

ENTREPREURIAL SELF-EFFICACY AND THE LIKELIHOOD OF BEING SELF-EMPLOYED – A COMPARISON OF URBAN AND RURAL AREAS IN VIETNAM

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Abstract

A large body of entrepreneurship research has focused on the relationship between entrepreneurial self-efficacy and start-up activity. Yet, little is known about how the interplay of these mechanisms is moderated by informal institutional conditions (e.g., social traits in rural and urban regions). Particularly, Vietnam, a country with a socialist-oriented market economy, has emerged as one of the world's most entrepreneurial countries. This study examines how the effects of individuals' entrepreneurial self-efficacy on being self-employed are contingent on institutional environments (e.g., rural and urban areas). Statistical analyses of 2013 to 2015 data from the Global Entrepreneurship Monitor (GEM) project for Vietnam provide empirical evidences that entrepreneurial self-efficacy is significantly and positively associated with being self-employed, and that this effect is more pronounced for individuals in rural than those in urban areas. Moreover, the findings show that people in rural Vietnam are more willing to be self-employed than their peers in urban areas. This difference is explained by the distinct impact of the informal institutional variable, entrepreneurial self-efficacy (e.g., the knowledge, skills, and experience required to start a new business) that individuals living in rural areas may gain from entrepreneurship promotion and start-up programs supported by the Vietnamese leadership. Our findings have implications for national entrepreneurship programs and financial support for start-up projects in rural areas.

Keywords: Entrepreneurial self-efficacy; Rural and urban entrepreneurship; Self-employed; Vietnam.

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1. INTRODUCTION

Entrepreneurship is considered a crucial force in economic development due to creating new jobs and reducing unemployment (Baumol, 1990; Schumpeter, 1934). A variety of programs supporting entrepreneurship have been launched in various nations and regions, focusing on not only urban but also rural areas (Meager, 1996; OECD, 2003; Vaillant & Lafuente, 2007). The Vietnamese leadership has also been strongly focusing on rural development with a variety of policies and a series of national programs. These programs aim to encourage individuals in rural areas to enter into business and entrepreneurship activities. For instance, the 2016-2020 national target program for building new-style rural areas was approved by the prime minister (Decision No. 1600/QĐ-TTg) to boost the comprehensive development of rural areas across Vietnam. From a policymaker's perspective, it might be interesting to know the expected return on these projects since future promotion schemes can be made more efficient from the experience and evaluation of previous programs. A start-up promotion program is an integral part of any development plan. In addition, providing realistic insights into rural-urban differences in entrepreneurship activity might help investors, venture capitalists, banks, and business angels develop better investment strategies.

To address the differences in entrepreneurship activity between rural and urban areas, this study investigates the determinants of being self-employed among people in rural and urban Vietnam. We use a dataset of 6,000 individuals from the Global Entrepreneurship Monitor (GEM) project for 2013 to 2015 to analyze the impact of entrepreneurial self-efficacy on the probability of becoming self-employed and the moderating effect of informal institutional conditions by social traits (e.g., entrepreneurial self-efficacy) on this mechanism in rural and urban areas. We find that individuals with greater belief in their own start-up self-efficacy are more willing to start a new firm than those with less belief. Moreover, an interesting result reveals that people who live in rural areas have more willingness to become involved in start-ups than those living in urban regions. Furthermore, the effect of entrepreneurial self-efficacy on the probability of engaging in entrepreneurship is more pronounced for rural residents than for urban ones.

Our paper offers three contributions to the entrepreneurship literature: First, it enriches empirical evidence on entrepreneurship to affirm the positive effect of entrepreneurial self-efficacy on the likelihood of becoming involved in new venture creation (Krueger, 1993; Krueger et al., 2000; Vaillant & Lafuente, 2007; Wennberg et al., 2013). Second, it broadens the small scope of entrepreneurship research on the determinants of individuals' self-employment, particularly for those living in rural areas. We provide an ongoing discussion of why people living in rural areas are more willing to engage in entrepreneurship than their peers in urban regions. Our findings are in line with previous studies (Evans & Leighton, 1990; Thompson et al., 2012). More importantly, we confirm the moderating effect of institutional arrangements on the relationship of individuals' human capital (e.g., entrepreneurial knowledge, skills, and experience) with their probability of becoming self-employed. Third, it contributes insight to the understanding of the entrepreneurship environment per se in socialist countries that still

exist today. A country is regulated by a socialist-oriented market economy and nonfarm household enterprise is currently dominant.

The remainder of this study is organized as follows. Section 2 presents the theory and develops hypotheses. Section 3 describes the dataset and methodology. Section 4 presents the findings. Section 5 presents the discussion. Section 6 provides the conclusion.

2. THEORY AND HYPOTHESES DEVELOPMENT

2.1. Self-efficacy and individual determinants of entrepreneurship

Self-efficacy theory is defined as “people’s beliefs about their capabilities to exercise control over events that affect their lives” (Bandura, 1989, p. 1175). Self-efficacy develops from the experience, knowledge, and skills of individuals and increases their cognitive abilities and their ability to anticipate potential difficulties. People who have strong beliefs in their own self-efficacy increase their efforts to master a challenge as it occurs. Regarding the cognitive dimension of self-efficacy theory, “when faced with complex decision-making tasks, people who believe strongly in their problem-solving abilities remain highly efficient and highly effective problem solvers and decision makers” (Maddux, 1995, p. 13).

In terms of entrepreneurship activity, self-efficacy is an indicator of the degree to which an individual believes in her or his capabilities to perform the tasks of a business venture (Guerrero et al., 2008; Krueger, 1993; Krueger et al., 2000; Peterman & Kennedy, 2003; Shapero & Sokol, 1982; Vaillant & Lafuente, 2007). Self-efficacy is viewed as a perception of feasibility that drives career path choice in the future as well as the core predictor of self-employed intentions (Krueger et al., 2000). Knowledge, skills, and experience related to entrepreneurship increase the ability to recognize and exploit start-up opportunities (Shane & Venkataraman, 2000). Prior market experience acquired in the business environment helps individuals run their businesses successfully and deal with customer problems effectively. Furthermore, meta-analytical research in human capital and entrepreneurship is tested by Unger et al. (2011). They define human capital as knowledge, skills, training, employment experience, and start-up experience, which are significantly associated with success in business. Unger et al. (2011) also conclude that the relationship of human capital with success is higher for entrepreneurial tasks than non-entrepreneurial tasks.

