

The Influence of Entrepreneurial Ecosystems on Entrepreneurs' Perceptions and Business Success

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Abstract: Entrepreneurship continues to grow and receives a great deal of interest from business researchers and practitioners for its importance in the modern economy. This study aims to contribute to the body of knowledge that the entrepreneurial ecosystem correlates with founders' perceptions and startup success. Data were gathered from surveys of 200 founders or CEOs of SMEs and startups in Tay Ninh City (Vietnam), who have operated their own companies for at least five years. The primary data analysis was performed using the partial least squares (PLS) technique. Five out of six ecosystem factors significantly affect entrepreneurs' perceptions and startups' success, based on the results of the empirical data. Besides, the founders' perceptions also positively affect the success of a startup. The implications show the need to enhance entrepreneurship in a nation.

Keywords: entrepreneurship, success, perception, entrepreneurial ecosystem.

JEL Classification: L26, M13

Introduction

In recent decades, entrepreneurship has become the driving force behind the socio-economic development of any nation. Creating an effective entrepreneurial ecosystem is considered to be a regional economic development strategy, which focuses on creating supportive environments that promote sustainable startups. Besides, entrepreneurs perceive their businesses' success and the importance of an entrepreneurial ecosystem as being a fundamental part of developing economic advancement policies. The more policymakers comprehend what startups consider to be necessary, the more prominent is the potential for national strategies to be better coordinated with entrepreneurs' activities, which is the main impetus behind a flourishing entrepreneurial segment.

Building a dynamic and effective entrepreneurial ecosystem has received great attention from many national leaders. Startups face many challenges in discovering their business partners and seeking help from families, friends, and other personal relations as part of their communities and cultures (Giardino et al., 2015). Hence, many nascent ecosystems worldwide need a theoretical framework for developing their communities to progress toward a successful and sustainable ecosystem.

The government's role is to create a startup environment, with startup-supporting policies that attract venture capitalists. Besides, the entrepreneurs' perceptions of the ecosystem and startups' success play a vital role in exploiting its resources. It is necessary to conduct in-depth research to guide entrepreneurs toward the correct business success and perception of the entrepreneurial ecosystem. Furthermore, finding out wheth-

er the impact of the startup's ecosystem on the success of startups contributes to the promotion of the startup ecosystem is also necessary; this for entrepreneurs, policymakers, and university administrators. Based on the problem statement, the research question posed in this study is: 'To what extent do the entrepreneurial ecosystem's pillars (accessible markets, human capital, a support system, regulatory framework, education and training, cultural support) directly or indirectly affect entrepreneurs' perceptions and startups' success?'

Although there have been many studies on the entrepreneurial ecosystem and its relationship with the related variables, this research comprehensively explores the ecosystem's elements by studying six specific ecosystem pillars and their interrelationships with founders' perceptions and the success of small and medium-sized enterprises (SMEs). In addition, this study was conducted in Vietnam, a developing country following socialist-oriented market policies. Therefore, the value outcomes of qualified entrepreneurship research in Vietnam are expected to contribute to the literature on entrepreneurship, by giving legislators and entrepreneurs in these economies a better understanding of the entrepreneurial ecosystem. This study was carried in Tay Ninh City (Vietnam) and targeted SME owners who have been running their companies here for at least five years, so they have experience of, and can make judgments about, entrepreneurship. The convenience sample was used, and data were mainly collected from 200 companies across the region, from entrepreneurs who were willing to be approached. Consequently, the result cannot represent all the startup owners in Vietnam. Startup stakeholders in Vietnam, and in developing countries, can benefit from the results of this study as it provides a standard

orientation for how they can benefit from a strong connection with the startup ecosystem and success through the entrepreneurs' perceptions.

Literature Review

Entrepreneurial Success

Generally, financial, economic, and environmental indicators are considered to be the factors that make up a business's success. However, the exact constituents and how to measure the success variables remain problematic. The absence of clarity in the concept of entrepreneurship is a worthy issue that business scholars need to investigate in detail (Baron and Henry, 2011).

Entrepreneurial success may be a dependent variable in empirical studies, often without an operational description. A literature review of the definition of entrepreneurial success reveals that four significant aspects correlate with the concept. First, entrepreneurial achievement is influenced by cultural issues or is based on individual perspectives (Rauch & Frese, 2000). For instance, it was found that venture capitalists and entrepreneurs pursuing funding had different perspectives on business success (Black et al., 2010). Secondly, achieving wealth is a standard indicator of success (McMullen and Shepherd, 2006). Next, gender differences also impact the perceptions of success. To benchmark success, men use external criteria to achieve prestige or recognition for their achievements. In contrast, women use internal definitions of success, such as achieving what they set out to do (Cliff, 1998). However, the latest research into the success of entrepreneurs, which is employed in this study, defines entrepreneurial success as a mix of the execution of individual and busi-

ness factors: the entrepreneur's perceptions and personal aspirations for his/her life and business, combined with sustainable business growth and exceeding ones business goals (Fisher et al., 2014).

It is challenging to measure entrepreneurial performance because it has different dimensions and multi-stage processes (Brockner et al., 2004). Grant (2003) explored a two-dimensional classification of firm performance or business success. Grant suggested that operational measures like market share, customer satisfaction, product quality, and the development of new products contribute to the financial results. Besides, subjective and objective indicators can be used to measure business success. González-Benito (2005) agrees with the previous author that the factors that measure a business's success should be subjective metrics like achieving organizational goals, including sales growth, market share, customer satisfaction, and profitability. Hence, these subjective measurements are utilized in this study.

Entrepreneurial Perception

Perception can be understood as a cognitive construct. Perceptions are mental representations of the physical environment around people, captured and elaborated in their minds through their senses (Liñán, Santos, & Fernández, 2011). Due to various cognitive biases, these representations can vary among individuals, which means that when a person faces complex problems with insufficient information, the propensity to make errors in judgment can happen (Baron, 1998; Busenitz & Barney, 1997). Entrepreneurs are highly vulnerable to many cognitive biases because their work environments are marked by high uncertainty and time constraints. These influence the degree of perception they have.

