

The Third Digital Divide: Digital Identity and Start-up Success

Zixuan Chen, Ali J. Ahmad, Dan Nunan

Warwick Manufacturing Group, University of Warwick, Coventry, UK

chen.z.x@outlook.com

ali.ahmad@warwick.ac.uk

daniel.nunan@warwick.ac.uk

Abstract: The digital divide concept recognizes that with the rapid pace of technological advancement, actors who lack access to digital infrastructure and the necessary knowledge may not have the opportunity to benefit from the opportunity that digital entrepreneurship offers. Online-exclusive ventures now constitute a growing proportion within the gross population of new ventures started up, especially in China. Digital entrepreneurship is viewed as the new vista where aspiring entrepreneurs are able to rapidly setup and test new business ideas, significantly reducing startup costs and the costs associated with startup failure. A key question for new entrepreneurs, therefore, is: what drives “success” in digital-only entrepreneurship, and are these drivers significantly different when compared to conventional or online-offline hybrid entrepreneurship? Here it is alleged that ‘digital identity’ plays a significant role in determining online-only start-up “success”. Our aim in this paper is to identify the overlaps between ‘identity’ and ‘digital entrepreneurship’ literature to highlight how scholars in the area explain the *digital identity* formation process, and the manner in which it contributes to start-up success. We situate our paper in the Chinese national context; which represents a unique digital start-up ecosystem, with well-developed routes to business startup. Presented are outcomes from a systematic literature review encompassing 48 publications, including 12 pieces of indigenous Mandarin literature. We identify overarching themes, and how concepts in identity and digital entrepreneurship literature overlap, with a view to explaining the drivers of digital start-up “success”, and as to how these might be further investigated using novel methodology.

Keywords: Digital Identity, Digital entrepreneurship, Digital Divide, New Venture Creation, Systematic Literature Review

1. Introduction

Digital entrepreneurship relies on digital technology as an enabler for opportunities brought by innovative digital products (Curley and Formica, 2013). Digital ecosystems have made it easier than ever for entrepreneurs to set up online ventures and reach a global audience (Wang, Liu and Qu, 2023). The digital entrepreneurship landscape or eco-system is now fast evolving: a mature e-entrepreneurship model is more than simply online trading; it encompasses innovation, communication, collaboration, management, and social networking (Lai and To, 2020). In fact, digital or e-entrepreneurship leverages digital technology which entrepreneurs can leverage to reduce capital expenditures and operating costs, effectively shortening the New Venture Creation (NVC) process (Laurell, Achtenhagen and Andersson, 2016). Digitization of the entrepreneurial process helps to break down the boundaries between different startup stages and introduces a greater degree of uncertainty and nonlinearity to their development (Satish Nambisan, 2017). This then raises a significant set of new research problems related to digital entrepreneurship; researchers contend that we need a careful assessment of digital technologies and their features that impact entrepreneurs' increasing endeavours. Alongside scholarly contributions, new research in the area will enable eco-system actors to fine tune features of digital spaces and mechanisms to promote the rapid growth of e-entrepreneurship (Elia, Margherita and Passiante, 2020).

Whereas in the past, digitalisation was limited due to functional processes and access to digital infrastructure, now though in the web 2.0 and 3.0 era, digital networks and devices are ubiquitous and end users exercise a high degree of control over digital resources (Guo and Yang, 2021). The openness, generativity and ability of digitalisation to bring about spontaneous change opens up many possibilities for digital start-ups to create new value. For example, online ventures can interact with customers and stakeholders through new channels, connect multivariate needs and highly personalized products, and use social media for collective intelligence innovation (Elia, Margherita and Passiante, 2020). Studies have shown that digital technologies have reduced boundaries encountered during business startup – where these have gone from discrete, impermeable, and stable to increasingly more dimensional and fluid (Satish Nambisan, 2017). This notion presents a challenge: as a growing number of organisations, including start-ups, now operate solely on online web 2.0 platforms, we are beginning to witness a two-fold digital divide (Reuschke, 2021). The first digital divide refers to the physical asymmetry of access to ICTs and the second digital divide is the social/effectiveness/digital skills aspect of ICTs. These divisions are one of the key factors that distinguish successful or failed entrepreneurship (Zhang, 2022). A further dimension in entrepreneurial success, in addition to the above two digital divides, is the significance of effective *digital identity* management as a means for regulating relationships between businesses and their audiences in an interactive web 2.0 context. In essence, a poor perception of a new venture’s digital identity is