A growing number of theoretical and empirical analyses have investigated the determining factors of entrepreneurship, such as internal factors (Block & Sandner, 2009; Davidsson, 1995b; Heineck & Süßmuth, 2013), external factors (Adam-Müller et al., 2015; Aidis & Mickiewicz, 2006; Davidsson, 1995a), or the institutional environment (Aidis et al., 2008; Wyrwich, 2013a; Wyrwich et al., 2016). The entrepreneurial event model (Shapero & Sokol, 1982) and the theory of planned behavior (Ajzen, 1991) are the best predictors of individuals’ entrepreneurship intentions toward behavior (Guerrero et al., 2008; Krueger, 1993; Krueger & Carsrud, 1993; Krueger et al., 2000). Both intention-based models are used widely and argue that individuals’ entrepreneurial behavior derives

from the socioeconomic environment and self-efficacy (Guerrero et al., 2008; Wennberg et al., 2013). Socioeconomic factors (e.g., family, role models, and institutional approval of entrepreneurship) shape individuals' perceptions of the desirability of being self-employed. Self-efficacy has been linked theoretically and empirically with individuals' self-confidence in their own knowledge, skills, and experience, which may shape their perceptions of the feasibility of becoming an entrepreneur (Bandura, 1983, 1989). For example, in analyzing the impact of self-efficacy on Catalanian students' entrepreneurship intention, Guerrero et al. (2008) used the question: "How confident are you about your skills and abilities to start a business?" to measure self-efficacy.

Moreover, in investigating the relationship between self-efficacy and entrepreneurial intention, Fitzsimmons and Douglas (2011) reveal that self-efficacy, which reflects individuals' belief in their start-up skills and abilities, is a powerful predictor of the intention to create a new business. In addition, Shook and Bratianu (2010) tested the entrepreneurship intentions among Romanian students in a transitioning economy. They provided empirical findings that Romanian students' self-efficacy is robustly associated with their entrepreneurship intention. Based on these findings, Shook and Bratianu (2010) concluded that the more confident individuals are about their entrepreneurial knowledge, skills, and experience, the more willing they are to create business ventures. Similarly, Solesvik et al. (2012) conducted a hand-collected survey of 192 Ukrainian students that confirmed the positive relationship between the perception of start-up knowledge and skills with entrepreneurial intention. Other studies have examined the link between individuals' entrepreneurial self-efficacy, gained through prior entrepreneurship experience, and being self-employed. For instance, Aidis and van Praag (2007) conducted a survey of 399 small-medium enterprise (SME) owners in Lithuania to explore the positive relationship between illegal (black market) entrepreneurship experience and business performance. They demonstrate that the experience obtained in the black market is positively associated with business motivation in the official market. Likewise, Earle and Sakova (1999) found a similar positive relationship between prior entrepreneurship experience and being self-employed. They documented the positive effect of prior business experience in a pre-transition economy on the probability of later being self-employed in six transition economies: Bulgaria, Czech Republic, Hungary, Poland, Russia, and Slovakia. Therefore, we posit the following hypothesis:

H1: Individuals' entrepreneurial self-efficacy is positively associated with their likelihood of being self-employed.

2.2. Institutional framework and entrepreneurship entry in rural and urban areas

2.2.1. Rural/urban definition

Rural/urban classifications are commonly based on population size, population concentration, and remoteness (physical distance to other settlements) (Pateman, 2011). According to the OECD definition, areas are categorized as rural when they have low population densities of under 150 inhabitants per square kilometer and do not contain a

major urban center. A local community is called a rural society if the community is located in a rural region (OECD, 2006). This definition is consistent with the definition of rurality in most countries. Because of their low population density and remoteness, most rural areas and their communities have several socioeconomic problems in common, including lower educational attainment, weaker business skills, out-migration, and lower labor productivity (Lang et al., 2013). According to the Vietnamese administrative system, rural areas are communes (a commune has one or more villages) where agriculture is the main source of livelihood, along with fishing, pottery production, and handwork; whereas, urban areas include city wards where industry, services, and trade are the main sources of livelihood (Tran et al., 2015).

Rural and urban areas in Vietnam are also ranked according to different criteria depending on population density, such as local socioeconomic role, industrialization level, and infrastructure (Jairo et al., 2014). According to Decree No. 42/2009/ND-CP, six indicators differentiate between urban and rural areas. The six criteria for classifying areas as urban are the following: (1) The area functions as an urban center. An urban center is a general or specialized center at the national, inter-provincial, provincial, or district level, or a center of an intra-provincial region that has the role of promoting socioeconomic development of the whole country or a certain region. (2) The population of an urban center is at least 4,000. (3) The population density suits the size, nature, and characteristics of each urban center grade and is calculated for the inner area or township's consolidated street quarter. (4) The nonagricultural labor within the inner area or consolidated street quarter accounts for at least 65% of total labor. (5) Urban infrastructure facilities exist, including social and technical infrastructure facilities. For inner areas, these facilities are built synchronously and completed to an extent prescribed for each urban center grade. Suburban infrastructure is also built synchronously, satisfying environmental protection and sustainable urban development requirements. (6) Urban architectures and landscapes exist. Urban construction and development comply with approved regulations on urban architecture management. An urban center has model urban quarters, urban streets, public areas for recreation, and architecture suitable to its environment and natural landscape.