Entrepreneurs can perceive lower risk levels or have higher confidence in their capacity to start a business than other individuals. Besides, the previous study indicates that entrepreneurial perception is associated with gender. Cassar (2006) found that females were less likely to have growth expectations than males. The theory of the perceptions of economic opportunities and social culture perceptions (Liñán, Santos & Fernández, 2011) evaluates the correlation between perception and some of the ecosystem factors mentioned in this study. Additionally, the nine dimensions of Entrepreneurial Framework Conditions (EFCs) identified by the Global Entrepreneurship Monitor (GEM) study (Manimala et al., 2019) are also included to analyze this correlation.

Identifying the individual perception of entrepreneurial intention is vital, since it promotes private ventures and public funds to invest in people who create new businesses that generate value for individuals and society (Douglas, 2013). Douglas differentiates entrepreneurial new ventures into growth-oriented and independence-oriented ventures, and indicates that entrepreneurs contribute little to their communities through job creation and income tax generation. This study employs Douglas's items to measure the perception variables. The author argues that entrepreneurial intention is a combination of the individual's perception and his/her capacities and special rights, including autonomy, risk, income, work intensity, and work enjoyment. Special rights or intrinsic rewards often start with a sense of independence, and later maximize their expected utility. Lee and co-researchers (2011) uphold Douglas's view by mentioning the intrinsic costs and advantages as the work conditions associated with self-employed perceptions. As such, being an entrepreneur allows them to earn sufficient

income to live while they also enjoy certain rights such as self-employment, which is additional leisure time. It can be argued that by working with consumers and suppliers who have the same perception of the business, startup owners enjoy the psychological benefits of the lifestyle.

Entrepreneurial Ecosystem

The literature on the entrepreneurial ecosystem has attracted a great deal of interest from business researchers (Stam, 2015; Stam & Spigel, 2017), especially in policymaking circles. The entrepreneurial ecosystem is defined by Mason and Brown (2014) as a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (the businesses' birth rate, numbers of high growth firms, levels of "blockbuster entrepreneurship", number of serial entrepreneurs, degree of sellout mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment. The World Economic Forum collaborated with Stanford University, Ernst & Young, and Endeavor to survey more than 1,000 entrepreneurs around the world with experience in early-stage companies, to gain a better understanding of the elements of the ecosystem. This paper examines the six variables of a startup's ecosystem based on the eight pillars of the entrepreneurial ecosystem proposed by The World Economic Forum (Foster et al., 2013) as follows:

- Accessible market: A crucial aspect of creating opportunities within entrepreneurial environments is the existence of

potential markets. The accessible markets pillar includes two components:

- Domestic market: Large/medium/small companies as customers and governments as customers.
- Foreign market: Large/medium/small companies as customers and governments as customers.
- Workforce (Human capital): Human capital is one of the pivotal pillars of an entrepreneurial ecosystem, as suggested by The World Economic Forum 2013 (Foster et al., 2013). The human capital pillar includes management, technical talent; entrepreneurial company experience; outsourcing's availability; access to immigrant workforce.
- Support system: The entrepreneurship ecosystem consists of supporting elements such as mentors/advisors, professional services, incubators/accelerators, and a network of entrepreneurial peers. The entrepreneur is assisted by family, friends, and other personal relations that are part of a group that influences the entrepreneur's behavior.
- Regulatory framework: An ecosystem which is favorable to entrepreneurial entry is positively correlated with efficient government (Baumol et al., 2008; Korosteleva & Belitski, 2017). The most recent trend in national innovation policy structures is the growing emphasis on more tax incentives, ease of access to necessary infrastructure, telecommunications, and transport.
- Education and training: The presence of technological talent supported by high-quality educational institutions or access to educational services are oth-

er factors that evaluate the ecosystem's maturity. The World Economic Forum (Foster et al., 2013) reported the three components of the education and training pillars: an available workforce with pre-university and university education and entrepreneur-specific training.

- Cultural support: The cultural support pillar includes tolerance for risk and failure, preference for self-employment, success stories/role models, a research culture, a positive image of entrepreneurship, and innovation celebration (Foster et al., 2013). The presence of success stories about other local entrepreneurs legitimizing entrepreneurial enterprises is associated with the culture.

Entrepreneurs' Perceptions and Entrepreneurial Success

The correlation between entrepreneurs' perceptions and the success of a startup is presented using the entrepreneurial self-efficacy theory. The idea of entrepreneurial self-efficacy is a social-psychological method that continually investigates the complex interaction between the individual and the external factors, by demonstrating which cognitive, persuasive, and emotional processes are involved in an entrepreneur's decision to start a business (Baron, 2004). As such, Luthans and Ibrayeva (2006) revealed that self-efficacy has a direct and mediating effect on a startup's outcome in a transitional economy. Since the success of a business depends not only on the execution of the common tasks, but also on the achievement of the desired outcomes that result from those tasks, entrepreneurial self-efficacy's perception about the capability to effectively tackle tasks would be distinct from the beliefs about successfully attaining success (Drnovšek et al., 2010). Their study

proposed two different types of perception: goal perception and control perception. An entrepreneur's goal beliefs are assessments of the startup owner's capabilities to participate in activities that would lead to the successful task or the success of the whole business during the startup's activities. People enjoy being entrepreneurs due to non-monetary related elements, including the autonomy of owning a business and the absence of a manager. However, they are troubled by the long hours needed for this flexibility and success (Alstete, 2008). Successful startup owners perceive autonomy and freedom by creating a new business because societal and educational attempts underline personal achievement and focus on the value of collaboration, community, and volunteerism, which might appear to go against this reward for creating and owning a startup. Alstete (2008) analyzed entrepreneurial success and found it is affected by the availability and the perception of the benefits or rewards. In Allstate's study, in telling successful entrepreneurs what their achievements are, in the sense of entrepreneurship, the result of their responses are the opportunities obtained by the results of the enterprise, the metrics or milestones reached or surpassed, the expectations of others, and the aspirational indicators, like social outcomes. Hence, a founder's success may partly inspire them to pursue their business despite the difficulties and challenges of the competitive environment and developing a startup.