a strong predictor for its failure. Entrepreneurs must consistently consider their initiatives' perception from others' perspective, incorporate new features and make rapid adjustments with customers' input and use rapid prototyping to create learning loops. This is where identity, strategy, and branding all converge, where digital identity becomes co-created through digital media (Horst and Hitters, 2020). However, what remains to be better understood is the process through which a *viable* new venture 'identity' is created and sustained.

It is contended that digital entrepreneurship has the potential to transform the socio-economic landscapes of developing and emerging economies. Li, Du and Yin (2017) argued that in China and elsewhere around the developing and emerging world, there has been an explosion of start-ups transforming their business models using digital technology and doing business exclusively online. However, many such start-ups lack a systematic framework for interacting with and leveraging the digital ecosystem to create and maintain a viable digital presence via a 'digital identity'. In other words, in the developing and emerging world especially, there is a lack of understanding within both practitioners and researchers on what *digital identity* is and its significance in e-entrepreneurship success. To illustrate, as the Chinese context is used as the backdrop for this paper, we find that there is a considerable lack of data on China's exclusively online start-up scene in western academic literature. This may be owing to the lack of Mandarin language proficiency, and the lack of access to the Chinese National Knowledge Infrastructure (CKNI). Hence, following on from the above, this article analyses the current research themes in digital entrepreneurship, digital media practise, and digital identity work, as well as the characteristics of the stage-dependent development of digital identities that lead to the success of small and micro-online firms during their NVC process (Frederik von Briel, Per Davidsson and Recker, 2018). Our aim is to identify the overlaps between digital identity and digital entrepreneurship literature to highlight how scholars in the area explain the digital identity formation process, and the manner in which it contributes to start-up success, especially in the Chinese digital eco-system context. The adopted theoretical lens emerges from the 'corporate identity' literature, where we emphasize explain how and why the "same" access to underlying digital technologies (such as ICTs) can produce different entrepreneurial outcomes in different contexts. We adopt the *Systematic Literature Review* (SLR) methodology to identify potential research questions and propositions to test in further research on digital entrepreneurship and digital identity. 48 peer-reviewed papers have been included, including 12 publications from reputable Chinese sources.

2. Research Background

A new generation of entrepreneurs is emerging as a result of the seamless integration of entrepreneurship and digital technology, who conduct most start-up activities online with the aid of digital technology. The availability of digital technologies has changed our understanding of the new venture creation (NVC) and digital identity formation processes (Curley and Formica, 2013; von Briel, Davidsson and Recker, 2018). But the existence of digital divides leads to an inequitable distribution of entrepreneurial capabilities as well as entrepreneurial performance, especially within the already maturing digital ecosystem of entrepreneurship. China presents a unique national context showing digital startup innovation (Yitshaki and Kropp, 2016). In 2016, China's Ministry of Science and Technology supported 115 university science and technology parks and over 1,600 technology business incubators to provide startup support, legal advice, and workspaces for aspiring entrepreneurs (Wang, Liu and Qu, 2023). This is taking into account the vast array of prevalent business models, interactive web 2.0 and 3.0 platforms and the sophistication and participation rates of its populace in ecommerce (Guo and Yang, 2021). In China, the rapid growth in the digitalisation of a vast array of services and institutions, including those that are government sponsored or led, is breaking down entry barriers for e-entrepreneurship. Although the importance and positive impact of digital identity on start-up performance has been largely documented, we still lack understanding of the dynamics of its emergence and other factors related to the composition of digital entrepreneurial ecosystems. Numerous studies reported that digital identities and the effective management of overcoming the digital divide can have a positive impact on business success (Wilson and Elliot, 2016; Flint, Signori and Golicic, 2018). It is now widely acknowledged that owing to the ease of starting up a new digital enterprise, there is an urgent need to develop the theoretical perspective of digital divide to solve the staged dynamic formation of digital identity in the ecosystem for Chinese entrepreneurs.

