

**Original citation:**

Peng Liu, Robin Bell, (2019) "Exploration of the initiation and process of business model innovation of successful Chinese ICT enterprises", Journal of Entrepreneurship in Emerging Economies, <https://doi.org/10.1108/JEEE-09-2018-0094>

**Permanent WRaP URL:**

<https://eprints.worc.ac.uk/8200/>

**Copyright and reuse:**

The Worcester Research and Publications (WRaP) makes this work available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRaP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

**Publisher's statement:**

This is an Accepted Manuscript of an article published by Emerald Publishing in the Journal of Entrepreneurship in Emerging Economies, available online: <https://www.emeraldinsight.com/doi/full/10.1108/JEEE-09-2018-0094>.

© 2019 Emerald Publishing Limited.

**A note on versions:**

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRaP URL' above for details on accessing the published version and note that access may require a subscription.

**For more information, please contact [wrapteam@worc.ac.uk](mailto:wrapteam@worc.ac.uk)**

# Exploration of the Initiation and Process of Business Model Innovation of Successful Chinese ICT Enterprises

Peng Liu & Robin Bell

[r.bell@worc.ac.uk](mailto:r.bell@worc.ac.uk)

Journal of Entrepreneurship in Emerging Economies (2019)

[doi: 10.1108/JEEE-09-2018-0094](https://doi.org/10.1108/JEEE-09-2018-0094)

## Abstract

### Purpose

This research investigates four successful Chinese ICT enterprises to determine what initiated their business model innovations and the process they went through by exploring how they adapted and innovatively renewed four key elements of their business models.

### Design/methodology/approach

This investigative and exploratory research adopted a multiple-case-study design exploring four purposively selected successful Chinese ICT enterprises which had all engaged in significant business model innovation since their inception. Data for the case studies was collected through in-depth interviews with the founders and analysis of the company history to gain a detailed account of the evolution of the firms' business models since their formation.

### Findings

The research identified three key initiating factors to business model innovation in the firms studied, namely, constant and rapid product iteration together with an emergent strategy leading to business model innovations to take full advantage of the firms' competitive advantages; a reaction to threats and environmental changes; and an opportunistic behavior to extend the business model into new markets. The research found that networks were a key factor in the process including the customer base, financial investors and network collaborators.

### **Research limitations/implications**

This research is limited to four successful Chinese ICT firms; this in-depth approach means the information may have only limited transferability but provides depth on a burgeoning Chinese sector.

### **Originality/value**

This research addresses the call for more research and a greater understanding of what initiates business model innovation and the process firms go through to develop the key elements of their business models by looking at a purposively selected sample of successful Chinese enterprises in a fast moving and technologically driven market.

### **Keywords**

Business Models; Business Model Innovation; China; Digital Entrepreneurship; ICT; Big Data

## Introduction

The information and communications technology (ICT) industry can both enable and drive economic development and growth and China's ICT market has massively expanded to become a major driver in China's social and economic development, in part due to government support (Li et al., 2018). It also impacts other industries and economic sectors by information transformation and technology diffusion (Li et al., 2018). Start-ups in the ICT sector must adapt themselves to a rapidly changing environment and technological leaps that transcend borders. For ICT firms, innovation and internationalisation are likely to be instantaneous and interrelated due to the globalised nature of ICT markets. Thus entrepreneurship, innovation and internationalisation are closely interconnected, which can create challenges for a firm's survival (Onetti et al., 2012). Fast moving technological progress provides real opportunities for businesses and the potential of success through innovative products and production but can equally result in threats for the established business (Amshoff et al., 2015). The ability to actively develop new viable business models may be a critical factor in their success and survival. Research suggests that business models can facilitate both technology and product development (Baden-Fuller and Haefliger, 2013; Hu, 2014) and the commercial and economic success of technological innovations (Dmitriev et al., 2014).

Some businesses have achieved outstanding success by developing and internationalising technology enabled business models that impact local and global value chains (Alcácer et al., 2016). 'Big data' analytic firms, for example, develop processes for gathering, analysing and interpreting data in order to gain valuable insights and advantages over their competitors (Vendrell-Herrero et al., 2018). Big data analytics is characterised by a focus on very large, unstructured and fast moving data (Davenport, 2014) and is already having an impact on global production processes and business-consumer relationships (Opresnik and Taisch, 2015).

Since the 'dot-com' bubble of the 1990's, the business model has received considerable attention from academics and practitioners for its strategic role in the firm's success (or failure) (Thornton and Marche, 2003). Magretta (2002), for example, argued that a sound business model was the key to a viable business and the literature has often since highlighted the importance of business model design to firm performance (e.g. Pucci et al.,

2017). However, many authors have stressed the need to review, develop and innovate business models to maintain competitive advantage (Doz and Kosonen, 2010; Eurich et al., 2014). This is particularly critical when the so-called 'rules of the game' change often and/or quickly, in order to establish new sources of sustainable competitive advantage (Voelpel et al., 2004). What factors initiate the experimentation process of business model innovation and which actions constitute the process requires further elucidation (Guo et al., 2016; McGrath, 2010).

This research explores what initiated four successful Chinese ICT firms to innovate their business models and the process they went through, by exploring how they adapted four key elements of their business models.

## **Literature Review**

### ***Business Models***

The business model concept has evolved continuously from approaches such as how a firm will make money and sustain profit over time (Stewart and Zhao, 2000), the logic of the firm (Linder and Cantrell, 2000), a story of how a firm works (Magretta, 2002), to more conceptual tools based on specific model components.

Dozens of definitions and composite business models have been proposed in the literature (e.g. Magretta, 2002; Morris et al., 2005; Osterwalder and Pigneur, 2010; Teece, 2010; Zott and Amit, 2010; Bucherer et al., 2012; Shafer et al., 2005). However, despite the multitude of literature seeking to contribute to the business model construct, there is no one unified or universally accepted definition of a business model or indeed what elements it should contain (Andersén et al., 2015). This lack of acceptance is largely due to the many different perspectives e.g. strategy, technology, e-business etc. and the different lenses and approaches through which business models have been developed (Shafer et al., 2005).

Over time business models have been developed in the literature that are defined in a broader sense and which are based on a large variety of business characteristics and decision variables, which translate opportunities into particular configurations that create and capture value (Andries and Debackere, 2013), or a holistic picture of the business produced by combining factors located inside and outside the firm (Gassman et al., 2014).

Osterwalder et al. (2005 p.10), using a holistic organisational approach, defined a business model as a “description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, to generate profitable and sustainable revenue streams”.

Approaches from perspectives such as technology, entrepreneurship and strategy have often focused on a value creation approach with the customer value proposition at the core of the plan surrounded by a profit formula, key resources and key processes (Johnson et al., 2008; Teece, 2010). A business model can thus be considered to represent the organisational and financial architecture of the business (Teece, 2010), and describes the business logic of the value creation, value delivery, and value capture mechanisms that the business will adopt (Teece, 2010). Osterwalder et al. (2015) argued that to maximise the potential of a business model, businesses should be customer-centric and the business model must be honed and developed to meet particular needs of customers.

Despite the wide variety of views, approaches and perspectives that are adopted in the development of business plans, there are some key reoccurring themes within the literature, and some consensus that business plans should incorporate the elements of value creation, value delivery, value network and value capture mechanisms (Osterwalder and Pigneur, 2010; Teece, 2010). These elements will be used in this research to investigate the creation, change and development of the business models of four rapidly evolving ICT businesses over time. They can be briefly described as follows. A business has a value proposition (including the product/service offering and target customer segments) from which it creates value, and the term value creation thus refers to the firm’s product and its business logic as to how it creates value for partners and customers (Osterwalder et al., 2015; Osterwalder and Pigneur, 2010; Teece, 2010).

Value delivery refers to the stream of activities through which value is delivered to both customers and network partners. This also includes how a firm develops and maintains contact with its customers (Osterwalder et al., 2005; Osterwalder and Pigneur, 2010; Morris et al., 2005).

