Introduction

Over the past few years, a bourgeoning stream of research has demonstrated that learning from business failure can have positive effects on business performance and survival (Madsen & Desai, 2010; Shepherd & Haynie, 2011). Following Whetten (1980) that an examination of the determinants and effects of business failure is an imperative in seeking to reduce risk of business operation, business failure has become an area of growing interests to scholars in mainstream management (e.g. Madsen & Desai, 2010; Shepherd & Haynie, 2011; Singh et al., 2015). To date, some efforts have been made in examining the determinants of business failure (e.g. Carter & Auken, 2006), but these are somewhat too general.

Recent empirical and theoretical works in the areas of strategic management, international business and organisational ecology have demonstrated a lack of clear consensus about the causes of business failure, polarising along the exogenous and endogenous views. The exogenous view suggests the causes of business failure should be attributed to exogenous factors such as market competition and recession (Freeman & Hannan, 1983; Henderson, 1999). The endogenous view, however, suggests that characteristics of managers and owners play a significant role in business failure (Mellahi & Wilkinson, 2004). In recent years, however, it has been suggested that the causes of business failure entail both the exogenous and endogenous factors (Carter & Auken, 2006; Hambrick, 2007).

Although some studies have suggested that any explanation of business failure is not complete without explicating the interaction of exogenous and endogenous factors (Mellahi & Wilkinson, 2004, 2010), the micro-level mechanisms and processes leading to business failure remain largely unexplored. In spite of decades of research on business failure and the potentially positive effects of experiential learning from failure (Cope, 2011), the existing streams of research on the subject have concentrated on why firms fail, leaving the processes and stages leading to failure largely unexplored.

In this study, we take a step forward in filling this theoretical and empirical gap in our understanding by examining the processes and mechanisms inherent in how business failure unfolds. Utilising insights of 50 failed entrepreneurs in China, we developed a process model to demonstrate changes and processes over time and reveal mechanisms underlying the interaction of exogenous and endogenous factors. The research context was in eastern China which has a low rate of business survival. From 2000 to 2012, 38.8% of registered companies experienced failure within the first five years from 2008 to 2012; 50.4% of the total registered firms failed within five to 10 years (State Administration for Industry and Commerce (SAIC, 2013).

This study makes two major contributions to strategy, business failure and entrepreneurship literature. Our first contribution is the development of a construct of dynamic capabilities malfunction (DCM) to explain how business processes and transitions can precipitate business failure. This study conceptualises the malfunction of capabilities as processes leading to business failure. It is contended that business failure can occur in a process of transition or upgrade. In particular, a process of transition involves four stages of transition: externality recognition, resources structuring, resources integration and innovation, and capabilities application. Each stage of transition is associated with a firm's sustained competitive advantage: cognitive capability, structuring capability, integrative capability and leveraging capability. The exogenous and endogenous factors interplayed at these stages contribute to the malfunction of these four capabilities.

In addition, one of the recurring questions at the heart of strategy and international business research is 'Why do firms fail?' (see Peng, 2004). Our second contribution adds and extends the existing literature on process-based explanations of business failure (Amankwah-Amoah, Boso & Antwi-Agyei, 2016). Furthermore, many of the existing studies on organisational failure have focused on firms in advanced economies as such little is known about business failure in

developing economies in Eastern Europe (Lussier, 2001), China (Yang et al., 2012; Zhu et al., 2011) and Africa (Amankwah-Amoah & Debrah, 2014).

As mentioned above, the aim of this paper is to examine the processes and causes of business failure in China, the largest emerging economy in the world. The subject objectives of the study are noted in the following key questions:

- What are the major contributory factors in the interactive process associated with business failures?
- How does the interactive process of exogenous (external) and endogenous (internal) factors unfold to precipitate business failure?

The remainder of this study is organised as follows. The next section presents a review of the literature on business failure and DCM. Second, we turn our attention to our research method and then set out the findings. The final section discusses implications of the findings.

Business failure and dynamic capabilities: Towards a process-based perspective

Strategic and international business research is replete with theories, models and concepts of how competitive advantages are gained and lost (e.g. Barney, 1991). Nevertheless, two streams of research are particularly relevant in seeking to shed light on the process of interactions leading to business failure: the endogenous and exogenous perspectives of business failure, and dynamic capabilities. We integrate these two streams of research to develop the construct of DCM.

What is a business failure?

The definitions of business failure vary from broad (discontinuance of ownership of the business for any reason) to a more narrow (formal bankruptcy proceedings) (Mellahi & Wilkinson, 2004; Parsa et al., 2015). Between the discontinuance of business and formal bankruptcy proceedings, further definitions have been proposed, for example, termination to prevent further losses, and termination with loss of shareholders (Ucbasaran et al., 2013). For example, Shepherd (2003)

combines the above two extreme definitions (discontinuity of ownership and bankruptcy) and suggests business failure as discontinuity of ownership due to insolvency. Specifically, business exit or failure refers to a situation where a host of internal and external factors interact to precipitate business decline leading to exit (Shepherd, 2003). In a highly uncertain environment, business failure occurs when a firm fails to update and upgrade its resources and expertise base to successfully transition from performance decline to create wealth for owners and values for customers leading to closure (Amankwah-Amoah, 2015).

Determinants of business failure

Regarding the determinants of business failure, there is also clear division that has been reflected through theoretical and empirical research. Indeed, there are two schools of thought surrounding the topic: the endogenous (voluntarist) and the exogenous (deterministic) views. The exogenous view argues that business failure primarily is caused by external factors (e.g. McGanhan & Porter, 1997; Stearns et al., 1995). In contrast to the exogenous view, the endogenous school believes that managers are principal decision makers for business development (e.g. Hambrick, 2007; Hall & Young, 1991; Hall, 1992).

The upper echelon theory argues that a firm's strategy and subsequent business failure are determined by the characteristics of decision makers such as personal characteristics, management skills, knowledge and experience of a manager or business owner (Mellahi & Wilkinson, 2004). For instance, Larson and Clute (1979) explore common reasons for business failure: personal shortcomings and managerial deficiencies of managers or owners can both lead to business failure. For example, Carter and van Auken (2006) argue that one of the most common reasons affecting business bankruptcy is managerial deficiencies of owners or managers due to lack of management knowledge or experience.

Building on the exogenous view, three relevant theories include industry organisation (IO), organisation ecology (OE) and institution-based view (IBV). The IO scholars argue that business

failure should be determined by fortuitous circumstances rather than excellent management (Wilkinson & Mellahi, 2004). Specifically, exogenous factors refer to technological uncertainty due to innovation, intensive competition from threats of new entrants or existing competitors, changes in economic condition, regulatory nature and changes in consumer structure (Baum & Singh, 1994; Lippman & Rumelt, 1982). These factors, in turn, accelerate the dynamics of an industry which further increase the risk of business failure. Indeed, the dynamics of an industry include dynamics of the industry structure and boundaries (Sirmon et al., 2007).