3. Review Approach

We propose that a new "digital identity perspective" is needed to bear on entrepreneurial process research, which will require a careful re-examination of theoretical foundations in the area; in other words, an exploration of "how" and "why" type questions (Fan et al., 2022). A systematic literature review (SLR) is, therefore, preferable in this paper because the 'phenomena' of digital entrepreneurship and digital identity formation

cannot be separated from its specific ‘context’ – in our case the Chinese national digital startup ecosystem (Li, Du and Yin, 2017). The SLR method is typical for exploring research questions in a complex context and helps to reveal aspects of a problem through multiple data sources (Fan et al., 2022). The next two sections highlight the planning and execution of the adopted SLR methodology.

3.1 Planning

To prepare this review, we adopted the protocol developed especially for the field of Entrepreneurship by Kraus, Breier and Dasí-Rodríguez (2020). By concentrating on strings searches via mainly online databases, a preliminary cross reading through article cover page was conducted to identify any missing key strings. Conference reports, academic books and scientific journals were selected as sources. Pertinent articles hosted by key academic journal databases including ScienceDirect, Scopus, Chinese National Knowledge Infrastructure (CNKI), Google Scholar, IEEE, Springer and ResearchGate were searched for using a set of key words. Reference lists of the shortlisted articles were also used to discover further relevant papers published during 2010-2022 period. A novel aspect of this review is that it includes for the first time, peer-reviewed publications exclusively focussed on the Chinese digital start-up ecosystem published in the Mandarin language. The ambition behind including CNKI’s outputs in this SLR is to increase relevance and to gather more direct evidence on the Chinese online entrepreneurial eco-system, information on which is not widely published in non-Chinese research outlets. The columns in Table 1 show the sources included and the total numbers of relevant publications for each database.

Table 1: Number of papers and database source

Database [↵]	Digital Entrepreneurship Success Factors, with a special emphasis on China [↵]	Digital Identity – its significance, emergence and evolution [↵]	Total [↵]
ScienceDirect [↵]	28 [↵]	35 [↵]	63 [↵]
IEEE [↵]	16 [↵]	3 [↵]	19 [↵]
Google Scholar [↵]	33 [↵]	30 [↵]	63 [↵]
Springer [↵]	19 [↵]	15 [↵]	34 [↵]
CNKI [↵]	9 [↵]	12 [↵]	21 [↵]
ResearchGate [↵]	5 [↵]	6 [↵]	11 [↵]
Total [↵]	110 [↵]	101 [↵]	221 [↵]

A strict selection criterion was applied: shortlisted papers needed to include ‘digital entrepreneurship’ and ‘identity’ as primary themes. The search was expanded using the "*" symbol to include word derivatives (e.g., "venture" and "venturing"). The following Table 2 shows key words and their combinations (along with their derivatives) in both English and Chinese were employed for search:

Table 2: Key words used for literature search

Key words in English [↵]	Key words in Chinese [↵]
<‘digital divide’, ‘digital entrepreneur*’, ‘E-entrepreneur*’ ‘digital eco*’, ‘digital identity*’, ‘online identity’, ‘start-up identity’, ‘new venture creation’, ‘business ventur*’, ‘online start-up*’> [↵]	<‘数字鸿沟 (shu zi hong gou)’, 数字创业 (shu zi chuang ye)’, 数字生态 (shu zi sheng tai), 在线身份 (zai xian shen fen)’, ‘企业身份 qi ye shen fen)’, ‘身份形成 (shen fen xing cheng)’, ‘创建新企业 (chuang jian xin qi ye)’, ‘企业创新 (qi ye chuang xin)’, ‘在线企业 (zai xian qi ye)’> [↵]

Specific exclusion criteria adopted were as follows:

a) Our selection of journals was based on rating system developed by Chartered Association of Business Schools (CABS) Academic Journal Guide (AJG) (2021). To ensure that this review demonstrated transparency and reproductivity, only articles from highly ranked (rating greater than 2) journals such as Journal of Business Research and Journal of Business Venturing. The average rating of our selections is 2.8, where the journal with highest rating of 4* is contributed by “Strategic Entrepreneurship Journal” and the lowest ranked journal is “International Entrepreneurship and Management Journal” with AJG rating of 1.