The value network can include partners, distribution channels, coalitions and customers (Osterwalder and Pigneur, 2010; Shafer et al., 2005). Such networks extend the firm’s resources and can help achieve economies, reduce risk and help tap into new knowledge or

resources. Value emerges in cooperation with partners upstream and downstream in the firm's value chain (Sainio et al., 2011). The importance of networks was highlighted by Lambrecht et al. (2015) who concluded that different resources and thus different partners were needed at different stages of the innovation journey.

Finally, value capture refers to the practices and mechanisms by which firms earn or capture profits. The so called revenue model e.g. the advertising model, commission model and the fee for service model, plays a central role in many business model definitions (Osterwalder et al., 2005; Osterwalder and Pigneur, 2010; Teece, 2010).

### ***The Role of Strategy***

Some researchers have included competitive strategy factors within their business model frameworks, in which case a business model can be regarded as an ongoing tool for strategic sustainability since the business model can offer interrelated sets of strategic choices (Morris et al., 2005). However, Magretta (2002) argues that business models do not incorporate competition as a dimension of performance, and Ladd (2017) that they do not incorporate contingencies for alternative pathways of market evolution. However, in either case, a business needs to strategically develop (change or upgrade) its business model to meet new challenges/environmental changes (DaSilva and Trkman, 2014). The ability to anticipate and react quickly to sudden changes in the environment has been referred to as strategic agility (Li et al., 2009). Agility can be considered in terms of the ability to develop products, features, services, solutions and business models in rapid response to customer, market and technology changes (Davidson and Klemme, 2016). The ability to react to customer feedback and adapt (or pivot) business models as required is highlighted in the lean start-up literature. This approach favours experimentation based on customer feedback and iterative design leading to frequent adaptations in search of a repeatable and scalable business model (Blank, 2013). Such changes have often been found to be undertaken through experimentation (Sosna et al., 2010) and there have been calls for research into what factors can initiate the process and what actions constitute this process in the Chinese context (Guo et al., 2016).

### ***Business Model Innovation***

Business model innovation is a growing area of research and has been variously considered to be a continuous reaction to external changes (Demil and Lecocq, 2010), an evolutionary process (Dunford et al., 2010), a discovery driven process (McGrath, 2010) and an ongoing learning process (McGrath, 2010; Sosna et al., 2010).

The definition of business model innovation is open to debate, largely due to the inconsistencies that surround the conceptual framework of the business model itself (Spieth et al., 2014). Debate also surrounds what precisely constitutes a business model innovation (Taran et al., 2016). Whilst innovation in the form of patents has grown quickly in China at an annual growth rate of 19% a year between 1995 and 2014, the growth and development of business model innovation is harder to measure and assess (Wei et al., 2017).

Business model innovation can be considered to be distinct from that of either product or process innovation (Comes and Berniker, 2008) and has been argued to be key to a firm's performance and long term success (Chesbrough, 2007; Johnson et al., 2008). It can result from both the identification of new opportunities or new threats and is defined by Bucherer et al. (2012 p.184) as "a process that deliberately changes the core elements of a firm and its business logic", or by Casadesus-Masanell and Zhu (2013 p.464) as "the search for new business logics of the firm and new ways to create and capture value for its stakeholders". In short, whilst product/process innovations and business model innovations can be interlinked they can also occur independently (Bucherer et al., 2012). Managers can thus innovate by modifying or redesigning their business model elements to make it more competitive going forward (Baden-Fuller and Morgan, 2010; Zott and Amit, 2010). This is particularly important when product or process innovation alone may be insufficient (Chesbrough, 2007), and when a firm's difficulty in differentiating itself from its competitors through product or services alone may be difficult to overcome. Business model ambidexterity has been found to improve technological innovation performance (Hu and Chen, 2016).

Business model innovation can include restructuring e.g. splitting or combining individual business models, dual-brand strategies, changing market segmentations, out-sourcing, changing the product or service focus. The more a firm can develop a business plan based on their unique resources, core skills and competitive advantages, the more difficult it is for competitors to react. Whilst products and services can be copied, new competitor business



models will take time to develop and may require changes in the competitor's long term strategy, corporate culture and core competencies (Bucherer et al., 2012). Thus, the development of a new business model can be seen as a tool for creating strategic sustainable competitive advantage in the marketplace with differentiated and difficult to replicate elements within the business model an important ingredient. Failure to update a failing business model can lead in the longer term to business failure (Amit and Zott, 2012). It is important however, to 'unlearn' the old failing one (Rezazade Mehrizi and Lashkarbolouki, 2016).

Disruptive technologies or innovations can have a potentially wide impact across businesses on their business models. Christensen (1997) categorised new technology into two categories; sustaining and disruptive. Whilst the former was based on incremental improvements to already established technology, the latter was less refined, relatively untried and might have only limited appeal and/or value. Christensen and Raynor (2003) extended the concept to include disruptive business models under the title disruptive innovation. Research suggests that disruptive technologies act as antecedents of business model innovation to both the owners of the new disruptive technology and the incumbent managers of established firms (Christensen, 2006).

In this research, business model development will be considered in terms of business model innovation as described above, alongside product/service development. In reality these can often be closely linked, but more importantly for this research, this will provide a more holistic understanding of the process and elements in business model development in a rapidly changing and volatile environment.

## **Research Aim, Questions & Contribution**

This research aims to explore what initiated business model innovation in successful Chinese ICT companies and how the companies implemented the process. The research seeks to answer the following two research questions;

1. What initiates business model innovation in successful Chinese ICT companies?
2. What is the process through which successful Chinese ICT companies innovate their business models, through the development of their value creation, value delivery, value networks and value capture mechanisms?

This research contributes to the literature by addressing previous calls for further research exploring what initiates business model innovation in China (Guo et al., 2016) and adds insight into how firms innovate their business models in volatile, uncertain and constantly changing industries (Schneider and Spieth, 2013). Previous research has indicated that entrepreneurs and innovation systems differ between China and the Western world (Bell et al., 2019). This along with different market considerations could lead to different needs to innovate business models. The object of this exploratory research is to explore four exceptional cases to gain a deeper understanding of why the businesses felt they needed to develop and innovate their business models and the process through which they were delivered, through the lens of value creation, value delivery, value network and value capture mechanisms, an approach which has been largely under adopted in the area of business model innovation (Ojala, 2016). This research will provide an insight into business model development in a key sector of the Chinese economy which is important for economic development through technological and product development and the commercial success of technological innovation (Li et al., 2018). The success of these organisations makes them unique in their fields and thus particularly suitable for a cross-case study approach to achieve the research aim (Thomas, 2016).

## **Methodology**

This investigative multiple-case-study research adopts a qualitative inductive approach, following a multiple-case design using each case as a single unit of analysis (Yin, 2013) to gain a detailed account of the business models and strategic decision making by the firms since their inception.

## **Sample**

The sample of enterprises selected for this research represented a range of award-winning Chinese ICT enterprises that had all been launched within the previous ten years and all of which were involved in some form of innovative research and development. A purposive extreme (deviant) case sampling strategy was employed to focus on special cases which were successful (Patton, 2002). The businesses all had operations internationally from the outset, or within a relatively short space of time, and during their history had engaged in

significant business model innovation. A summary of the four enterprises is provided in Table 1. Eisenhardt and Graebner (2007) have suggested that the rigor of theory improves when data are drawn from at least four cases. The four enterprises chosen represented a purposive sample to yield the most detailed and informative information from internationally successful ICT businesses. The sample was selected based on connections with an elite university in Beijing. The researchers hoped the university connection would increase the subjects' comfort with engaging in a frank and honest interview. In line with other research it was decided to sample only organizations who were comfortable engaging in the research and would fully commit to participation, in the hope that it would encourage honest answers and support the reliability of the research (Pham et al., 2019). The companies involved in the research were briefed on the purpose of the research and consented to taking part in the study. It was agreed that any identifying company figures and statistics and specific geographical market data would be removed to support the anonymity of the enterprises. Those involved in the interviews and translation of the data agreed to treat the information confidentially and the data was stored on encrypted devices.