2.2.2. Institutional conditions and entrepreneurship development in rural/urban areas

In the past decades, Vietnam has achieved remarkable rates of economic growth, including a dramatic reduction in poverty within urban and rural areas. About 30 million people have been lifted above the official poverty line since the 1990s (The World Bank, 2012). Per capita annual income increased from USD 100 in 1990 to USD 2,300 in 2015. Economic growth averaged from 5 to 6 percent in the past three decades, with a higher average rate of 6.4 percent in the 2000s (The World Bank, 2019). Economic development has also created business opportunities, including new venture creation possibilities for all. Significantly, since the introduction of the reform process toward a multi-sector, market-oriented economy in 1986, the role of entrepreneurship has been recognized in Vietnam. Over the years, entrepreneurs have exploited the excellent opportunities brought by development and international integration to meet the demand for new products and

services (Nguyen & Mort, 2016). Thousands of new firms have been established, and millions of entrepreneurs have started their own businesses, particularly nonfarm household businesses. The development speed of this sector has been remarkable, with 2,443,669 businesses in 2000, up from 377,005 in 1990. The number of nonfarm household businesses reached 4,909,827 in 2016, making up 30.43% of GDP, and the number was estimated to be 5,142,628 in 2017, accounting for 29.34% of GDP (General Statistics Office of Vietnam (GSO), 2017).

With the development of the economy and the rapid growth in entrepreneurship activity, the Vietnamese leadership provided funding and implemented various programs and policies to support entrepreneurial activities. For example, the Small and Medium-sized Enterprises Development Fund was founded in 2016 with an initial seed capital of USD 85 million and a focus on SMEs in the manufacturing sector and science and technology start-ups. Enterprises are entitled to preferential loans at the interest rate of 5.5% per annum for short-term loans, which have a maximum term of one year, and 7% per annum for medium-term loans, which have a term of one to five years, and long-term loans, which have a term of more than five years. In 2017, this funding implemented the program, “Supporting SMEs in Innovation,” with a total capital limit of USD 4 million. The period to pay back such loans is up to 24 months. The maximum allowable loan is USD 400,000. The program applies to three sectors: (i) agriculture, forestry, and fisheries; (ii) processing industry; and (iii) water supply and waste management. In the same year, to create favorable investment, business, and development conditions for enterprises, the prime minister issued Directive 26/CT-TTg affirming the spirit of the government siding with businesses. The law creates a legal framework to mobilize the private sector as well as organizations and individuals at home and abroad to jointly provide support for SMEs.

Promoting rural entrepreneurial activities provides employment to millions of unemployed rural individuals. In addition, many products and services are available in rural areas that can be leveraged by entrepreneurs to set up new enterprises (Stathopoulou et al., 2004). Given the importance of the entrepreneurial movement to the country’s overall economic growth, the Vietnamese leadership has been strongly focusing on rural development through a variety of policies and a series of national programs. These programs aim to encourage individuals in rural areas to venture into businesses and entrepreneurship activities. In May 2018, Vietnam’s prime minister approved the nationwide implementation of the “One Commune, One Product” (OCOP) program (Hoang et al., 2018, p. 1). These programs have created a platform for cooperatives and small and medium-sized businesses and have inspired entrepreneurship by rural enterprises and individuals.

In addition, various by-laws have been promulgated by the prime minister to facilitate the implementation of the above-mentioned programs. Decision 1956/QD-TTg, dated November 27, 2009, was issued approving the vocational training scheme for rural laborers to 2020. Two notable policies of the scheme are (i) rural laborers may receive financial support for basic short-term (under three months) vocational training of up to USD 130/person/course excluding meal and travel allowances; (ii) after receiving vocational training, rural laborers may take loans from the national employment fund

under the national target program on employment to generate self-employment. The vocational training program, which started in 2016, requires a total investment of USD 552.7 million, of which USD 330 million will be sourced from the state budget, USD 145 million from local budgets, and the remainder from other sources. According to the Ministry of Agriculture and Rural Development, vocational training will be provided to 5.5 million workers in rural areas by 2020, a quarter of whom will be trained to work in the agricultural sector. The other 4.1 million workers will be trained in other vocations. Of these, 3.84 million will attend a training course of under three months, with the aim of at least 80 percent finding new jobs or increasing productivity and income in their existing jobs.

According to Decree No. 55/2015/ND-CP on credit policies for agricultural and rural development issued on June 9, 2015, individuals, households, cooperative groups, business households, cooperatives, unions of cooperatives, and farm owners may borrow a loan without collateral security from credit institutions. The loans must not exceed (i) USD 4,300 for individuals and households residing in rural areas or for individuals and households residing outside rural areas and having agricultural production linkage with cooperatives or enterprises, and (ii) USD 86,000 for aquaculture or offshore fishing or offshore fishing service cooperatives, aquaculture farm owners, and unions of cooperatives operating in rural areas or conducting agricultural production and business activities. According to the Central Coordination Office on New Rural Development, the central and local governments will invest an estimated USD 645 million in OCOP implementation.

Beyond the training programs, the Vietnamese leadership has provided financial support for entrepreneurship development in rural areas. The State Bank of Vietnam has launched various effective credit programs and facilities to support agricultural production and improve local livelihoods in rural areas. Currently, 70 commercial banks, more than 1,100 people's credit funds, and the Vietnam Bank for Social Policies provide loans for rural economic development. As of December 2018, the debt amount was estimated at USD 76.72 billion, a quarter of all total outstanding debts. In past years, the credit programs have provided farmers with capital to expand their businesses, thereby promoting the growth of the agriculture-forestry-fishery sector, which stood at 3.76 percent in 2018, the highest level in six years.

2.2.3. Institutional conditions influencing individual determinants of entrepreneurship

Institutions, both formal and informal, affect people's actions, including entrepreneurship activity (North, 1990; Welter, 2011). Formal institutions consist of rules, laws, and constitutions; informal institutions comprise norms and values, conventions, codes of behavior, and the conduct of a society (North, 1990, 1994). The key formal institutions that affect entrepreneurship activity are governmental support and policies, taxation, and labor market regulations (Elert et al., 2017; Henrekson, 2007). Social traits are the key informal institution that determines entrepreneurship activity. These include societal approval of entrepreneurship, entrepreneurial culture, and entrepreneurial self-efficacy, which can be shaped over time (Mueller & Thomas, 2001; Smallbone & Welter, 2006).