According to OE theory, business failure is primarily determined by four factors: liability of newness (Stinchcombe, 1965), industry lifecycle (Balderston, 1972), population density (Delacroix & Swaminathan, 1991; Hannan & Freeman, 1988) and liability of smallness (Hambrick & D'Aveni, 1988). Indeed, Swaminathan (1996) indicates that established firms are more likely to survive in the market than young firms. Industry lifecycle theory suggests that business failure should be viewed as the natural endpoint and objective phenomenon (Hannan & Freeman, 1977). Population density refers to the number of organisations within the relevant population which affects the rate of business failure (Pal et al., 2006). A high population density brings more competition and meanwhile increases legitimation in the market. Pal et al. (2006) use a U-shaped relationship to explain that business death starts to fall as legitimacy rises, and then increases as competition is increasingly fierce. Liability of smallness refers to the negative correlation between the rate of business failure and the size of business. In other words, a small firm always has a higher rate of business failure than a large firm (Freeman, et al., 1983; Sutton, 1997).

In order to compare the exogenous and endogenous views, an interaction of both factors needs to be taken into account (Carter & Van Auken, 2006). Unfortunately, few studies have explained what the interaction is or how the interaction of both factors contributes to business failure. This

study thus develops a concept of DCM to explain how businesses unfold and thus specifically illustrate the interaction of factors leading to business failure.

Dynamic capabilities malfunction

For analytical clarity, dynamic capabilities (DCs) refers to a firm's ability to recognise, renew, integrate, recreate and reconfigure their core capabilities and resources in response to the fast-moving environment to maintain performance (Teece et al., 1997). Similarly, Eisenhardt and Martin (2000, p. 1107) regard DCs as, "the firm's processes that use resources to integrate, reconfigure, gain and release resources to match and even create market change." As Goodman (1982, p. 45) observed decades ago, "there is no way of getting around the fact that the major cause of continued malfunction is management inadequacy". It is our contention that DCM is at the intersection of business failure and dynamic capabilities' literature. By DCM, we are referring to the failure in the resources and capabilities management in the process to integrate, reconfigure, recreate and renew (Teece et al., 1997), leading to business failure. Indeed, there are some negative factors emphasised by deterministic and voluntarist views which can contribute to a firm's failure in the process of resources and capabilities recognition, renewal, recreation, integration and reconfiguration. The breakdown of capabilities and inability to manage a transition by carrying over sets of capabilities and resources during one phase of the firm to another is what is referred to here as DCM. This ultimately leads to business closure. In order to understand the nature of dynamic capabilities better, there are two major issues: the hierarchies and the commonalities of DCs (Teece, 2007; Wang et al., 2015; Zollo & Winter, 2002).

The hierarchies of DCs

Regarding the hierarchies of DCs, some researchers suggest that DCs should be regarded as operational capabilities (Winter, 2003; Zahra et al., 2006). Specifically, they regard DCs as another type of operational capabilities which can be regarded as an outcome of the effective renewal of operational capabilities and resources that influence a firm's performance (e.g.

Easterby-Smith et al., 2009; Helfat & Peteraf, 2003; Zott, 2003). Eisenhardt and Martin (2000, p. 1117) suggest that dynamic capabilities should be viewed as another type of operational capability and can only be a source of sustained long-term competitive advantage if they are applied, "sooner, more astutely, and more fortuitously" than competition to reconfigure resources.

However, many studies initially view DCs as a source of sustained long-term competitive advantage (Collis, 1994; Wang et al., 2015). For example, Wang and Ahmed (2007) use a "hierarchical" in order to distinguish the differences of resources, capabilities, core capabilities and dynamic capabilities (Wang & Ahmed, 2007). Specifically, they put "resources" on the "zero-order" element of the hierarchy. Some of resources can be used for competitive advantage if they appear to be VRIN. Nevertheless, the competitive advantages brought by VRIN resources may be lost over time; therefore it is necessary for firms to deploy resources into capabilities that are "first-order" (Wang & Ahmed, 2007). Core capabilities can be regarded as a bundle of capabilities which are put on the "second-order". However, core capabilities can become 'core rigidities' over time. The DCs on the third order constantly renew, recreate, reconfigure, integrate and coordinate resources, capabilities and core capabilities, as suggested by Wang and Ahmed (2007). Thus, DCs can be regarded as "ultimate" operational capabilities that are conducive to business failure or success.

However, a more recent stream of research has stressed that there is no consensus among scholars about the way that dynamic capabilities precisely affect organisational success or failure. The empirical research of this linkage has been hindered by a lack of agreement on the definition of DCs, their measurement and the relationship with firm performance (Protogerou et al., 2012). Scholars who regard DCs as another type of operational capability have suggested an indirect link between DCs and business survival (Barreto, 2010). For example, Barreto (2010) suggests that several intermediate outcomes can be generated by the impact of DCs and then

affect business performance. Protogerou et al. (2012) also suggest that DCs have an indirect impact on business performance. They examine whether the impact of DCs on business performance is mediated through technological capabilities and operational capabilities. Their empirical findings indicate that direct impact on business performance appears to be insignificant.

Nevertheless, there is a strong emphasis initially put on the direct link between DCs and business performance (Teece et al., 1997). For example, Symeonidou et al. (2013) argue that the management of DCs directly affects business survival. Indeed, they regard configuration of capabilities as DCs and then indicate that an effective configuration of R&D, marketing or production capability has a strong effect on business survival.

The commonalities of DCs

For the second issue about commonalities of DCs across firms, Eisenhardt and Martin (2000) suggest that DCs appear to be idiosyncratic, but also they have common features across firms which affect business performance. They indicate that resource integration capability, reconfiguration capability, and resource acquisition and release capabilities should be regarded as the commonalities of DCs. Wang and Ahmed (2007) indicate that absorptive, adaptive and innovative capabilities can be the commonalities of DCs cross firms. Sirmon et al. (2007) suggest structuring capabilities, bundling capabilities and leveraging capabilities as the commonalities of DCs by proposing a dynamic resource management model.

The three major capabilities include three sub-processes. Specifically, the structuring capabilities with acquiring, accumulating and divesting sub-processes refer to the management of the firms' resources portfolio. The acquiring process, including acquisition of intangible resources, tangible resources, and complex sets of tangible and intangible resources, contributes to the firm's ability to create value in competition (Denrell et al., 2003). Accumulating is the development of a firm's existing resources. Divesting, as the third sub-process of structuring, refers to the shedding of a

firm's existing resources which are less valued and less effective in contributing to gaining and maintaining a firm's competitive advantage.

The bundling process refers to the integration of resources to form capabilities within three sub-processes including stabilising, enriching and pioneering. Indeed, stabilising refers to the process of making minor incremental improvements to existing capabilities; enriching refers to extending current capabilities; and pioneering refers to the creation of capabilities. The third capability, leveraging, refers to the application of a firm's capability to create owners' wealth and customers' value by predicting customers' need and exploiting lucrative opportunities.

