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Article

Growth of Venture Firms under State Capitalism with Chinese Characteristics: Qualitative Comparative Analysis of Fuzzy Set

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Abstract: This study builds upon the venture growth literature and venture legitimation mechanisms and investigates how venture firms in China can acquire legitimacy and necessary resources from state stakeholders for venture growth during the COVID-19 pandemic. To offer a context-specific perspective of Chinese ventures' legitimation strategies, we discuss that under Chinese state capitalism, these ventures need to follow lingering socialist values, such as equality and social stability, to be recognized as appropriate business operations by state audiences. Furthermore, we discuss that access to necessary resources for venture growth is limited during crises. Based on the understanding of particular contexts of Chinese state capitalism and the COVID-19 pandemic, we examine how various sets of a venture's identity, associative, and organizational mechanisms influence venture growth during crises in China. In addition, we consider serial entrepreneurship as a contextual factor affecting the effectiveness of causal effects. This study applies the fuzzy-set qualitative comparative analysis method to take a configurational approach and identify multiple concurrent causality of legitimacy mechanisms on venture growth. We conduct a survey and analyze data from 107 entrepreneurs of Chinese technology ventures during the COVID-19 pandemic. Findings show that Chinese ventures with or without repeat entrepreneurs can actively utilize various sets of legitimation mechanisms to acquire legitimacy and necessary resources from Chinese state audiences for venture growth during adversity. This study provides comprehensive understanding and practical implications on Chinese ventures' legitimation strategies for venture growth during crises.

Keywords: venture growth; venture legitimation; state capitalism; COVID-19; crisis management; fsQCA



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1. Introduction

The COVID-19 pandemic is having an adverse effect on the world economy, causing governments to globally limit people's daily lives (Aruga et al. 2020; Boratyńska 2021; Castro and Zermeño 2020). The COVID-19 pandemic has also resulted in difficulty for new ventures to gain sufficient resources from external stakeholders to realize sustainable growth. To date, several studies have explored the various antecedents on sustainable venture growth (Baum et al. 2001; Dean and Meyer 1996; Gilbert et al. 2006). Factors influencing the growth of ventures mainly include, but are not limited to (Baum et al. 2001; Dean and Meyer 1996; Gilbert et al. 2006): (1) resources that ventures have obtained and developed, such as financial, human, and technological resources (e.g., Cardon 2003; Lee et al. 2001; West and Noel 2009), and management of these resources (e.g., Wang et al. 2019); (2) the particular features of founders, such as educational level (Sapienza and Grimm 1997) and entrepreneurial origin (Barbosa and Faria 2020); (3) entrepreneurial attitudes and goals, such as entrepreneurs' passion (Baum and Locke 2004) and entrepreneurial and market orientation (Song and Jing 2017); and (4) industrial characteristics, such as environmental complexity and dynamism (Cavazos et al. 2012) and market growth (Park et al. 2002).

Findings of prior studies have considerably expanded our understanding of the influence of various internal and external factors of ventures on venture growth. However,

these studies have been mostly based on the Western capitalist economy and are less likely to consider ventures' crisis situations, such as the COVID-19 pandemic. Factors influencing the growth of ventures in the transition economy—economies that have been converted from state-centered socialism to state capitalism that embraces elements of market but still sustains a socialism legacy—have received relatively minimal attention from researchers (Li and Hitt 2006). In recent years, numerous ventures have been established in China owing to the government-led policy to establish ventures (White et al. 2005). Under China's state capitalism economic system, owing to the strong influence of the existing socialism that has yet to fade, politicians are more interested in sustaining socialist values across socio-political arenas, such as reducing the unemployment rate (Musacchio et al. 2015) and maintaining their power, than promoting capitalism values, such as achieving economic efficiency (Yun et al. 2022). Such politicians are highly likely to aim to maintain job creation and regional development (Acs and Armington 2006) through the establishment and growth of ventures. Thus, unlike ventures under the Western capitalist economic system, Chinese ventures under state capitalism face significant pressure from the government to follow such values as equality and social stability (Yang 2002). In crisis situations, such as the COVID-19 pandemic, ventures' legitimation strategies to obtain resources and legitimacy become critical for venture growth because access to necessary resources from external stakeholders is less available (Brown and Rocha 2020).

Ventures will be considered legitimized by audiences when they are recognized as “desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman 1995, p. 574). In the case of Chinese ventures, fulfilling socialist values and obtaining legitimacy from powerful state entities, such as government agencies and state banks, are essential for venture growth. Chinese ventures that are successful in legitimation can obtain necessary resources and active support, leading to growth. Thus, how Chinese ventures manage legitimacy building strategies to achieve legitimacy from one of the most influential external audiences in China—the state—during adversity should be systematically understood. Furthermore, considering the particular features of Chinese state capitalism, previous studies have explored the effect of Chinese firms' individual legitimacy building strategy (Ahlstrom and Bruton 2001; Tsang 1996). However, how the combinations of legitimacy building strategies affect Chinese venture growth and what the dimensions of such strategies have been minimally studied. Under such an economic system, the question of how Chinese ventures can manage crisis and achieve venture growth when disruptive and unexpected events significantly reduce available resources that ventures can acquire from external stakeholders (Brown and Rocha 2020) has to be further investigated (Hu et al. 2022).

Therefore, this study examines how Chinese ventures under pressure from powerful interested state parties can secure legitimacy, acquire the necessary resources (e.g., financial, human, and technological resources), and achieve sustainable growth during periods of adversity, such as the COVID-19 pandemic. Moreover, we investigate how ventures with different prior entrepreneurial experiences of founders should implement different strategies for growth. To this end, we discuss particular features of Chinese state capitalism that Chinese ventures must follow to obtain resources and legitimacy. To find and examine patterns resulting in Chinese venture growth during adversity, we build upon Fisher et al.'s (2017) study, which discusses three different legitimation mechanisms (i.e., identity, associative, and organizational) that ventures strategically combine and use to influence legitimacy judgments of external state stakeholders. To summarize, this study plans to systematically investigate how diverse patterns of Chinese ventures' legitimation strategies affect their growth through actively securing legitimacy and acquiring resources when ventures face emergent situations. We select fuzzy-set qualitative comparative analysis (fsQCA) as our methodological strategy because fsQCA is one of the ideal empirical methods used to investigate the effects of various configurations of legitimation mechanisms on venture growth (Ragin 2006; Penela et al. 2022). By applying fsQCA, we can explore which combinations of antecedents are equally effective rather than focusing on the individual effect of a causal

condition on the dependent variable (Pappas and Woodside 2021). To test our theory, we use fsQCA to analyze survey data on entrepreneurs of 107 technology-oriented ventures in China during the COVID-19 pandemic.

The remainder of this paper is organized as follows: (1) literature review and theory on new venture growth, legitimation in China, and legitimation mechanisms; (2) methods to collect survey data and measure outcome and causal condition variables; (3) fsQCA method procedures; (4) procedures to analyze data and findings; and (5) discussion on the contributions, implications, and limitations of the current study.