H1: There is a direct positive effect between entrepreneurs' perceptions (ENPER) and entrepreneurial success (ENSU).

Entrepreneurial Ecosystem and Entrepreneurs' Perceptions

A dynamic and supportive ecosystem is vital for a startup's owner and the growth of a

new business. Entrepreneurship primarily relies on the perceptions of the founders about the ecosystem. An ecosystem's effectiveness might describe who becomes an entrepreneur and how an individual's understanding promotes entrepreneurial decision-making in the field, and how the different realms impact the entrepreneurial actions and results of the ecosystem (Ács, Autio & Szerb, 2014). The availability of entrepreneurial prospects cannot be established but often depend on the individual's expectation of the possibility of the desired activity and his/her entrepreneurial perception.

Accessible market and entrepreneurs' perceptions

Individuals' perceptions about the local context substantially impact the decision-making strategy and entrepreneurial operation. Around 254 entrepreneurs who have operated their businesses after 1990 were surveyed about how the market's location impacts their perceptions. The location factor is one of the significant factors influencing startup owners' risk perceptions, followed by economic and experience factors (Psaltopoulos et al., 2005). Psaltopoulos mentioned the pecking order theory and the theory proposed by Leland and Pyle (1977), and partially tested by Carter and Van Auken (1991) to emphasize the importance of choosing an environment which is related to the planned economic opportunities. The position of a new startup's markets is considered a guideline for entrepreneurs. Local markets are connected to local economic performance and minimize potential entrepreneurial risks. Foster's "global perspective" identified that an accessible market considers all-size companies and governments as customers for domestic and foreign markets (Foster et al.,

2013), to encourage entrepreneurship and the formation of new businesses. In addition to implementing projects in partnership with private operators, governments can positively or negatively impact the entrepreneurial climate through their policies on taxation, incentives, financial support, and the bureaucratic procedures often associated with applying for permits and licenses (Siegel et al., 2003). In an accessible marketplace, entrepreneurs can easily find opportunities because they connect more readily with potential local buyers and quickly test new products. This environment offers startups a potential market for early sales and capability development for potential growth.

H1a: There is a direct positive effect between the accessible market (ACMA) and entrepreneurs' perceptions (ENPER).

Workforce and entrepreneurs' perceptions

Understanding the importance of entrepreneurial talent and startup performance relationships can benefit economic policymakers. Human capital plays a vital role in how entrepreneurs perceive potential risk, since the human resources factor influences the initial capital structure (Psaltopoulos et al., 2005). Especially for technical entrepreneurship, much theoretical and empirical literature on its economics has shown the value of having technical talents capable of effectively integrating and responding to a technological transition (Morrison Paul & Siegel, 2001; Siegel et al., 1997). Shrader and Siegel carried out a longitudinal study of the role of human resources in 198 emerging technology-based startups. Their findings show that technological ventures' founders perceive the experience of tech-people correlates with

the long-term performance of high-tech entrepreneurial businesses (Shrader and Siegel, 2007). Besides, human capital theories imply that having sufficient knowledge and experience in the relevant domains enable business founders to choose more efficient approaches (Caliendo & Kritikos, 2008). Arguably, entrepreneurs perceive the importance of human resources, especially in the technology sector, as a sustainable competitive advantage in the era of Industry 4.0.

H1b: There is a direct positive effect between workforce (HUCA) and entrepreneurs' perceptions (ENPER).

Support system and entrepreneurs' perceptions

Manimala and co-researchers (2019) pointed out that the stakeholders in an ecosystem directly or indirectly affect the founder's perception when decision-making due to being biased. The startup ecosystem positively impacts the awareness of creating a new venture and promotes the entrepreneur's creativity (Theodoraki and Messeghem, 2017). Alvedalen and Boschma (2017) stated that the interaction between individuals, organizations, and institutions is perceived as an ecosystem performance. The founder plays a leading role in operating and developing the ecosystem. Besides, there is a vital connection between the founder's perception of the market's incubation (training, business support, financial and technical support, resources and equipment, networking and mentoring, and aftercare programs) and the understanding of the services to be offered at the incubator (Meru & Struwig, 2011). Because of entrepreneurs' positions within social networks, their internal skills, their reputation of being entrepreneurs, and their

personal attributes can affect their ability to utilize the opportunities available in the ecosystem (Spigel & Harrison, 2018).

H1c: There is a direct positive effect between the support system (SUSY) and entrepreneurs' perceptions (ENPER).

Regulatory framework and entrepreneurs' perceptions

Regional entrepreneurship policies are experiencing a shift from increasing the number of entrepreneurs to increasing the quality of the entrepreneurs. The next step is to move from a policy of entrepreneurship to an entrepreneurial economic policy (Stam, 2015). An efficient regulatory framework, resource distribution prioritization, and government assistance in creating jobs and finance produce a conducive entrepreneurial ecosystem to create new businesses and change founders' points of view on asset allocations, government support, and trust (Stenholm et al., 2013). The appreciation of ambitious entrepreneurship has led to a change in policy focus from raising the quantity of entrepreneurs to increasing their quality. Feld (2012) advised that politicians can create an environment where entrepreneurs can thrive, but they cannot make decisions to invest, drive innovation, initiate or develop. The founder only implements these activities. This transformation also involves a change in the thinking about the rationale for policies to create a positive atmosphere for innovative entrepreneurship (Spigel & Harrison, 2018). Arguably, this phenomenon may lead to a change in entrepreneurs' perceptions, which means a startup's founder can focus on creating innovative products and services rather than copying the ideas of others.

H1d: There is a direct positive effect between the regulatory framework (REFRA) and entrepreneurs' perceptions (ENPER).