A large body of research has studied the impact of informal framework conditions on entrepreneurship (Aidis et al., 2008; Bauernschuster et al., 2010; Fritsch et al., 2014; Runst, 2013; Wyrwich, 2013a, 2013b). Bauernschuster et al. (2010) tested the effect of informal work in terms of internal locus of control on entrepreneurial activity in former socialist institutions. They show that society's norms and values related to competition and self-reliance that developed under a centralized planning system continue to persist after German reunification. They argue that those norms and values negatively affect entrepreneurial aspiration among East Germans. As found by Runst (2013), the locus of control and preference for state action, which individuals gained under the former socialist regime, are negatively associated with creating a new firm. This finding explains why the propensity for being self-employed in eastern Germany is at a relatively low level compared to western Germany. Vaillant and Lafuente (2007) and Lafuente et al. (2007) used 2003 GEM data to investigate the distinctiveness of entrepreneurship in rural Catalonia and rural areas in the rest of Spain. They indicate that differences in informal institutional conditions (entrepreneurial role models, self-confidence in entrepreneurial skills, and social fear of entrepreneurial failure) lead to a significant difference in entrepreneurship activity among the examined regions.

Based on the distinctive context, rural-urban differences offer an interesting opportunity for analyzing the effect of institutional frameworks, particularly informal institutional conditions, on entrepreneurship (Brooksbank et al., 2008; Freire-Gibb & Nielsen, 2014; OECD, 2003; Thompson et al., 2012; Vaillant & Lafuente, 2007). Oftentimes, the level of entrepreneurship activity in urban areas is higher than in rural areas. The difference is due to the lack of business networks, low competitive markets, limited financial sources, poor business skills, and the weak effect of role models on entrepreneurial intentions and start-up willingness among rural residents (OECD, 2003; Thompson et al., 2012).

However, the above statement is not consistent with the findings of Vaillant and Lafuente (2007) who revealed that the adult population in rural Catalonia is more willing to start a business venture than the urban population. Evans and Leighton (1990) attributed the high level of entrepreneurship in rural areas to the lack of alternative opportunities for career choices or lower opportunity costs. Evans and Leighton reported that individuals with lower wages, or who are unemployed, are more likely to step into entrepreneurship than those in work. In addition, Thompson et al. (2012) found that respondents living in deprived communities in Wales are more often in favor of getting involved in start-ups than those living in urban areas. They explained that people in rural areas may recognize business opportunities from their communities that are deprived of demand for services and products. This is in line with the conclusion of Porter (1995) that an environment that lacks market competition also offers good opportunities for potential self-employment. Therefore, we suggest the following hypotheses:

H2a: Individuals living in rural Vietnam are more willing to engage in start-ups than their counterparts living in urban areas.

H2b: The positive effect of entrepreneurial self-efficacy on the probability of becoming self-employed is more pronounced for individuals in rural areas than for those in urban areas.

Our conceptual framework is summarized in Figure 1.

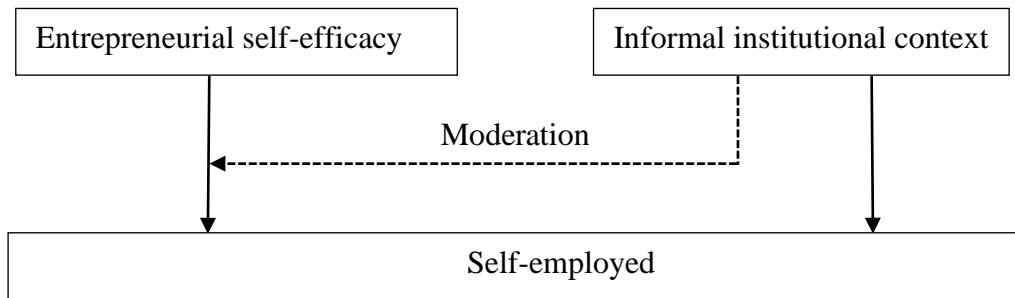


Figure 1. Conceptual framework

3. DATASET AND METHODOLOGY

3.1. Data

This study uses an individual-level dataset from the representative Adult Population Survey (APS) of the Vietnam GEM project, covering three years (2013-2015)¹. Recently, more than 42 countries worldwide have taken part in the GEM project, which offers a valid and reliable source of data for entrepreneurship research. The methodology and data collection of the GEM project can be found in more detail in Reynolds et al. (2005). The Vietnam GEM project was conducted by the Vietnam Chamber of Commerce and Industry and includes random samples of individuals from the entire country. The survey focuses on entrepreneurship, such as the demographic profile of entrepreneurs, entrepreneurial activity across time and geography, and entrepreneurial potential and support (e.g., fear of failure, role models, self-efficacy, and entrepreneurship opportunity). Each year, the GEM project includes a sample of about 2,000 individuals. In total, the GEM sample comprised about 6,000 individuals from 2013 to 2015, including 1,798 (29.98%) and 4,199 (70.02%) from urban and rural areas, respectively. There is an unbalanced sub-dataset in our sample between urban and rural areas; however, as suggested by Greene (2003), “the unequal group sizes do not have any effect on the result” (Greene, 2003, p. 56).

3.2. Variables

The GEM data allows measuring rural-urban differences in the “mental software” that might explain engagement in entrepreneurship by individuals’ entrepreneurial self-

¹ Vietnam joined the GEM research in 2013 but did not take part in the GEM project in 2016 and 2018.

efficacy. These measurement variables have been successfully used in prior studies (e.g., Vaillant & Lafuente, 2007; Wennberg et al., 2013; Wyrwich et al., 2016).

