What have Vietnamese scholars learned from researching entrepreneurship?: A systematic review

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Abstract:
Entrepreneurship has contributed to the rise and stability of Vietnamese economy through innovation, job creation, and nurturing entrepreneurial spirit. Using a structured database of Vietnamese researchers' scientific publications, the study was able to identify 111 research on entrepreneurship from 2008 to 2018. Then, a homemade software was designed to analyze the data, and produce descriptive tables, charts, and network maps. The results show limited scope and quantity over the past ten years. Moreover, research topics were scattered with most interests focused on management, finance, and legal issues. Technology, gender, and internationalization are attracting public attention but remain under-researched. In the future, entrepreneurial venture and startups in Vietnam will benefit from the growing number of scientific publications.

Keywords: Entrepreneurship, structured data, entrepreneurial spirit, emerging economy, Vietnam economy.

JEL: M13, L26, O31
Executive Summary:

The US Presidential Election in 2016 took place when manufacturing jobs in key battle states had been taken away due to automated technology; according to estimation, 4 million jobs in the United States has already been taken away by automation since 2000 (Yang, 2018). Among many reasons for the election of a businessman such as Donald Trump, the advancement in artificial intelligence and robotic technology is among the key aspects of the Trump's story as well as the rise of populist politicians around the world (Bartlett, 2018; Slobodian, 2018). To combat the problem, the invigoration of entrepreneurial activities is considered one of the major solutions (McAfee and Brynjolfsson, 2017; Yang, 2018).

In a different corner of the world, entrepreneurship is considered to be among major drivers of the fast-growing economy of Vietnam by policymakers and experts alike. This study seeks to provide a panoramic view of Vietnamese research on entrepreneurship by utilizing the structured database of 111 scientific publications from 2008 to 2018. The paper employed a homemade software to visualize and analyze the data. The data visualization resulted in 7 figures (2 column charts, 2 network maps, 1 world map, 3 line charts) and 3 tables. Based on the structured data analysis, network analysis, and data visualization, this study hopes to fledge out the major themes, outstanding results, and important extant and emerging trends of the literature on entrepreneurial activities in this time frame in Vietnam. The results show limited scope and quantity over the past ten years: 105 Vietnamese authors produce in Vietnam produces averagely 11.1 articles in the past ten years. Research topics mostly focused on management, finance, and legal issues. Technology, gender, and internationalization are attracting public attention but remain under-researched. For instance, there were only three research studies on technology and entrepreneurship; while only eight articles focused on gender issues. The fact that these studies are scattered over a span of 10 years indicates a lack of interests and weak research capacity.

1. Introduction

Nowadays, entrepreneurship contributes significantly to the world economy. According to Global Entrepreneurship Monitor 2018/2019, high level of entrepreneurial activities among adults was found in low-income countries like Angola, Lebanon; meanwhile, in some high-income countries such as Chile or South Korean, citizens are starting to venture into new businesses (Bosma and Kelly, 2018). Recently, the rise of new generation enterprises such as Facebook, Tesla, or Uber has connected the concept of entrepreneurship to the Internet and technology. In that way, traditional business venture has transformed into computational entrepreneurship, which is characterized by low-cost computational power, high connectivity and business calculations to the utmost detail (Vuong, 2018). The essence of entrepreneurship is, thus, about starting a new business in spite of the competition and possibility of failure, in order to create values for the entrepreneurs and the society (Scarborough and Cornwall,
Such a spirit continues to be essential in an increasingly competitive and ever-changing world.

Despite the ubiquitous presence in daily life, entrepreneurship remains an ‘outsider’ in mainstream economic theory. In the beginning, Adam Smith ruled out the role of entrepreneurs in his analysis and the exclusion has continued throughout the formulation of economic sciences (Landstrom, 2010). In mainstream economic sciences, using mathematics and developing mathematical models are common practices. However, the notable contribution to the theory of entrepreneurship was developed by scholars of the school of Austrian economics, who were known for their distastes for the use of mathematical models (Yeager, 1997). Therefore, the studies of ‘entrepreneurship’ were scattered and only until the 19th century did some significant analyses emerge. Carl Menger was one of the first to study entrepreneurship as he defined the entrepreneur: entrepreneurs are those who create, calculate, and manage productive activities (Campagnolo and Vivel, 2014). Later, scholars of Austrian economics like Eugen Bohm von Bawerk, Friedrich von Wieser and Joseph Schumpeter – continued developing entrepreneurship from an individual’s perspective and raising entrepreneurship to become an academic discipline. Nonetheless, there have not been many works that successfully put entrepreneurship at the center of economic sciences (Baumol, 1968; Landstrom, 2010). In this day and age, entrepreneurship research has continued to show that entrepreneurial activities play a major role in creating jobs and reducing poverty, thus being vital to create a strong economy (Brush et al., 2009; Bruton et al., 2013; Kiss et al., 2012) while exploring itself deeper as an academic discipline (McDonald et al., 2015; Suddaby et al., 2015).

In a developing country like Vietnam, entrepreneurship has been the backbone of the country’s economy since the government economic reformed in 1986: *Doi Moi*. The decision has opened Vietnam to the world and brought radical changes to the country. In 15 years, from 1986 to 2001, the per capita income of Vietnamese people has risen from US$202 to US$417 (Pham and Vuong, 2009). At the moment, the GDP per capita has reached more than US$2,000 (Vuong, 2019). The new economic model has given Vietnamese people opportunities to pursue personal wealth: between just 1991 and 1999 there were around 40,000 newly established companies (Vuong, 2019). These business founders became the first generation of entrepreneurs in Vietnam. The number of small- and medium-sized enterprises (SMEs) jumped from 349,000 SMEs in 2009 (Vuong and Tran, 2009) to around 500,000 in 2017 (Nhan Dan, 2017). Some small ventures have successfully turned into giants such as Dang Le Nguyen Vu with Trung Nguyen Coffee or Pham Nhat Vuong and his VinGroup; while others continue as micro firms, small and medium enterprises, family business, or household business. Regardless of their sizes, entrepreneurial ventures have contributed significantly to the development of the Vietnamese economy, provided opportunities and changed the lives of many Vietnamese.