**Table 1: Case Summary**

Firm	Description of Operation	Age	Scope of Operation	Value Proposition	Value Capture Mode	Financial Backing
A	IOS and Android app developer	8 years	Global	Advanced easy to use keyboard app	Advertising	Venture capital
B	IOS and Android app developer	4 years	Global	Next generation predictive keyboard application with colourful and fun input keyboard	Advertising	Venture capital
C	Big data collection and analytics	9 years	Global	Independent data and technology analysis service	Fee for service	Venture capital
D	Digital advertising demand side platform	8 years	Global	Digital advertising service with direct programmatic buy and audience profiling services	Fee for service	Venture capital

### **Data Collection**

Data was collected from analysis of the company history and in-depth interviews that lasted, on average, two hours, with the conclusions fed back to the interviewees through a member-checking process to support the credibility and transferability of the research (Creswell, 2013). Shorter follow up interviews were also held to help clarify and answer questions arising. The interviewees were all founding members of their enterprises and were all still involved with the day-to-day running of their enterprises. This meant that the interviewees could discuss all the business model innovations undertaken from inception of the business. This particular and very selective criterion was chosen to ensure that the most appropriate sample of interviewees was chosen who could provide insight on the process of business model innovation and what initiated the innovations.

The interviews were conducted by the researchers and the interviews were recorded and later transcribed. Additional notes were taken by research assistants to detail the context and situational analysis of the discussions. The notes were used to ensure the professional translations of the transcripts preserved the context of the conversation. Bilingual faculty members also reviewed the transcripts to ensure their integrity before they were analysed. Questions explored the history of the company and what initiated the business model innovations and the changes undertaken during the course of the business's history. Questions were also asked about the key components of the business models based on the four key areas highlighted in the literature review and the process behind how these were developed. A semi-structured interview approach was adopted to give the interviewees the freedom to answer and expand the conversation and to gain deeper insights that more structure would not allow. This approach also helped to reduce the likelihood of social desirability response bias (Maccoby and Maccoby, 1954). Interviewees were encouraged to discuss the key areas of their business models and how these developed without using the term 'business model' to avoid possible different interpretations of the meaning, and to avoid the interviewees feeling influenced to answer in a certain way.

### **Data Analysis**

Within this research the unit of analysis was the four individual enterprises as the research sought to explore what initiated the firms to innovate their business models and the process

they went through. In order to achieve this, a framework of observations was applied for each unit (Gerring, 2017), which focused on four key elements of their business models: Value creation, value network, value delivery, and value capture. The importance of these key areas within the business model has been highlighted by numerous researchers (Chesbrough, 2010; Ojala, 2016) and some consensus exists that businesses should incorporate all of these elements in their development (Osterwalder and Pigneur, 2010). Using this approach it is possible to investigate an under researched aspect of business models, namely, their creation, change and development over time (Ojala, 2016) and shed light on the initiation and process. A top-down thematic approach was then applied to understand what initiated business model innovation within each business and the process each business went through in adjusting the four key business model areas. The NVivo software program was used to help support the data analysis.

In the next section the four case studies are presented and analysed, then in the discussion section the findings from the case studies are brought together.

## **Case Studies & Case Analysis**

### **Case A**

Case A is based on an IOS and Android app developer. The product is a Keyboard app which was targeted at overseas markets from the outset and which provides an alternative input method that runs on multiple major platforms through a virtual keyboard on the touchscreen. English was chosen as a relatively easy language to work with which led to the discovery that overseas markets provided the opportunity of adopting a wider range of 'easier' business models than the home market, especially for basic innovative products. This was crucial for the early survival of the enterprise.

The first business model that was adopted was based on the shareware distribution model strategy to get the product into the market. The firm followed the established path of allowing free use of the software for a set period of time, after which payment was required to prevent some functions from being disabled. This value capture approach benefited from being easy to action and low cost with minimal overheads. The shareware model was adopted at this stage because although it produced the lowest return, it provided a stable cash flow at a critical time in the firm's development. Following on from this, the product

was placed on the firm's own website where, for a license fee, users could download the software from the website and then copy it on to their phones. The uptake of the product was encouraging despite it being expensive and neither simple nor convenient.

Importantly, the product was being constantly developed and improved on an ongoing basis and new languages added. Changes and developments in this sector are rapid and the process of constant iteration (Blank, 2013) or 'probe and learn' (Lynn et al., 1996) are commonplace. The interviewee commented:

*"We do not attach much importance to market research or procedures. What we value is flexibility."*

*"We would create a prototype very quickly and then launch it into the market, after which we would continue using the process of trial and error."*

The firm believed that its relationship with its core users was paramount in the development of its product. Indeed, the customers' active involvement in providing feedback on the product encouraged innovation of the product through the rapid iteration process. This was reflected in the comment:

*"You need to involve them with the update of your products. By this means, innovation will be easier to succeed through fast iteration."*

This agile development reflects the aim to develop competitive advantage through continuous product development based on insights from customer feedback. Gains from single innovations are frequently short lived but a continuous development based on a customer centric driven approach can create additional value sooner (Denning, 2013). This requires not only delighting the customers with constant innovation but also developing enduring relationships with them (Reichheld, 2006).

These approaches however, offered only limited potential for growth and development, which was a key objective of the firm. As such, new business models were required that would generate a greater income. It is worth noting at this point that neither of these approaches would have survived in the home market due to the license payments involved (value capture model).

Later as the product became more established, the business model changed yet again to a licensing agreement model with operators and manufacturers paying a license fee to pre-

install the product. This was a more lucrative arrangement (possible only because of the developed competitive advantages of the product) which helped to support further research and development. However, this approach was limited in the longer term due to eventual market saturation. A step change was needed to realise the full potential of the product.

At this point the firm moved to a completely new business model based on the large and growing customer base. The product was offered free to manufacturers to pre-install in their equipment and revenue was now captured through value-added services including advertisements and other revenue streams. This model which provides an opportunity for greater potential returns and the opportunity for greater innovation would not have been tenable at an earlier stage in the firm's development since this new approach provided less initial revenue than the licensing model. However, this was offset by an increase in external financing through an extended value network. The founder identified that:

*"In the beginning there was no venture capital. At present, we've got venture capital."*

Importantly, it was venture capital investment that made this business model innovation possible. This product was seen as a globalised product when it was launched outside China in the West and as such, based on some definitions, could be considered in terms of a born global business (Knight and Cavusgil, 1996). This supports the contention by Cabrol et al. (2009) that entrepreneurs must have a global vision from an early stage, in order to operate rapidly in foreign markets. In addition, it can be viewed as a lean start-up with its focus on experimentation, customer feedback and iterative design (Blank, 2013). In summary, its focus has been on growth and development and has repeatedly changed its value proposition; value creation, value delivery, value network and value capture mechanisms alongside constant iterative product development. The interviewee concluded by saying:

*"So in my view we needed to adopt a different business model to suit the stages that our company was at."*

### **Case B**

Firm B is an IOS and Android app developer of mobile keyboards. It works on innovative technologies to support human expression powered by machine learning through next generation keyboard applications. Firm B began by developing a successful app which provided a colourful and fun input keyboard for young people. Based in China, Firm B

originally launched its product in more developed countries and then later began expanding into relatively less developed countries. It also extended its range of languages to include a wide variety of less common languages. The interviewee commented that:

*“Whilst most of China’s companies focus on the Chinese market ...with the development of globalization, China’s companies have this kind of opportunity and ability to do international business and create international trade.”*

The decision to start abroad was based on the belief that it would be less competitive overseas and it would be easier and quicker to build up big data. This strategy provided a competitive advantage over Chinese competitors who could try and copy the service but would not have the data to compete in terms of product and service.