The three sub-processes of leveraging capabilities include mobilising, coordinating and deploying. Mobilising means identifying the capabilities and design requisite capability configurations needed to exploit opportunities in the market; coordinating refers to combining capability configurations; and deploying is physically using capability configurations to support leveraging strategy, which includes the resource advantage strategy, market opportunity strategy or entrepreneurial strategy. As Sirmon et al. (2007) argued, the three capabilities within their sub-processes are critical for business survival.

Regarding these two issues, the following suggestion of Teece et al. (1997) on the hierarchies of DCs takes the initial view that DCs are "ultimate" capabilities of renewing, existing or creating new resources and capabilities which directly lead to business failure. Moreover, although there is no consensus on the commonalities of DCs, most of the current work as mentioned above emphasises the importance of environment recognition (adaptive capability/absorptive capability), resource evolution (structuring capability), resource integration (integrative capability/innovative capability) and capability application (configuring capability/leveraging capability) in DCs management (Barreto, 2010; Protogerou et al., 2012; Wang & Ahmed, 2007; Wang et al., 2015). This study thus suggests four capabilities: cognitive capability, structuring

capability, integrative capability and leveraging capability as the commonalities of DCs. The four capabilities are frequently emphasized by DCs management in terms of current literature.

Specifically, cognitive capability refers to the ability of firms to sense and analyse fast-moving changes efficiently in the market. Structuring capability refers to the ability of firms to effectively acquire needed resources and stabilise their current resources. Integrative capability refers to the ability of firms to integrate resources effectively to enrich current capabilities or create new capabilities. Leveraging capability refers to the ability of firms to apply capabilities needed to diffuse customers' values and thus create owner's wealth.

However, an interaction of some factors emphasised by exogenous and endogenous views can occur in these four capabilities and contributes to DCM. The understanding of the DCM associated with business failure is especially limited in existing literature. This study thus seeks to explore the research question "How do business failures unfold?" by developing a concept of DCM to link business failure, as indicated in Figure 1. This study uses a narrative approach to reveal the micro-level mechanisms and processes of business failure at the level of individual lived experience.

Insert Figure 1 about here

Research method

Research design

In light of limited prior scholarly works on the process leading to business failure and interactive effects of external and internal factors, we adopted a qualitative approach (Edmondson & McManus, 2007; Yin, 2009). By qualitative analyses, we relied on semi-structured interviews to assemble our data. Semi-structured interview is a qualitative method of inquiry that uses a pre-designed set of open-ended questions (questions that prompt discussion) with the opportunity for the researcher to focus on some particular themes (Wengraf, 2001). This open-ended questioning

and discovery-oriented approach makes the interviewers enter into a dialogue with respondents, regulating the scope to explore research issues for researchers while also giving interviewees freedom to respond to the issues using their own words (Bryman & Bell, 2015).

Moreover, semi-structured interviews allow the time available to be controlled for interviewees in a dialogue with respondents (Bryman & Bell, 2015; Wengraf, 2001). The interview schedule uses pre-designed categories of interview questions to guide the data collection in the qualitative analysis phase, ensuring all perspectives of the causes and effects of business failure, as outlined in the literature review section, can be discussed. Indeed, this approach has been found to be effective when exploring complex issues with limited prior research (e.g. Osemeke & Adegbite, 2016). We adopted a narrative research approach which can provide a clear sequential order by connecting events. The narratives can contain temporal information about when and how certain events unfold and the effects of these events on subsequent happenings (Singh et al., 2015). The approach also helps in the identification of patterns and unfolding dynamics (Singh et al., 2015). Thus, building on the approach, we collected and analysed stories of failure to answer the research question of ‘‘How does the interaction unfold to contribute to business failure in China?’’

Informants for this study were identified through snowball sampling whereby the sample population was sourced from, “cases of interest from people who know people who know people, who know what cases are information-rich, that is, good examples for study, good interview subjects” (Patton, 1990, p. 182). A list of failed businesses was provided by relevant informants including the local industrial and commercial bureau, local chamber of commerce, and individuals. Informants were asked to nominate the potential candidates for the study and nominees were subsequently asked to nominate other potential candidates until no new nominees arose. Then, all qualified nominees who satisfied sample criteria were to participate in our study through telephone. This approach has also been found to be very effective when exploring

complex issues such as this and using elites/business owners (Welch et al., 2002).The nature of the questions revolving around how and why businesses failed in the Chinese market were divided into two phases. The first phase is labelled ‘‘pre-transition/upgrade”, which refers to the time period wherein entrepreneurs intend to do business transition/upgrade because of uncertainties that occurred in changes of economy, politics or technology. The second phase is described as “experiencing failure in transition and upgrading” and it illustrates how business failure unfolded under business transition/upgrade.

A total of 64 failed entrepreneurs from 50 failed companies agreed to participate. Most of the businessmen and women owned mid-sized private firms and experienced failure in the transition phase. This study views business failure as discontinuation of the business due to inability to make a successful transition to a new business model. Further information about the sample is provided in Table 1. In addition, the basic information including the real names of interviewees and failed firms have been changed to ensure confidentially. Purposive sampling was conducted by selecting information-rich examples for this study. In addition, 6 government officials who work in banks and economic departments were also interviewed to provide rich information about determinants of business failure. The time period of business failure was restricted to the past ten years to ensure the timeliness of information. Data for 2015 were collected through in-depth semi-structured interviews which lasted between 60 and 80 minutes. Permission to record the interview was requested before each interview commenced. Only one interviewee refused to use the recording pen from a total of 50 interviewees. The record and transcriptions were made timeously after each interview.

Insert Table 1 about here

Data analysis

Regarding data analysis, we adopted the following steps. The first stage was to construct a chronology for each failed entrepreneur and his/her story. This allowed us to explore a collective story of failed businesses. Based on the content analysis, we identified common and divergent themes from the informants' responses. In the second stage, the data were coded and grouped into first- and second-order categories. In the third stage of data analysis, we reviewed each interview and then expanded the open codes into more elaborated codes by employing analytical memos. Eventually, we moved on to theorising which allowed us to create models to reveal the process and mechanisms of business failure suggested by the data. We then returned some transcripts to some informants for clarification before data analysis.

Findings and analysis

This novel study uncovered that business failure could occur at four stages: externality recognition, resources structuring, resources integration and innovation, and capabilities application. We found that business failure at each of these stages was associated with a particular outcome: low sensitivity and inadequate understanding to malfunction of cognitive capability, less-effective resources acquisition and internal resources loss to malfunction of structuring capability, less-effective resources development and innovation to malfunction of integrative capability, and failure of diffusion of customer value to malfunction of leveraging capability. Figure 2 shows a summary of categories and associated themes.