Early research on entrepreneurship in Vietnam has confirmed these effects. In 2009, around 40% of Vietnam’s GDP was contributed by SMEs (Vuong and Tran, 2009). Foreign scholars see entrepreneurship as a way towards poverty reduction in Vietnam: the husband in a family would take up stable jobs while his
wife, who has more free time, would use the salaries for founding and running a business venture (Hiemstra et al., 2006; Summerfield, 1997). Later, challenges and achievements were found to be the motivation for Vietnamese entrepreneurs (Swierczek and Thai, 2003). The finding suggests entrepreneurship has slowly transformed from an option to escape poverty to a risk-taking personal development venture as the economy grows. Along this road, constraints from cultural values, lack of support from the government, shortage of human resources and capital are common struggles of entrepreneurs in Vietnam (Ardrey et al., 2006; Leshkowich, 2006; Ronnas, 2001; Truong, 2002).

The early research on entrepreneurship in Vietnam set out to understand the situation of a young economy and its potential. However, most of them were published by international scholars, who utilized large-scale surveys from the government and international organizations to produce immediate results. The findings provided a resourceful entry point but did not reflect deeper insights.

It was not until 2008 when the National Foundation for Science and Technology Development (NAFOSTED) was established and started pushing scientific funds that Vietnamese research in the field of social sciences and humanities took international publications more seriously. Despite the efforts to meet the global standards, statistics have shown that the number of internationally recognized publications in Vietnam is modest and lagged behind that in other Southeast Asian countries like Singapore or Thailand (Tuan and Ly, 2011). In the field of social sciences and humanities, preliminary results from a dataset of 412 Vietnamese authors highlight the instability due to the predominantly significant contribution of senior researchers (Vuong et al., 2018c), and dependency on non-leading co-authorship (Vuong et al., 2017). This dataset, updated as of Jan 2019, serves as the basis for this review: there were 1,300 Vietnamese researchers producing 2,300 scientific articles between 2008 and 2018.

In a developing country like Vietnam, the society has been enthusiastic for the bloom of technology and startups in recent years. For instance, around 40,000 new businesses entered the Vietnamese market in the first quarter of 2017, and by the end of the year, US$291 million was invested in 92 startups (Contributor, 2018; Ngoc, 2018). In 2017, Vietnam was reported as one of the countries with the highest total early-stage entrepreneurial activity—23.3%—and significant entrepreneurial spirit index—0.26 (GERA, 2018). Many successful startups are Internet-based business such as Foody – a food delivery app, or Tiki – an e-commerce website. According to Mr. Nguyen Viet Dung – Director of Ho Chi Minh City Department of Science and Technology, successful entrepreneurship should be a collaboration between scientific research and business (Nguyen, 2019).

However, the connection between research and entrepreneurship in Vietnam is limited, despite the advantages of science and scientific peer-review (Cristea et al., 2019). It appears that there has not been any thorough review article about the state of entrepreneurship research in Vietnam since 2008. In order to fill in that gap, this study developed a unique database based on records
of productivity in Vietnam’s publications in social sciences and humanities to provide an overview on the entrepreneurship and entrepreneurship research in the country (Vuong et al., 2018a). Specifically, the current research seeks to answer the following questions based on a systematic review of 112 studies in our database:

**RQs:** *What are the major themes and outstanding results of research on entrepreneurship in Vietnam from 2008 to 2018?*

2. **Material and Methods**

The literature review is intensive labor that requires deep knowledge in the fields, clear research question with systematic study design. In this section, a detail description of our database system and data collection procedure will be presented as an innovative approach to improve productivity and accuracy when carrying out a systematic review.

1.1. **SSHPA (Social Sciences and Humanities Peer Awards) and SDA (SSHPA Data Analysis)**

The review was conducted by exploiting the resources and power of SSHPA, an exclusive database for social sciences and humanities research in Vietnam. The system was designed to monitor scientific productivity of Vietnamese researchers based on their international publications. The use of SSHPA for literature review shows potential: first, the data is structured and organized; second, the data meet the standards of Scopus, ISI or NAFOSTED, thus, ensuring quality; finally, users have the flexibility to exploit and customize the technical aspect of the database for a specific purpose. In this paper, we will review the works by Vietnamese researchers in entrepreneurship in Vietnam from 2008 to 2019 using these structured data. However, as we are in early 2019, the data from 2019, which is based on the publication date of the article, will be excluded from the analysis.
As shown in Figure 1, Scopus- or ISI-indexed journals articles were entered and stored in the database. These have to have at least one Vietnamese nationality author whose affiliation is in the country or cover topics within the field of SS&H in Vietnam. Before entering the system, these data had to go through multiple validity and reliability checkpoints to eliminate errors of data duplication or inaccuracy (Vuong et al., 2018a). For example, academic profiles of Vietnamese author having an international publication from 2008 to present were constructed using information from various sources such as official sites of their affiliations, the Government’s, other scientific journals and database systems. The authors themselves were also invited to review and confirm their information. Once stored in the system, the data were classified into four categories as in Figure 2 according to: authors and their connecting circles (Pink Area), sources (Green Area), affiliations (Yellow Area), all linked to the fourth and fundamental base unit: Article (White Area). To analyze the data without interfering with the logical structure of SSHPA, SDA (SSHPA Data Analysis) was developed to categorize articles more comprehensively according to their topics and other attributes: revArticleTopic and revArticleAttribute. The category revArticleTopic contains data on the intended research field which is Entrepreneurship in this context. revArticleAttribute gives the detail on the topics of the fields and methodologies, and their values which are “Yes” or “No” for topics, and “Qualitative” or “Quantitative” for methodologies.
1.2. Search strategy and identification of studies

The review aims to cover research on the topic of entrepreneurship within the Vietnamese context from 2008 to 2018. The search concepts include: entrepreneurship; entrepreneur; entrepreneurial firms and their synonyms such as small and medium enterprises; small business; startup; micro firms and microfinance. Using these keywords, SSHPA system yielded a total of over 112 research articles which were then independently screened to check content relevance by two of the authors to make sure entrepreneurship is the focus of the research. A team review of any abstracted studies was carried out to secure consistency in the inclusion and exclusion of studies.