The interviewee emphasized the role and importance of acquiring big data by saying:

*“Market research is different from the past in essence, because market research today must be based on users and data, which are collected from mass sampling.”*

*“We can know the users behaviours and we can get some useful information of users and their remarks. By analysing all the ‘big data’ we are able to determine the future trend and customers’ preferences.”*

The app download is free to the customer and the firm captures its revenue through advertising. It originally offered a freemium service, in common with many internet businesses, but this has now been discontinued. It is vital that businesses constantly review their customer value propositions to maximise their revenue. Freemium business models, which are free but charge extra for more premium add-on features, often result in poor conversion rates (Teece, 2010). Fun updates are provided to refresh interest and maintain customer loyalty.

Understanding customer demands and behaviours through the management of knowledge flow can be a critical activity for business model innovation (Wu et al., 2013) and the firm believes that big data is essential to identify future trends and customer preferences in order to develop their products, enhance their competitive advantages, and to nurture the firm’s dynamic capabilities (e.g. build a stronger brand). The change and importance of customer wants and needs were reflected in the comments:



*“According to the original plan we would deprioritize the voice service and defer its development but with the revolution of technology voice service is now considered an important input form.”*

*“My Company has its own advantage, we focus on users’ needs, and strive 100% to meet those needs.”*

Having been successful with the input keyboard app, it is now seeking to expand into predictive output technology using emoji’s and algorithms to respond to different emotions which are typed or spoken. This potential new value proposition highlights the importance of strategic innovation and business model development which will potentially provide a new source of competitive advantage which will take time for others to replicate. The importance of strategic innovation, updating the value proposition and business model development were encapsulated in the comment:

*“The first thing (key point) is innovation; the second thing is that you have to be unique, which requires your idea to be different from your competitors.”*

The firm highlights the need to adjust their business plan regularly (quarterly) as the market is dynamic, and targets, customer priorities and developments need constant attention. New product development is customer driven and iteration driven by feedback is crucial. As such this business can be thought of as operating a lean start up model looking to pivot its value proposition as the market unfolds.

The firm was launched abroad with a strategy of expanding to relatively less developed countries using its inbuilt competitive advantages. The interviewee highlighted the gap in the market:

*“For example, (market leader) may provide some popular language keyboards, while we develop many minority languages which it lacks.”*

Such disruptive innovation behaviour can be both successful and profitable or fail, providing a dilemma for competitors in similar fields in the development of their business models (Christensen and Raynor, 2003). The interviewee continued:

*“For example, we once targeted the [majority ethnic group] people of [central Asian country]. We invented a keyboard with a language that few people use and almost one million locals chose our product.”*

In this sense its development can be viewed as a typical stages model development outwards from the US and Europe. Cases A and B provide some evidence for the stages or stepwise process of technology globalization to overcome technical, cultural and linguistic needs of local markets (Fulford, 2009).

### **Case C**

Firm C began as a professional agency in the advertising industry providing data and a technology service to business clients. The first business model was centred on the collection of data from the internet and the development of personalised advertising algorithms based on previous historical behaviour data. This information could then be used for personalised advertising or marketing, which offers the ability to target and deliver specifically chosen adverts to specific potential customers. Income was based on the number of transactions or ‘hits’. Despite success over a number of years, environmental changes and an increase in competition necessitated a change in the business model to ensure continued successful growth. Foreign businesses were starting to advertise more in China and required the same type of data. However, a system based on arbitrage from the internet transactions numbers was not transparent. Customers wanted to know their exact numbers, real traffic numbers, which created a trust issue when payment was based on an arbitrage economic model. Firm C at this stage decided to split the company into two and adopt a new second business model which was purely service based:

*“Finally, we made a decision that we give up anything about the arbitrage model (in the second company) and we only provide the pure service.”*

The newer current service helps their clients to process data from their e-campaigns and helps them to understand the performance of their media campaign and optimise their future advertising investments. In short, Firm C charges a service fee, based on the advertising spend, and provides data reports and their professional service. After the clients have accumulated a large enough amount of data, Firm C will help them to build their own

data platforms to use this data to optimise their e-commerce and future business. The interviewee added:

*“Therefore right now, lots of clients don’t consider us as a tracking company; they consider us as a big data company.”*

Most of the players in this industry capture value through media buying. That is, they buy advertising inventories, buy the media at a lower price then sell at a higher price. Firm C acts instead to only provide independent data and technology and concentrates on efficient corporate marketing based on objective data and innovative technology solutions.

Firm C, which is still based in China, is now providing the same services internationally to Chinese businesses advertising abroad. Such stepwise or stages expansions provide the opportunity to develop the business with lower risk. The development of the customer base through an extension of the area of operations is a common business model innovation for such firms. This case highlights the need to review and develop the business plan as the environment changes. When faced with the potential of the business being held back, the firm recognised a new opportunity and started a second business with a new value proposition, value creation and value capture mechanisms. It changed its positioning (service only) and by being independent it gained a competitive advantage of being regarded both independent and trustworthy. By expanding its operation to Chinese firms wanting to advertise abroad, it introduced a new value proposition and extended the customer (value) network. Not developing a business plan but instead sticking with the old one can lead in the longer term to business failure (Amit and Zott, 2012). This may mean breaking the rules or previous wisdoms that had previously led to success (Johnson et al., 2008). The interviewee highlighted the importance of understanding the customers and their needs and having the skillsets to meet their requirements:

*“I think we need different skills in different business models, but to start a company in connection with industry you should have a very good understanding about the consumers.”*

*“We run a business to business firm, which means you should understand the industry. Sometimes industry changes a lot, you should have very good studying. Self-learning is also very important for the entrepreneur.”*

Such comments highlight the importance of industry knowledge and keeping abreast of developments in order to ensure business model development is undertaken and businesses don't get left behind.

#### **Case D**

Firm D is a digital advertising demand side platform (DSP) which offers direct programmatic buy services (DPB) and a data management platform (DMP). The firm has a real time bidding architecture and algorithm, a proprietary cloud computing platform and audience profiling technology. As a result, its value proposition is that it is able to find the best matches between advertisements and customers, which offer advertisers the potential for increased targeted marketing effectiveness. Advertisers can bid in real time for their products or services to be targeted at specific potential clients. As such, it is a leading provider of audience based program advertising technology. Its value proposition was described as:

*“We use technology and big data to allow advertisers to effectively reach their consumers in a more intelligent way.”*

This is achieved through developing their competitive advantage, which is sustained through the ability to handle tens of billions of pieces of data on a daily basis. The advantage that this provides was described by the interviewee as:

*“We have data and technology and when the data becomes bigger we become better and the technology and algorithms become a better choice over our competitors for the advertisers.”*

It also actively supports and invests in the development of new big data research and product development and encourages business start-ups within its in-house incubator. The importance of this to the current business was highlighted by the comment:

*“We see that for our future we need to encourage and support our employees to come up with new business ideas to support and supplement our business.”*

*“We have weekly meetings where all the team get together to discuss ideas and possible developments.”*

*“A low hierarchal management structure is adopted within the company and our team meetings to ensure we hear everyone's ideas.”*

These comments reflect the belief that both expert advice and new ideas can be provided by almost all staff (Dobson et al., 2013). Indeed, employee engagement has been highlighted as a critical driver of business success in competitive markets (Lockwood, 2007) and corporate entrepreneurship a way to create an entrepreneurial culture which encourages creativity and innovation (Kassa and Raju, 2015).

