

Building business models through simple rules

Building
business
models

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Received 2 August 2017
Revised 21 January 2018
5 April 2018
16 May 2018
Accepted 17 May 2018

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-making involved (Marshall and Rossman, 2014; Tsang, 2013).

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-unpredictable 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

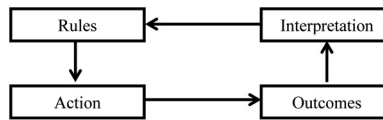
Venkataraman, 2000). By using this backward-looking process (Gavetti and Levinthal, 2000), entrepreneurs select rules that have worked effectively and use them to guide the building of a business model, as shown during the early development stages of Qihoo 360, Xiaomi and Alibaba.

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

Figure 1.
An experiential learning cycle of simple rules



Source: Inspired by March and Olsen (1975)

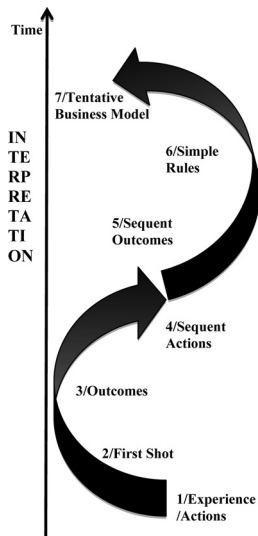


Figure 2.
Business model emerges from simple rules learned from experience (early stage of development)

	Qihoo 360	Xiaomi	Alibaba
1	- 3271 and Yahoo! - Qi and Qihoo 360	- CEO of Kingsoft - Founder of Joyo.com - Investor of Vanc.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).

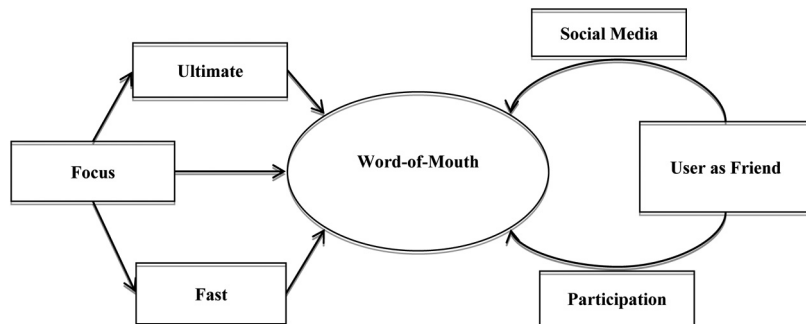


Figure 3.
The business model
of Xiaomi (2014)

Source: Portrayed by Jun Lei

- (2) 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).
- (3) 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:

Firm name	Qihoo 360	Xiaomi	Alibaba
Simple rules	Free	Customer (Fans) Participation	To make it easy to do business anywhere
Emergence: business models emerge from simple rules learned from entrepreneurs' experience	Hongyi Zhou's experience with 3721 and Yahoo! Qihoo 360's first shot: 360 Safe Guard	Jun Lei's experience in Kingsoft, new venturing and angel investment MIUI, Mi Chat and Xiaomi Phone's success	Jack Ma's experience in America, especially in Silicon Valley: in government office China Pages (The yellow pages)'s failure
Materialization: simple rules help entrepreneurs actualize opportunities with the right business model	Qihoo 360's basic security products and services would be permanently free Online advertising and Internet value-added services to earn revenue	Selling high quality smartphones at or near cost, without compromising the component quality and performance compared to other premium smartphones Through online forum and other social media channels like Weibo, WeChat, and QQ Zone	Launched Taobao, Alipay, Tmall, Ali cloud, and other platforms to do business
Scaling: simple rules help business models evolve	Success reinforced the permanently free of its basic security products and services Developing open platforms on which third-party Internet product and service providers offer their products and services Free products (360 Internet Security and 360 Mobile Security) and international collaboration	Products and market expansion as well as building an eco-system To "make quality technology accessible to everyone" becomes a more salient simple rule than user-participation because of the former's unsatisfactory performance Add offline presence to marketing strategy Xiaomi 4i and the success in Indian and Brazil markets	Building an open eco-system (e-commerce, logistics, cloud computing, digital marketing and mobile Internet services) Inspire American and African entrepreneurs to do business on Alibaba's platform Globalization, rural development, and big data cloud computing

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 [...] 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

1. “形”和“勢” in Chinese. Details can be referred to Sun Tzu’s book *The Art of War* translated by Samuel B. Griffith (1963, Oxford University Press) and François Jullien (1995)’s book on “Shi” – *The propensity of things: Toward a history of efficacy in China*.
2. *Reuters*, Technology News: Alibaba’s Ma meets Trump, promises to bring one million jobs to US 9 January 2017, available at: www.reuters.com/article/us-usa-trump-alibaba-idUSKBN14T1ZA

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