2. Literature Review and Theory

2.1. New Venture Growth

Factors that affect venture growth have been widely explored by scholars (Baum et al. 2001; Dean and Meyer 1996; Gilbert et al. 2006). These factors can be generally categorized into internal and external aspects, including: (1) ventures' resources and management ability, (2) entrepreneurs' characteristics, (3) entrepreneurial attitudes and goals, and (4) industrial characteristics.

One of the most widely examined internal factors affecting venture growth is ventures' resources and the management of these resources (Thakur 1999). To grow, ventures should attract and develop appropriate resources, such as human (Cardon 2003; Thakur 1999) and financial (Cooper et al. 1994; Lee et al. 2001) resources, and manage them in an efficient and effective manner (Gilbert et al. 2006). For example, knowledge resources of venture CEOs are useful in acquiring and developing other types of resources, leading to venture growth (West and Noel 2009). Ventures' acquisition of international knowledge also allows them to find new opportunities in the local and overseas markets, resulting in venture growth (Naldi and Davidsson 2014). Söderblom et al. (2015) found that government subsidies decrease the liability of the newness of ventures at the early stage and attract more financial and human resources to ventures, leading to venture growth. Scholars emphasized the effects of resources that ventures acquire and develop and also the coordination and orchestration of these resources on venture growth (Gilbert et al. 2006). For example, how ventures manage resources in a way of bundling internal resources and creating new capabilities and of coordinating and deploying resources for strategy implementation are related to venture growth (Wang et al. 2019). Similarly, entrepreneurial bricolage, which means the strategic orientation to reconfigure present resources to cope with environmental changes, results in venture growth (Yu et al. 2020). Clarysse et al. (2011) determined that how ventures manage the development of a portfolio of resources (e.g., social, human, financial, and technological resources) over time in consideration of environmental contingencies that ventures face differently (e.g., environmental stability and complexity) influence venture growth.

The effects of entrepreneur characteristics on venture growth have also received considerable attention from scholars (Box et al. 1994) because ventures tend to be influenced by entrepreneurs (Gilbert et al. 2006). Entrepreneur characteristics that are explored include, but are not limited to, entrepreneurs' educational background (e.g., Sapienza and Grimm 1997), founding team characteristics (e.g., Amason et al. 2006), and prior experience (e.g., Cooper et al. 1994). Barbosa and Faria (2020) found that the entrepreneurial origin of ventures, such as whether a venture was founded by a professor or graduate school student, affects venture growth because top-educated entrepreneurs can access the latest technological knowledge. Moreover, there are several studies on how entrepreneurial attitudes and goals affect venture growth (Baum and Locke 2004; Box et al. 1994; Cliff 1998; Wiklund et al. 2003). For example, entrepreneurs' passion for work influences venture growth mediated by their motivations, such as self-efficacy, vision, and goals (Baum and Locke 2004). Managerial attitudes, such as entrepreneurial orientation (i.e., taking risks and pursuing opportunities), market orientation (i.e., focusing on customers and market), and technological orientations (i.e., applying technology into product development and operational processes), individually and interactively affect venture growth (Song and Jing

2017). In addition, new venture managers' growth orientation and motivation to achieve firm growth enable them to engage in innovation activities, resulting in venture growth (McKelvie et al. 2017). Lastly, as an external force affecting venture growth, industrial characteristics around ventures have been considered (Box et al. 1994). Gilbert et al. (2006) explained that the features of industries (e.g., market growth and life cycle of industry) (e.g., Park et al. 2002; Sandberg and Hofer 1987), competition in industries (Baum et al. 2001), and environmental hostility (Zahra and Bogner 2000) can influence venture growth. Moreover, two different dimensions of firms' external environmental conditions can affect venture growth: (1) environmental dynamism, which refers to uncertainties firms can face as the external environment rapidly changes; and (2) environmental complexity, which means the difficulties of firms to interpret diverse external issues (Cavazos et al. 2012).

Although findings of prior studies have significantly contributed to our understanding of the ventures' diverse internal and external factors' influence on venture growth, the unique context of venture growth has been less considered. In Chinese state capitalism, in which ventures' important external audiences (e.g., the state) maintain strong power, an investigation must be conducted on how ventures can affect the legitimacy judgement of external stakeholders and receive necessary support and resources from them, thereby achieving venture growth during adversity. Moreover, only a few studies have investigated how Chinese entrepreneurs utilize particular sets of legitimation mechanisms (i.e., identity, associative, and organizational mechanisms) to obtain legitimacy from external actors during crises when access to necessary resources from external audiences becomes difficult. In addition, how Chinese ventures' legitimacy building strategies are contingent on a particular firm context (e.g., serial entrepreneurship) must be understood. The reason is that prior entrepreneurial experience can give entrepreneurs more experience in coordinating different legitimization mechanisms during adversity.

2.2. Legitimation in China

Characteristics of socialism remain strong in China's economic system under state capitalism (Peng et al. 2016). The government remains highly interested in its power maintenance and supplementing people's lives (Musacchio et al. 2015). Therefore, for business operations in China's economic system, ventures must follow such values as equality and social stability for business activities (Yang 2002). As ventures accept these norms and values, they can be recognized as appropriate economic entities by major external stakeholders, such as government ministries, local governments, political parties, state banks, and the public. This process can be considered venture legitimation (Suchman 1995). Through this justification, ventures can continue to grow and secure sustainability by acquiring active support and human, financial, and other types of resources from society's main actors (Zimmerman and Zeitz 2002). In Chinese state capitalism, in which the state maintains dominant power (Yun et al. 2022), only when ventures are considered important and appropriate in the eyes of the state audiences can the former obtain active support and resources from the latter. Given that resources that ventures can socially utilize are reduced during periods of adversity, such as the COVID-19 pandemic (Brown and Rocha 2020), their legitimacy-building strategy becomes critical for their resource acquisition and growth.

Ventures seek to influence stakeholders' judgment of legitimacy by using various mechanisms to actively secure legitimacy. Fisher et al. (2017) explained that these mechanisms can be divided into three main categories. For example, CEOs of ventures can seek to appeal to external stakeholders that ventures are already connected with them by using the identity mechanism, such as appeals to identity (Navis and Glynn 2010), impression management (Clarke 2011), and appeals to similarities (Wry et al. 2011). They can also strategically use the associative mechanism, which can show that ventures are already associated with existing audiences by emphasizing the link between organizations and the personal network of top management. Lastly, ventures can use organizational mechanisms

that attempt to persuade stakeholders by accepting the organizational structure required by society and advertising achievements.

2.3. Legitimation Mechanisms

2.3.1. Identity Mechanism

Identity mechanism refers to “an entrepreneur’s strategic use of cultural tools and identity claims such as images, symbols and language to enhance and manage new venture legitimacy” (Fisher et al. 2017, p. 54). That is, ventures can strategically attempt to leave an impression that they share a similar identity with audiences, being legitimized by them (Fisher et al. 2017). Entrepreneurs can utilize diverse identity mechanisms to gain legitimacy (Fisher et al. 2017), including storytelling (Katre and Salipante 2012; Ruebottom 2013), impression management (Benson et al. 2015), sensegiving (Fischer and Reuber 2014), analogies and arguments (van Werven et al. 2015), collective framing (Rao 2004), cultural agency (Drori et al. 2009), and symbolic actions (Zott and Huy 2007).