The agility required to innovate continuously cannot be achieved through the hierarchical management structures that prevail in many large organisations (Denning, 2013). Regular meetings and a less hierarchal structure are important features in agile approaches to business model innovation. This is emphasised in team management approaches such as Agile which has been refined in the software industry and is now used more widely (Davidson and Klemme, 2016). Various methodologies based on the ideology of Agile include Scrum, in which development phases (or sprints) are undertaken by scrum teams. The process represents a horizontal ideology of enablement as opposed to the more traditional vertical ideology of control (Denning, 2015).

The firm began by selling advertising space on Chinese search engines to American companies. Over time, as the economy developed, as in case C, it expanded internationally into selling its services to Chinese firms looking to sell their products and services into the US. Over time the firm has developed and scaled up its business and as a result has required increased external investment i.e. an increased value network. As in Case A this should provide the impetus for further growth and research and development. The revenue model adopted to capture value is the fee for service model where the customer pays for the service they actually receive. The value creation is based on offering an enhanced technologically tailored and targeted advertising service at a premium through the bidding process. As in case C, a new value proposition has been added by extending the customer base to Chinese businesses looking to advertise in foreign markets. By launching its original business into markets abroad it was able to build up its big data, which subsequently made it highly competitive in the home market and develop its competitive advantage. The company sees itself as an international company which links international brands to consumers.

## **Results and Discussion**

This research was designed to investigate and shed light on the initiation and process through which a selection of award winning and highly successful Chinese ICT firms have innovated their business models to achieve successful outcomes in fast moving and highly competitive national and international markets. A number of key themes have developed from the case studies in this research.

### ***The Initiation of Business Model Innovation***

Many small hi-tech firms adopt an 'emergent strategy' approach within their sectors. In fast moving and constantly evolving markets a constant iteration approach is often adopted which allows continuous development with reduced risk. Although this most often involves product development, as seen in case studies A and B where constant iteration is a key theme, this can also benefit other areas within the business model such as through an enhanced value proposition and adjustments to value creation and delivery processes, value networks, and value capture mechanisms. Adjustments in these can all help to maximise a competitive advantage in the marketplace. For such firms' business model/product development can be seen as inherent or part of the DNA of the firm and they demonstrate a high level of strategic agility. Many recently established firms adopt this approach when the direction of the market is unclear or when product development is rapid. This is typical of the hi-tech sector in which these firms operate. Larger firms with greater finance and stability can afford to sink money into research and development to influence or change the market whilst smaller firms need to keep abreast of the market to survive. Hence, the business model of small hi-tech businesses can change or be updated regularly in terms of value proposition, value creation, value delivery and value capture, based on an emergent or evolving strategy.

In case A for example, the firm changed its business model in this way at regular intervals. Not only was the product continually developed, the most appropriate model at each stage was adopted to increase income, develop competitive advantage, and enable further research and development to take place. As a result, case A involves a series of value proposition/creation/delivery and capture changes and a focus on both customer and

external value networks. This increased the firm's competitive advantage and enabled it to meet its long term objectives which included research and development.

Importantly, when a firm's progress is limited by its business model then a new model is required. It is worth noting that in case B the business model is systematically reviewed every three months due to the pace of change in the market, sales and customer demands. An important factor in a born global firm's survival and success is its ability to respond to changes (e.g. market, technological) through the development of its capabilities (Kumar and Yakhlef, 2014). Case B has also adopted iterative product development, different value capture mechanisms and as in case A, a strong focus on customer needs and feedback to experiment and learn. The ability to react to customer feedback and adapt (or pivot) business models as required in search of a repeatable and scalable business model (Blank, 2013), as highlighted in the lean start-up literature, is a feature of these firms operating in the customer user applications (apps) sector. Indeed, it has been suggested that the lean start up approach can be perceived as a form of agile development operating at the strategic and business model levels i.e. lean start up approaches are agile methods for business model innovation (Ghezzi and Cavallo, 2018). Established firms that struggle to maintain a transitory competitive advantage whilst undergoing continuous innovation are often at a disadvantage to many newer firms who adopt newer forms of team management such as Agile (Davidson and Klemme, 2016). The ideology of Agile includes, work is focused on meeting customer needs and thus customer interaction is central; a product owner focuses attention on the customers' needs; work is undertaken by self-organising teams that utilise the skills of those undertaking the work; and work is undertaken iteratively and progress towards meeting the customer needs is assessed at each stage (Denning, 2015).

Business model innovation that enables companies to deal with frequent customer driven service requirements in an efficient and effective way can provide a source of competitive advantage (Clauß et al., 2014).

In case C, business model innovation came as a reaction to environmental and market competition conditions and the need to develop a new value proposition which would create a new competitive advantage in the marketplace. Inertia in defence of the status quo can provide an obstacle to the transformation of a business plan (Doz and Kosonen, 2010). However, not changing business models can also carry risks (Amit and Zott, 2012). This resulted in a second completely new business with a different business model based purely

on service. Later, this model was rolled out to Chinese businesses looking to advertise abroad.

This opportunistic behaviour is also characteristic of case D where a successful business model was similarly extended to Chinese businesses wanting to tap into foreign markets. Chinese firms that begin by operating in markets abroad can gain important competitive advantages in home markets e.g. in big data collection, in addition to the advantages of size and scale when adopting this strategy. Cannone et al. (2014) highlight that young entrepreneurs tend to move their business towards countries where financial resources are more easy and widely available; this research suggests that this is also true of other resources such as accessible big data. Furthermore, such stepwise or stages expansions provided the two Chinese service providers the opportunity to develop the businesses with lower risk.

In conclusion, this research has identified three distinct factors that act to initiate business model innovation within the four firms researched. These are the constant iteration and experimentation of the product and business model in search of a successful business model, the reaction to environmental changes and competition, and an opportunistic behaviour in maximising competitive advantage at reduced risk.

### ***The Process of Business Model Innovation***

Business model, product, and technological innovation to develop new competitive advantage in the market are key themes in this research. To be successful in experimenting and developing a new business model, the firm requires strong networks that allow it grow into the new model. The firms must develop a product or service that the customers want. A reoccurring theme within the four case studies is the need to develop and grow the customer base. All the firms stress the need to understand exactly what the customers want, which reflects the contention that businesses should be customer-centric and the business model should be developed to meet particular customer needs (Osterwalder et al., 2015; Teece, 2010). Understanding customers' needs, demands and behaviours through the management of knowledge flow can be vital both to business model innovation (Wu et al., 2013) and product development. Good customer support and feedback can help to prevent costly development mistakes. The first version of a service is often introduced as quickly as possible and feedback from early adopters then lead to a cycle of iterative changes to adapt



the features to meet customer needs (Ojala, 2016). In this way, the value and quality of the product can be evaluated and improved through the use of a relatively small group of active users (Standing and Mattsson, 2018). The early development of a small group of early adopters was highlighted in case A. This group is attracted and reacts to the value proposition, functions as a test sample that can provide feedback, and can provide a means of expanding the group by word of mouth (Standing and Mattsson, 2018). Wind (2008) opines that digital businesses necessitate a move from traditional management approaches towards an approach that includes 'network orchestration' as communities and networks are essential for digital entrepreneurs. The firms must also assess how they can best capture value from their product or service and which revenue model most appeals and is acceptable to their customers. For example, some groups of customers will avoid services that require payment. Seidenstricker and Linder (2014) argue that it takes a crucial initial idea that changes the logistics of value capture to develop a new business model. This was demonstrated in all four cases where a wide range of value capture mechanisms throughout their histories included advertising, fee for service, licensing, and freemium products. The latest value capture mechanisms involve Cases A and B relying on advertising to produce revenue, whilst Cases C and D rely on pay for service revenue models.

Finance can be a critical issue for young ICT firms. The competition is considerable, the market is fast moving, research and development is expensive, and changing business models can carry risks e.g. advertising requires a large customer base and may take time to produce a profit. This may require additional financing and extension of the firm's network to enable this. New start-up businesses require capital until the business can generate enough income to meet their business model objectives. This highlights the importance of the right investors and connections i.e. networks, to provide the stability required for the business to thrive. This is often critical in young data and technology firms. Investment and the importance of raising capital were highlighted in case A although all the firms in this research had successfully obtained venture capital over time to enable them to grow and develop through the extension of their value networks.