We used several simple logit regression models to test our hypotheses. The dependent variable, self-employed, was frequently theorized, while entrepreneurial self-efficacy and rural Vietnam were the two central independent variables in this study. Moreover, we consider entrepreneurship opportunity as an independent dummy variable that equals one if respondents stated that there will be good opportunities for starting a business in the area where they live in the next six months and zero otherwise.

With regard to the first hypothesis (H1), the dependent variable is a dummy variable at the individual level for self-employed – the dummy variable equals one if the individuals are self-employed and zero if not. As stated by Reynolds et al. (2005), “GEM defines people who are entrepreneurially active as adults in the process of setting up a business they will (partly) own and/or currently owning and managing an operating young business” (Reynolds et al., 2005, p. 209). Vaillant and Lafuente (2007, p. 322) use the GEM entrepreneurial activity variable and state that “entrepreneurial activity does not discriminate based on the size or purpose of the venture, including self-employment and part-time entrepreneurial activities.” Self-employed and self-employment have been used synonymously in academic studies (Wyrwich, 2013a). Our study treats self-employed as self-employment as well as entrepreneurial activity². The GEM self-employed variable has been successfully used in prior studies (e.g., Vaillant & Lafuente, 2007; Wennberg et al., 2013).

Our independent variable, entrepreneurial self-efficacy, is based on the GEM question in which respondents indicate whether they possess the knowledge, skills, and experience required to start a new business (1 = yes, 0 = no). Many previous studies used this GEM variable and treated it as entrepreneurial self-efficacy (Wennberg et al., 2013) or entrepreneurial self-confidence (Vaillant & Lafuente, 2007).

The GEM dataset also contains background information on the residence of the respondents on the date of the interview. (The survey vendor provides the name of the main region where the respondents live.) That information allows us to investigate the differences in entrepreneurship entry between rural and urban people. We constructed a rural Vietnam dummy variable that equals one if respondents live in a rural area and zero if they live in an urban area of Vietnam. In a further step, the dummy variable, rural Vietnam, is treated as an independent variable to test the differentiated effect of living in a rural area over becoming self-employed (H2a). In terms of hypothesis H2b, entrepreneurial self-efficacy interacts with the rural Vietnam dummy variable to examine the moderating effect of rural areas on the relationship of people’s self-efficacy with the probability of engaging in entrepreneurship activity.

² The literature is usually deliberately vague in distinguishing between the self-employed and entrepreneurs and treats them as synonyms (Block & Sandner, 2009).

The control variables at the individual level consist of gender, age, household income, educational attainment, and household size. The gender variable has an important impact on entrepreneurship activity and offers evidence to explain the different start-up levels between males and females (Lafuente & Vaillant, 2013; Wyrwich et al., 2016). In this study, we coded males as one and females as zero. We included the control variable age as well as age squared to capture curvilinear effects. We also controlled for the role of household income, which was measured by six different categories. The control variable, educational attainment, was categorized by seven different levels, and household size was measured by the number of members that make up the respondents' permanent household. Descriptions of the variables are displayed in Table 1.

Table 1. Individual-level variables (2013-2015)

Variable	Description
Male	Dummy = 1 if the respondent is male
Rural Vietnam	Dummy = 1 if the respondent lives in rural Vietnam
Age	Age of the respondent in years
Household annual income	Categorical variable: 1 = < 2,499 Euros; 2 = 2,500–4,999 Euros; 3 = 5,000–9,999 Euros; 4 = 10,000–14,999 Euros; 5 = 15,000–19,999 Euros; 6 = 20,000 Euros or more
Educational attainment	0 = pre-primary education (5 years); 1 = primary education or first stage of basic education (9 years); 2 = lower secondary stage of basic education (12 years); 3 = (upper) secondary education (14 years); 4 = post-secondary non-tertiary education (16 years); 5 = first stage of tertiary education (18 years); 6 = second stage of tertiary education (22 years)
Household size	Number of members who make up the respondent's permanent household
Entrepreneurial self-efficacy	Dummy = 1 if the respondent has the knowledge, skills, and experience required to start a new business
Entrepreneurship opportunity	Dummy = 1 if the respondent stated that there will be good opportunities for starting a business in the area where they live in the next six months
Self-employment	Dummy = 1 if the respondent is self-employed

4. RESULTS

4.1. A first glance at rural-urban differences

Mean comparison t-tests in Table 2 show a significant difference in being self-employed between people in rural Vietnam and urban areas. The average age of individuals in rural areas is 36.19 years and 35.62 years in urban areas. A common conclusion of studies of household income is that the level of individual income in urban areas is higher than in rural areas because the labor market in urban areas has more competition and higher economic performance. Our result is in line with this general trend that people in rural areas earn lower incomes than those in urban areas, with average levels of 3.07 and 3.85, respectively. The average level of educational attainment in rural Vietnam (3.18) is also lower than in urban Vietnam (4.01).

The GEM provides a valuable source of data to measure rural-urban differences in core entrepreneurial predictors, such as entrepreneurial self-efficacy and entrepreneurship opportunity, that might predict the likelihood of being self-employed. There is a significant difference in the core predictors of entrepreneurship activity between rural and urban areas. As can be seen in Table 2, respondents who live in rural areas of Vietnam have less entrepreneurial knowledge, skills, and experience than those in urban areas. The mean value of individual self-efficacy is 0.52 in rural areas and 0.60 in urban areas. Also, in a comparison of entrepreneurship opportunities in rural and urban areas, t-test values indicate that people living urban areas have slightly more opportunities for starting a new business where they live in the next six months. Astonishingly, willingness to engage in entrepreneurship is stronger for people who live in rural regions than in urban areas, with mean scores of 0.47 and 0.38, respectively. This finding is in contrast to previous studies of rural-urban entrepreneurship but is consistent with the results of Vaillant and Lafuente (2007).