Education and training and entrepreneurs' perceptions

The factors that assess the ecosystem's maturity are known to be the presence of technological talent generated by high-quality educational institutions or access to educational services (Berbegal-Mirabent et al., 2012). Colleges and research centers are aware of the innovations that empower startups and can educate entrepreneurs and offer networking opportunities; universities and development centers also direct entrepreneurs into technology transfers. Managerial efficiency and learning by-doing emphasize the importance of formal learning having a positive impact on entrepreneurship (Variyam and Kraybill, 1994). Many successful, experienced founders likely work as mentors to amateurs. In start-up-oriented nations, universities and existing businesses operate incubators and accelerators that coach and develop startup techniques such as agile methods, lean startups, consumer development, and disciplined entrepreneurship (Rise, 2011; Aulet, 2013). Eventually, existing businesses buy, compete, or work with the startups for growth and sustainability. Many studies prove that entrepreneurs perceive that universities play a critical and pivotal role in a startup's ecosystem, and they consider universities to be the center of that ecosystem (Fernandez et al., 2015; Rice, Fetters, & Greene, 2014; Schaeffer & Matt, 2016).

H1e: There is a direct positive effect between education and training (EDUTRA) and entrepreneurs' perceptions (ENPER).

Cultural support and entrepreneurs' perceptions

The social standards of a particular society or culture, including its entrepreneurs, appeal to the collective and relate to a perception of trust and security within the society. A significant field in a thriving entrepreneurship environment is the fusion of trust between business residents, neighborhood members, and social security (Beinhocker, 2007). The expectations of expatriates or immigrants being well incorporated with a resident promote globalization among the business community. To be specific, an appreciation of creative ideas and methods, race and ethnicity produce a particular ecosystem where the pull of cultures becomes a norm for entrepreneurship. Community norms reinforce entrepreneurial creativity along with high risk and failure aversion and an open approach to experimentation. A clear picture of entrepreneurs has different effects on founders' perceptions of decision-making strategies (Isenberg, 2011; Spigel, 2015). For instance, the history of an entrepreneurial culture can increase the readiness of entrepreneurs and other participants to take part in the risks of innovative entrepreneurship, while other cultural frameworks can prevent these types of behavior.

H1f: There is a direct positive effect between cultural support (SUSUP) and entrepreneurs' perceptions (ENPER).

Entrepreneurial Ecosystems and Entrepreneurial Success

The latest literature on the entrepreneurial environment includes many factors that are considered essential for entrepreneurial success. The antecedents of entrepreneurs'

success include four variables: economic, sociological, psychological, and management (Rauch & Frese, 2000; Caliendo & Kritikos, 2008; Brush, 2008). Economic factors include effective planning and strategy implementation, creativity, entrepreneurial focus, and environmental conditions (Rauch & Frese, 2000). Sociological variables are the effectiveness of skills and networks (Brush, 2008). The need for accomplishment, low risk, human resources, and self-management are psychological factors (Caliendo and Kritikos, 2008). Management factors include visioning and bootstrapping, minimal cost performance, educational support, and failure (Brush, 2008; Waske et al., 2007). Economic and social factors are relevant to the ecosystem variables in this study since an ecosystem's performance is perceived to depend on interactions between three components: individuals, organizations, and institutions. In the entrepreneurial ecosystem, the startup's owner has a crucial role as the leading player in creating and maintaining the ecosystem (Alvedalen & Boschma, 2017).

Accessible market and entrepreneurial success

The World Economic Forum (2013) concludes that market access, human capital, and finance are critical for an entrepreneurial firm's growth. An ideal market should have supporting laws and regulations, accessible human resources, and other supporting bodies. Environmental conditions, or market entry facilitation, like the availability of human capital, government policies, R&D support, university assistance, and incubators have a substantial impact on a startup's performance (Manimala et al., 2019). Stuart and Sorenson (2005) emphasized the pivotal part of local social networks that enable founders

to access capital, like knowledge, financial, and human. Governments are considered as the critical player in an accessible market. The role of the government in supporting policies on intellectual property rights (IPRs) contributes to the sustainable development of startups (Manimala et al., 2019). Creative entrepreneurs are concerned about their proprietary products being stolen; having a supportive IPR policy promotes innovative startups in the community. An open economy will drive domestic enterprises to develop to survive and compete with global firms. Besides, startups would have the ability to access foreign investment capital such as finance, human resources, and high technology in developed countries, which leads to the possibility of the entrepreneur being successful.

H2a: There is a direct positive effect between an accessible market (ACMA) and entrepreneurial success (ENSU).

Workforce and entrepreneurial success

Many business scholars suggest that enhancing the talent pool in an ecosystem is critical for startups to survive and thrive (Feld, 2012; Isenberg, 2011). The "The rise of creative classes" of Florida (2004) proposed the "3T" concept, which means technology, talent, and tolerance have been recognized as the significant factors for creativity, development, and entrepreneurship. Management talent and technology talent provide business opportunities for local founders to expand internationally (Mason & Brown, 2014). Vast economies of scale, with a large pool of talent and expertise, offer additional opportunities to innovate and expand (Feldman, 2014; Glaeser et al., 2014; Ghio et al., 2015). Since the market's size is crucial for economic growth and job creation, high labor demand and high salaries can deter individuals from

starting businesses due to higher opportunity costs. That would remove the workforce from startups and small companies that pay smaller salaries and are at high risk.

H2b: There is a direct positive effect between workforce (HUCA) and entrepreneurial success (ENSU).

Support system and entrepreneurial success

An ecosystem that attracts potential entrepreneurs requires supportive bodies such as professional services, experienced mentors/advisors, incubators/accelerators, and entrepreneurial peers' networks (Roundy et al., 2017). It is difficult for these nations to capture and maintain their resources through successful entrepreneurship without substantial public support. Mentoring is a vital relationship that varies from place to place and is one of the outstanding features of an entrepreneurial environment (Spigel, 2017). In developed ecosystems, the government supports community dealers to establish denser networks between entrepreneurs, support platforms, and activities where entrepreneurs can connect. An ecosystem tends to encourage existing entrepreneurship practices. Their success can continue to bring additional resources and facilitate entrepreneurs to develop and sustain.

H2c: There is a direct positive effect between the support system (SUSY) and entrepreneurial success (ENSU).