Based on the reading, the authors proposed a list of potential key topics: Social Orientation, Economic efficiency and limits, Creativity and Innovation, Gender, Organisational management, Capital structure, Human resources and finance, and Inter-generation transfer. The subject areas need to be analyzed and discussed in detail in its results and discussion sections for an article to be marked relevant and given “Yes” value. If, for instance, a topic was brought up only to set the context without in-depth examination then the article would still be given “No” value for the attribute indicating that particular topic. The proposed list was then revised by experts in the field and finalized through group discussions. Any newly proposed topic was scrutinized in compared with the original list to avoid overlapping or duplication. This process was carried out independently by two researchers who read the full text of the articles. Disagreements on inclusion or exclusion of topics would be justified by the whole group of reviewers. The final list was revised to accommodate eight more topics: Law, policy, and institution, Internationalization, Entrepreneurial education, Poverty reduction, Job creation, Network development, Entrepreneur’s motivations, and values, Technology application and Issues in Vietnam as listed below.

| Number | Topics                                           | Number of Articles | Examples of Studies                                                                 |
|--------|--------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|
| 1      | Influences from social and cultural values       | 36                 | (Dang et al., 2016; Nguyen and Nordman, 2018; Nguyen and Mort, 2016; Nguyen and Rose, 2009; Perri and Chu, 2012; Vuong, 2016a; Vuong and Napier, 2015) |
| 2      | Capital structure, human resources, and finance | 53                 | (Chu and Luke, 2012; Duy and Oanh, 2015; Nguyen et al., 2015b; O’Cass et al., 2012; Pham and Talavera, 2018; Thai and Ho, 2010; Turkina and Thi Thanh Thai, 2013; Vuong et al., 2016a) |
| 3      | Economic efficiency and limits                   | 38                 | (Hiep and Van Vu, 2015; Hoa and Khoi, 2017; Lensink and Pham, 2012; Nguyen et al., 2013; Santarelli and Tran, 2013; Tran and Santarelli, 2017; Walder and Nguyen, 2008) |
| 4      | Creativity and Innovation                       | 38                 | (Brundenius and Le, 2014; Kiura et al., 2014; Le et al., 2018a; Nam et al., 2017; |
Table 1: Finalized list of entrepreneurship research topics

| Research Topics                                      | Total |
|------------------------------------------------------|-------|
| Gender                                               | 8     |
| Inter-generations Transfer                           | 14    |
| Organizational management                            | 59    |
| Social responsibility and orientation                | 28    |
| Law, policy, and institution                         | 39    |
| Internationalization                                 | 17    |
| Entrepreneurial Education                            | 10    |
| Poverty Reduction, Job Creation                      | 21    |
| Network Development                                  | 17    |
| Entrepreneur’s motivations and values                | 22    |
| Technology Application                               | 3     |

The same process was adopted to specify other attributes of articles such as methodologies. Within the area of entrepreneurship, five research methods have been identified and labeled in the system which yielded qualitative and quantitative data: interview, questionnaire, case study, study review and logical argumentation (non-data approach). Values for attributes of methodologies of articles were proposed by experts in the field then re-examined and concluded by the whole team of reviewers.

1.3. The computational categorization of topics and methodologies

SSHPA’s automated generation of articles’ attributes function was employed to classify the data according to their adopted methodologies and main topics. Visual illustrations of information on researchers’ network, research group and co-authorship in the field were also obtained. Based on the output of this
stage, a systematic content review was conducted by all researchers to classify the data further and identify key issues and patterns. Any notable abnormalities or trends of data would be recorded and cross-checked using various reports retrieved by the system. Each reviewer scanned the classified data and system reports independently to contribute to a list of possible issues and highlights. These suggested review items were then investigated by the whole group of reviewers who read the full articles, justified the observed patterns and sought potential explanations from the reported data. The process, therefore, minimizes researcher’s biases when analyzing a large volume of data by involving a large group of reviewers and employing means of computational algorithms and structured data system.

3. Overview of entrepreneurship research in Vietnam

3.1. Productivity

The total number of articles on entrepreneurship research by Vietnamese scholars in 2008-2018 is illustrated in Figure 3. While in Figure 4, we compare that with the number of articles in three big fields: economics, business, and management. The first notable observation is the low number of only three studies in 2010 despite previously, ten research articles were produced in the year 2008 and 2009. The 2007-2008 financial crisis outset in the United States could explain this phenomenon. In 2009, the Vietnamese government injected US$4 billion into the economy, and the money started flowing among banks, state-owned enterprises, corporations and finally reaching citizens at around 2012. During the two years of 2010 - 2011, the economy was still trying to recover from the event. Thus, interest in entrepreneurship, as well as related research practices, hit bottom. Comparing with the three big fields, entrepreneurship 2010 is also a low period of scientific productivity. However, as in Figure 4, researchers showed more focus on economics, possibly to analyze and explain the catastrophic event, which resulted in more research on economics in 2010 than in 2008.
Figure 3: Number of articles of entrepreneurship research in Vietnam