Insert Figure 2 about here

The first phase: Motives of business transition/upgrade

We found that the processes of capabilities upgrade contributed to business failure. The motive of firms' transition or upgrade was due to a highly uncertain environment, which then represents the first phase in the quest to upgrade their capabilities. The high degree of uncertainty generated by environmental changes pushed some of the owners of firms in the traditional manufacturing and low-tech sector to seek to transition/upgrade for their survival. According to one entrepreneur who experienced business failure in Shenzhen:

> *"Since centre government opened parts of market in military industry for POEs* in 2014, we tried to transfer our current business into this industry by developing and upgrading high value-*added products and services…" (F025)*

The study shows that the highly uncertain environment was driven by IO factors such as economic slowdown, internet development and an anti-corruption campaign, and further affected the behaviour and action of decision makers. First, the study revealed that the rebalance of China's economic structure has brought some uncertainties and challenges into businesses. Following a slump in fixed investment and a slowdown in export benefits, China's economic downturn has made many traditional businesses slide into serious decline. Indeed, the growth rate in the real estate industry has dramatically decreased to only 1% in 2015 from 19.8% in 2013 (Haitong International Securities (HIS), 2015). High debts and excessive capacity in the sector from steel and coal further affected the profitability. Due to the effects of less-effective economies in the upstream, many businesses attempted to change their target market through transition for their survival. As one failed entrepreneur in Beijing (F041) indicated:

> *"The slowdown of economy also affected our business … the number of offers was decreasing in last two years due to decline investment in SOEs…As a result, we tried to transfer our target from and renew our services for survival."*

Our findings suggest that under huge pressure from overcapacity and high debt, many traditional businesses are experiencing decline. However, according to one Statistical Report on Internet Development in China 2015, issued by China Internet Network Information Centre (CINIC), the number of internet users in China increased to about 649 million in 2014 (CINIC, 2015). The utilisation of the mobile phone as a means of accessing the internet reached 85.8% in 2014 (CINIC, 2015). Moreover, the scale of online shoppers was over 361 million in 2014, up from the figure of nearly 302 million in 2013 (CINIC, 2015). Similarly, the internet-adoption rate among China's SMEs only was about 20% to 25% compared with 72% to 85% of SMEs in the US (McKinsey, 2015). As one failed entrepreneur in Shenzhen (F039) concurred, noting the influence of the internet:

> *"I engaged in traditional retailing with a physical store in Shenzhen in 2010… however, high labour cost made us have to bear a heavy financial burden…I* think the rise of online business that provides a new opportunity with us. Furthermore, more and more competitors also closed their physical stores and *transferred their business from offline to online…that's why I transferred my business from offline to online in 2014."*

The findings indicate that instability in politics also contributed to a highly uncertain environment. Since 2012, the central government has being holding a massive anti-corruption campaign. By the end of 2015, 100 high-ranking officials had been accused of bribery and abuse of power (CHINADAILY, 2015). Over 100,000 people from politics and business have been indicted for corruption (The Economist, 2015). In the long term, the anti-corruption campaign may be positive for China's economy by tackling work in SOEs to break up monopolies and push market liberalisation (The Economist, 2015).

Nevertheless, in the short term, the "political earthquake" has generated feelings of fear in many officials and politicians, and caused further uncertainty in business. Many officials only want to

keep their post and believe "not acting" is the best way to avoid more troubles and uncertainties in this campaign. According to Yang (2015), officials' inaction made them passive and slow moving in business service. Many of the entrepreneurs also complained about the impact on their businesses of officials "not acting". Some of them even attempted to make a transition for their survival under the impact of "political earthquake". One failed entrepreneur in Beijing illustrated the effects of political changes on her business:

> *"New market policy and anti*-corruption campaign weakens a relationship between government and firms. In short term, less opportunities and supports we could gain from government. In face of the changes, we tried to upgrade our current product into high value-added product and transfer our market *target…" (F025, one failed entrepreneur in Beijing)*

The second phase: Process-based explanations

Malfunction of cognitive capability (The first stage)

Our analysis suggests that malfunction of cognitive capability here implies that the firm fails to understand new changes and uncertainties from the external environment efficiently and effectively. Two themes emerged to shed light on the determinants of cognitive capability malfunction and the research labels them "low sensitivity to external changes" and "weak analysis to dynamics".

By low sensitivity to external changes, we are referring to the firm's lack of flexibility and sensitivity to external dynamics so that the firm cannot efficiently take actions to respond to the external changes. In a highly uncertain environment, the low sensitivity easily makes firms ignore the potential risks from the changes in environment. As a result, a firm cannot efficiently avoid the potential risks that may affect its survival. According to one failed entrepreneur from Beijing:

> *"… if we could do transition earlier maybe we could avoid failure …I think our* failure came from a low sensitivity on industrial change. We were too slow in face of external change and failed to efficiently respond to the uncertainties in *market…in fact, many traditional me*dia took advantage of internet technology and successfully achieved transformation in that time. However, it was too late *when we were aware of the importance of business transition…" (F008)*

On the other hand, weak analysis of dynamics implies that a firm has a weak analysis of external changes so that firm cannot fully understand the effects of the changes to its survival and development. As one entrepreneur indicated:

> *"Our failure comes from a low sensitivity and a weak analytical ability on* external changes. This made us ignore the effects of external risks to our *business…We failed to efficiently take actions to handle the changes. We never thought how big pressure the changes brought to us." (F042)*

Determinants of low sensitivity to external changes

The data indicate that low sensitivity to external changes could be caused by an interaction of some internal and external factors. Specifically, the internal factors include closed culture and centralisation, overconfidence, and a lack of risk consciousness. The external factor comes from information asymmetry that is related to less-effective public services.

Regarding closed culture to low sensitivity, the beliefs and values are influential to individual decisions and behaviours in business operation. Our analysis suggests that closed culture and centralization were closely associated with failed firms. The culture can lower flexibility and sensitivity of decision makers to external changes. Consequently, they failed to take actions efficiently to handle the changes in environment.