Regulatory framework and entrepreneurial success

A favorable ecosystem for entrepreneurial entry is positively correlated with an

efficient government (Baumol et al., 2008; Korosteleva & Belitski, 2017). Stam (2015) stated that the entrepreneurial ecosystem focuses specifically on key players in the economy, predominantly startup founders and policymakers. Private investment bodies such as angels and venture investors advise and invest in startups, receiving financial aid through R&D funding agencies or tax subsidies from government initiatives. The current regulatory system (labor regulations, tax incentives, IPRs, patents, and related red tape) determines the costs and shapes the startup's business model (Cukier et al., 2015). Cukier's study proposed the startup environment approach, which tends to resolve the business failure approach's limitations and the system failure's approach and pushes the entrepreneur closer to success.

H2d: There is a direct positive effect between the regulatory framework (REFRA) and entrepreneurial success (ENSU).

Education and training and entrepreneurial success

Educational factors such as the levels of education and work experience combined with personal characteristics help enhance an individual's entrepreneurial spirit (Boschma & Frenken, 2010). Entrepreneurs identify the startup's market by reviewing the host country's education policies to assess the abundance and quality of human resources (Wright et al., 2007). Educational institutions create cutting-edge technological advances that extend to neighboring businesses. Technology serves as a testing ground for the quality of the new entrepreneurial generations and as a magnet to attract highly skilled employees to the community (Huffman & Quigley, 2002). A startup's talents are developed through educational policies. Specifically, Bachelor of Economics

or MBA programs can integrate entrepreneurship programs for students. Hence, educational bodies in an ecosystem have an essential role in creating quality resources, including talent and technology, that help businesses survive and develop.

H2e: There is a direct positive effect between education and training (EDUTRA) and entrepreneurial success (ENSU).

Cultural support and entrepreneurial success

The cultural or social norm reflects the characteristics of each nation. The geopolitical status also affects society and establishes opportunities and obstacles for startups (Cukier et al., 2015). For example, the knowledge and perceptions of talent from failing businesses rely on a local community that does not punish failure but instead sees it as a learning opportunity. If societal perceptions punish failure too much, companies synonymous with failure may not be able to use the knowledge and skills to build up their companies again (Cardon et al., 2011). Entrepreneurial knowledge and successful experience are gained through the interactions of new entrepreneurs with more successful founders, or startup mentors consulting with other entrepreneurs, and through a broad absorption into the entrepreneurial culture of the community (Aldrich & Yang, 2014).

H2f: There is a direct positive effect between cultural support (CUSUP) and entrepreneurial success (ENSU).

Methods

Research methodology

The methodology applied for this study was mainly based on a quantitative one. Sta-

tistical, mathematical, and computational approaches were used to evaluate the theories and analyze the correlation between the variables. This approach emphasized the quantitative methods and questionnaires to generalize the research concepts, predict the future outcomes, or examine any causal correlations. Besides, the questionnaires were formulated in English and Vietnamese to minimize the respondents' inability to understand the survey and limit their confusion. All the measures relied on a 5-point Likert scale of 1 to 5, corresponding to strongly disagree, disagree, neutral, agree, and strongly agree. Hence, there was scientific evidence to conclude, and the findings would be more credible and objective.

Data collection

According to information from the Department of Planning and Investment of Tay Ninh Province in 2021, there were a total of 5,839 small and medium enterprises, accounting for 96.49% of the total number of enterprises in the area. The target population of this study was the owners or CEOs of SMEs and startups in Tay Ninh City (Vietnam), who have operated their own companies for at least five years. The surveys were sent directly to the respondents (offline collection) and also via social networks (online collection), including Facebook, Google Drive, LinkedIn, and official email. A total of 200 responses were obtained from Tay Ninh City (Vietnam), they were representative of the target audience and were intended to help the study's purpose. The convenience sampling method was utilized in this study, and as much data were collected as possible. According to Heckler (2005), the minimum subject-to-item rate of any event at 5:1 in the exploration factor analysis (EFA) is fitting.

The ratio of 10:1 was used in this analysis to guarantee its unwavering quality and validity. Therefore, with at least 13 items in the survey, 200 responses were gathered.

Data analysis

In this paper, the survey depended on eight fundamental factors utilized in this exploration. Significant concerns were posted to guarantee all the study's scales had unwavering quality and validity. Based on the purpose of this investigation, partial least squares structural equation modeling (PLS-SEM) was applied as a suitable technique for this model and allowed scholars to determine the critical factors in the framework. Hence, the structural equation model's partial least squares (PLS) technique analyzed the collected data. The data were coded, digitized, and screened for missing value before any factual investigation. Thus, the software was utilized by SmartsPLS 3.0, which displayed the statistical data.

Internal consistency reliability (CR), convergent validity (AVE), and discriminant validity (HTMT) were identified by exploratory factor analysis (EFA). A structural equation model (SEM) was used to validate the causal correlation between the variables and verify the validity of the hypotheses with the variance inflation factor (VIF), coefficient of determination (R² value), predictive relevance (Q² value), and non-parametric bootstrapping.

Results

Profile of Respondents

The demographic data of the 200 respondents are presented in Table 1 below.

Female respondents accounted for 40.5%, and male respondents accounted for 59.5%. There were 61 (30.50%) respondents between 25-34 years old, 80 (40.00%) were between 35-44 years old, , and 49 respondents (24.50%) were 45-54 years old. Among the 200 respondents, 18-24 years old and above, above 55 years old accounts for 3% and 2%, respectively. Of the respondents, 49.5% were at the university level, while postgraduate, college, and high school levels were 32%, 47%, and 22% respectively.