From 2012, the number of articles is always more than ten each year, with a peak of 20 in 2016. The sudden rise of entrepreneurship research from 2012 resulted from the surge of business research, although research on economics decreased. As mentioned above, 2012 was around the time citizens received the cash flows from the injected money. Thus, different acts of entrepreneurship arose in various forms of speculation. A year later, Vietnam started promoting entrepreneurship as a trendy business venture, especially technological startups. Reports showed that 81.5% of surveyed people valued entrepreneurs’ contribution and 63.4% wants to be entrepreneurs (VCCI, 2013). Thus, entrepreneurship competitions like “Entrepreneurship with Kawai 2013” or “Real Entrepreneurship 2013” gained much attention from the society during this moment (Oanh and Hung, 2013; Viet Business Clubs, 2013). Around 2013-2016 is when the economy stabilized, leading to the accessibility to the resources for a business venture. However, experts predicted resources poisoning would happen when the youngsters pursue entrepreneurship (Nguyen, 2013). In 2016, the number of papers on entrepreneurship was equivalent to those on management, suggesting a response to the abundance of resources.
3.2. Authorship

SDA counts 105 Vietnamese authors who have contributed to a total of 112 articles on entrepreneurship and related topics from 2008 to 2019. There are 12 authors in the top 10%, and their productivity occupies 53.15% of the total, while the top 5 authors account for 36.94% of the overall productivity. Male authors dominate the top 10%, and two female authors produced 16 articles and remained in the top 3%.

| SDA ID | SSHPA ID | Number of Article | Topics          |
|--------|----------|-------------------|-----------------|
| 5      | vm.3     | 13                | 1, 2, 4, 7      |
| 6472   | vf.2081  | 9                 | 1, 2, 7, 8, 10  |
| 30     | vf.25    | 7                 | 2, 3, 9         |
| 10     | vm.12    | 6                 | 1, 2, 3, 7, 13  |
| 22     | vm.16    | 6                 | 7, 8            |
| 84     | vm.79    | 5                 | 9, 10           |
| 42     | vf.37    | 4                 | 1, 2            |
| 6489   | vm.2087  | 4                 | 9, 10, 13, 15   |
| 6516   | vm.2104  | 3                 | 1, 5, 11        |
| 480    | vm.438   | 3                 | 9, 10           |
| 120    | vm.115   | 3                 | 2, 7            |
| 81     | vm.76    | 3                 | 2, 4, 14        |
Table 2: Top 10% of Vietnamese researchers in the field of Entrepreneurship.

The outperformance of 12 out of 105 authors explains the high level of cooperation as shown in Figure 5. Particularly, 30 authors in groups of 2 to 6 authors published 13 articles from 2008 to 2010. In the 2008-2018 period, there are only five solo authors while groups of 2 or 3 authors are common. In fact, Dang (2011) became the first research from a solo author in the researched time frame. Moreover, it is notable that even though the number of articles from 2008 to 2010 is relatively low, there was no solo author in this period while groups of 4 to 5 authors were established. The prevalence of research groups is attributable to the following reasons. First, research practices and international scientific publications are relatively unfamiliar and have posed a difficulty for Vietnamese researchers. As in Figure 6, there are strong links with North America, Europe, and Australia. The high dependence on international collaboration and co-authoring also explains the low number of publications in the past ten years. Second, from 2013, the promotion of entrepreneurship in Vietnamese society has pushed the interest of Vietnamese people, and consequently, researchers and research productivity. Before 2012, academics had not been enthusiastic about entrepreneurship, but the attention from society has since driven their focus to the field.

![Figure 5. Group of entrepreneurship research authors in two periods: a) 2008 – 2010, and b) 2008 - 2018](image-url)
3.3. Scientific collaborations

In Vietnam, the centers of scientific research are Hanoi, Ho Chi Minh, and Danang. The capital city, Hanoi, is commonly known as the center of culture, while Ho Chi Minh City is the economic hub. Most of Vietnam’s prestigious universities and research institutions are located in Hanoi, which makes the city a leading center for entrepreneurship research. The rise of Ho Chi Minh and Danang is the outcome of their economic development. From 2008 to 2013, Danang received US$218.5 million investments, later, the amount scaled up from 2013 with US$272 million from the International Development Association, World Bank (World Bank, 2017). The successful investments extend to education and scientific research as Duy Tan University, Danang was able to publish 521 scientific research in 2018 (Research Informeta, 2019).

Internationally, North America, Europe, and Australia are the main hubs of scientific collaborations. Since the beginning of 2008 - 2010, connections among Hanoi, North America and Europe have been visible; while Ho Chi Minh city linked up with Thailand; and surprisingly, there was no activity between Vietnam and Australia. The first scientific collaboration between Vietnam and Australia was found in 2014. Before that time, Vietnamese researchers who affiliate with Australian institutions cooperated with each other.

3.4. Research Methods

Our statistics show that of 110 articles, 78 are quantitative empirical research and the others are either qualitative based (15), theoretical based (13 or review articles (4) with regression as the most widely used analytical method (in nearly 75% of the studies). The patterns resemble international trends of research
into entrepreneurship where the quantitative method is predominantly adopted to assess performance and make cross-cultural comparisons of economies (Kiss et al., 2012).

The majority of quantitative studies developed questionnaire surveys, which illustrates the dissemination of research topics with the focus on organizational management. In addition, we also recorded one structured interview and one mixed method study integrating data from the semi-structured interview, questionnaires, field studies, and naturalistic observations, both looking at the management and development of microfirms (Nguyen et al., 2017; Thai and Ho, 2010). Only two studies analyzed data from secondary sources to investigate issues from social and innovation aspects (Vuong et al., 2018b; Vuong et al., 2013).

In addition to organizational management, capital structures, human resources and finances and topics of social and cultural values remain areas with the most qualitative studies in which Interview and case study are the two most commonly practiced methods. The 13 theoretical research studies reviewed in our study also covered issues related to capacity and society although their most researched topics are law, policy, and institution.