Table 2. Mean comparison t-tests between respondents in rural and urban Vietnam

	Sig.	Rural Vietnam			Urban Vietnam		
		Obs.	Mean	S. D.	Obs.	Mean	S. D.
Gender	n.s.	4,199	0.496	0.500	1,798	0.474	0.499
Age (in years)	n.s.	4,136	36.195	12.188	1,746	35.628	12.387
Household income	***	4,140	3.078	1.407	1,750	3.850	1.565
Average educational attainment	***	4,195	3.181	1.199	1,792	4.011	1.178
Household size	n.s.	4,198	4.350	1.333	1,794	4.307	1.408
Entrepreneurial self-efficacy	***	4,170	0.521	0.499	1,777	0.603	0.489
Entrepreneurship opportunity	*	4,140	0.436	0.496	1,769	0.460	0.498
Self-employment	***	4,199	0.477	0.499	1,798	0.389	0.487

Note: Obs. = observations; Mean = mean value; S. D. = standard deviation; Significance levels: ***p < 0.01, **p < 0.05, *p < 0.1, n.s. not significant (p > 0.1).

4.2. Regression results

Logit regression models are applied to analyze the effect of entrepreneurial self-efficacy on being self-employed, and the rural-urban differences in the probability of becoming self-employed, which confirm the hypotheses (H1, H2a, and H2b). Self-employed is treated as a dependent variable, independent variables consist of entrepreneurial self-efficacy, rural Vietnam, and entrepreneurship opportunity, whereas gender, age, household income, educational attainment, and household size are control variables.

The statistical results in Table 3 show a significant positive effect of entrepreneurial self-efficacy on becoming self-employed among Vietnamese adults (Model I, $\beta = 0.87$, $p < 0.01$). In this case, the odds ratio indicates that respondents with high self-efficacy are on average 2.4 times more in favor of beginning a new venture than those with low self-efficacy (Model I, Table 3). In other words, the more confident they

are in their abilities, the more willing they are to start new businesses, on average by 140% (Model I, Table 3, 2.40:1; $p < 0.001$) compared with people who are less confident in their entrepreneurial knowledge, skills, and experience. This is consistent with earlier findings by Wennberg et al. (2013) and Vaillant and Lafuente (2007) on entrepreneurship and self-efficacy. The authors argue that individuals with high entrepreneurial self-efficacy have more willingness to enter into entrepreneurship than individuals with low entrepreneurial self-efficacy. Hypothesis H1 is therefore supported.

Regarding the difference in entrepreneurship activity between people living in rural and urban areas, our findings in Table 3 show that individuals in rural regions have a stronger willingness to start a new business venture compared to those in urban areas (Model I, $\beta = 0.26$, $p < 0.01$). Also, the odds ratio (Model I, OR = 1.301, $p < 0.001$) in Table 3 shows that people living in rural areas are 1.3 times more in favor of starting new firms than those in urban areas. It can be said that individuals living in rural parts of Vietnam have a higher willingness to start a new firm than their counterparts in urban Vietnam by 30% (Model I, Table 3, 1.30:1; $p < 0.001$). The hypothesis H2a is accepted. There are two reasons for this result. Firstly, individuals in rural areas may be motivated to start a new venture by programs and policies that promote entrepreneurship (e.g., vocational training, seminars, and workshops) that the Vietnamese leadership has intensively focused on for rural development in recent years. Secondly, the establishment of national funding and financial aid programs for entrepreneurship activity may lead individuals in rural areas to open new businesses in their local communities. Financing is one of the most important considerations for people in the initial phase of opening a new company. Hence, the availability of financing will spur individuals to become involved in start-up activities.

Testing how the institutional context, rural Vietnam, moderates the effect of entrepreneurial self-efficacy on the probability of being self-employed requires an interaction term between entrepreneurial self-efficacy and rural Vietnam as the base outcome. Empirical evidence in Table 3 also reveals significant differences between people in rural and urban areas in engaging in self-employment. Surprisingly, the positive effect of individuals' entrepreneurial self-efficacy on making decisions to be self-employed is more pronounced in rural than in urban areas (Model II, Table 3, $\beta = 0.24$, $p < 0.01$). Additionally, the beta coefficient for the rural Vietnam dummy variable remains significant and positive, suggesting that individuals living in rural areas are more likely than those in urban areas to start a new business venture (Model II, Table 3, $\beta = 0.41$, $p < 0.01$). Furthermore, the odds ratio for rural Vietnam (1.52) is higher in this case than in the case before running the interaction term (1.30) (Table 3). Thus, H2b is supported. In addition, to ascertain the direction and effect size for the dependent variable, self-employed, we plotted the marginal effects of the interaction term. Figure 2 shows the result. One explanation for this result may be that the potentially self-employed hope to provide the goods and services that are currently lacking in their local communities. Another interpretation that can account for this finding is that there is no better option for work. In other words, lacking alternative work opportunities in deprived areas can push individuals into entering the business market (Evans & Leighton, 1990; Thompson et al., 2012).

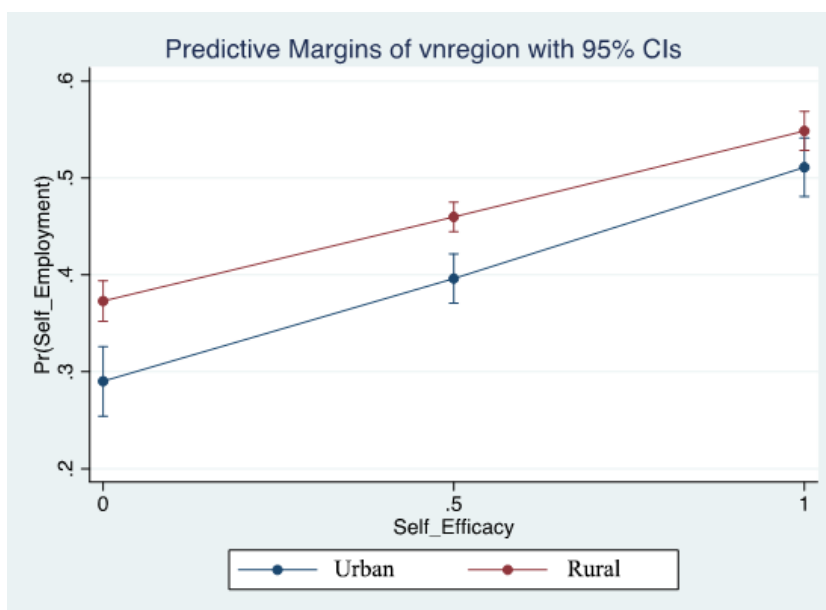


Figure 2. Marginal effects of self-efficacy (from 0 to 1) on probability of being an self-employed among individuals living in urban and rural areas