In Chinese state capitalism, for ventures to obtain active support and necessary resources for venture growth and sustainability, they need to strategically use identity claims that they follow norms and values that the state deems important. Chinese ventures may be against socialist values, such as income equality and public ownership (Tsang 1996). However, given that entrepreneurs of private firms in China can be considered ideologically capitalists, they must obtain legitimacy from the state that values the opposite ideology (Marquis and Qian 2014; Tsang 1996). For example, Chinese ventures attempt to show that they conform to the government’s political priority for technology sharing and rapid spread as they reveal their patents, foresight, and technological advice across society (Xie et al. 2020). Liang et al. (2017) argued that Chinese private firms with missions reflecting socio-politically required values (e.g., promoting the Chinese economy and improving the wealth of not only firms but also the public, customers, and employees) can obtain sustainable legitimacy. Moreover, Chinese private enterprises that highlight the image of patriotism can allay the doubt of the state on their ideological orientation (Liang et al. 2017). Ma and Parish (2006) observed that Chinese private entrepreneurs could obtain legitimacy from the government, such as social status and political access, by making charitable donations.

2.3.2. Associative Mechanism

Associative mechanism can be defined as “the relationships and connections that entrepreneurs and their ventures forge to establish and manage their legitimacy” (Fisher et al. 2017, p. 55). Accordingly, connecting with recognizable external stakeholders can attract the attention of other audiences because ventures will be evaluated on the bases of having developed a reputation for their performance and built legitimacy (Fisher et al. 2017; Rindova et al. 2007). Organizational ties (Zimmerman and Zeitz 2002), top management ties (Higgins and Gulati 2006), and individual ties (Packalen 2007) can be considered sub-categorizations of associative mechanisms (Fisher et al. 2017).

One of the widely known associative mechanisms that Chinese firms often use is *guanxi* at the individual, group, and organizational levels (Chen et al. 2013). *Guanxi* with key individuals in China helps firms obtain legitimacy because it aids in building obligatory relationships between individuals for resource acquisitions (Ahlstrom and Bruton 2001). For Chinese ventures, given the weak institution situation, *guanxi* networks are necessary for resource access and performance during the economic transition period because *guanxi* has deep roots in China (Guo and Miller 2010). For example, Chinese entrepreneurs’ *guanxi* networks contribute to maintaining the growth moments of firms in the entrepreneurial processes in China (Guo and Miller 2010). Chinese venture managers’ political ties with government officials and state banks contribute to venture performance, such as profit growth and return on sales in Beijing (Li and Zhang 2007). At the organizational level, Chinese ventures’ ties with other firms, including buyers and suppliers, play a significant role in the availability of opportunities, such as finding potential value to generate competitive

advantages (Li et al. 2014). Zhang and Li (2010) showed that Chinese ventures' networks with service intermediaries at the organizational level in Guangdong Province lead to high product innovation.

2.3.3. Organizational Mechanism

Organizational mechanism means "the organization and structure of a new venture, and achievement of success measures by that venture" (Fisher et al. 2017, p. 55). Legitimacy can be granted when ventures incorporate expected standard organizational structures or achieve professionalization and performance to a certain level within an organizational field (Fisher et al. 2017). Organizational mechanisms can be narrowly categorized into (Fisher et al. 2017) internal milestones or structures (e.g., completing a business plan and founding a legal entity (Delmar and Shane 2004) and venture top management team's (TMT) legitimacy) (Cohen and Dean 2005), leaders background (e.g., demographic features of a founding team) (Packalen 2007), and external validation (e.g., formal business registration) (Kistruck et al. 2015) and certification from an authorized organization (Sine et al. 2007).

Scholars have explored how Chinese ventures employ organizational mechanisms as one of their legitimacy building strategies. For example, Chinese private firms that register themselves as collective business entities or organize internal labor unions and Communist Party organizations are considered resembling established organizational structures (Feng and Wang 2010). These firms can be ideologically accepted and enjoy favorable treatments, such as tax reductions, from the government (Feng and Wang 2010). Regarding external validation, Chinese IT ventures that obtained certifications, such as an Internet Content Provider license, can enhance their visibility to authorities, enabling them to receive more venture capital funding (Zheng et al. 2021). Similarly, Chinese entrepreneurs can build legitimacy as they choose to enter an environment that already has validated certificates, such as ISO 9000 (Ahlstrom and Bruton 2001). Chinese ventures' early acquisition of legal registration enables them to accelerate legitimacy and resource acquisitions (Tian et al. 2019).

2.3.4. Contextual Factor: Serial Entrepreneurship

Ventures that have to follow socialist values in China can strategically utilize the combinations of identity, associative, and organizational legitimation mechanisms to obtain legitimacy from various state stakeholders in society, thereby securing resources and leading to growth. However, not all ventures are subjected to the same level of pressure from external stakeholders and are pursuing the same strategy to gain legitimacy. The effectiveness of a set of ventures' legitimation mechanisms may be contingent on prior entrepreneurial experience of venture founders (Davidsson and Honig 2003; Farmer et al. 2011). Ventures' foundational setting can affect their integration of diverse legitimation mechanisms and their effects (Lengnick-Hall and Beck 2005). Prior entrepreneurial experience is defined as "whether an individual has previously started or owned a business" (Zhan et al. 2022, p. 1) and not every venture's entrepreneur is a repeat entrepreneur. Past participation in venture involvement enables entrepreneurs to acquire social networks, familiarity with the entrepreneurial role, and explicit and tacit knowledge (Farmer et al. 2011). This situation results in success in innovative opportunities exploitation (Davidsson and Honig 2003), learning from previous mistakes and avoiding the same mistakes (MacMillan 1986), enriching the cognitive schemas of entrepreneurs and improving ventures' innovativeness (Vaillant and Lafuente 2018), increasing the probability of ventures' successful exit through M&A (Harel et al. 2022), and sales and survival of ventures (Delmar and Shane 2006). Considering ventures' contextual factor (i.e., serial entrepreneurship), the current study explores how the combinations of the three types of legitimation mechanisms for securing legitimacy in China affect the growth of ventures during crises.