The value of extending the network to collaborate with other organisations is highlighted in cases A and B. These firms had grown and developed by extending their networks and cooperating with manufacturers to enable their products to be more widely distributed and used. In these cases, value capture was then obtained through advertising. These findings

highlight the multifaceted role of networks and relationships in the entrepreneurial process in emerging economies (Mamun et al., 2018; Ren et al. 2016). The networks developed as the requirements of the firms changed over time, which reflected the findings of Lambrecht et al. (2015) who argued that different resources and thus different partners were needed at different stages of the innovation process.

In summary, this research highlights the importance of the following factors in the process of business model innovation. The development of a strong and loyal customer base, active customer feedback to ensure the product meets customer needs and avoiding expensive mistakes going forward, an extension of the value network to ensure finance is available to allow both product development and business model development, and the development of the network to take advantage of collaborative opportunities.

## **Conclusion**

Previous research has suggested that business model innovation is positively influenced by an exploratory orientation and is mediated by opportunity recognition and bricolage. However, it has been highlighted that further research was required to examine the factors that initiated and constituted it (Guo et al., 2016). This research was designed to determine what initiated business model development in successful Chinese ICT companies and how the process was implemented, by exploring how they adapted and innovatively renewed four key elements of their business models. In order to investigate this, the research has focused on four rapidly evolving successful ICT companies.

Two of the four ICT firms (A & B) have adopted an emergent strategy in both product and model innovation. Not only was the product continually developed, but the most appropriate model at each stage was adopted to increase income, develop competitive advantage, and to develop the business further. Typically, this involved experimentation based on customer feedback and iterative design leading to frequent adaptations in order to develop a successful product and business model, a process characteristic of the so called lean start up model (Blank, 2013). The importance of the customer base was highlighted in both cases.

The third firm (C) reacted to environmental changes and an increase in competition by splitting the company into two parts and adopting an entirely new value proposition for the

new business and subsequently extending the service to Chinese firms looking to advertise abroad. The fourth firm (D) was highly successful in the home market and opportunistically extended their service to Chinese firms wanting to advertise abroad. The development of the customer base through an extension of the area of operations is a common business model innovation for such firms and can provide competitive advantages through size, scale and experience. Once again the importance of maintaining competitive advantage in a highly competitive sector was highlighted in the form of business model innovation, improved technologies and big data accumulation. Bigger data and algorithms can provide a better choice than other competitors for the advertisers.

In terms of the process, networks were an important theme in several distinct ways. Finance was an important theme in the firms' development although all firms now receive venture capital to finance their operations. In addition, in cases A and B the value networks were extended to include manufacturers who could make their products more widely available free of charge which allowed them to adopt an advertising revenue model that had the potential to be more profitable. Importantly, care should be taken to ensure that the new business model appeals to the customers, not only in the offering, but also in the revenue model used. Finally, the research highlighted the importance of developing a strong and loyal customer base as part of the value network and active customer feedback to ensure the product is tailored to the customer needs and to avoid expensive mistakes going forward. These factors highlight the importance in business model design for resource limited new ventures to establish external relationships to access valuable resources and information for innovation (Atuahene-Gima et al., 2006; Wei and Liu, 2013).

In view of the impact that a strong ICT sector can have on both the social and economic development of a country, it is important that these businesses develop and grow. Successful business models and business model development can facilitate technological and product development (Baden-Fuller and Haefliger, 2013), leading to commercial and economic success. They can contribute to the economy through economic output, exports and job creation, and positively impact other industries and economic sectors (Li et al., 2018). Examining these four highly successful Chinese ICT businesses provides some valuable insights as to how these four businesses have achieved success in the rapidly changing and evolving ICT sector. This research suggests that innovation, emergent strategies, experimentation, iteration, reaction to environmental and competitor changes,

opportunism, and the ability to develop networks and access finance, all play a part in the success of successful ICT businesses in the highly competitive Chinese ICT sector. To support this, enterprises would benefit from government support to incentivise innovation and try new approaches. Clustering and revenue sharing between key actors has also been put forward to support innovation (Ojala, 2016). Active and experiential entrepreneurial education and training focusing on value creation can support the development of potential entrepreneurs' innovation capacity (Bell, 2015).

### ***Limitations and Future Research***

This research presents certain limitations and opportunities for further research. It has focused on four highly successful Chinese ICT firms, which limits its transferability to other industries and countries. Future research could help to explore whether less successful ICT firms had not felt the need to initiate business model and product innovation and the part this may have played in their lack of success. With only limited transferability to other countries, future research could look to explore if the process of business model innovation is similar in other Asian countries and beyond or whether key elements of business model innovation changed in other ways. One thing which was apparent in this research was the role that value networks played in the process of business model innovation. It is not clear whether this is something which is particularly significant in the Chinese setting or significant more generally in other regions.

## References

Alcácer, J., Cantwell, J. and Piscitello, L. (2016), "Internationalization in the information age: A new era for places, firms, and international business networks?", *Journal of International Business Studies*, Vol. 47 No. 5, pp. 499–512.

Amit, R. and Zott, C. (2012), "Creating value through business model innovation", *MIT Sloan Management Review*, Vol. 53 No. 3, pp. 41–49.

Amshoff, B., Dülme, C., Echterfeld, J. and Gausemeier, J. (2015), "Business model patterns for disruptive technologies", *International Journal of Innovation Management*, Vol. 19, No. 03, p. 1540002.

Andersén, J., Ljungkvist, T. and Svensson, L. (2015), "Entrepreneurially oriented in what? A business model approach to entrepreneurship", *Journal of Small Business and Enterprise Development*, Vol. 22 No. 3, pp. 433–449.

Andries, P. and Debackere, K. (2013), "Business Model Innovation: Propositions on the Appropriateness of Different Learning Approaches", *Creativity and Innovation Management*, Vol. 22 No. 4, pp. 337–358.

Atuahene-Gima, K., Li, H. and De Luca, L.M. (2006), "The contingent value of marketing strategy innovativeness for product development performance in Chinese new technology ventures", *Industrial Marketing Management*, Vol. 35 No. 3, pp. 359–372.

Baden-Fuller, C. and Morgan, M.S. (2010), "Business models as models", *Long Range Planning*, Vol. 43 No. 2–3, pp. 156–171.

Baden-Fuller, C., and Haefliger, S. (2013), "Business models and technological innovation." *Long Range Planning*, Vol. 46 No. 6, pp. 419–426.

Bell, R. (2015), "Developing the next generation of entrepreneurs: Giving students the opportunity to gain experience and thrive", *The International Journal of Management Education*, Vol. 13 No. 1, pp. 37–47.

Bell, R., Liu, P., Zhan, H., Bozward, D., Fan, J., Watts, H. & Ma, X. (2019), "Exploring entrepreneurial roles and identity in the United Kingdom and China", *International Journal of Entrepreneurship and Innovation*, Vol. 20 No. 1, pp. 39-49.

Blank, S. (2013), "Why the lean start-up changes everything", *Harvard Business Review*, Vol. 91 No. 5, pp. 64–68.

Bucherer, E., Eisert, U. and Gassmann, O. (2012), "Towards systematic business model innovation: Lessons from product innovation management", *Creativity and Innovation Management*, Vol. 21 No. 2, pp. 183–198.

Cabrol, M., Favre-Bonté, V. and Fayolle, A. (2009), "The influence of the entrepreneur's

network on the internationalization of young French firms”, *The International Journal of Entrepreneurship and Innovation*, Vol. 10 No. 3, pp. 213–221.

Cannone, G., Pisoni, A. and Onetti, A. (2014), “Born global companies founded by young entrepreneurs. A multiple case study”, *International Journal of Entrepreneurship and Innovation Management*, Vol. 18 No. 2–3, pp. 210–232.