b) Studies unrelated to the research topic, or opinion-based publications, and duplicate studies with low impact factors were rejected. After excluding studies that did not meet criterion a), we read through the titles of the remaining pieces of literature. In most cases the title itself revealed whether a study proved to be a good fit with the review's aim. After the preliminary reading of the title, another round of exclusions was made based on the abstract and the targeted research questions.

3.2 Execution

The execution stage included the selection of research themes and the extraction of data. After narrowing down the number of articles that did not meet the designed quality criteria, a total of 112 articles were excluded. Among the remaining publications, 18 papers were presented in the form of systematic literature reviews or research overviews, and we focused on these articles to identify current developments in the area as well as emerging research trends. We first extracted key data from these 18 papers and selected the remaining valid papers according to their coverage (Table 3). After the main themes were identified, we found that secondary themes such as identity formation, identity co-creation and entrepreneurial journey were prominent in the reviewed literature.

Table 3: Coverage of research themes

Research overviews that took 'Entrepreneurship' as a primary theme [↵]		
No. [↵]	Sub-theme [↵]	Articles [↵]
1 [↵]	Entrepreneurial process; Entrepreneurial journey; [↵]	(Zaheer et al., 2022), (Kraus, Breier and Dasi-Rodríguez , 2020) [↵]
2 [↵]	Media Entrepreneurship; Media Management; [↵]	(Horst and Murschetz , 2018) [↵]
3 [↵]	Digital ecosystem; Digital Entrepreneurial ecosystem [↵]	(Autio et al., 2018), (Guo and Yang, 2021), (Zhu and Yang, 2022) [↵]
4 [↵]	Entrepreneurial identity; Entrepreneurship [↵] Founders; Identity formation; Identity work; [↵]	(Horst, Järventie-Thesleff and Perez-Latre , 2020) [↵]
5 [↵]	Role identity; Social identity; Venture identity; Organizational identity; [↵]	(Mmbaga et al., 2020), (Leitch and Harrison, 2016) [↵]
Research overviews that took 'Identity' as primary theme [↵]		
1 [↵]	Brand community; Netnography [↵]	(Laroche, Habibi and Richard, 2013) [↵]
2 [↵]	Organizational identity [↵]	(Balmer, 2017), (Di Lauro et al., 2020) [↵]
3 [↵]	Identity co-creation; Corporate performances; [↵]	(Devereux, Melewar and Foroudi , 2017), (Iglesias et al., 2020), (Upendra Kumar Maurya et al., 2015) [↵]
4 [↵]	Social media strategy; media entrepreneurship [↵]	(Arendt and Brettel , 2010), [↵] (Hassan, Nadzim and Shiratuddin , 2015) [↵]
6 [↵]	Entrepreneurial Identity; social identity; [↵]	(Wang et al., 2022) [↵]

By screening out irrelevant articles based on defined themes, 49 publications were further excluded. In the following chapter we will undertake a standardised procedure to analyse data from the remaining 52 publications with identified themes. The thematic intersections led credence to this SLR and helped identify important gaps in knowledge. These intersectional pieces of literature were grouped together into a separate third theme: Interplay between Start-up Success & Digital Identity – and included 42 of articles in English and 10 in Mandarin.

4. Research themes

The digital divide refers to the unequal access to digital technology, where not only geographical factors but knowledge, skills and connectivity within the ecosystem could deepen the gap of digital divide. Specifically, prior study has shown that digital identity is becoming one of the emerging factors that causing division hence the success/failure of digital entrepreneurship (Zhang, 2022). Taking the theoretical lens of the NVC process, our aim is to identify the overlaps between digital identity and digital divide literature to highlight how scholars in the area explain the digital identity formation process, and the manner in which it contributes to start-up success. Specifically, we wish to present new understanding on the role of digital identity in start-up success within the Chinese online entrepreneurial eco-system (Zaheer et al., 2022).