2.4. Theoretical Proposition

Using a set theory, such as fsQCA, and examining the subset relations of antecedents (Fiss 2007), relationships between several legitimation mechanisms and serial entrepreneurship and new venture growth can be explored. A proposition has to be formulated to test the necessity and sufficiency of these causal factors to the outcome (Jacobs and Cambré 2020). A sufficient condition indicates that a condition can lead to an actual outcome without being combined with other causal factors (Fiss 2007). Meanwhile, a necessary condition indicates that the outcome can only be achieved if a causal condition is absent or present (Fiss 2007). Fisher et al. (2017) and the literature on Chinese venture legitimation (discussed in Section 2.3) indicated that Chinese ventures' legitimacy building strategy using a single legitimation mechanism is necessary or sufficient conditions cannot unequivocally result in venture growth. Instead, several combinations of legitimacy-building strategies can achieve Chinese ventures' growth. This result denotes that our causal factors will combine conditions that are "Insufficient but Necessary part of an Unnecessary but Sufficient (INUS)" (Duşa 2022, p. 548) and growth of Chinese ventures can be explained by these configurations. Hence, we present the following proposition on the basis of our previous discussion on the effects of causal conditions (i.e., identity, associative, and organizational mechanisms) and serial entrepreneurship on venture growth:

Proposition 1. *Identity, associative, and organizational mechanisms and serial entrepreneurship are INUS conditions for venture growth in China.*

3. Method

3.1. fsQCA

This study analyzes the data collected through the survey using fsQCA to fully determine the complex relations between Chinese ventures' diverse legitimacy building strategies and their growth during the COVID-19 pandemic. Moreover, fsQCA allows us to find diverse configurations of causal factors affecting the growth of ventures from an integrated perspective, rather than individually analyzing them (Boratynska 2021; Penela et al. 2022). Equifinality, which means "the premise that multiple combinations of antecedent conditions are equally effective" (Pappas and Woodside 2021, p. 4), is the basic principle of fsQCA. Depending on this principle, fsQCA enables researchers to explore how the absence or presence of their factors and configurations result in the same outcome (Hu et al. 2022).

Considerable studies have employed traditional quantitative methods that are variance-based, assumed that there is a linear relationship between causal conditions and outcomes, and conducted a significance test to evaluate hypotheses (Pappas and Woodside 2021). Compared with quantitative analysis, fsQCA can easily analyze the causal complexity of the causal relationship of the combined factors, enable precise analysis by enabling researchers to control the membership stage, and empirically reflect the essence of set theory (Ragin 2008). Although regression analysis hardly identifies different paths to the outcome, fsQCA allows us to find diverse combinations of independent variables (Fainshmidt et al. 2020). In addition, fsQCA is an ideal empirical approach to deal with data sets when the sample size is small or intermediate (Sellnow and Seeger 2021). Hu et al. (2022) applied fsQCA and analyzed 21 Chinese firms to show how the diverse configurations of firms' resilience capabilities result in sustainable performance of firms during periods of adversity in China. Compared with conventional quantitative methods, fsQCA has several disadvantages, such as reflection of the researchers' previous knowledge by using calibration measures (Vis 2012) and the impossibility of showing the influence of an individual causal condition on the dependent variable (Skarmeas et al. 2014).

Although fsQCA has several limitations, it is one of the ideal methodological approaches in investigating how the different sets of firms' legitimation strategies affect venture growth and sustainability during adversity in China. Accordingly, this study

conducts a fuzzy set analysis on venture growth based on the analysis of different sets of legitimation mechanisms used by companies to obtain legitimacy from state stakeholders.

3.2. Variables and Measurements

3.2.1. Outcome Variables

We drew on previous research on venture growth (VG) (Gilbert et al. 2006) and venture performance (Stam and Elfring 2008) and measured VG using four items. Respondents evaluated their ventures' growth relative to that of their competitors in the past three years in terms of profit, employment, sales, and market share growth. The scale respondents utilized ranges from 1 (much worse) to 7 (much better) (for example, we asked the respondents: compared with your competitors in the past three years, please rate your performance on profit growth from 1 to 7, in which 1 and 7 indicate "much worse" and "much better", respectively). We obtained the average score of the four items to represent VG.

3.2.2. Causal Condition Variables

To measure the causal condition variables of the study, we reviewed the literature on measurements of each mechanism. Although the identity mechanism comprises diverse dimensions (Fisher et al. 2017), not all dimensions can be measured based on prior studies because some of them are only qualitatively described and their measures are not explicitly suggested. Thus, to measure each legitimation mechanism, we focused on dimensions that measures are already constructed by prior studies, or we can induce measures from previous studies' clear descriptions on possible measures.

- Identity mechanism

To measure the identity mechanism that Chinese technology ventures utilize for legitimation, we considered its diverse dimensions. First, these dimensions include collective identity (CI), which emphasizes that homogeneity is seemingly accomplished through rapid isomorphism between ventures and external stakeholders (Fisher et al. 2017; Navis and Glynn 2010). CI measures to what degree ventures highlight their contributions to society and country when they interact with external stakeholders, such as government agencies or officials (Fisher et al. 2017; Navis and Glynn 2010). Second, organizational identity (OI) means the individuation of "who we are" as distinctive category members. To measure OI, we requested the respondents to respond to what degree their firms highlight that they can contribute to society or the technological breakthrough to their country than other firms while they interact with state stakeholders (Fisher et al. 2017; Navis and Glynn 2010). Third, we considered impression management (IM), which means regulating emotions, creating a professional identity and emphasizing control, and presenting an appropriate scene to stakeholders (Clarke 2011). We specifically asked the respondents to what degree ventures conceal certain aspects of their drawbacks and expose their advantages, emphasize wearing a business dress, and display positive emotions when they interact with external stakeholders. We also measured how much ventures attempt to manage and ensure that the Chinese Communist Party or any government agencies have a positive attitude toward them (Clarke 2011).

- Associative mechanism

Associative mechanism reflects to which organizations and individuals ventures are tied (Fisher et al. 2017). To fully determine ventures' utilization of associative mechanism to gain legitimacy, we account for founders, TMTs, and organizations' ties with state stakeholders, such as state banks, tax bureaus, and research institutions (Baum and Oliver 1991; Gulati and Higgins 2003; Fisher et al. 2017; Sheng et al. 2011). For founders' tie (FT), the respondents were asked to answer to what degree their founders maintain a good personal relationship with government officials (Sheng et al. 2011), whether their founders serve important positions in prominent research institutions (Gulati and Higgins 2003), and how much their founders have cultivated good relationships with external stakeholders in

supporting organizations (Sheng et al. 2011). For TMT's tie (TT), we asked the respondents on their TMT the same questions we asked on their founders. Lastly, organizational tie (OT) means how strong relationship ventures have established with government organizations (Baum and Oliver 1991) and research institutions (Fisher et al. 2017).

- Organizational mechanism

Organizational mechanism accounts for organizational leaders' characteristics, organizational structure, organizational achievements measures, and external validation (Fisher et al. 2017). For leaders' background (LB), we requested the respondents to respond on whether or not TMT members have recognized academic qualifications and reputations and served important positions in Chinese political bodies (Fisher et al. 2017). For organizational structure (OS), we asked the respondents whether or not their ventures attempt to mimic the organizational structure of successful state-owned firms in their industries (Khaire 2010) and to follow successful state-owned firms to participate in activities, such as award contests (Khaire 2010). For internal milestone and success measures (IS), we measured, during the interaction with the state, to what degree ventures strive to outline their scientific achievements (Fisher et al. 2017), highlight the number of job opportunities (Fisher et al. 2017), and outline the tax payment contributions to the local economy (Fisher et al. 2017). For external validation (EV), we asked to what degree ventures present and prove their legal registration status to governmental agencies and officials (Sine et al. 2007) and seek to gain awards or certification from government bodies for business operations (Sine et al. 2007).