Measurement Model Result

Measuring the validity and reliability was the first step in the analysis procedure. PLS-SEM provided the two critical indicators to evaluate these characteristics: the factor loading and composite reliability. Each of the indicators was verified to see if it measured the expected result. First, all the factor loadings, presented in Table 2, were equal to, or greater than, 0.7, which demonstrated favorable results for the correlation coefficient

Table 1: Demographic data

Demographic Categories		Frequency	Percentage (%)
Gender	Male	119	59.5
	Female	81	40.5
Age	18-24	6	3.0
	25-34	61	30.5
	35-44	80	40.0
	45-54	49	24.5
	Above 55	4	2.0
Education level	High School	22	11.0
	College	47	23.5
	University	99	49.5
	Postgraduate	32	16.0
Income	Less than 1 billion VND	48	24.0
	2-3 billion VND	72	36.0
	4-5 billion VND	40	20.0
	More than 5 billion VND	40	20.0
Age of firms	Less than one year	43	21.5
	2-3 years	78	39.0
	4-5 years	39	19.5
	6 years	1	0.5
	More than six years	39	19.5
Fields	Industry	57	28.5
	Trading and services	72	36.0
	High technology	9	4.5
	Real estate/construction	18	9.0
	Others	44	22.0
Firms size (number of employees)	Less than ten employees	92	46.0
	11-20 employees	54	27.0
	21-40 employees	31	15.5
	More than 40 employees	23	11.5

statistics (Nenkov, 2008). Accordingly, the selected items in each component complied with the required reliability by being greater than 0.7 (the values were from 0.722 to 0.886). Second, the composite reliability (CR) was used to evaluate the construct's internal consistency, by its value of Cronbach's alpha in PLS. A composite reliability (CR) higher than 0.7 would be acceptable in terms of its internal consistency and adequate consistency (Gefen et al., 2011). The CR values of both the dependent and independent variables are presented in Table 3. The composite reliability (CR) values of the eight variables ranged from 0.815 to 0.914, greater than 0.7. Hence, the CR results indicated a strong internal consistency and a satisfactory consistency for the tested variables. The AVE of all the variables met the requirement by being greater than 0.5, as their values were from 0.588 to 0.754

The Fornell-Larcker Criteria Analysis in PLS-SEM was continuously used to test the

discriminatory validity. To assess the discriminant validity of the construct, it could share more variations with its measurements than with any other construct using the square root of AVE (Hair et al., 2014). For instance, the AVE for the latent variable regulatory framework (REFRA) was determined to be 0.754 (from Table 3). Therefore, its square root was 0.868. The result outlined in Table 4 was more significant than the correlation values in the REFRA column (0.555 and 0.311), and larger than those in the REFRA row (from 0.224 to 0.597). Similarly, the latent variables in other variables gave the same results.

As a result, the independent and dependent variables in this fulfilled the measurement model's requirements using excellent statistics for measuring reliability and validity (outer loadings, composite reliability (CR), average variance extracted (AVE), Fornell-Larcker criterion, and the Heterotrait-Monotrait ratio of correlations (HTMT)).

Table 2: Measurement model evaluation

Constructs	Item	Statements	Outer loadings	
Entrepreneurial success	ENSU1	Market share	0.757	
	ENSU2	Increase in sales		0.805
	ENSU3	Increase in profitability		0.848
	ENSU4	Increase in earnings		0.808
	ENSU5	Sustainable growth		0.684
	ENSU6	Exceeding business goals		0.764
Entrepreneurs' perceptions	ENPER2	Higher level of independence	0.820	
	ENPER3	Great opportunity to have higher income		0.755
	ENPER4	Influence of new knowledge on improvements		0.866
	ENPER5	Receive special rights or privileges in life		0.849
	ENPER6	Business brings owners closer to prosperity		0.827

Entrepreneurial ecosystem	Accessible market	ACMA1	Domestic market & large companies as Customers	0.786
		ACMA2	Domestic market – small/medium companies as customers	0.685
		ACMA3	Domestic market – governments as Customers	0.837
	Workforce (human capital)	HUCA3	Entrepreneurial company experience	0.757
		HUCA4	Outsourcing Availability	0.834
		HUCA5	Access to immigrant workforce	0.813
	Support system	SUSY1	Mentors/advisors	0.743
		SUSY2	Professional services	0.808
		SUSY3	Incubators/accelerators	0.773
		SUSY4	Network of entrepreneurial peers	0.740
	Regulatory framework	REFRA1	Ease of starting a business	0.867
		REFRA2	Tax Incentives	0.900
		REFRA3	Business-friendly legislation/policies	0.837
	Education and training	EDUTRA2	Available workforce with university Education	0.730
		EDUTRA3	Entrepreneur-specific training	0.863
		EDUTRA4	Universities promoting a culture of respect for entrepreneurship	0.852
		EDUTRA5	Role of universities in idea-formation for new companies	0.770
		EDUTRA6	Role of universities in providing graduates for SMEs	0.722
		CUSUP2	Preference for self employment	0.697
	Cultural support	CUSUP3	Success stories/role models	0.836
CUSUP4		Research culture	0.886	
CUSUP5		Positive image of entrepreneurship	0.836	

Table 3: Internal Consistency

	Cronbach's Alpha	Composite Reliability	AVE
Entrepreneurial perception	0.882	0.914	0.680
Entrepreneurial success	0.870	0.902	0.607
Accessible markets	0.678	0.815	0.596
Workforce (human capital)	0.722	0.844	0.643
Support system	0.770	0.851	0.588
Education and training	0.849	0.892	0.623
Regulatory framework	0.837	0.902	0.754
Cultural support	0.836	0.888	0.667

Table 4: Fornell-Larcker Criterion

	ACMA	CUSUP	EDUTRA	ENPER	ENSU	REFRA	SUSY	HUCA
ACMA	0.772							
CUSUP	0.371	0.816						
EDUTRA	0.482	0.602	0.790					
ENPER	0.425	0.336	0.558	0.824				
ENSU	0.460	0.288	0.383	0.547	0.779			
REFRA	0.375	0.597	0.577	0.224	0.360	0.868		
SUSY	0.499	0.491	0.645	0.507	0.535	0.555	0.767	
HUCA	0.359	0.318	0.529	0.494	0.467	0.311	0.545	0.802

Structural Model’s Result

The variance inflation factor (VIF) was utilized to explore the issue of multicollinearity. All the VIF values should be less than 5.0 (Hair et al., 2016). The results of the VIF (from 1.250 to 2.957) proved that collinearity among the predictor constructs was not a problem; thus, the analysis could be continued. The coefficient of determination, the predictive relevance, and the effect size were used to test the model’s fit (Hair et al., 2014).