> *"A closed culture we had in top management … we failed to share some* valuable information with each other on time. In addition, there was a high

centralization in decision making…This lowered our sensitivity to changes in market." (F010)

Overconfidence in this context refers to overestimation of one's own ability relative to others (Koellinger et al., 2007). Overconfidence of decision makers can produce rigid behaviours which further affect business development (Finkelstein, 2003). This is highly likely to contribute to business owners making poor decisions in business operations. The data suggest that overconfidence can lower the sensitivity of decision makers to external changes, thereby affecting business transition. As one failed entrepreneur in Tianjin noted:

"We were overly overoptimistic because of past success… a low sensitivity on industrial changes made us underestimate the effects of external risks at *beginning of business upgrade" (F014)*

Another one top manager who worked with entrepreneur F024 in Shenzhen also added,

"…we overly replied on the experience from past success …even if there was a fast-moving change in environment, we still made a judgement based on *previous experience and felt very confident to deal with it…in fact, we did not* prepare eno*ugh to deal with the changes…we were less sensitive to the change* and underestimated the effects of externality on our business due to *overconfidence…" (F024a)*

The impact of low-risk consciousness and emotional instability are frequently emphasized by the failed entrepreneurs. The findings indicate that low-risk consciousness led to low sensitivity of decision makers to fast-moving changes in industry. One failed entrepreneur in Beijing emphasized the failure to handle industry dynamics efficiently:

"A lack of risk consciousness on external changes made me ignore the risks in market especially for the rise of competitors. After the rise of iPhone and its

> Apple store, more and more businessmen started to rethink their business model based on the development of mobile internet. However, we seemed to be less sensitive on the industrial change and did not prepare enough to respond to the *change in market …" (F011)*

Information asymmetry refers to inequalities between the information held by stakeholders in the market (Dai et al., 2013). Piotroski and Wong (2012) discussed the information environment in the Chinese market. They indicated that high information asymmetry and a lack of quality public information still exist in the Chinese market. As a result, some managers or investors have to rely on private information channels through building a close relationship with people who have an information advantage in the market. The problem of information asymmetry contributes to a higher cost of communication. SOEs in China could have less information asymmetry due to the close relationship with authorities (Huang et al., 2015).

For SMEs, the problem of information asymmetry may increase their financial burden. Our analysis suggests that a high information asymmetry results in decision makers/owners failing to gain relevant information efficiently, therefore affecting the effectiveness of business transition. Entrepreneurs and top managers complained that it is not easy to access information about policies and technology. The shortage of transparent service information in support systems lowered firms' sensitivity to environmental changes. One failed entrepreneur commented about his previous business:

> *"During business transition, we hoped to collect much inform*ation about *external changes from third party … however, we had to give up this idea because of a high price the public services asked …we did not step up our vigilance on external risks without support from public services" (F021)*

One governor from the National Statistical Bureau commented:

> *"I think the unfairness between public and private firm*s lies in information *asymmetry…* SOEs are able to get more information resources from the market. Therefore, it is difficult for private economies to take *actions." (M0*01)

Determinants of weak analysis on dynamics

The study indicates that internal factors include knowledge or experience deficits, overconfidence and composition of TMT. External factors include frequent changes of regulations and less-effective public services. Our fieldwork indicates that deficits in management knowledge are one of the most important contributory factors to business failure. A weak analytical ability to dynamics changes in the business environment is associated with the deficits of knowledge and experience. One failed entrepreneur from Shenzhen indicated the importance of knowledge and experience to an effective analysis of external changes:

> *"I think individual deficits in knowledge and experience made us underes*timate the effects of changes and risks in environment including economic downturn, *technological development, customer behaviour, and competitors' actions"* (F042)

The study indicates that overconfidence of decision makers affected the sensitivity of decision makers to external changes but. A weak analysis to dynamics made firms fail to take actions for their survival and development in response to external changes. One failed entrepreneur from Shenzhen commented:

> *"We enjoyed* big successes, but ignored team building and rise of competitors. The overconfidence hid our eyes so that we did not care rapid changes in *market." (F047)*

Regarding the contribution of the composition of TMT to business failure, the study noted that homogenous teams may lead to limited scope for decision makers. Compared with

heterogeneous teams, homogenous teams are not beneficial to decision makers in fully understanding external changes. Heterogeneous teams are able to gather information from a variety of sources and provide diverse interpretations in decision making. One failed entrepreneur in Beijing indicated:

> *"I think the composition of team is a big* issue for my previous business. In our *team, all members have a similar background… for example, we are close to 40 years old and few people accepted high education…young manager in our team was lacking…The age group was hard to understand the changes in y*oung *customers' preference and technology…this is one of reasons that made us miss the right time for products upgrade…" (F021)*

Regarding the frequent changes in regulations which impact business performance, it has been noted that inconsistent regulations affect business growth (Zhu et al., 2011). The findings demonstrate that the frequent changes of policies and regulations generate more uncertainties under a highly uncertain environment. This made it difficult for decision makers to make an effective analysis of external changes. When asked about the impact of deficient regulations and laws on business survival one governor in Hangzhou commented:

> *"The frequent change in regulation and policy is normal in China. It did bring* more uncertainties into busi*ness operation… for example, I know some companies they are encouraged by government's policy to make investments on* some projects. However, only after one year, the policy was cancelled by government and many of the investors and developers have to bear a loss with a *little compensation." (M004)*

The less-effective pubic service to weak analysis of dynamics can be primarily reflected on less-effective consulting services for China's SMEs. As Zhu et al. (2010) indicated, many SMEs find it difficult to improve their analysis of dynamics

due to less-effective public services. For example, innovation intermediaries are necessary for some SMEs that try to upgrade their businesses. These SMEs should have gained some useful information and professional services from the intermediaries. However, due to less professional service and high cost, few SMEs can gain effective supports from public services to help them better understand industrial changes and risks in market. The data show that the less-effective public service cannot help SMEs improve their analytical ability for better understanding industrial risks and changes. As one entrepreneur F033 from Shanghai noted,

> *"*Although many public services can provide professional analysis in sector and macroeconomic environment, very little is known about how the change will affect SMEs in Market. I think most of their clients are MNEs or SOEs. Their *analysis always regard these firms as research target. That's why I think many* public services are difficult to help us better understand the effects of industrial *changes and risks to us…in addition, some research analysts in these institutions are not very professional…many of them just do analysis based on fixed framework…" (F033)*

Malfunction of structuring capability (The second stage)

Malfunction of structuring capability refers to firms which cannot effectively acquire and manage essential resources for their survival and development. In terms of research findings, two themes that surfaced in the stage of resources structuring were about determinants of structuring capability malfunction and the research labels them "Less-effective resources acquisition" and "Internal resources loss".

Less-effective resources acquisition implies that firms cannot effectively acquire needy resources from within the market to help them reconstruct their core capabilities in a highly uncertain

environment. This hampers firms' upgrading or transition due to difficulties with resource acquisition. As one failed entrepreneur from Hangzhou added:

> *"More and more traditional businesses were trying to transfer their businesses from offline to online ...However, less resources could be shared when more firms enter into this industry…" (F036)*

Internal resources loss implies that firms fail to manage, allocate and control internal resources effectively. The findings suggest that internal resources loss not only made it difficult for firms to maintain current capabilities, but also affected new capabilities' construction during transition or upgrade. One failed entrepreneur from Beijing indicated:

> *"From my own failed experience…Learning how to avoid or reduce loss of resources is essential for business survival…We failed to manage and control* our resources so that we lost some resources that were essential for business *transition."(F023)*

Determinants of "Less-effective resources acquisition"

The data suggest that financing difficulty is one of the most important factors that contributes to Less-effective resources acquisition, especially for SMEs (OECD, 2008). Despite SMEs contributing over 60% GDP to China's economy, they still face significant barriers in financing (Tsai, 2015). According to Tsai (2015), only 23.2% of bank credits were given to SMEs and only 4.7% of short-term loans. One failed entrepreneur from one firm in Shenzhen indicated:

> *"A lack of financial support made me really worry about the high labour cost. As a result, I had to lay off some employees for cost saving." (F019)*

Determinants of "Internal resources loss"

The present study indicate individual emotion, a lack of long-term strategy, poor financial management, closed culture, and psychological unbalance lead to resource loss from internal

management. Externally, less-effective supervision mechanism and vicious competition is one of most important factor to contribute to resource loss.