- Contextual factor

To measure serial entrepreneurship (SE), we asked the respondents whether or not they have "prior experience of running a self-owned company" (Li et al. 2009, p. 673). Serial entrepreneurship is a dummy variable. In particular, 1 indicates that entrepreneurs have prior experience, and 0 otherwise.

Table 1 presents the categories, variables, and corresponding survey items.

3.3. Data and Sample

To empirically test the theory, we collected data through a survey on founders and CEOs of technology-oriented ventures established in China in 2022, when COVID-19 raged through China. We chose to examine technology ventures in China because they are under significant influence from the state as the Chinese government attempts to move its industrial structure from producing low-value-added and labor-intensive goods to high-tech ones (Yu et al. 2009). In such a situation, Chinese technology ventures may be under pressure for gaining legitimacy from external stakeholders, such as government agencies and state banks, to secure the necessary resources for venture growth (Li and Zhang 2007) during crises. Founders and CEOs often have the most relevant information on the operation of ventures.

To maximize the response rate despite the COVID-19 pandemic, we collaborated with the Technology and Innovation Association in Zhuhai, Guangdong Province to distribute our questionnaires to 208 ventures through an online questionnaire platform. We eventually obtained 107 completed and valid questionnaires, with a response rate of 51.4 percent. We examined the non-response bias by comparing some features at the firm level, such as firm age and size (Stam and Elfring 2008). T-test results indicated no significant differences in the attributes. Fainshmidt et al. (2020) explained that fsQCA was developed by Charles Ragin to analyze small sample sizes. Compared with traditional regression analysis, fsQCA requires considerably below sample sizes (Fainshmidt et al. 2020). Moreover, fsQCA is ideal when analyzing sample sizes that are markedly small for traditional quantitative methods and substantially large for case studies (Ragin 2000). When there are 4 or 7 antecedents, fsQCA requires at least 12 and 30 sample sizes, respectively (Marx 2006). Hence, our sample size sufficiently meets the sample size required by the fsQCA method.

Table 1. Descriptions of variables, survey items, and references.

| Categories | Variables | Definitions | Items | References |
|--------------------------|----------------------------------|---|---|---|
| Outcome variable | Venture growth (VG) | Ventures' growth relative to that of their competitors in the past three years in terms of profit, employment, sales, and market share growth | "Comparing with your competitors' performance, please rate the performance of your firm on the following aspects: profit, market share, employment, and sales growth." | (Gilbert et al. 2006; Stam and Elfring 2008) |
| Identity mechanism | Organizational identity (OI) | Individuation of "who we are" as distinctive category members | "We always highlight how our firm can contribute to society better than other firms during our interaction with government agencies or officials." "We always highlight how our organization can contribute to the technological breakthrough of our country better than other firms during our interaction with government agencies or officials." | (Navis and Glynn 2010) (Navis and Glynn 2010; Fisher et al. 2017) |
| Associative mechanism | Founder's tie (FT) | Relationships and connections that founders forge to establish and manage their legitimacy | "Our founder has maintained good personal relationships with officials at various levels of government." "Our founder serves important positions (professorship or board seats) in prominent research institutions." "Our founder has developed good connections with officials in regulatory and supporting organizations such as tax bureaus, state banks, research institutions, and commercial administration bureaus." | (Sheng et al. 2011) (Gulati and Higgins 2003) (Sheng et al. 2011) |
| | TMT's tie (TT) | Relationships and connections that TMT members forge to establish and manage their legitimacy | "Top managers in our firm have maintained good personal relationships with officials in various levels of government." "Our top management team members serve important positions (professorship or board seats) in prominent research institutions." "Top managers in our firm have cultivated good relationships with officials in regulatory and supporting organizations such as state banks, research institutions, commercial administration bureaus, and tax bureaus." | (Sheng et al. 2011) (Gulati and Higgins 2003) |
| Organizational mechanism | Internal milestones/success (IS) | Ventures' successes to demonstrate achievement of standard organizational performance | "We often strive to outline the scientific achievements of the venture and the team, such as the winning of awards for research breakthroughs or patents held during our interaction with government agencies or officials." "We often highlight the number of job opportunities created for the sake of regional development during our interaction with government agencies or officials." "We strive to outline the tax payment contribution to the local economy during our interaction with government agencies or officials." | (Fisher et al. 2017) (Fisher et al. 2017) (Fisher et al. 2017) |
| | Leaders' background (LB) | Venture leaders' characteristics to demonstrate achievement of professionalization | "Our top management team has members with recognized academic qualification and reputation." "Our top management team has members who served important positions in the communist party, People's Congress, or People's Political Consultative Conference." | (Fisher et al. 2017) (Fisher et al. 2017) |
| | Contextual factor | Serial entrepreneurship (SE) | Whether or not individuals have previously started or owned businesses | "I have prior experience of running a self-owned business." |

Note: Variables showing low reliability are exempted from the description.

4. Procedures

4.1. Descriptive Statistics

Table 2 shows the descriptive statistics summarizing the data set and providing guidance on how the outcome can be categorized. Although we sought to include different items to determine what has been described for each legitimization mechanism by the prior literature in the survey, our primary interest was not to develop new measurement tools for each variable. Thus, among each mechanism's variables theoretically discussed, only those with Cronbach's alpha values above 0.65 were considered as having an acceptable level of reliability and included in the fsQCA analysis (Taber 2018). Given that the items were either extracted from prior surveys or conceptual discussions of papers, they have relatively high construct validity.

Table 2. Descriptive statistics of the variables.

| Variables | Mean | Mdn. | S.D. | Min. | Max. | Reliability |
|-----------|-------|-------|-------|-------|------|-------------|
| VG | 5.154 | 5.250 | 0.741 | 2.25 | 6.75 | 0.72 |
| OI | 5.701 | 5.500 | 0.857 | 3 | 7 | 0.70 |
| FT | 5.187 | 5.333 | 0.983 | 1.667 | 7 | 0.69 |
| TT | 5.221 | 5.333 | 0.974 | 1.667 | 7 | 0.72 |
| IS | 5.847 | 6.000 | 0.754 | 2.667 | 7 | 0.66 |
| LB | 5.136 | 5.500 | 1.179 | 2 | 7 | 0.68 |
| SE | 0.645 | 1.000 | 0.481 | 0 | 1 | - |

The descriptive statistics show the following results. (1) Average VG, the variable to measure venture growth, of the sample ventures is 5.154, and the standard deviation is 0.741 (maximum and minimum of 6.75 and 2.25, respectively). It reports a significant gap between ventures' growth. (2) Average of OI, the variable to measure identity mechanism, is 5.701 and the standard deviation is 0.857. It shows that the sample firms' OI is significantly different. (3) FT and TT, which are categorized into associative mechanisms, have averages of 5.187 and 5.221, respectively, and standard deviations are 0.983 and 0.974, respectively. These results show significant differences between Chinese ventures that execute associative mechanism to obtain legitimacy from the state audiences. (4) Averages of IS and LB, the two variables representing organizational mechanism, are 5.847 and 5.136, respectively, and standard deviations are 0.754 and 1.179, respectively. These statistics show a large difference between Chinese ventures in utilizing LB. (5) Average of SE is 0.645, showing that about 6.5 out of 10 are repeat entrepreneurs. The standard deviation of SE is 0.481, which is sufficiently large to conduct an analysis on different prior entrepreneurship experiences.