4.1 Digital Divide and New Venture Creation Process

The development of digital technology over the past decade, particularly the growth of the Internet, has provided an efficient and effective way to launch businesses online exclusively (Elia, 2020). Darja Reuschke, Mason and Syrett (2021) assert that new business concepts based on Information and Communication Technology (ICT) have simplified the process of entrepreneurship. Researchers have focussed on analysing what enabling mechanisms of digital technologies come into play during the entrepreneurial process and develop stage-specific claims for the impact of enabling digital technologies on start-up activity. The NVC process of start-ups is characterized by flexibility, experimentation, learning, and interactivity owing to digital technologies, reducing the risk associated with the start-up development process (Kraus et al., 2019). Digital infrastructures, digital artifacts and digital ecosystems form part of new entrepreneurial ideas and act as external enablers, with specificity and relationality as two prominent properties (Frederik von Briel, Per Davidsson and Recker, 2018). While low specificity digital technology has significant scalability and editing (input and output are not rigorously constrained), rigid digital technology has high professionalism and access threshold (such as digital twining). This will lead to a new digital divide paradigm when ventures lose their digital edge due to barriers to access. The change in the entrepreneurial landscape is so fundamental that Nambisan (2017) proposes that the use of a "digital identity lens" to examine the phenomena of entrepreneurship is now fundamental. Such a lens will help us recognise important extant changes in entrepreneurial processes and outcomes driven by the distinctive features of digital technology. For example, we can determine whether digital identities make some start-ups more successful than others, how affordability of digital technologies in different configurations induces start-up activity in certain industries, and at what stage of the entrepreneurial process, which features of digital identities provide maximum value. Therefore, the support provided by specific digital technologies is associated with specific stages of firm development. This observation warrants a deeper investigation at the impact of digital technologies on start-up activity depending on the stage being initiated (Li, Du and Yin, 2017).

It has been shown that digital affordances can accelerate the traditional NVC process, which is seen as consisting of the following stages: 1. conceptualising 2. resourcing 3. developing 4. scaling (Zaheer *et al.*, 2022). E-entrepreneurs negotiate these stages using digital media. Such media exists in a plethora of forms, and enables the building of connections with external audiences and customers through diverse channels and modes of communication, as well as to facilitate internal communication, decision-making and organisational development (Hassan, Nadzim and Shiratuddin, 2015; Devereux, Melewar and Foroudi, 2017).

4.2 Digital Identity as Mediator to Digital Divide

Based on data from the 2018 China Household Tracking Survey (CFPS), the study found that the digital divide significantly inhibits the probability of starting a venture with the household as the smallest unit (Zhang, 2022). Research based on the Chinese context shows that Micro-SMEs can reap digital information dividends by actively interacting with digital ecosystems such as the Internet and other digital information technologies (Ma, Lin and Xiao, 2022). The connection between entrepreneurship and identity becomes apparent in the work that entrepreneurs do, which has implications for the image, perception and identity of the organisation (Leitch and Harrison, 2016). This means that identity work may be seen as an element of strategizing. A clear and legitimate identity helps entrepreneurs achieve consistency, uniqueness and authenticity that eliminate digital divide within the digital entrepreneurial ecosystem (Flint, Signori and Golicic, 2018). It is a complex and dynamic process, and entrepreneurs should adapt their identity in response to changes in the entrepreneurial environment and market demands (Di Lauro et al., 2020).

Micro and small business entrepreneurs expand their social capital ties by enhancing their digital information technology application capabilities, and the prevalence and low barriers to digital technology provide easier and more diverse channels for using the internet for identity building (Zhou and Que, 2022). Entrepreneurs need to communicate their core values and characteristics in order to facilitate the digital identity formation process (Newbery et al., 2018), and digital ecosystems are considered the ideal environment for stakeholder interaction and co-creation of identity due to their unique features which facilitate scale collaboration (Wang, Liu and Qu, 2023). We find that the rise of digital business challenges the resource-based view of the firm and the division and definition of the firm's resources themselves, instead emphasizing the role of social, cultural and spatial aspects of entrepreneurial processes and outcomes (Zhang, 2022).