Three out of four review articles employed the traditional approach to providing a summary of the literature. The fourth article is a systematic review which proposed a framework of the optimal entrepreneurial environment in the transitional period (Nguyen et al., 2015a). Quantitative content analysis was carried out to investigate the major themes and patterns extracted from academic research, international organization reports and government documents. The researchers used Leximancer software to construct maps of concepts from records of word frequency and co-occurrence counts, which illustrates not only the significance of concepts but also their connections.

4. Overview of Research Topics

The identified topics after the review were classified into three types: (1) The main topics which are the most discussed on the literature, (2) the foundation topics which received less attention but still occupied a large portion of total, and (3) the emerging topics whose number of articles is low were often discussed alongside with the main and the foundation topics.

4.1. The main topic
Figure 7: The main topics of entrepreneurship research in Vietnam

The main topic consists of Organizational management, Economic efficiency, and limits, Law, policy, and institution, Capital structure, human resources, and finance. Early literature has confirmed human resources, capital, and government’s support were the challenges for Vietnamese entrepreneurs (Ardrey et al., 2006; Leshkowich, 2006; Ronnas, 2001; Truong, 2002). The findings continue to influence the later period as the number of papers investigating these topics is high. Interestingly, despite the decline in the output of articles in 2010, papers concerning Capital structure, human resources and finance, and Law, policy, and institution were piling up.

4.1.1. Constraints facing enterprises, economic efficiency and limitations

Research in Vietnam mostly concluded on such major factors associated with productivity of Vietnamese SMEs as financial capital, firm type and size, experiences, technology and innovation (Vu, 2016). With regards to the impact of capital constraints on firms’ profitability, researchers found that capital-constrained firms appear to perform as well or even better than their non-capital-constrained counterparts (Thu Hien and Santarelli, 2014). Similar patterns have also been noticed that financially constrained firms tend to start earlier with a higher chance of receiving early revenues or better perseverance compared to financially unconstrained businesses (Vuong et al., 2016b). The most commonly proposed explanation for this seemingly paradoxical and intriguing finding is that businesses facing capital constraints are also ones with more new investment opportunities and the needs to borrow more loans mainly arise from these new projects (Thu Hien and Santarelli, 2014). Studies also revealed corresponding
results that capital-constrained firms are more often young and small startups in their optimal development stage which are more updated on entrepreneurial ideas and therefore in thirst of resources for the opportunities (Tuan and Yoshi, 2009).

Together with financial capital, human capital remains the most influential determinant of firms’ productivity. Studies investigating the effectiveness of professional training suggested that impact on the productivity of firms is subjected to types of training and types of firms (Duy and Oanh, 2015; Duy et al., 2015). Specifically, off-site training only significantly improved household enterprises in the short term while formal businesses showed no improvements both in the long and short run. Besides typical reasons related to the quality of training such as failure to identify the needs of trainees leading to unrealistic and theoretically based training content, factors from the SMEs themselves are also recognized by researchers. Household companies can improve their profitability more easily since they have fewer labors with the selected staff to receive training is often family members who can easily devote their time and effort to focus on off-site training and try to benefit from the investment.

On the other hand, SMEs which tend to concentrate more on on-the-job training take longer to improve their performance (Duy and Oanh, 2015). In addition, from the managerial perspective, the experience of firm managers is another much-researched factor yielding mixed results. It is reasonable to expect that industry experience is crucial in managing a business in a transitional economy where proper professional education in the field is not available, which is confirmed by some research (Vuong et al., 2016b; Vuong et al., 2016c). However, findings from some other studies indicated that older managers, especially in household companies, are less open to entrepreneurial opportunities with a high level of risk due to concerns over succession matters and conservation of family wealth (Vuong et al., 2016b). Regarding training at managerial level, studies addressed the importance of training for SME managers to improve firms’ performance, particularly on-site training as well as the increasing demand for such programs after direct participation (Suzuki et al., 2014).

Innovation capability is also a key and much-researched determinant of enterprises’ profitability. Studies have examined and highlighted the role of innovation and creativity on firms’ competitiveness through various aspects including strategy calculation, generation of new ideas, adoption of new technologies, internal management, marketing capability and determination of entrepreneurial approach (Brundenius and Le, 2014; Nguyen and Nguyen, 2011; Nguyen and Pham, 2017; O’Cass and Ngo, 2011; Vuong et al., 2016b). Researchers also addressed the low level of awareness of the importance of stimulating innovation in entrepreneurial activities by enterprises. Innovation is often perceived as being costly and involving a huge investment on technological updates, which is not necessary since most businesses in Vietnam rely on labor-intensive production due to cheap labor cost in the country (Thi Phuong Thao and Swierczek, 2008).
4.1.2. Organizational Management

It is perhaps not surprising when research findings pointed out the first and foremost concern of enterprises is financial capital as it is a major constraint on firms’ profitability (Tran et al., 2017). In order to optimize firms’ capability to pursue different growth objectives including better access to credit, managers should adjust their network seeking according to different stages of development (Le and Nguyen, 2009; Nguyen and Nguyen, 2011; Pham and Talavera, 2018; Thai and Ho, 2010; Vu et al., 2013b). Actively broadening network ties to gain trust among business partners is also recommended for enterprises in the transitional context as there is a historical lack of institutions of a market economy in Vietnam (Nguyen and Rose, 2009).