4.2. Calibration of Sets

Following Ragin's (2008) method, the value we obtained from the survey has to be transformed into values between 0 and 1 through calibration. To determine the non-membership, full membership, and crossover point, scholars typically utilized three anchors (Pappas and Woodside 2021). The points containing 5, 95, and 50 percent of the data values were considered non-membership, full membership, and crossover point, respectively (Tho et al. 2017). For seven-point Likert scales, 6, 4, and 2 are often utilized to calibrate the data because the three points resemble 95, 50, and 5 percent, respectively, of the data values (Pappas et al. 2016). However, if the data do not show normal distribution, then using standard calibration anchors will result in bias (Mikalef and Pateli 2017). Thus, we adjusted the anchors based on the distribution of our data (Mikalef and Pateli 2017; Ong and Johnson 2021). Table 3 presents each variable's calibration anchor points. QCA software was used to calibrate all continuous variables.

Table 3. Each variable’s calibration anchors.

| Variables | Fully Out | Crossover | Fully In |
|-----------|-----------|-----------|----------|
| VG | 3.5 | 5 | 6.5 |
| OI | 4.5 | 5.5 | 6.5 |
| FT | 3.5 | 5 | 6.5 |
| TT | 3.5 | 5 | 6.5 |
| IS | 4.5 | 5.5 | 6.5 |
| LB | 3.5 | 5 | 6.5 |

5. Analysis Procedures and Findings

5.1. Analysis of Necessary Conditions

By conducting the necessity test, we can identify the necessary conditions for an outcome presence. In particular, 0.9 is often considered a threshold to identify potential necessary conditions (Pappas and Woodside 2021; Ragin 2008). We use the fsQCA software to perform the necessity test. Table 4 shows that the consistency values of all causal variables are below 0.9. That is, condition variables included in this study do not necessarily result in high VG. Thus, we retain all condition variables in the subsequent analysis.

Table 4. Analysis of necessary conditions.

| Condition Variables | Consistency | Coverage |
|---------------------|-------------|----------|
| OI | 0.788 | 0.731 |
| ~OI | 0.470 | 0.696 |
| FT | 0.774 | 0.758 |
| ~FT | 0.523 | 0.714 |
| TT | 0.793 | 0.766 |
| ~TT | 0.504 | 0.702 |
| IS | 0.847 | 0.714 |
| ~IS | 0.395 | 0.696 |
| LB | 0.758 | 0.779 |
| ~LB | 0.516 | 0.662 |
| SE | 0.689 | 0.609 |
| ~SE | 0.311 | 0.500 |

Note: “~” means absence of core causal condition.

5.2. Configuration Analysis of Different Paths

The fsQCA analysis requires setting the minimum number of cases per configuration and thresholds for consistency to generate different configurations for high VG (Jacobs and Cambré 2020). Consistency represents the degree to which outcomes are consistent with the sufficiency and necessity of the relations in the sample (Pappas and Woodside 2021). The minimum number of cases is set to one per configuration considering the sample size (Jacobs and Cambré 2020). The threshold for raw consistency and proportional reduction in inconsistency (PRI) consistency used in this study are 0.8 (Tho and Trang 2015) and 0.7, respectively (Pappas and Woodside 2021).

We choose the intermediate solution to interpret our results (Pappas and Woodside 2021). Configurations of the core-auxiliary condition and their results are presented in Table 5. The cutoff threshold is 0.8 and overall solution consistency is above it. Thus, the overall solution has high reliability in identifying the sufficient and necessary conditions for high VG. Higher coverage means higher importance of a path. The overall solution coverage is 0.678. Thus, the six configurations account for a significant variance to achieve high VG. Among the six configurations, 1, 3a, and 3b can be considered the three major paths for ventures to achieve high growth during periods of adversity because the raw coverage of these paths is higher than others.

Table 5. Configurations for high venture growth.

| Condition Variables | Configurations | | | | | |
|----------------------------------|----------------|-------|-------|-------|-------|-------|
| | 1 | 2a | 2b | 3a | 3b | 3c |
| OI | ● | ○ | ○ | ● | | ● |
| FT | ● | ● | ○ | ● | ● | ○ |
| TT | ● | ○ | ● | ● | ● | ○ |
| IS | ● | ● | ● | | ● | ○ |
| LB | ● | ○ | ○ | ● | ● | ● |
| SE | | ○ | ○ | ● | ● | ● |
| Consistency | 0.894 | 0.932 | 0.950 | 0.896 | 0.893 | 0.991 |
| Raw coverage | 0.532 | 0.083 | 0.090 | 0.403 | 0.425 | 0.125 |
| Unique coverage | 0.093 | 0.007 | 0.011 | 0.016 | 0.046 | 0.035 |
| Solution consistency | | | | 0.885 | | |
| Solution coverage | | | | 0.678 | | |
| Presence of core condition | | | ● | | | |
| Absence of core condition | | | ○ | | | |
| Presence of peripheral condition | | | ● | | | |
| Absence of peripheral condition | | | ○ | | | |
| “Don’t care” condition | | | blank | | | |

On the bases of the results of configuration analysis, we can obtain six paths to achieve high VG in China during the COVID-19 pandemic. Solution 1 (OI*FT*TT*IS*LB) indicates that to achieve high VG, firms need to simultaneously craft a distinctive organizational identity to the state goals, develop a good level of relationship with state stakeholders through founders and TMT, demonstrate internal milestones and success, and have leaders with strong background and reputation. In particular, founders’ connections and backgrounds are core factors contributing to high growth regardless of whether or not they are serial entrepreneurs.

Solutions 2a (~OI*FT~TT*IS*~LB*~SE) and 2b (~OI*~FT*TT*IS*~LB*~SE) represent two configurations that are relevant to ventures with nascent entrepreneurs. Solution 2a implies that with the absence of organizational identity construction, TMTs’ connections to state stakeholders and leaders’ strong reputations and backgrounds, high VG can be obtained through a combination of founders’ strong connections to key state stakeholders and demonstration of high-level internal success. Solution 2b suggests that TMT ties to critical state stakeholders and strong organizational achievements in state goals can be combined to achieve high VG, particularly when ventures have a low-level distinctive organizational identity, low-level founders’ ties to key state stakeholders, and a lack of strong leaders’ backgrounds.

Solutions 3a (OI*FT*TT*LB*SE), 3b (FT*TT*IS*LB*SE), and 3c (OI*~FT*~TT*~IS*LB*SE) contain three paths to achieve high VG, particularly for ventures with serial entrepreneurs. When serial entrepreneurs occupy vital positions in academic and government institutions and cultivate good connections with state stakeholders through founders and TMTs, ventures can achieve high growth through either establishing an organizational identity associated with state goals (Solution 3a) or displaying internal milestones and success to achieve state goals (Solution 3b). When serial entrepreneurs hold reputable positions in academic institutions or government organizations, to achieve high growth, ventures should articulate distinctive organizational identities to achieve state goals when there is absence of ties to important stakeholders and a lack of demonstration of venture success (Solution 3c).