Emotional instability of the decision makers is one of the personal shortcomings which affect business operation (Parsa et al., 2015). The findings indicate that the emotional instability of entrepreneurs generated additional uncertainty in team cohesion and talent management. This further led to resource loss internally. According to one failed entrepreneur from Beijing:

> *"Our leader was very impatient and emotional to their (to*p managers) performance. For example, he always hoped that new managers could immediately show their values for business transition. If they cannot show their *values within a short term, our leader easily became very impatient them…some* of managers even we*re sacked quickly without a formal reason…I think you* need to give employees much patience and time, especially in business *transition" (F001)*

The analysis indicates that a lack of clear strategy could contribute to resource loss (e.g. financial hardship; brain drain) which affects firms' resource structuring in a highly uncertain environment, (see Table 2). The table also indicates that closed culture and individual psychological unbalance (e.g., fantasy, idealization) led to resource loss and affected resource integration and innovation.

Poor financial management encompasses poor cash-flow management, poor debt controlling, inadequate sales, poor financial records and high operating expenses (Carter & Van Auken, 2006). Many of the failed entrepreneurs emphasized the importance of cash-flow management when asked about the most important factors in their business failure. As D'Aveni (1989) argued, effective cash-flow management can forecast future cash requirements so as to avoid a crisis of liquidity. However, poor cash-flow forecasting can lead to a loss of resources and thus

affect business survival and development (Zacharakis et al., 1999). One failed entrepreneur from a firm in Beijing added:

> *"An effective financial management should have been establ*ished. For my own experience, few companies have developed a good financial management *system especially in SMEs…This easily caused a waste of resources…for my business, we also suffered a loss due to poor financial management." (F023)*

The data indicate that a loss of talent in top management always occurred due to less-effective supervision mechanisms and vicious competition in market. Specifically, some SOEs deliberately offered a high salary to attract talent from SMEs. Some failed entrepreneurs complained that the salary offered by those SOEs was much higher than the average salary in industry. Due to the lack of an effective supervision mechanism in the labour market, a higher labour cost was incurred by the vicious competition. When asked about deficiency of regulations and laws, a failed entrepreneur in Shenzhen commented:

> *"Some big companies (SOEs) grabbed our technique managers by offering an extreme high salary. It is almost eight times higher than our pay…At start, we* also try to *rise our pay for some talents during transition…However, we had to give it up finally…due to a lack of effective supervision mechanism, we had to bear a price war in labour market…This not only improved our labour cost but* also contributed to brain drain in our company. Finally, talents crisis in our company led to a frequent changes of top management which affect our *transition and survival." (F041)*

Malfunction of integrative capability (The third stage)

Malfunction of integrative capability implies that firms cannot effectively integrate essential resources for capability construction which further affects product and service innovation in

value creation for customers. Based on the research findings, the theme "failure of resources integration and innovation for capabilities construction", refers to firms failing to integrate current resources effectively to maintain, enrich or create new capabilities in a highly uncertain environment. The failure of resource integration and innovation results in firms failing to develop their core capabilities to address the risks and uncertainties generated by the external environment. One failed entrepreneur from Beijing indicated:

> *"For my failed experience, how to effectively allocate and integrate some* resources for products and services innovation was a big challenge during business transition. The failure of resources integration made us lose *competitiveness in market which finally led tour business failure." (F007)*

Determinants of less-effective resource integration and innovation

The findings suggest that the failure in resource integration for capabilities construction can be caused by an interaction of internal and external factors in terms of OS and IBV perspectives. Specifically, the internal factors include closed culture and centralization, deficits of knowledge and experience, and composition of TMT. The external factor comes from a deficiency of regulations and laws that consists of less-effective protection of non-technological innovation and invisible assets, and less-effective supervision mechanisms for competition.

As Herzog and Leker (2010) argued, individual centralization in decision making can affect a firm's innovative capability. The findings suggest that closed culture and centralization are not beneficial to resource integration and innovation. As one failed entrepreneur from Shanghai indicated:

> *"Honestly, our team was really strong at start and we also did not need to* worry about financial support. However, our team failed to integrate these *resources into firm's* competitive advantage in competition. I think it is because

> that our leader was too centralised in decision making, especially during in business transition. He always rejected some good ideas and suggestions from other *managers." (F008)*

Second, the findings suggest that knowledge and experience deficits affect resource integration for capabilities construction which created customer values. When asked the effects of knowledge and experience to business failure, one failed entrepreneur in Beijing indicated:

> *"We did lose some resources as I said before. However, our failure was* primarily related to a lack of ability in resources integration and *innovation…For example, it seemed to be difficult to produce some good ideas* in services innovation. Take me as an example, I thought I was more suitable to the role in marketing or product design. However, our leader gave me a job as head of office in company. Some managers like me also were not suitable to *their roles during business upgrade…this made us difficult to m*aximize our own *values to business, especially in product innovation…I think it was due to a lack of individual experiences in personnel arrangements for decision maker…In other words, our leader failed to fully activate employees' potential by* providing s*ome essential supports during business upgrade." (F019)*

It has been noted that a heterogeneous team is conducive to a high level of innovation and creativity (Somech, 2006). Specifically, different perspectives in a heterogeneous group lead to innovation, novelty and comprehension in the set of recommended solutions. However, a high level of heterogeneity does not come without disadvantages. The findings indicate that a homogenous team was not beneficial to resource integration and innovation. When asked about the effects of composition of TMT to business survival and development, one failed entrepreneur from Shenzhen commented:

> *"We had a homogenous team. Except for our leader, other people with* similar background seemed to be hard to have new ideas in product *upgrade and development…" (F045)*

The study noted that weakness of property rights, lack of concrete regulations at operational level, inconsistent regulations, extra entry barriers and lack of regulations for non-technological innovation lead to a weak innovative capability in the Chinese market (Zhu et al., 2011). The study uncovered that less-effective protection of non-technological innovation and invisible assets are still an issue which affects business survival and development in the Chinese market. Specifically, the protection of innovation primarily focuses on the technological side—either product or process innovations. Although Chinese authorities have noted the deficiency of regulations and laws on non-technological innovations such as business model innovation and service innovation, the relevant regulations and laws are lacking so far. Furthermore, some concrete regulations for the protection of invisible assets, such as trademarks, copyrights or patents, are still incomplete.