Coefficient of determination (R2 Value)

In terms of the PLS analysis, the R2 values were like those obtained from a multiple regression analysis (Janadari et al., 2016). The model's sophistication and testing discipline determined the appropriate standard value for R2. The R2 values of 0.25, 0.5, and 0.75, respectively, suggested a poor, moderate, or significantly endogenous model (Hair et al., 2014). As a result, the R2 values in this study were considered to be of moderate effect sizes, with the R2 of entrepreneurial perception (ENPER) and entrepreneurial success (ENSU) respectively being 0.428 and 0.457.

Predictive relevance (Q2 value)

A Q2 value greater than zero for an absolute reflective dependent variable would

demonstrate the path model's predictive validity for this construct (Chin, 2010). The Q2 values in this study ranged from 0.263 to 0.251, which were significantly higher than zero. As a result, the model's certification was met with a high degree of predictive relevance.

Effect size (f2)

According to Hair et al., (2014), $f^2=0.02$, $f^2=0.15$, $f^2=0.35$ respectively implies a small, medium, and significant effect of the dependent variable on the dependent variable. The findings demonstrated that omitting the cultural support variable had a minor influence on the exogenous latent variable. It would have had a medium impact on the exogenous endogenous variable if the following variables were omitted: accessible market, education and training, entrepreneurs' perceptions, regulatory framework, support system, and workforce.

The next step was to examine the importance of the path coefficients using bootstrapping, as presented in Table 5. Accordingly, Hypothesis 2 in this analysis was valid, as shown by the clear, direct positive effects of ENPER on ENSU. The entrepreneurial environment element had a moderate effect on ENPER and ENSU, with P values near 0.000, except for the CUSUP variable. Noticeably, the path coefficients between EN-

Table 5: Path Coefficient and Hypotheses Testing

Relationship	Path Coefficients	P - Values	Decision
ACMA -> ENPER	0.152	0.019	Supported
ACMA -> ENSU	0.185	0.002	Supported
CUSUP -> ENPER	0.043	0.601	Rejected
CUSUP -> ENSU	-0.044	0.558	Rejected
EDUTRA -> ENPER	0.363	0.000	Supported
EDUTRA -> ENSU	-0.235	0.023	Supported
ENPER -> ENSU	0.371	0.000	Supported
REFRA -> ENPER	-0.242	0.001	Supported
REFRA -> ENSU	0.189	0.026	Supported
SUSY -> ENPER	0.202	0.007	Supported
SUSY -> ENSU	0.229	0.019	Supported
HUCA -> ENPER	0.198	0.003	Supported
HUCA -> ENSU	0.172	0.043	Supported

PER and ecosystem variables were determined to be $\beta = 0.152$ (ACMA), $\beta = 0.363$ (EDUTRA), $\beta = -0.242$ (REFRA), and $\beta = 0.202$ (SUSY). Notably, the direct effects of ENPER on ENSU were presented as $\beta = 0.371$. Additionally, Hypothesis 1 was also supported by the statistics that there was a path coefficient between ENSU and the ecosystem as follows: ACMA ($\beta = 0.185$), EDUTRA ($\beta = -0.235$); REFRA ($\beta = 0.189$), SUSY ($\beta = 0.229$), HUCA ($\beta = 0.172$). Figure 1 demonstrates the path analysis's value and the influence of the variables.

Discussion

The suggestive statistics in this report demonstrate the relationships between the entrepreneurial ecosystem, the entrepreneurs' perceptions, and startup success. Specifically, nine hypotheses had been confirmed, two that have been rejected, and two that provided opposing results. The findings of this study contribute to the literature review on entrepreneurship by illustrating that the role of the ecosystem, such as providing accessible markets, education and training, and hu-

man capital, such as entrepreneurial talent, is critical in enhancing entrepreneurship in society, particularly in terms of its economic, educational, and other aspects. The ecosystem's elements positively affect the founders' perceptions and positively influence entrepreneurial success. Furthermore, the researcher also found a positive correlation between the entrepreneurs' perceptions and businesses' success. Ecosystem-building policy proposals should focus on impacting the perception that leads to startup success. The ecosystem practices in this study are considered to have a critical role in creating a supportive entrepreneurship ecosystem in society, which reduces the risk of new ventures failing by influencing their founders' perceptions.

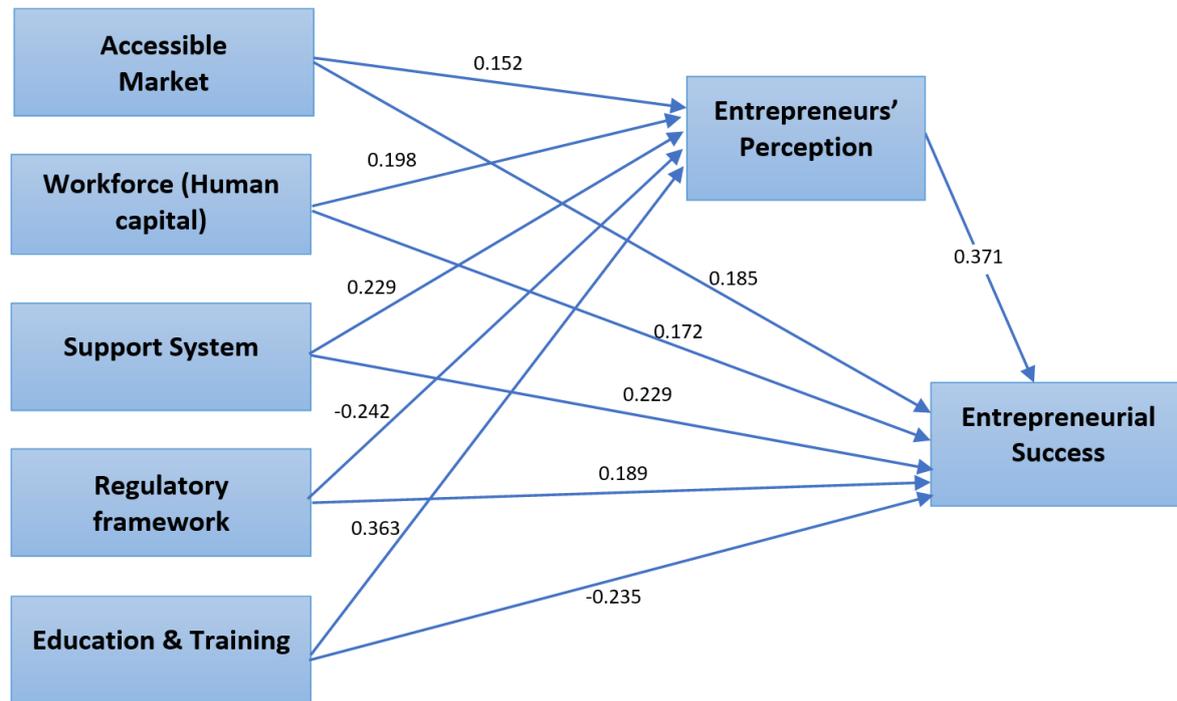
Based on the research's results, education and training substantially impact entrepreneurs' perceptions, more so than the other environmental factors do. The practical entrepreneurial ecosystem pillars have an indirect effect on the success of SMEs, which need to benefit from the ecosystem. Depending on each country, this determines what aspect they want to focus their resources on. If they intend to enhance the percep-