However, as scientists have argued, improving internal resources such as human capital is more beneficial to the sustainable growth of enterprises rather than financial capital (Thi Nhung et al., 2015). It is essential that firms secure staff commitment by an employment contract and seek to enhance their capacity, most importantly innovation capability (Dung et al., 2017; Vu et al., 2013b). Creativity is only popular among top leaders and hardly considered by employees in their working routines (Le, 2015). Entrepreneurial values should be cultivated throughout all levels of organization for employees to be encouraged to initiate and attempt new ideas so as to become more proactive to market changes (Luu, 2017; Nam et al., 2017; Thai and Chong, 2013; Tuan, 2015b, 2017; Vu et al., 2013b). This also means that managers should motivate member staff to accommodate new values and be more open to necessary changes, be it organizational structure, working process or potential market (O’Cass et al., 2012). Leaders should also exert moderate tolerance of failures and mistakes to encourage an innovative culture in the company (Le, 2015; Trong Tuan, 2017b). Collaboration and knowledge sharing should be stimulated within an organization as the initial step towards innovation since innovative ideas stem from professional discussion and interaction among employees within the firm and across business partners (Nguyen and Pham, 2017; Trong Tuan, 2017a).

Lack of education and knowledge at the managerial level is another highlighted issue in the literature. Findings suggested that management training can help enhance the quality of information acquisition and analysis, thus improving the performance of firms in Vietnam, particularly those of small size and in the informal sector (Dang, 2011; Raven and Le, 2015; Suzuki et al., 2014; Thai and Chong, 2013). Entrepreneurial strategies should be based on an extensive search for information from various sources and thorough calculations and analyses of the gathered data (Kiura et al., 2014; Mai and Chong, 2008). Strategic management knowledge is also crucial for long term planning of an enterprise, which managers should focus on rather than maintaining day-to-day practices of the firm (Le, 2015). Managers should extend their knowledge and access to web-based platforms as a means to collect more valuable information and carry out computational analysis. This should also be encouraged to business employees in the form of in house training courses (Thi Phuong Thao and Swierczek, 2008).
4.1.3. Law, Regulation, and Policy

Research on Government policy has shown that support from the Government, in general, has yet been successful in addressing the problems of most SMEs. This is because policies are not consistent, prone to changes and sometimes target at only a small group of SOEs (Nguyen and Pham, 2017). For example, fiscal fund aid and tax exemption are among the two most negatively viewed policies since SMEs could hardly access and benefit from them.

Moreover, even though Vietnam has shifted from centrally planned to market economy, higher degree of liberalization and transparency of its legal frameworks is still required to provide a more favorable, free-market competition encouraging environment for the growth of private sector enterprises (Carbonara et al., 2018; Le et al., 2012; Nguyen and Pham, 2017; Paswan and Tran, 2012; Pham and Talavera, 2018; Thai and Chong, 2013; Turkina and Thi Thanh Thai, 2013).

Researchers have also pointed out that developed policies have not been implemented properly to protect the rights and needs of firms (Hoa and Khoi, 2017; Thai and Ho, 2010). Contradict to previous findings that bribery or ‘speed money’ can help firms reduce cost arising from the complex and unpredictable legal practices in a transitional context, several studies on corruption have revealed that corruption has had a negative impact on firms’ productivity and their abiding by state regulations (Tran et al., 2016; Vu and Le, 2016; Vu et al., 2018). It is suggested that supporting policy and regulation are not enough without careful supervision to achieve targeted goals (Cox and Le, 2014). More attention should be given to better allocating national resources among state and non-state sectors, and to eradicating any discrimination or promoting production efficiency of both sectors (Nguyen and Mort, 2016; Thi Nhung et al., 2015).

There have also been suggestions for more decentralization of policy to better support SMEs due to the regional and industrial variation in determinants of firms’ productivity (Cox and Le, 2014; Le et al., 2016; Paswan and Tran, 2012; Tran and Santarelli, 2017). For example, entrepreneurs’ perceived main determinants of firms’ performance show considerable variability among major cities of Vietnam. Researchers also reported a lack of measures and support programs targeted at sector-specific organizations (Cox and Le, 2014; Pham and Talavera, 2018). As a result, promoting policy based on cultural and social values of the country as a whole might not be effective (Le et al., 2016). Positive indicators, however, have been noted with the emergence of business associations at lower level government acting as communicating channels between the Government and entrepreneurs for timely feedback and adjustments toward a more rationalized implementation of regulation and support plans (Nguyen and Mort, 2016; Nguyen, 2014; Phuong, 2014). Promoting networking both entrepreneurially and socially, in general, is necessary for increasing the level of social capital and encouraging the shift to formal sector (Nguyen et al., 2014b;
Thai and Turkina, 2014). However, more efforts should be put to ensure these networks are authentically pro-business and not political and superficial.

Having said that, there is still evidence for the improvements in the Government’s efforts to boost the performance of Vietnamese firms, from which increasing trust by the community has been reported (Dut, 2015; Nguyen and Wongsurawat, 2012; Phuong, 2014). The policy of infrastructure which supports telecommunications network, transport, electricity, and Internet system are rated as most positively effective (Le et al., 2012). New regulations on property rights and land ownership which are more open to entrepreneurs of various nationalities are also highly appreciated for the rise of SMEs in Vietnam. It has also been reported that despite the reported ineffectiveness of fiscal fund aid, other financial policies such as tax reduction, loans support and are still considered to have successfully eliminated financial burdens faced by startups in the period of crisis (Hoa and Khoi, 2017).