The findings indicate that the less-effective protection of non-technological innovation and invisible assets further affects resource integration and innovation for maintaining or upgrading capabilities in a highly uncertain environment. In particular, less-effective protection of non-technological innovation and invisible assets result in some entrepreneurs and managers losing confidence to innovate. When asked what the effects were of a lack of protection on non-technological innovation to business survival and development, one failed entrepreneur from Shanghai recalled:

> *"Except for individual factors, I think the protection on non*-technological innovation is still lacking in market. Some competitors easily imitated or even copied our product design. *This made us struggle with products innovation…I mean we lost the positivity of innovation in long run…" (F008)*

One failed entrepreneur in Shenzhen noted:

> *"Although we suffered a loss in human resources, we tried to develop some online products…however, a lack of institutional supports made product R&D* come to be more difficult. Specifically, the protection of intellectual property rights is less-*effective…f*or example, we took more than one year on a lawsuit about infringement disputes that one firm illegally used our brand name and *patent in 2013. This made us waste much time on lawsuit. What's more, this* made us lose passion and patience in products R&D. We invested and lost a lot resources, but we still insisted to do R&D. However, no one can protect our *property right in face of many copycats and SOEs in the market…" (F024)*

The lack of complete regulations and laws on non-technological innovation and invisible assets lowers firms' confidence and positivity in relation to product and service innovation. However, the less-effective supervision mechanism directly unbridled some firms, allowing them to make profits through vicious competition. Although relevant commercial laws and regulations on market competition have been enacted by government in China, they fail to be strictly enforced for a variety of political, socio-cultural, institutional and historical reasons (Luo et al., 2011). This enforcement uncertainty and variability can be partly attributed to long traditions of a lack of independent law enforcement and frequent changes of unjustified regulations. Therefore, the deficiency of supervision mechanisms in markets makes it difficult to protect the long-term interests of many private enterprises in the Chinese market (Luo et al., 2011). Under these weak systems and other personal issues, many enterprises, especially SMEs, are inclined to pursue short-term interests. Being copycats gives many SMEs opportunities to achieve rapid short-term returns through cost advantages and channel advantages.

The findings indicate that many firms in the Chinese market copied other firms' products and services due to the lack of an effective supervision mechanism. This made some good firms lose motivation for product and service innovation. What's worse, this issue finally contributed to vicious competition in the Chinese market. The vicious competition, in turn, weakens firms' integrative and innovative capabilities. When asked what effects the supervision mechanism had on business survival and development, one failed entrepreneur from Hangzhou indicated:

> *"As an e*-retailer, there are two ways to survive. One way is to anticipate a *'price war'. Another way is to focus o*n service innovation. Indeed, most e-*retailers prefer to participate 'price war' rather than doing 'R&D' due to less-effective supervision mechanism…we did not form an innovative environment in last few decades…for us, we also had to anticipate an intensive 'price war' in market. This made us fail to develop an innovative capability in a long term…"* (F036)

When asked what the effects were of the supervision mechanism and vicious competition on business failure, one failed entrepreneur recalled:

> *"We initially insisted to do a differentiated strategy and focused on* product innovation. However, we finally failed to resist the huge pressure *from vicious competition… we cannot develop our innovative capability* under less-effective protection from moni*toring department…This is one of the most important reason to contribute to our final failure…" (F044)*

Malfunction of leveraging capability (The last stage)

Malfunction of leveraging capability refers to firms that fail to apply firm's capabilities configurations effectively to diffuse customer value and create wealth for owners (Aragon-Correa & Sharma, 2003; Sirmon et al., 2007). The data suggest that the malfunction of

leveraging capability is due to "failure of diffusion in customer value". Therefore, the theme "failure of diffusion in customer value" is labelled in the research.

The theme refers to firms that fail to diffuse the value creation effectively for customers in the market, although some capabilities have been constructed through resources integration and innovation. Therefore, the failure of diffusion in customer value can lead to firm's failure in application of core capabilities in the market. One failed entrepreneur from Beijing indicated:

> *"There are some resistance in diffusing customer value…for example, some of* competitors copied our business model but failed to provide a good service with customers. This may make some potential customers difficult to trust our *services especially for online business…" (F020)*

Determinants of failure of diffusion in customer value

The analysis indicates that the failure of diffusion in customer value can be caused by a less-effective supervision mechanism which is emphasized by the IBV perspective. The study indicates that some firms effectively renewed and upgraded their capabilities and developed new products and services in highly uncertain environments. However, they still suffered business failure because of some malicious gossip created by other competitors. Due to the less-effective supervision mechanism in the market, customers easily lost trust in firms during their diffusion in customer value. One failed entrepreneur from Beijing provided an insight into the effects of the less-effective supervision mechanism to customers' value diminishing:

> *"Some companies even made some malicious actions to compete with us.* For Example, one of our competitors deliberately created a rumour that we sell fakes to customers. This made some potential customers discredit our products within short term. Under a less-effective supervision

mechanism in the market, some competitors that adopt such behaviours *made us lose some potential customers online…" (F004)*

One official who works in the department of SMEs in Economic Information Committee in Fuzhou stated:

> *"It is difficult for us to conduct an effective market surveillance…I think there* are two reasons. First, you know, there is a special relationship between SOEs *and us… sorry I cannot say too much about that…Another reason is associated* with characteristics of industry. For example, it is more difficult for us to *conduct an effective supervision in online industry." (M005)*

A process of business failure

Findings from the collective story of failed ventures revealed a process, as shown in Figure 2. The figure illustrates how some exogenous and endogenous interact to contribute to DCM and it led to final business failure. The malfunction of cognitive capability can occur when a firm has a low sensitivity to and weak analysis of external changes. In particular, some adverse factors emphasised by endogenous and exogenous perspectives interplayed to contribute to a low sensitivity and weak analysis that led to malfunction of cognitive capability. This accelerates the malfunction in structuring capability. An interviewee noted:

> "During business transition, we did not have a clear understanding to external *changes due to a low sensitivity…As a result, we missed the best time. What's worse, this made us waste more resources for business transition late…* " (F015, one failed entrepreneur in Shenzhen)

Constructing competitive capabilities through resources integration and innovation was less likely to be implemented due to malfunction of structuring capability. Indeed, resource support such as advanced equipment, laboratories, sufficient capital, and quality human capital can be viewed as a basic condition for capabilities construction. In turn, the malfunction of integrative

capability produced negative emotion to contribute to resource loss. It is dangerous for business survival and development because the negativity could make managers lose their confidence in the long term. According to one respondent when asked about the effects of resources structuring:

> *"The financing difficulty and a high labour cost produce*d many barriers to our transition. A lack of capital support made us hard to execute the next plan. Indeed, it came to be difficult for us to buy some good patents from research *institutions to support our product R&D…on the other hand, less*-effective innovation lowered the positivity and confidence of some researchers and *developers…many of them left our company quickly…This led to our failure finally" (F025, one failed entrepreneur, Beijing)*

One interviewee stated when asked about the effects of integrative and innovative capabilities:

