simple rules.

Research on entrepreneurial decision-making is currently lacking. An urgent need exists for more researchers to tackle this area of great significance both theoretically and practically. This article contributes to this literature by studying how entrepreneurs use simple rules to build business models, especially in fast-changing and uncertain environments. The research setting of our study, the emerging technology industry, is admittedly an extreme setting where it is essential for firms to capture opportunities efficiently and flexibly in order to succeed. However, we believe that the findings of this research may provide organizations across different industries with insights as they face increasingly VUCA environments (Horney and Pasmore, 2010).

This article speaks to scholars and practitioners in strategy and entrepreneurship fields in helping businesses with their decision-making on business models, especially under uncertain and fast-changing environments (Guo et al., 2016). While the strategy field has traditionally focused on establishing and sustaining competitive advantages, the focus of the much younger entrepreneurship field has revolved around opportunities and new venture creation (Sun et al., 2018). The overlap between strategy and entrepreneurship is expanding because of the increasing importance of entrepreneurship and creative destruction in our economy. Sitting at the intersection of strategy and entrepreneurship lies in the emerging new field of strategic entrepreneurship. Our article elucidates how emerging businesses create and sustain competitive advantage while simultaneously identifying and exploiting new opportunities (Hitt et al., 2011).

Traditional strategy theories, such as the positioning view and the RBV, like classical economic theories, presume that firms have perfect information and unlimited cognitive abilities. As such, they pay minimal attention to people and their cognition problems and limitations (Massa et al., 2017). We bring people, the individual decision-makers for businesses, back into strategy research and depict a more realistic picture of the behaviors of successful entrepreneurs and their business model development processes. As Sarasvathy (2001, p. 250) rightfully pointed out:
<table>
<thead>
<tr>
<th>Firm name</th>
<th>Qihoo 360</th>
<th>Xiaomi</th>
<th>Alibaba</th>
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<td>Simple rules</td>
<td>Free</td>
<td>Customer (Fans) Participation</td>
<td>To make it easy to do business anywhere</td>
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<td>Emergence: business models</td>
<td>Hongyi Zhou’s experience with 3721 and Yahoo!</td>
<td>Jun Lei’s experience in Kingsoft, new venturing and angel investment</td>
<td>Jack Ma’s experience in America, especially in Silicon Valley; in government office</td>
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<td>emerged from simple rules</td>
<td>Qihoo 360’s first shot: 360 Safe Guard</td>
<td>MIUI, Mi Chat and Xiaomi Phone’s success</td>
<td>China Pages (The yellow pages)’s failure</td>
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<td>Materialization: simple rules</td>
<td>Qihoo 360’s basic security products and services would be permanently free</td>
<td>Selling high quality smartphones at or near cost, without compromising the component</td>
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<td>help entrepreneurs actualize</td>
<td>Online advertising and Internet value-added services to earn revenue</td>
<td>quality and performance compared to other premium smartphones</td>
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<td>opportunities with the right</td>
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<td>Through online forum and other social media channels like Weibo, WeChat, and QQ Zone</td>
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<td>business model</td>
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<td>Scaling: simple rules help</td>
<td>Success reinforced the permanently free of its basic security products</td>
<td>Products and market expansion as well as building an eco-system</td>
<td>Building an open eco-system (e-commerce, logistics, cloud computing, digital marketing and</td>
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<td>business models evolve</td>
<td>and services</td>
<td>To “make quality technology accessible to everyone” becomes a more salient simple rule</td>
<td>mobile Internet services)</td>
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<td>Developing open platforms on which third-party Internet product and service</td>
<td>than user-participation because of the former’s unsatisfactory performance</td>
<td>Inspire American and African entrepreneurs to do business on Alibaba’s platform</td>
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<td>providers offer their products and services</td>
<td>Add offline presence to marketing strategy</td>
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<td>Free products (360 Internet Security and 360 Mobile Security) and</td>
<td>Xiaomi 4i and the success in Indian and Brazil markets</td>
<td>Globalization, rural development, and big data cloud computing</td>
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<td>international collaboration</td>
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Table I. The role of simple rules in the development and evolution of business models: three cases
Human life abounds in contingencies that cannot easily be analyzed and predicted but can only be seized and exploited […]. This is especially true when dealing with the uncertainties of future phenomena […].

The simple rule approach provides a better depiction of entrepreneurs in their decision-making and business model development in uncertain and fast-changing environments and thus offers guidance for future entrepreneurs.

**Implications for future research**

Our research opens many doors for future studies in strategy, entrepreneurship and decision-making. Some topics may include:

**Q1.** How can we apply simple rules to the lean startup process (Blank, 2013; Ries, 2011), speed up the product iteration cycle and reduce the failure rate (Sun and Zou, 2018)?

**Q2.** Can we test the relationship between simple rules and business performance using both qualitative and quantitative methods? For example, to examine whether ventures with identified simple rules have higher performance exhibited in indicators such as return on investment and market valuation (Zott and Amit, 2008; Zott *et al.*, 2011)?

**Q3.** Do entrepreneurial firms’ simple rules help counter the liability of foreignness in foreign market entry (Shi *et al.*, 2017; Sun *et al.*, 2015)?

**Q4.** How do venture capitalists view simple rules and evaluate business models in different funding rounds (Ahlstrom *et al.*, 2007; Ahlstrom and Bruton, 2006; Cumming, 2005)?

**Q5.** How can simple rules empower entrepreneurs and business managers in the top, middle, and low levels by sharing a common strategy, values, and beliefs, fostering trust and motivation, and responding to changing Xing and Shi agilely?

**Q6.** How do simple rules link to entrepreneurs’ ethical decisions?

Examples might include decisions on the issue of counterfeit goods on Alibaba and intellectual property protection in Xiaomi (Peng *et al.*, 2017). Further research is needed to explore the black box of entrepreneurial decision-making pertaining to business model developments and other key business decisions, such as decisions on foreign market entry modes (Shi *et al.*, 2017; Sun *et al.*, 2015) and strategies on breaking down barriers to innovation and change (Wang *et al.*, 2008).

**Conclusion**

This article addresses how entrepreneurs use simple rules to build business models, especially in VUCA environment. We find that entrepreneurs create simple rules that are often learned from their experience. These simple rules serve as the backbone of the venture’s business model by creating value for customers and actualizing new opportunities. Our findings provide insights into how simple rules guide the development of
business models and offer prospective entrepreneurs with a powerful approach to decision making for enhancing competitiveness and growth.

Notes

References


Building business models


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