tion of entrepreneurs, the national leaders should place more emphasis on education in the community. To be more specific, the perception of potential entrepreneurs is formed through professional and formal education and training processes, including significantly higher education levels such as a Bachelor of Economics or MBA programs that can integrate entrepreneurship. Universities need to provide essential business knowledge such as law, taxation, and accounting as support for the business founders' workplaces. Previous researchers also agree on the importance of education in a startup's ecosystem, where successful entrepreneurs can act as coaches to guide or inspire potential entrepreneurs (Rise, 2011). Amateur entrepreneurs can learn critical perception from the stories their coaches impart, thereby reducing the possibility of failure when running a startup (Bergal-Mirabent et al., 2012). Universities and existing companies can run incubators and accelerators using agile methods, lean startups, customer development, and disciplined entrepreneurship to train and guide new startups. SMEs can access these organizations' capital, human resources, knowledge, and networks for sustainable development (Blank, 2013).

The next aspect that administrators should consider is the support system, which significantly impacts perception in the research's results. The marketplace, with its wide range of supportive bodies such as incubators and accelerators, can nurture potential entrepreneurs and attract massive venture capital sources (Roundy et al., 2017). Vietnam's prime minister stated that the "government should consider support systems as the top priority, as a practical support plan. To build a financial mechanism, the innovation center promotes the role of a private investment fund, research into raising capital for

startups, investment funds, including startup investment funds" (An & Thanh, 2020). The supportive organization connects successful founders and potential entrepreneurs, creating a dense network of startups. In addition, seminars, talk shows, and startup competitions are organized to attract, discover, and nurture young entrepreneurs. Government plays a critical role in creating the IPRs, and technology transfer policies to promote innovative startups in the community. The current trend in national innovation policy structures is the growing focus on a more multifunctional and multi-disciplinary approach (Acs et al., 2014), including the evolution of florid technology transfers, with the viewpoint of entrepreneurship, economics, and management based on the role of the entrepreneurial ecosystem and the processes of how it is nurtured, adapted, and sustained (Audretsch et al., 2015). Supportive bodies need to play a pioneering role in providing business talent, good quality resources with useful mindsets, skills, and experience for sustainable growth for young entrepreneurs. Hence, education and support systems should be encouraged to invest more than other ecosystem factors by administrators, to impact entrepreneurial perceptions positively. Other ecosystem factors such as human capital and the accessible market should be dealt with after these two critical factors are invested in, and implemented, effectively.

Although the hypotheses posed in the literature review show that a regulatory framework and education & training positively impact entrepreneurs' perceptions and success in developed countries, the reality in Vietnam (surveyed country) has the opposite result. It can be explained that Vietnam is a developing country, and a startup-oriented economy has received attention from the government in recent years, but the policy and education



system has not been optimized as yet, leading to the negative perception of entrepreneurs. Besides, Vietnam is a country that operates a socialist-oriented market economy, so policy formulation differs from the research countries in the literature review. Therefore, future research could investigate startup policies in countries with a socialist-oriented market economy for a more solid understanding.

Conclusion

The main objective of the research is to determine the significant determinant of the entrepreneurial ecosystem and startup founders' perceptions as they relate to business success. The findings of this study show empirical evidence to support many previous studies by providing a greater understanding of the impact of the ecosystem on entrepreneurs' perceptions and entrepreneurial success. According to the study's results, the following environmental elements significantly impact ENPER and ENSU: accessible industry, education and training, the regula-

tory structure, support infrastructure, and the workforce. The positive relationships are identified, to encourage management-level recommendations. The ecosystem's aspects should be carefully considered. With this emphasis, governments, university leaders, incubator entities, and entrepreneurs worldwide can practice entrepreneurial ecosystems effectively. Finally, productive entrepreneurial success and fruitful results from ecosystem activities are considered to be essential factors in improving entrepreneurship in the future.

Inconsistent with the previous studies, this research fulfilled the aim of contributing to the entrepreneurship literature by evaluating theories in the context of Vietnam, a developing Southeast Asian country that follows a socialist-oriented market economy. The findings provide empirical evidence to support numerous theories, allowing for a better understanding of the ecosystem's effects on founder's perceptions and entrepreneurial success. The findings show a valid link

between the ecosystem's aspects, entrepreneurs' perceptions, and startup's success. Despite having practical recommendations and meaningful data, this study mainly describes the circumstances in Vietnam. It would be

more meaningful and valuable if the literature is developed in other countries, especially other socialist-oriented market economies. Sustainable growth, in general, requires involvement at the international level.

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