Casadesus-Masanell, R. and Zhu, F. (2013), “Business model innovation and competitive imitation: The case of sponsor-based business models”, *Strategic Management Journal*, Vol. 34 No. 4, pp. 464–482.

Chesbrough, H. (2007), “Business model innovation: it’s not just about technology anymore”, *Strategy & Leadership*, Vol. 35 No. 6, pp. 12–17.

Chesbrough, H. (2010), “Business model innovation: Opportunities and barriers”, *Long Range Planning*, Vol. 43 No. 2–3, pp. 354–363.

Christensen, C. (1997), *The Innovator’s Dilemma: When New Technologies Cause Great Firms to Fail*, Harvard Business School Press, Boston.

Christensen, C.M. (2006), “The Ongoing Process of Building a Theory of Disruption”, *Journal of Product Innovation Management*, Vol. 23 No. 1, pp. 39–55.

Christensen, C.M. and Raynor, M.E. (2003), *The Innovators Solution: Creating and Sustaining Successful Growth*, Harvard Business School Press, Boston.

Clauß, T., Laudien, S.M. and Daxböck, B. (2014), “Service-dominant logic and the business model concept: Toward a conceptual integration”, *International Journal of Entrepreneurship and Innovation Management*, Vol. 18 No. 4, pp. 266–288.

Comes, S. and Berniker, L. (2008), “Business Model Innovation”, in Pantaleo, D. and Pal, N. (Eds.), *From Strategy to Execution*, Springer Berlin Heidelberg, pp. 65–86.

Creswell, J.W. (2013), *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications, Inc, Thousand Oaks.

DaSilva, C.M. and Trkman, P. (2014), “Business model: What it is and what it is not”, *Long Range Planning*, Vol. 47 No. 6, pp. 379–389.

Davenport, T. (2014), *Big Data @ Work*, Harvard University Press, Cambridge, MA.

Davidson, A. and Klemme, L. (2016), “Why a CEO should think like a Scrum Master”, *Strategy & Leadership*, Vol. 44 No. 1, pp. 36–40.

Demil, B. and Lecocq, X. (2010), “Business model evolution: In search of dynamic consistency”, *Long Range Planning*, Vol. 43 No. 2–3, pp. 227–246.

Denning, S. (2013), “Why Agile can be a game changer for managing continuous innovation

in many industries”, *Strategy & Leadership*, Vol. 41 No. 2, pp. 5–11.

Denning, S. (2015), “Agile: it’s time to put it to use to manage business complexity”, *Strategy & Leadership*, Vol. 43 No. 5, pp. 10–17.

Dmitriev, V., Simmons, G., Truong, Y., Palmer, M. and Schneckenberg, D. (2014), “An exploration of business model development in the commercialization of technology innovations”, *R&D Management*, Vol. 44 No. 3, pp. 306–321.

Dobson, S., Breslin, D., Suckley, L., Barton, R. and Rodriguez, L. (2013), “Small firm survival and innovation: An evolutionary approach”, *The International Journal of Entrepreneurship and Innovation*, Vol. 14 No. 2, pp. 69–80.

Doz, Y.L. and Kosonen, M. (2010), “Embedding strategic agility: A leadership agenda for accelerating business model renewal”, *Long Range Planning*, Vol. 43 No. 2, pp. 370–382.

Dunford, R., Palmer, I. and Benveniste, J. (2010), “Business Model Replication for Early and Rapid Internationalisation: The ING Direct Experience”, *Long Range Planning*, Vol. 43 No. 5, pp. 655–674.

Eurich, M., Weiblen, T. and Breitenmoser, P. (2014), “A six-step approach to business model innovation”, *International Journal of Entrepreneurship and Innovation Management*, Vol. 18, No. 4, pp. 330–348.

Eisenhardt, K.M. and Graebner, M.E. (2007), “Theory building from cases: Opportunities and challenges”, *Academy of Management Journal*, Vol. 50 No. 1, pp. 25–32.

Fulford, H. (2009), “The world, the web and SMEs: Stepping stones across language and cultural divides”, *The International Journal of Entrepreneurship and Innovation*, Vol. 10 No. 3, pp. 191–199.

Gassmann, O., Frankenberger, K. and Csik, M. (2014), *The Business Model Navigator: 55 Models That Will Revolutionise Your Business*, FT Publishing, London.

Gerring, J. (2017), *Case Study Research: Principles and Practices*, Cambridge University Press, Cambridge.

Ghezzi, A. and Cavallo, A. (2018), “Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches”, *Journal of Business Research*. doi:10.1016/j.jbusres.2018.06.013.

Guo, H., Su, Z. and Ahlstrom, D. (2016), “Business model innovation: The effects of exploratory orientation, opportunity recognition, and entrepreneurial bricolage in an emerging economy”, *Asia Pacific Journal of Management*, Vol. 33 No. 2, pp. 533–549.

Hu, B.L. (2014), “Linking business models with technological innovation performance through organizational learning”, *European Management Journal*, Vol., 32 No. 4, pp. 587–595.

Liu, P. & Bell, R. (2019) Exploration of the Initiation and Process of Business Model Innovation of Successful Chinese ICT Enterprises, *Journal of Entrepreneurship in Emerging Economies*. doi: [10.1108/JEEE-09-2018-0094](https://doi.org/10.1108/JEEE-09-2018-0094)

Hu, B. and Chen, W. (2016), "Business model ambidexterity and technological innovation performance: Evidence from China", *Technology Analysis & Strategic Management*, Vol. 28 No. 5, pp. 583–600.

Johnson, M.W., Christensen, C.M. and Kagermann, H. (2008), "Reinventing your business model", *Harvard Business Review*, Vol. 86 No. 12, pp. 50–59.

Kassa, A.G. and Raju, R.S. (2015), "Investigating the relationship between corporate entrepreneurship and employee engagement", *Journal of Entrepreneurship in Emerging Economies*, Vol. 7 No. 2, pp. 148–167.

Knight, G. and Cavusgil, S. (1996), "The born global firm: A challenge to traditional internationalization theory", in Cavusgil, S.T. and Madsen, T.K. (Eds.), *Export Internationalizing Research - Enrichment and Challenges*, Vol. 8, JAI Press, New York, NY, pp. 11–26.

Kumar, N. and Yakhlef, A. (2014), "How capabilities evolve in a born global firm?: A case study of an Indian knowledge-intensive service born global firm", *Journal of Entrepreneurship in Emerging Economies*, Vol. 6 No. 3, pp. 223–242.

Ladd, T. (2017), "Business models at the bottom of the pyramid: Leveraging context in undeveloped markets", *The International Journal of Entrepreneurship and Innovation*, Vol. 18 No. 1, pp. 57–64.

Lambrecht, E., Kühne, B. and Gellynck, X. (2015), "How do innovation partners differ with respect to innovation type and stage in the innovation journey of farmers?", *The International Journal of Entrepreneurship and Innovation*, Vol. 15 No. 3, pp. 191–203.

Li, X., Goldsby, T.J. and Holsapple, C.W. (2009), "Supply chain agility: Scale development", *The International Journal of Logistics Management*, Vol. 20 No. 3, pp. 408–424.

Li, Y., Lee, S-G. and Kong, M. (2018), "The industrial impact and competitive advantage of China's ICT industry", *Service Business*. doi.10.1007/s11628-018-0368-7

Linder, J. and Cantrell, S. (2000), *Carved in Water: Changing Business Models Fluidly*, Accenture Institute for Strategic Change.

Lockwood, N.R. (2007), "Leveraging employee engagement for competitive advantage: HR's strategic role", *HR Magazine*, Vol. 12 No. 3, pp. 1–11.

Lynn, G., Morone, J.G. and Paulson, A.S. (1996), "Marketing and discontinuous innovation: The probe and learn process", *California Management Review*, Vol. 38 No. 3, pp. 8–37.