> *"Except for vicious competition and top management team, a weak innovative* capability also was due to a lack of essential resources. For example, it was difficult to hire some qualified technology managers who can help us upgrade *our products…the failure of innovation always is risky for us…because this means a loss of resources…not only financial resources but also includes time and energy…" (F040, one failed entrepreneur, Shenzhen)*

The data indicate that some firms gained sufficient resources and had a strong team, but they still suffered failure in resource integration and innovation due to an interaction of external and internal factors (see Figure 3). Others suffered malfunction of integrative capability due to interplay of external and internal factors and the effects of malfunction of structuring capability. The failure of constructing capabilities made firms fail to apply capabilities needed to diffuse customer value and therefore contributed to the malfunction of leveraging capability. The malfunction of integrative capabilities made it difficult for departments to coordinate with each

other in configuring capabilities needed to diffuse customer value in the market. In turn, malfunction of leveraging capability caused conflicts in internal management which was not beneficial to capabilities construction. According to our interviewees:

> *"Due to some internal and external factors, operational department failed to* develop a strong communication mechanism and IT department also failed to *design new products…This made our competitiveness fail to be built…as a* result, we failed to create values for customers under a fast-moving change in *environment…" (F027, one failed entrepreneur Shanghai)*

Insert Figure 3 about here

Discussion and conclusion

Our research aim was to examine how the interactions of firm-level and external factors unfold to shape the processes leading to business failure. This study returns to the theory to motivate more precisely what the issues are that remain unresolved in relation to the study of business failure, and why this thesis needs to solve them. As noted earlier, although some studies have suggested that any explanation of business failure is not complete without explicating the interaction of exogenous and endogenous factors (Amankwah-Amoah & Zhang, 2015; Desai, 2011; Mellahi & Wilkinson, 2004, 2010), the micro-level mechanisms and processes of the interaction leading to business failure remain largely unexplored. This study examined what the interaction is, and how the interaction unfolds to contribute to business failure by developing new concepts in current integrative theories. Indeed, we extend prior research by developing a construct of DCM to explain how the interactive processes can precipitate business failure. Using insights from failed Chinese entrepreneurs, we identified that the interactions of exogenous and endogenous factors on transitions leading to business failure entail cognitive

capability malfunction, structuring capability malfunction, capabilities construction malfunction, and capabilities leveraging malfunction.

Specifically, the findings showed that business failure can occur due to the DCM. The process of business failure is not a simple interaction between internal and external factors, but a complex and consecutive process embedded in the management of DCs. the management of DCs consists of four stages (aspects): externality recognition, resource structuring, resources integration and innovation, and capabilities application. Each stage corresponds to specific dynamic capabilities respectively. Indeed, externality recognition corresponds to cognitive capability; resource structuring corresponds to structuring capability; resources integration and innovation reflect the firm's integrative capability; and capabilities application corresponds to leveraging capability. Some exogenous and endogenous factors act on the dynamic capabilities, leading to an interaction of DCM, which further contributes to business failure. The findings are both theoretically and empirically significant because the identification of micro-level mechanisms extends to a new understanding in current knowledge of business failure by offering a process-based explanation, which is lacking in the business failure literature. Furthermore, it highlights the need to examine the causality between the interactive processes and business failure.

Another unexpected finding revealed that business failure in the Chinese market came from motives of the business transition. The paper therefore identified some industrial changes, such as: higher labour costs; an ageing society; overcapacity within industries; internet development; and an anti-corruption campaign that could all be viewed as motives for business upgrade or transition in the Chinese market. Theoretically, this provides a new research stream on causes of business failure.

This study also showed that most of the firms failed due to an interaction of malfunction of structuring capability and malfunction of integrative capability, or an interaction of malfunction of cognitive capability and malfunction of structuring capability. Although attention has been

paid to dynamic capabilities by many scholars in strategic management, the effects regarding DCM in business failure are still in the early stages of development. The model (see Figure 3) could provide a theoretical or empirical research guideline on business failure.

This study provides three implications for practitioners in highly uncertain economies. First, our research offers a means of conceptualising their DCs management emphasising an interaction of internal and external factors. This helps to delineate the processes and steps inherent in decline and business failure. What's more, the paper suggests that decision makers should pay more attention to DCs management in a highly uncertain environment. Specifically, entrepreneurs and top managers need to strengthen their cognitive capability through improving their sensitivity and analysis to market changes. Second, entrepreneurs and managers can improve their structuring capability by effectively controlling resources loss under highly uncertain market. Furthermore, how to improve firm's integrative capability is a big test for entrepreneurs and managers. The findings suggest knowledge and experiences deficits, homogenous team, and closed culture in top management may not be beneficial to resources integration and innovation. Lastly, entrepreneurs or managers need to improve their leveraging capability which helps their products and services diffuse customer value in market.

Third, this study has suggestions for policy makers on how to help firms improve their DCs management to reduce their risks of failure during highly uncertain market. Specifically, reducing information asymmetry enables firms to better understand changes of economic policies and regulations. Market-oriented reform in capital market and SOEs is necessary to provide capital and labour support with private economies, especially for SMEs during business upgrade or transition. In addition, building effective supervision mechanism and property right protection can improve and support business innovation.

Regarding the limitations in this research, although this study emphasises the differences of business failure between developed economies and emerging economies, this study only focused

on an exploration of tangible institutional factors such as regulations, rules, and laws. For the intangible institutional factors such as culture, norms, and social ideology seem to be ignored. For example, national culture could be regarded as a factor to contribute to business failure during transition/upgrade. While the thesis in its current form examined the effects of business culture to business failure, the effects of social ideology and national culture also need to be considered and examined especially for the countries with a long history. The national culture could be formed in several social norms that affect individual decisions, strategies, and behaviours before and after business failure.

The samples in this study include firms from a wide array of industries including manufacturing, retail, technology and culture. Therefore, the determinants and processes of business failure may vary in terms of industry. This may produce a bias in understanding business failure in a particular sector. It needs to note that this study examines business failure based on a more general context. Specifically, all failed firms are involved in high velocity industries, where changes are constant and significant. However, as mentioned above, some specific factors that contribute to business failure may vary across different industries.

Current findings are based on only small and medium-sized enterprises and the process of failure may be different with large enterprises. This paper suggests future research on the process of business failure can be investigated in large failed enterprises. In addition to this, an exploration of common determinants to DCM and business failure needs to be verified based on a large sample. Thus, future research could focus on examining the specific correlation between internal factors/external factors and malfunction of DCs in a specific sector. Furthermore, future research could work for an exploration about how intangible institutional factors interact with other internal factors contributing to business failure.

In conclusion, to the best of our knowledge, this is the first study that explicitly examines how the interactions of firm-level and external factors unfold to shape the processes leading to

business failure. The findings contribute to a better understanding of determinants, processes and consequences of business failure. This paper should stimulate future research effort to explore this emerging research topic.

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