Overall, within the literature, there is still limited discussion of how digital ecosystem and the collaborative dynamics enabled by such technology can change and transform the entire entrepreneurial process (Elia, 2020). Entrepreneurial identity is seen as a transitory phenomenon which is co-constructed through interactions within

digital ecosystem with an ever-changing audience (Wang, Liu and Qu, 2023). Therefore, constructing coherence and receiving attention are core aspects that entrepreneurs need to sustain in creating their entrepreneurial identities.

4.3 Identity: Old versus New Identity Archetypes

According to Yitshaki and Kropp (2016), identity is composed of concrete elements that interact with each other and more diffuse features (such as emotions or beliefs) that are abstract and difficult to capture and measure. The term is often used interchangeably with corporate reputation, corporate portraits, and corporate branding (Devereux et al., 2017). Numerous studies report that identity has become an important strategic concept because its effective management has a positive impact on corporate performance (Arendt and Brettel, 2010). Nguyen et al. (2018) argued that Chinese high-tech companies in the early stages of development that do not have a cohesive strategy and the requisite experience in developing a robust corporate identity, limit their potential to communicate their value and offerings.

Identity work helps build credibility and creates more favourable business relationships with potential customers (Di Lauro et al., 2020). Staub et al. (2016) examined the relationship between innovation ability, sustainability and identity under the classifications of soft and hard endogenous drivers. Hard drivers included corporate culture, attitude and philosophy, while soft drivers included corporate image, communication, and design. According to the identity co-creation performances model described by Devereux et al. (2020), scholars are leaning towards the idea that the concept of identity is dynamic because in practice it can evolve in-between four core status (communication, internalisation, contest, elucidation) over time. Stakeholders constantly reflect, validate and reconcile their subjective perceptions of differences in identity through interactive channels (Essamri, McKechnie and Winklhofer, 2019). In this co-creation process, stakeholders simultaneously give multiple meanings to the intended identity and may resonate with other stakeholders within the digital ecosystem (Iglesias et al., 2020).

Over time the understanding of digital identity has shifted from a perspective that is solely nurtured by its founders to a dynamic concept in the digital arena, where it is co-created by multiple stakeholders (Iglesias *et al.*, 2020). Research on the concept of identity can be divided into several temporal stages, with the early stages revolving around corporate marketing and marketing communications, the middle stages formally establishing the concept and focusing on corporate strategy, and the later stages refining the dimensions and classifying themes (He, 2012). The differences in features between the old and new archetypes of identity are compared in Table 4.

Table 4: Features Comparison: Physical identity vs. Digital identity

Features [↵]	Old identity archetype [↵]	New identity archetype [↵]
Form of communication [↵]	One-way: one to many [↵]	Two-way: one to one [↵]
Contents [↵]	Single content, created by venture itself [↵]	Rich content, co-created by stakeholders [↵]
Mode of perception [↵]	Passively accepted by the audiences [↵]	Interactively constructed [↵]
Effectiveness of identification [↵]	Propagation delay [↵]	Instantaneity [↵]
Limitation [↵]	Constrained by channels [↵]	Unlimited size, time or space [↵]
Formation process [↵]	Unexpected time or cost consumption [↵]	Low cost and low threshold [↵]

4.4 Identity Work and Digital Entrepreneurship Eco-systems

Entrepreneurial ecosystems are clusters of industries influenced by spatial proximity and availability of digital technologies (Autio et al., 2018). In order to deepen the understanding of digital entrepreneurship in the emerging phase of the field's development, it is desirable to delve into the processes and outcomes of various entrepreneurial actions interacting with the external environment (Zaheer, 2022). The multiple interrelated elements, resources, and networks that aid in the development and expansion of digital startups are collectively defined as the "digital entrepreneurial ecosystem". It includes a variety of stakeholders, such as entrepreneurs, investors, customers, government and academic institutions. The key components of a digital entrepreneurial ecosystem typically include access to funding and investment; preservation of talent and skills; availability of

supportive infrastructure, such as incubators, accelerators, and coworking spaces; and bondage between research institutions (Autio et al., 2018; Guo et al., 2021).