Maccoby, E. and Maccoby, N. (1954), "The interview: A tool of social science", in Lindzey, G. (Ed.), *Handbook of Social Psychology: Vol. 1. Theory and Method*, Addison-Wesley, Reading, MA, pp. 449–487.

Magretta, J. (2002), "Why business models matter", *Harvard Business Review*, Vol. 80 No. 5,



pp. 86–92.

Mamun, A.A., Nawil, N.B.C., Permarupan, P.Y. and Muniady, R. (2018), “Sources of competitive advantage for Malaysian micro-enterprises”, *Journal of Entrepreneurship in Emerging Economies*, Vol. 10 No. 2, pp. 191–216.

McGrath, R.G. (2010), “Business models: A discovery driven approach”, *Long Range Planning*, Vol. 43 No. 2, pp. 247–261.

Morris, M., Schindehutte, M. and Allen, J. (2005), “The entrepreneur’s business model: Toward a unified perspective”, *Journal of Business Research*, Vol. 58 No. 6, pp. 726–735.

Ojala, A. (2016), “Business models and opportunity creation: How IT entrepreneurs create and develop business models under uncertainty”, *Information Systems Journal*, Vol. 26 No. 5, pp. 451–476.

Onetti, A., Zucchella, A., Jones, M.V. and McDougall-Covin, P.P. (2012), “Internationalization, innovation and entrepreneurship: Business models for new technology-based firms”, *Journal of Management & Governance*, Vol. 16 No. 3, pp. 337–368.

Opresnik, D. and Taisch, M. (2015), “The value of Big Data in servitization”, *International Journal of Production Economics*, Vol. 165, pp. 174–184.

Osterwalder, A. and Pigneur, Y. (2010), *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, Wiley, Hoboken, NJ.

Osterwalder, A., Pigneur, Y. and Tucci, C.L. (2005), “Clarifying business models: Origins, present, and future of the concept”, *Communications of the Association for Information Systems*, Vol. 16 No. 1.

Osterwalder, A., Pigneur, Y., Bernarda, G., and Smith, A. (2015), *Value Proposition Design: How to Create Products and Services Customers Want*, John Wiley & Sons, Chichester.

Patton, M.Q. (2002), *Qualitative Research & Evaluation Methods*, Third edition., SAGE Publications, Thousand Oaks, CA.

Pham, T.T., Bell, R. and Newton, D. (2019), “The father’s role in supporting the son’s business knowledge development process in Vietnamese family businesses”, *Journal of Entrepreneurship in Emerging Economies*, Vol. 11 No. 2, pp. 258-276

Pucci, T., Nosi, C. and Zanni, L. (2017), “Firm capabilities, business model design and performance of SMEs”, *Journal of Small Business and Enterprise Development*, Vol. 24 No. 2, pp. 222–241.

Reichheld, F. (2006), *The Ultimate Question: Driving Good Profits and True Growth*, Harvard Business School Press, Boston, Mass.

Ren, R., Yu, L. and Zhu, Y. (2016), “Innovation-orientation, dynamic capabilities and

evolution of the informal Shanzhai firms in China: A case study”, *Journal of Entrepreneurship in Emerging Economies*, Vol. 8 No. 1, pp. 45–59.

Rezazade Mehrizi, M.H. and Lashkarbolouki, M. (2016), “Unlearning Troubled Business Models: From Realization to Marginalization”, *Long Range Planning*, Vol. 49 No. 3, pp. 298–323.

Sainio, L., Saarenketo, S., Nummela, N. and Eriksson, T. (2011), “Value creation of an internationalizing entrepreneurial firm: The business model perspective”, *Journal of Small Business and Enterprise Development*, Vol. 18 No. 3, pp. 556–570.

Schneider, S. and Spieth, P. (2013), “Business model innovation: Towards an integrated future research agenda”, *International Journal of Innovation Management*, Vol. 17 No. 01, pp. 1–34.

Seidenstricker, S. and Linder, C. (2014), “A morphological analysis-based creativity approach to identify and develop ideas for BMI: A case study of a high-tech manufacturing company”, *International Journal of Entrepreneurship and Innovation Management*, Vol. 18 No. 5–6, pp. 409–424.

Shafer, S.M., Smith, H.J. and Linder, J.C. (2005), “The power of business models”, *Business Horizons*, Vol. 48 No. 3, pp. 199–207.

Sosna, M., Trevinyo-Rodríguez, R.N. and Velamuri, S.R. (2010), “Business model innovation through trial-and-error learning: The Naturhouse case”, *Long Range Planning*, Vol. 43 No. 2–3, pp. 383–407.

Spieth, P., Schneckenberg, D. and Ricart, J.E. (2014), “Business model innovation – state of the art and future challenges for the field”, *R&D Management*, Vol. 44 No. 3, pp. 237–247.

Standing, C. and Mattsson, J. (2018), “‘Fake it until you make it’: Business model conceptualization in digital entrepreneurship”, *Journal of Strategic Marketing*, Vol. 26 No. 5, pp. 385–399.

Stewart, D.W. and Zhao, Q. (2000), “Internet marketing, business models, and public policy”, *Journal of Public Policy & Marketing*, Vol. 19 No. 2, pp. 287–296.

Taran, Y., Nielsen, C., Montemari, M., Thomsen, P. and Paolone, F. (2016), “Business model configurations: A five-V framework to map out potential innovation routes”, *European Journal of Innovation Management*, Vol. 19 No. 4, pp. 492–527.

Teece, D.J. (2010), “Business models, business strategy and innovation”, *Long Range Planning*, Vol. 43 No. 2–3, pp. 172–194.

Thomas, G. (2016), *How to Do Your Case Study*, SAGE, Los Angeles.

Thornton, J. and Marche, S. (2003), “Sorting through the dot bomb rubble: How did the high-profile e-tailers fail?”, *International Journal of Information Management*, Vol. 23 No. 2,

Liu, P. & Bell, R. (2019) Exploration of the Initiation and Process of Business Model Innovation of Successful Chinese ICT Enterprises, *Journal of Entrepreneurship in Emerging Economies*. doi: [10.1108/JEEE-09-2018-0094](https://doi.org/10.1108/JEEE-09-2018-0094)

pp. 121–138.

Vendrell-Herrero, F., Parry, G., Bustinza, O.F. and Gomes, E. (2018), “Digital business models: Taxonomy and future research avenues”, *Strategic Change*, Vol. 27 No. 2, pp. 87–90.

Voelpel, S.C., Leibold, M. and Tekie, E.B. (2004), “The wheel of business model reinvention: how to reshape your business model to leapfrog competitors”, *Journal of Change Management*, Vol. 4 No. 3, pp. 259–276.

Wei, J. and Liu, Y. (2013), “Business modeling for entrepreneurial firms: Four cases in China”, *Chinese Management Studies*, Vol. 7 No. 3, pp. 344–359.

Wei, S.-J., Xie, Z. and Zhang, X. (2017), “From ‘Made in China’ to ‘Innovated in China’: Necessity, Prospect, and Challenges”, *The Journal of Economic Perspectives*, Vol. 31 No. 1, pp. 49–70.

Wind, Y. (2008), “A Plan to Invent the Marketing We Need Today”, *MIT Sloan Management Review*, Vol. 49 No. 4, pp. 21–28.

Wu, J., Guo, B. and Shi, Y. (2013), “Customer knowledge management and IT-enabled business model innovation: A conceptual framework and a case study from China”, *European Management Journal*, Vol. 31 No. 4, pp. 359–372.

Yin, R.K. (2013), *Case Study Research: Design and Methods*, SAGE Publications, Inc, Los Angeles.

Zott, C. and Amit, R. (2010), “Business model design: An activity system perspective”, *Long Range Planning*, Vol. 43 No. 2–3, pp. 216–226.