4.2. Foundation Topics

The foundation topics include Influences from social and cultural values, Motivations and values of entrepreneurs, Creativity and innovation and Social responsibility and orientation. These topics offer a fundamental basis to define entrepreneurship, examine and outline the typical features of entrepreneurial behavior in Vietnam. It can be seen from Figure 8 that the total output of research on these topics resembles the patterns of the overall area of Entrepreneurship with an upward trend from 2010 which peaked in 2016. The period from 2012 onwards witnessed a surge of studies on Creativity and innovation, a topic that has remained one of the most researched topics in this group. There was a noticeably high number of articles concerning social and cultural issues in 2016, followed by a sharp decrease in the following year – this observation is explained by the overall drop of articles in the field and suggests that the rise was only temporary. However, the overall rise in research into these areas casts a growing interest in the investigation of entrepreneurship as a result of the uncertainty of the entrepreneurship environment in Vietnam in its early stage.
A large body of studies has identified the predominance of Confucian-based cultural features in Vietnam together with similar values from Buddhism and Taoism which underestimate the contribution and status of entrepreneurs in the country (Nguyen et al., 2009; Thai, 2016; Vuong et al., 2018b). Collective cultures like Vietnam put great emphasis on the power of community and hierarchy relationship in society (Nguyen and Rose, 2009; Perri and Chu, 2012). As a result, creating a venture is considered the last resort to improve income after better-respected professions in the society such as state officials, intellectuals or workers. Typical entrepreneurial goals in individualistic cultures including personal development, the pursuit of passion or adventure seeking are rarely the driving forces for Vietnamese people to become entrepreneurs. Those are, in fact, not as a strong motivation as the desire to provide jobs for family members (Perri and Chu, 2012; Pham et al., 2018). This might be due to the country’s long period of suffering from financial insecurity and high unemployment rates (Tenev and Mekong Project Development, 2003).

Confucian philosophy has been found to associate with Vietnamese limited innovation capacity, tolerance of uncertainty and submissiveness to environmental changes (Nguyen and Rose, 2009). It is common for entrepreneurs to start businesses by initially copying the model from other existing firms and amend them later to adjust to the changing environment. Findings have also revealed that the majority of business founders in Vietnam base their initial settings on personal intuition and pure luck without any analytical plan carried out (Nguyen and Nguyen, 2008; Nguyen et al., 2009; Poon
et al., 2012). With regards to operating the business, luck continues to be the major determinant together with opportunities from limited personal network ties while entrepreneurs do not actively search for opportunities or sources of information (Thai, 2016). It should, however, be noted that studies do highlight differentiation of findings among regions within the country. The effects of traditional values tend to be perpetuated in northern areas where these features are more deeply rooted (Le et al., 2016).

Despite the conventional characteristics of Vietnamese enterprises, a group of researchers noticed some emerging shifts in the motives and attitudes towards running a business. Non-profit and altruistic motives such as self-development or serving the community by creating new jobs for others have been reported in several studies (Nguyen and Nguyen, 2008; Nguyen et al., 2009). This is particularly the case why owners, after successfully setting up their first company, desire to expand further. According to the researchers, possible factors accounting for these findings, apart from cultural features of collectivism in the society, might be the country’s historical period undergoing Doi Moi and the transitional context. People witnessing all the drastic changes and crises might be more likely to empathize with others and willing to make positive changes to the community. It was also found that for female entrepreneurs, continuous learning and ability to control their own life are two fundamental reasons for their decision to create a venture (Nguyen et al., 2014a). Besides, reliance on pure luck is gradually replaced by serendipity, or the ability to detect and exploit information, which sometimes derives from seemingly disadvantaged situations, based on knowledge sharing and analytical calculations to lower costs and risks. This shift enables them to be better prepared and respond quickly to entrepreneurial opportunities (Vuong and Napier, 2013).

4.3. Emerging Topics

The emerging topics concern issues related to education and training, gender, inter-generations transfer, internationalization, network development, technology application, poverty reduction, and job creation. In general, the number of articles in this group remained low and not consistent. An observable trend here is the slight boost of articles addressing the issue of Network development in 2016, which mirrors the patterns of research about Law, regulation, and institutions. This could signify the connections among topics within the field since the issue of Network development often involves discussion about corruption and bribery with implications for institutions and policy.
In recent years, Industry 4.0, Artificial Intelligence are the buzzwords for the government and society. At Industry 4.0 Summit and Expo 2018 in Hanoi, Prime Minister of Vietnam – Nguyen Xuan Phuc – asserted that Vietnam would not be an outsider of Industry 4.0 and the government, the Party will soon develop a sound policy to accelerate the Industry 4.0 in the country (VNS, 2018). In reality, many Vietnamese entrepreneurial mobile applications have successfully exploited the opportunity like Foody, GoViet or Rada. However, Vietnamese academic seems to be left behind. In the past 11 years, there are only three research articles that can be classified into the topic Technology Application (Hoang and Swierczek, 2008; Le et al., 2018b; Le et al., 2012). There are several reasons for the lack of research on technological advancement in Entrepreneurship in Vietnam. First, Vietnam is still developing the infrastructure and ecosystem to sustain a 4.0 society. Government and technology companies are making progress toward change Vietnamese agriculture, finance, and banking, or Hanoi urban (VNA, 2018a, b, c). Thus, the data contains a short period and is insufficient for analysis. Second, universities and research institutions in Vietnam are keeping up with the changes as well. In term of international publications, the social sciences and humanities disciplines in Vietnam have been lagging behind. Meanwhile, new technological concepts like DOI, Data storage, preprints, open-access are slowly emerging among scholars in Vietnam. In the medical fields, Vietnam slowly adopts artificial intelligence while battles the slow and outdated bureaucracy (Vuong et al., 2019).