For presenting the nexus between potential entrepreneurship opportunities and self-employment, the coefficient in Table 3 shows a positive effect. That is, respondents who stated that there will be good opportunities for starting a business in their area in the next six months are more involved in entrepreneurship (Model I, II, $\beta = 0.15$, $p < 0.01$). Table 3 also reveals the inverted U-shaped relationship between age and being self-employed. The inverted U-shape is shown by a positive coefficient (Model I, II, $\beta = 0.20$, $p < 0.001$) on the age variable and a negative estimated value (Model I, II, $\beta = -0.002$, $p < 0.001$) on the age squared variable. Moreover, the odds ratio (OR = 1.22 > 1, $p < 0.0001$) reveals that older age groups are more likely to become self-employed than younger age groups by 1.22 times on average. Each additional year in age increases the probability of being self-employed by 22% (Table 3).

Household income has a positive impact on being self-employed (Table 3). The coefficient in this case shows that individuals with higher household incomes are more willing to embark on entrepreneurship (Model I, II, $\beta = 0.15$, $p < 0.01$). Also, the odds ratio in Table 3 indicates a significant positive effect (OR = 1.169 > 1, $p = 0.000 < 0.001$). The odds ratio shows that higher-income people are on average 1.16 times more likely to engage in entrepreneurship activity than lower-income individuals. In other words, a level increase in household income will increase individuals' willingness to start new businesses by 16% (1.16:1, $p < 0.01$). Educational attainment has a negative effect on being self-employed. This effect may indicate that a majority of the self-employed are engaged in manual occupations (Thompson et al., 2012). Moreover, in Vietnam, entrepreneurship is a new phenomenon, and few universities provide entrepreneurial courses, workshops, or seminars (Mai & Nguyen, 2016). There is no empirical evidence for a relationship between household size and self-employment.

Table 3. Determinants of self-employed

	Model I ^a	Model II ^a	Model I ^b	Model II ^b
	Coefficient	Coefficient	Odds ratio	Odds ratio
	(standard error)	(standard error)	(standard error)	(standard error)
Male	-0.010 (0.058)	-0.007 (0.058)	0.989 (0.058)	0.992 (0.058)
Rural Vietnam	0.263*** (0.069)	0.419*** (0.111)	1.301*** (0.090)	1.520*** (0.169)
Age	0.200*** (0.016)	0.200*** (0.016)	1.222*** (0.020)	1.222*** (0.020)
Age ²	-0.002*** (0.0002)	-0.002*** (0.0002)	0.997*** (0.0002)	0.997*** (0.0002)
Household income	0.156*** (0.021)	0.154*** (0.021)	1.169*** (.025)	1.166*** (0.025)
Education attainment	-0.440*** (0.028)	-0.440*** (0.028)	0.643*** (0.018)	0.643*** (0.018)
Household size	-0.021 (0.021)	-0.020 (0.021)	0.978 (0.021)	0.979 (0.021)
Entrepreneurial self-efficacy	0.875*** (0.060)	0.812*** (0.069)	2.401*** (0.144)	2.253*** (0.157)
Entrepreneurship opportunity	0.158*** (0.059)	0.152*** (0.059)	1.171*** (0.069)	1.164*** (0.068)
Interaction terms				
Rural Vietnam x entrepreneurial self-efficacy		0.247* (0.137)		1.280* (0.175)
Number of observations	5,657	5,657	5,657	5,657
Pseudo R ²	0.1269	0.1273	0.1269	0.1273

Note: a: Logit regression and b: Logistic regression. Binary variable is 1 if respondents are self-employed. Significance levels: ***p < 0.01, **p < 0.05, *p < 0.1, n.s. not significant (p > 0.1). Model I shows the findings that support H1 and H2a, while Model II reports the results that support H2b.

5. DISCUSSION

This study aims to examine the effect of individuals' entrepreneurial self-efficacy on being self-employed and to investigate how the informal institutional context moderates this mechanism. We argue that individuals who possess entrepreneurial knowledge, skills, and experience are more willing to start a new firm. We further argue

that people in rural areas are more often in favor of becoming involved in a start-up activity than people living in urban areas. We are also interested in the moderating effect of the informal institutional environment on this relationship. More precisely, the positive effect of entrepreneurial self-efficacy on the self-employed is more pronounced for individuals living in rural areas than those living in urban areas. We employ data from the GEM 2013-2015 Adult Population Survey for testing the hypotheses in the context of Vietnam.

The empirical findings reveal that individuals' entrepreneurial self-efficacy is positively associated with being self-employed. This finding is consistent with previous studies (Vaillant & Lafuente, 2007; Wennberg et al., 2013). Moreover, business knowledge, skills, and experience related to human capital help individuals recognize and exploit start-up opportunities (Shane & Venkataraman, 2000) and be successful in starting a new venture (Unger et al., 2011). That results in engaging in entrepreneurship. Our findings substantiate previous research arguments in that we find a remarkable, significant positive effect of entrepreneurial self-efficacy on new business ventures.