A major challenge digital entrepreneurs face in business development is building trust among ecosystem participants (Kraus et al., 2019). This happens by, for example, sharing of new ideas, publishing updates on prototypes and receiving feedback from followers, enabling entrepreneurs to leverage their knowledge (Liu, Lin and Xing, 2021) and openly co-create products with customers (Essamri, McKechnie and Winklhofer, 2019). It is agreed that digital technology is changing how organizations do business, and associated digital technology has made it easier for online-only start-ups to conduct user preference analyses based on consumption and other data, thereby providing targeted products to specific segment needs (Hassan, Nadzim and Shiratuddin, 2015). There is a need, therefore, for digital start-ups to proactively explore customer participation opportunities, extend contextual feedback and inspire customers to participate in the value creation process (Guo et al., 2021).

Overall, a digital entrepreneurial ecosystem is critical for the growth and success of startups and digital businesses, as it provides the necessary support and resources to help them navigate the challenges of launching and scaling a new venture in the digital age. However, to properly comprehend the digital nature of these new forms of entrepreneurship, we need to further address the potential of digital technologies as entrepreneurship enablers via the theoretical lens of strategy-as-practices (Frederik von Briel, Per Davidsson and Recker, 2018). This is important because strategic actions become more complex in start-ups using digital media, as the location of meaning production shifts from within the organization to ongoing engagement with audiences (Elia, Margherita, and Passiante, 2020).

5. Potential for Further Research

One of the essential purposes behind conducting this SLR was to identify key themes for future research on the topic. We have highlighted two well-developed themes in the area: 'digital entrepreneurial ecosystem' and 'digital identity', showing that a consistent digital identity can significantly shorten the NVC process and overcome the startup success gap caused by the digital divide. The assumption that digital identities are dynamic is now reaching the level of consensus in scholarship in the area and that it changes with interaction with digital entrepreneurial ecosystem. Specifically, prior research has shown that identities can be modified based on corresponding internal and external radical events, and that these aspects could be negatively or positively affected by the existence of digital divide. There is a distinct lack of novel research on digital identity formation in emerging economies such as China. A large number of young digital entrepreneurs are engaging with the Chinese national digital eco-system with undergone significant development under Chinese government policies. Interactions in the digital entrepreneurial ecosystem can act as a form of virtual social capital that translates into real-life social networks and contributes to the accumulation of social capital. Thus, a digital identity management construct is urgently needed for these micro and small businesses for better differentiation strategies. Although many authors have highlighted the importance of developing a digital representation, a study of how digital identity evolves with changes in the internal and external environment and such changes' link to start-up success will be an important contribution to current scholarship. Since entrepreneurs often see their ventures as an integral part of their own personal identity, radical changes such as innovative disruption or business failure can be critical to prompt such identity changes (Zhu and Yang, 2023).

6. Conclusion and Limitations

The research overlapping digital entrepreneurship and digital identity is still in its infancy. We now recognize that "success" in the start-up phase depends largely on the support generated by the digital society. If the digital divide is widespread, the accumulation of social capital through digital information tools cannot be achieved. Although the importance and positive impact of digital identity on start-up performance has been largely proven, so far we lack understanding on the dynamics of that emerge, amongst other factors related to the make-up of digital entrepreneurship eco-systems, as a response to *digital divide*. Incorporating concepts that draw on digital identity within entrepreneurship research can allow us to examine how the infusion of fluidity or volatility impacts the entrepreneurial process. Ultimately, what we urgently need is a robust identity-theory perspective to explain how entrepreneurship promotion mechanisms and institutions, enabled and supported by digital entrepreneurial ecosystem, shape stage-dependent entrepreneurial processes and outcomes.

Two challenges and limitations of this SLR can be stated. Firstly, since we have conducted key term search procedures for international publications in both English and Chinese databases, we were unable to include all variants of key terms related to digital identity and e-entrepreneurship. Another limitation is that the scope of

our work can potentially be restrained by our selection of the 18 extant literature reviews by previous researchers – these extant literature reviews were published in earlier years with different research foci which could have potentially biased our selection of themes.

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