5.3. Supplementary Analyses

Although our primary focus is to examine how Chinese ventures utilize different legitimation mechanisms to achieve VG, ventures’ investment and growth during the COVID-19 pandemic may have depended on their financial condition (Tawiah and Keefe

2022). To further explore such a possibility, we added a venture's profit margin as another causal condition. Profit margin was measured using a categorical variable. The respondents were asked to place their profit margin in the past year in one of the following seven categories: below 0%, 0–5%, 5–20%, 20–35%, 35–50%, 50–65%, and above 65%. We re-ran the analysis, and our results show that for firms with better financial conditions, solutions 1, 2a, 3b, and 3c can achieve higher growth; for ventures with lower profit margins, solutions 2b and 3a are optimal paths to gain higher growth. Thus, ventures with different financial conditions can choose different strategies to obtain better growth.

Although venture growth is one of the major indicators to determine ventures' success, we also evaluate their success using venture performance and organizational resilience as two alternative indicators. Venture performance was measured by a 10-item scale proposed by [Stam and Elfring \(2008\)](#). The respondents were asked to compare their performance in the following aspects: sales growth, market share growth, profit growth, employment growth, return on investment, innovation in products and services, speed in developing new products and services, quality of products and services, cost control, and customer satisfaction. We used a 7-point Likert scale ranging from 1 (much worse) to 7 (much better) to rate these items. The average score of these items was used to indicate ventures' performances. We re-ran the analysis and obtained seven configurations. Among the seven configurations, three were consistent with solutions 2a, 3a, and 3b. We obtained four new solutions. Solution m1 (OI*~FT*TT*IS*~LB) suggests that when there is an absence of founder ties with state stakeholders and lack of strong leader background, organizations can achieve high performance by crafting distinctive identities to the state objectives, developing strong TMT ties with state stakeholders, and demonstrating success to achieve state goals. Solutions m2a (~FT*TT*IS*~LB*~SE) and m2b (OI*TT*IS*LB*~SE) are two new solutions for nascent entrepreneurs. Solution m2a is similar to Solution m1, except that crafting a distinctive identity is not necessary. Solution m2b matches with solution 1, except that high-level founders' ties to state stakeholders are not necessary. Solution m3 (~FT*~TT*~IS*LB*SE) represents a solution for serial entrepreneurs and resembles Solution 3c, except that highlighting distinctive identities to state objectives is not necessary.

Organizational resilience refers to "the incremental capacity of an organization to anticipate and adjust to the environment" ([Ortiz-de-Mandojana and Bansal 2016](#), p. 6). It is particularly important for firms to recover from crises and achieve better performance and growth ([Hu et al. 2022](#)). Organizational resilience was measured by a four-item scale developed by [Zhang and Qi \(2021\)](#) ("We can cope with changes in our business brought on by COVID-19", "We can easily adapt our business operations to the disruption caused by COVID-19", "We can provide a quick response to the negative effects of a COVID-19 disruption on our business", and "We always remain aware of changes in customer demand."). We asked respondents to rate the four items using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). An average score of the four items represents organizational resilience. We re-ran the analysis and obtained seven solutions. Two general solutions are Solutions n1a (~OI*FT*~TT*IS*~LB) and n1b (OI*~FT*TT*IS*~LB). For nascent entrepreneurs, we obtained three solutions: Solutions n2a (FT*~TT*IS*~LB*~SE), n2b (OI*TT*IS*~LB*~SE), and n2c (OI*~FT*TT*IS*~SE). For serial entrepreneurs, two solutions are produced: Solutions n3a (OI*FT*TT*~IS*SE) and n3b (FT*TT*IS*LB*SE). Among the seven paths, Solutions n1b, n2a, and n3b are identical to Solutions m1, m2a, and 3b. For serial entrepreneurs, solution 3b is generally an optimal path across all three measures and also has the highest coverage in the sample. For nascent entrepreneurs, utilizing an identity mechanism may not be necessary to achieve high growth but can be relatively important to achieve organizational resilience.

6. Discussion

This study draws upon the literature on VG ([Baum et al. 2001](#); [Dean and Meyer 1996](#); [Gilbert et al. 2006](#)) and strategic legitimation mechanisms ([Fisher et al. 2017](#)) and examines the ways Chinese ventures can sustainably grow under state capitalism by

acquiring legitimacy and securing resources from state stakeholders during the COVID-19 pandemic. In particular, this study discusses that ventures under China's state capitalism, unlike ventures under Western capitalism, are under pressure from state audiences to accommodate lingering socialist values. We also emphasize that resources that ventures can obtain from external stakeholders are highly limited during crises. Prior studies on Chinese ventures' growth have primarily explored how individual legitimation mechanism that they strategically adopt leads to legitimacy and resources acquisition and venture growth. However, as an effective legitimacy building strategy for Chinese ventures, we present various combinations of identity, associative, and organizational legitimation mechanisms that lead to venture growth during irreversible adversity in China.

In general, Chinese start-ups can combine the three legitimation mechanisms to achieve high growth regardless of their founders' prior entrepreneurial experiences during periods of adversity (Solution 1). We discovered that Chinese ventures with nascent and serial entrepreneurs show distinctive paths for high venture growth. To realize high growth, if Chinese ventures with nascent entrepreneurs fail to craft organizational identities related to state goals and their leaders do not have reputable backgrounds related to academic institutions and government organizations, a demonstration of internal success to achieve the state goals is particularly essential when combined with either strong founder ties (Solution 2a) or top management ties (Solution 2b). Thus, organizational mechanisms, such as appealing internal milestones and success to interested state stakeholders, can be integrated with any associative mechanism to generate high growth when nascent entrepreneurs have not established strong backgrounds and are not ready to deploy identity mechanism.

For Chinese ventures with repeat entrepreneurs, we find that displaying a strong leader background in terms of membership in academic and government institutions is markedly essential to obtain necessary resources and legitimacy from state audiences during crisis. They have to highlight an organizational identity aligned with state goals to achieve high growth if they have low-level association with government institutions and have not presented internal success on the state objectives (solution 3c). If they have already established ties with government institutions through founders and TMTs, then they can achieve high VG either through showing a strong identity with the state goals (Solution 3a) or demonstrating achievements associated with the state logic (Solution 3b). Thus, leader background serves as a vital legitimation mechanism for new venture growth for Chinese start-ups with serial entrepreneurs. Such a mechanism can be combined with identity mechanism to gain high growth if all other mechanisms are absent. Once Chinese ventures have established association through founders and TMT, leaders' backgrounds can be orchestrated with either identity mechanism or advertising internal achievements to obtain legitimacy and necessary resources from state stakeholders for high VG in China during the COVID-19 pandemic.