As we expect, individuals in deprived regions are more willing to embark on entrepreneurship activities. Also, the positive effect of entrepreneurial self-efficacy on creating a new firm is stronger for people living in rural areas than for those living in urban areas. There is supportive evidence for these arguments that the rural-urban differences in becoming self-employed are significant. Likewise, individuals in rural areas are more in favor of entering into new venture creations than those in urban areas. Our explanation for this result is that programs that promote start-ups have inspired individuals in rural areas to open new businesses. These special programs, focusing on deprived areas, might help people be more confident about their own entrepreneurial knowledge, skills, and experience, which are positively associated with engaging in a business venture. Moreover, beyond the entrepreneurship training schemes, the Vietnamese leadership has been setting up foundations to support the financing of new firms in rural areas. Financing plays an important role for every self-employed person in the beginning period of opening a new firm and in the future operation of a new business venture. The availability of financing can help the self-employed have less fear of failure and reduce risk-taking as well. Thus, the entrepreneurship financing projects that the Vietnam government has launched for the potentially self-employed in rural areas may encourage them to venture into business activities. Moreover, business laws and regulations have been loosened to facilitate the business environment. Hence, national programs to support entrepreneurship that focus on deprived rural areas may have a profound impact on the relationship between individuals' self-efficacy and their entrepreneurship willingness.

Another interpretation is that alternative employment choices are limited and that goods or services are lacking in rural areas, which might provide business opportunities for potential self-employment. Less market competition or lower costs in rural regions also gives a new firm greater chances of success due to less risk-taking (Porter, 1995). Thompson et al. (2012) argued that a business venture might be easily fostered and developed in regions where its product or service is lacking, including food shops, post

offices, and leisure centers. This argument might be a possible explanation for a higher level of entrepreneurship activity in rural Vietnam compared with urban areas. Importantly, nonfarm household businesses, which are defined as businesses with no more than 10 employees and one establishment only, have dominated the private sector since the opening of the market economy in 1986. The number of nonfarm household businesses was 377,005 in 1990, 2,443,669 in 2000, and it increased to 5,142,628 by 2017 (GSO, 2017). According to a report by the General Statistics Office of Vietnam (GSO), on average, there is one business establishment for every 19 persons (GSO, 2016).

6. CONCLUSION

Entrepreneurship has been a topic of research interest in recent years. However, not much attention has been paid to the rural-urban differences in “mental software,” such as the willingness to become self-employed. This paper attempts to bridge the gap by investigating the effects of individuals’ entrepreneurial self-efficacy on self-employment and how this effect differs in rural and urban areas. Our findings demonstrate that individuals who possess entrepreneurial knowledge, skills, and experience are more willing to start a new firm. Additionally, people in rural areas are more in favor of becoming involved in start-up activities compared with people living in urban areas. Furthermore, the positive effect of entrepreneurial self-efficacy on self-employment is more pronounced for individuals living in rural areas than for those living in urban areas.

Our study contributes to the existing literature in the following ways. First, this study adds to the literature review on the effect of entrepreneurial self-efficacy on entrepreneurship, and how this influence differs in rural and urban areas in a transitioning economy (Krueger, 1993; Krueger et al., 2000; Vaillant & Lafuente, 2007; Wennberg et al., 2013). Second, the study provides new empirical insights into the impact of the observed social traits (entrepreneurial self-efficacy) on entrepreneurial activity in rural Vietnam with strong entrepreneurship programs and start-up promotion. Thus, this work could be useful for the design of policies to foster entrepreneurship in rural and urban environments in Vietnam or other developing countries with similar conditions. In addition, more flexible policies can be encouraged so that the rural population has more opportunities for and access to entrepreneurship activities.

The findings of the study reveal that informal institutional frameworks, as well as social-cultural factors, are the underlying backbone of entrepreneurial engagement. For policymakers, understanding the difference in being self-employed across regions with distinct informal institutional conditions (e.g., entrepreneurial self-efficacy) is crucial for designing policies and programs. Entrepreneurship promotion programs at a local level should first establish the necessary informal institutional foundation within a community before applying formal institutional measures for the programs of entrepreneurship activity. Formal support and promotion may be in vain in the presence of an inappropriate informal institutional arrangement (Lafuente et al., 2007).

As argued in previous studies (e.g., Evans & Leighton, 1990; Porter, 1995; Thompson et al., 2012), alternative employment choices are limited and goods or services

are lacking in rural areas, which might provide business opportunities for the potentially self-employed, who can be called “reluctant entrepreneurs.” These arguments challenge policymakers to pay attention to entrepreneurship promotions if they are interested in formal policies to encourage individuals to start new ventures. Hence, with the great hope of promoting the development of the region’s economy through entrepreneurship activity, regional policy-makers should consider improving the image and role of entrepreneurs in the community (e.g., capital accumulation and job creation). Furthermore, celebrating the entrepreneurial successes of existing entrepreneurs, who are creating jobs for the community and contributing to social and environmental development, can stimulate a culture of entrepreneurship in a local community. Beyond promotions with business-related knowledge, skills, experience (know-how), and role models (know-who), policy-makers should offer a special promotion of awareness campaigns if they are interested in changing the perception of potential entrepreneurs from survival needs to the social and environmental missions.

Our study has some limitations. Firstly, our data are based on the GEM dataset, which might not contain information on social networks such as family or friends. This makes it impossible to discover whether the self-employed in the local community are engaged in traditional businesses or family firms. Secondly, we focused on rural and urban areas of Vietnam, a socialist country. Moreover, rural areas in Vietnam are not homogeneous since local economic conditions differ considerably (Sohns & Diez, 2018). It may not be possible to generalize the findings of this study to capitalist countries because each socioeconomic system possesses characteristics that have different impacts on entrepreneurship activity. Thus, further research could broaden this topic across countries to make international comparisons. Finally, we only used the GEM variable, entrepreneurial self-efficacy, as a social trait in analyzing rural-urban differences in entrepreneurship activity. Further studies could add more variables, including formal institutional variables (e.g., GDP, CPI, governmental support and policies, financing for entrepreneurs, taxes and bureaucracy, and governmental programs), and informal institutional variables (e.g., entrepreneurship, culture, and regional entrepreneurship rate) into the analysis. Last, but not least, further work could investigate whether self-employment in rural areas is motivated by opportunity or necessity.

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