The analysis allows us to categorize three main periods of entrepreneurship research in Vietnam. Table 3 will briefly summarize the periods and some notable events.
2008-2011 2012-2015 2016 to date
Beginning Rise Rediscovery

Notable events
2010: The lowest number of articles
2012: The rise of Entrepreneurship article to more than ten articles/year
2016: The highest number of articles

2011: First solo author
2014: First scientific collaboration between Vietnam and Australia
2016: Entrepreneurship research articles equal the number of management research articles
2016: The rise of Law, policy and institution topic

Table 3: Summary of entrepreneurship research in Vietnam

5. Suggestions for further research

Innovation has emerged to be one of the key pillars for the sustainable growth of enterprises. It affects internal factors of firms’ efficiency such as entrepreneurial orientation and identification of business opportunities, responsiveness to market forces or participation in exports (Nguyen and Nguyen, 2011; Vu et al., 2016; Vu et al., 2018; Vuong and Napier, 2013). Innovation as SMEs’ capacity also exerts important effects on the economy as a whole regarding the effectiveness of macro policies targeted at long-standing issues in a transitional context including formalization of businesses, export participation as well as transparentizing and equalizing of state policy and regulation (Nguyen et al., 2014b; Nguyen et al., 2013; Vu et al., 2016). Despite this fact, the body of research into this area remains limited. The development process toward authentic innovation of SMEs in transitional economies like Vietnam where institutional frameworks are weak, and most firms face uncertainty and resource scarcity is different from that in developed countries, which need in-depth investigation. Specifically, it is suggested that rather than a radical evolution, incremental approach to innovation through imitation as the initial stage in combination with personalization strategy might be more appropriate to firms in the transitional environment (Chu and Luke, 2013; Nguyen and Pham, 2017). However, much is unclear about how and the extent to which firms can benefit from different types of imitation according to their developing stages. Internal and external factors affecting innovation capability of firms also need careful investigation using data from a wide diversity of sources (Dung et al., 2017; Nam et al., 2017). By the same token, revolutionary approaches for firms to make timely response and adjustments to environmental forces, i.e., serendipity, should be considered in depth (Vuong and Napier, 2013). From a sociocultural and macro perspective, the emergence of creativity and possible friction arising from the conventional hierarchical environment and management style is a promising path for exploration (Vuong et al., 2016c).

Despite its criticality in promoting entrepreneurship as a means to achieve overall sustainable development, the recorded low number of studies concerning entrepreneurship and non-discrimination of vulnerable groups above suggests a
potentially fruitful area for future research. The very few reviewed studies on gender issues all highlighted the disadvantages of female and transgendered businesses owners including societal prejudice, financial constraints, limited educational opportunities and lack of support from the government (Nguyen et al., 2014a; Oosterhoff and Hoang, 2018; Poon et al., 2012). The social responsibilities of entrepreneurship are vital in facilitating vulnerable groups and promoting equality in society. Careful investigation into these groups of entrepreneurs is necessary for policymakers to understand their values, motives, needs, and difficulties to develop effective supporting plans and maximize their contribution to the whole economy.

Review of methodology and scope and size of studies highlights the lack of longitudinal research to examine temporal effects of various determinants of businesses’ performance, which is particularly meaningful given the fast-changing economic context of Vietnam (Le et al., 2016; O’Cass and Ngo, 2011; Thai and Turkina, 2014; Thi Phuong Thao and Swierczek, 2008). For example, longitudinal studies are believed to have implications for predicting the changing patterns in entrepreneurial values and motives, to construct and promote these values in the market-driven environment with the interconnections of businesses, social organizations and the government (Nguyen and Nguyen, 2008). Researchers also call for cross-sectional, cross-regional as well as sector-specific studies to better generalize findings (Luu, 2017; Thang et al., 2013; Thi Phuong Thao and Swierczek, 2008; Tran et al., 2017; Tuan, 2015b). This is particularly relevant to policy-serving research as mentioned above that policymakers need to consider the geographical, cultural and industrial variabilities for government efforts to really take effects in reality. Also, the need for interdisciplinary research is also emphasized to gain insight from a holistic approach into all stakeholders and their interaction. This includes social and behavioral factors such as gained perceptions of entrepreneurs, organizational mechanisms and the reciprocal interaction of firms with the environment (Cox and Le, 2014). For example, the psychological concept of emotional intelligence has been demonstrated to be a strong predictor of knowledge sharing culture and effective leadership in businesses (Karkoulian et al., 2010; Palmer et al., 2001).

6. Limitations

In this section, we would like to discuss the limitations of our paper. This paper utilized a structured database on Vietnamese social sciences and humanities research to conduct the literature review; thus, the shortcomings of the data are the limitations of this paper.

Firstly, the database only includes papers that have Vietnam-nationality authors. Therefore, the data visualizations do not take into account research made by non-Vietnamese authors. A more comprehensive representation of the topic will be achieved if all relevant papers in the field covered are included. Since research is continuous and dynamic, the abstraction of work by non-Vietnamese authors could partly account for the dismantling and scattering of topics discussed above. Secondly, the period from 2008 until now locks the review to a
set but reasonable period. Thus, the review does not reflect the previous period until the expansion of the database is conducted. Even though the chosen time frame is reasonable given the economic and social development of Vietnam, much of the research reviewed here is inherent from work done earlier than 2008 and need to be considered in the whole context rather than individually. Finally, the focus on a specific geographical location of Vietnam does not allow the review to generalize its findings to other destinations. However, all these limitations deriving from the insufficiency of data can be addressed by adjustments of the whole system. The data structure and its logic flow founding the basis of this review are completely replicable in other contexts. With the ability to further expand and update the database in the future to cover a wider range of data, we hope to introduce a new computational and data-driven approach to a systematic review of literature which saves time, labor and also human errors and biases.

7. Conclusion

Despite its emerging as a much-interested topic in the relevant context of the transition economy of Vietnam, entrepreneurship research in the country has remained limited in scope and quantity over the past ten years. The number of published findings is not high, and descriptive statistics of topics indicate a scattered and unbalanced coverage of issues. Crucial topics particularly relevant to the development of a transition economy such as technology and innovation, gender and internalization are largely neglected. The lack of theoretical articles as well as those taking a holistic approach also reflects a deficit in research capacity and insight systematic understanding of the overall topic from an academic perspective. Since the total output of articles began to fall after the 2016 peak, it should be noted with caution that this is, in fact, only an effect of the temporary interest in the topic with an absence of expert authors in the field. However, there is still a possibility that the noticed growing number of authors and research groups might signify potential improvements in both the quality and quantity of research in the future.

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