6.1. Contributions

First, this study advances the understanding of legitimacy building strategy of Chinese ventures under state capitalism with Chinese characteristics that have emerged along with the transformation to a transition economy during crises. In Chinese state capitalism, politicians tend to keep dominant power, and the state is a primary arbiter of the fate of private firms (e.g., ventures) because they are highly treated as political tools to support national or public interest (Bremmer 2010; Yun et al. 2022). In particular, we highlight that in Chinese state capitalism, politicians are highly interested in sustaining socialist values (e.g., fulfilling public demands and maintaining social stability) during economic transition and ventures are under considerable pressure to adopt such values in their structures, practices, and ideation (Yun et al. 2022). Although ventures are mostly founded to exploit market opportunities (Yun et al. 2022), in such a situation, they must follow the state's guide and obtain legitimacy and necessary resources from state stakeholders for growth. Furthermore, we focus on the limited availability of resources that ventures can acquire from external stakeholders (Brown and Rocha 2020) and to the importance of

ventures' legitimation strategies during crises. We particularly extend previous studies that have considered legitimation targets as state stakeholders (e.g., government agencies, local government, state banks, tax bureaus, and research institutions) in China and examined how Chinese ventures acquire legitimacy from them during adversity. In summary, we clarified that to investigate Chinese ventures' legitimacy building strategies during the COVID-19 pandemic, particular features of the Chinese economic system, which is the contextual features of the research setting, must be emphasized.

Second, this study builds upon Fisher et al.'s (2017) framework on diverse dimensions of venture legitimation mechanisms (i.e., identity, associative, and organizational mechanisms) and presents that entrepreneurs can arrange particular sets of legitimacy building strategies for VG in China during crises. Unlike previous studies that have placed importance on the relationship between single legitimation mechanism and venture growth, we focus on the overlapping, competing, and complementary potential effects of legitimation mechanisms. We primarily contribute to the venture growth literature (Baum et al. 2001; Dean and Meyer 1996; Gilbert et al. 2006) because we empirically apply the fsQCA method and clearly present how different bundles of legitimation mechanisms that Chinese ventures adopted to acquire legitimacy from the state audiences result in venture growth during the COVID-19 pandemic in Chinese state capitalism. To summarize, prior studies have failed to consider that diverse arrangements of legitimacy building strategies of ventures can effectively lead to venture growth, given that ventures actively obtain legitimacy and resources from powerful external stakeholders during periods of adversity. We fill in this research gap as we demonstrate that ventures can strategically and actively coordinate whether or not they will concurrently utilize identity claims and use cultural tools, establish and manage connections with external stakeholders, and incorporate standard structures and advertise achievements for VG in China during the COVID-19 pandemic.

Third, this study accounts for prior entrepreneurial experience as a contingent factor and suggests a practical way for Chinese ventures to establish legitimacy building strategies, rather than simply theorizing and analyzing configurations of legitimacy building strategies. We consider that not all Chinese ventures are under the same level of pressure from state stakeholders to accept sustained socialist values during adversity. We particularly highlight that ventures are different in terms of founders' prior entrepreneurial experiences. Serial entrepreneurship is one of the ventures' fundamental settings, in which various sets of legitimation mechanisms combine and produce an effect. The findings of this study vividly demonstrate that the strategic directions of ventures to obtain legitimacy from state stakeholders change according to founders' prior entrepreneurial experience of ventures during crises.

6.2. Practical Implications

The results of the study recommend several actions that practitioners of Chinese ventures can take during periods of adversity. To achieve sustainable VG during crises, entrepreneurs and managers of Chinese ventures need to consider the effects of combinations of legitimation strategies. Chinese ventures under state capitalism are under pressure to follow socialist values and fulfilling such values is critical for them to gain legitimacy from the state audiences. The relationship between legitimation strategies and venture growth is not linear but affected by diverse combinations of legitimacy mechanisms. Thus, to obtain legitimacy and necessary resources during adversity in China, entrepreneurs and managers of Chinese ventures must implement diverse legitimation strategy portfolios. In particular, the strategies they can select may vary with founders' prior entrepreneurial experiences.

Regardless of repeat entrepreneurship of their founders, Chinese technology ventures better utilize all legitimation mechanisms (i.e., identity, associative, and organizational mechanisms) for their growth during adversity. Chinese start-ups without repeat entrepreneurs must actively advertise their internal milestones and successes to interested state audiences in ways of outlining the scientific outcomes of the venture, their job creation for regional development, and tax payment contributions. Moreover, it is required for either

founders or TMT to maintain a good relationship with state audiences and serve important government positions. They also need to remember that it is not useful to highlight how much they follow sustaining socialist values if their founders are not experienced in the business yet.

For Chinese technology ventures with serial entrepreneurs, appealing leaders' background, such as academic qualification and reputation and career in government or party, is necessary during crises. When they utilize associative mechanism, such as founders and TMT's networks with state audiences to obtain legitimacy, they can choose between using identity mechanism, such as revealing that they are following norms; and values that the state considers important or using organizational mechanism, such as appealing that they achieved internal milestones or success, including technological breakthrough, job creation, and tax payment contribution. Note that when entrepreneurs have prior entrepreneurial experience, it is not always necessary to utilize associative mechanisms to maintain a good relationship with state stakeholders during adversity. Prior studies have proposed the importance of building *guanxi* networks in operating businesses in China. However, our findings clarified that Chinese technology ventures with repeat entrepreneurs can focus more on identity claims and advertising founders' background to acquire legitimacy and necessary resources from state audiences for venture growth during crises.

6.3. Limitations and Future Research

This study has several limitations that can provide future research opportunities for ventures' legitimation strategies for VG during crises. First, we collected data using the survey method. Thus, whether or not Chinese ventures use identity, associative, and organizational legitimation mechanisms to obtain legitimacy and necessary resources from state audiences during adversity is measured based on entrepreneurs' perceptions. Entrepreneurs may avoid reporting their legitimation strategies and there could be a gap between our findings and reality. Although we believe a survey is an adequate method to test our theory, future studies can use archival data or use other qualitative methods to confirm our results. We also note that our sample was collected in January 2022. Given that the COVID-19 pandemic has impacted ventures' long-term growth, we suggest that future studies adopt a systematic sampling to collect samples at a regular interval and test our theory. Second, we consider only serial entrepreneurship as a contextual factor of the analysis. Although we believe prior entrepreneurial experience is one of the optimal choices as ventures' foundational setting, we encourage future research to examine whether other contextual factors such as founders' gender, foreign experience, and education level show similar results to ours. In addition, it has to be investigated whether or not diverse entrepreneurial skills, such as creativity, confidence, efficacy proactivity, resilience, and responsibility (Castro and Zermeño 2020), can be used as a contextual factor affecting venture growth. Lastly, we also acknowledge that our findings may not be valid in other countries' state capitalism contexts. Although state capitalism prevails in emerging countries (Nguyen and van Dijk 2012), not all ventures are under pressure to accept lingering socialist values from the state with the same intensity as Chinese ventures. Thus, we note that the interpretation of this study's findings should be cautious when our theory is applied to another research context. We encourage future studies to explore the effects of diverse configurations of ventures' legitimation strategies on venture growth in other state capitalism systems during crises.

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