



Entrepreneurs' Risk Attitudes: A case of Vietnam

Thuong Nguyen

Department of Business Administration, Dai Nam University, No. 1 Xom Street, Phu Lam Ward - Ha Dong District, Hanoi 100000, Vietnam

ABSTRACT

Entrepreneurship promotion plays an important role in a country's socio-economic development. Policies to facilitate the citizens' entrepreneurship are focused on by both developing and developed countries. The success of a business depends on entrepreneurs who make decisions about the growth strategy for the business. This study aims to investigate the common personality traits, optimism, pessimism, and risk attitude of Vietnamese entrepreneurs. The study quantitative methods to describe a sample of 167 Vietnamese entrepreneurs. The survey findings show that Vietnamese entrepreneurs favor stability and are reluctant to make high-risk decisions. While they are willing to accept some risks, they avoid high-risk breakthroughs. It also reveals that most Vietnamese entrepreneurs are quite young resulting in different personality traits. The entrepreneurs are open, extroverted, agreeable, pretty conscientious in their work, and quite neurotic. The Vietnamese entrepreneurs are generally more optimistic than pessimistic. The results of the study are an important reference for policy researchers, investors and entrepreneurs in Vietnam.

Keywords: Big - five, optimism, pessimism, risk attitudes, entrepreneurs, personality traits

1. Introduction

Entrepreneurship promotion plays an important role to a country's socio-economic development. Recently, many policies to facilitate the citizens' entrepreneurship have been focused by both developing and developed countries. The rise of entrepreneurship in Vietnam started strongly since 2016 and was known as the year of "Vietnamese National Start-up". According to Ministry of Planning and Investment (2022), in the period 2016 - 2020, the number of Vietnamese enterprises increased by 1.6 times as in the period 2011- 2025. General Statistics Office (2024) reported that in 2023, the number of businesses entering and re-entering the market continued at the milestone of 217706 businesses, an increase of 4.5% compared to the same period in 2022. At the same time, the number of businesses temporarily suspending operations was 89100 businesses, an increase of 20.7% compared to 2022; 65500 businesses stopped operating while waiting to complete dissolution procedures, an increase of 28.9%; 18000 businesses completed dissolution procedures. Vietnam is among the 20 countries with the lowest ability to implement business plans with less than 10% of successful startups. Although entrepreneurship is prominent, the risk is very high due to the market instability, complexity of capital management; and many entrepreneurs have yet to confirm the importance of business risk management.

Entrepreneurs are responsible for making decisions and understanding risk management, necessitating accurate risk identification and assessment. Their choices influence the business's creation, growth, and survival. However, each individual is unique, particularly in terms of personality, which affects behavior and perception. This individuality means that personal perceptions can impact risk-taking. In essence, personality traits can forecast the risk attitudes of decision-makers (Beyer et al., 2015). Risk attitude refers to an individual's mindset that can lead to either positive or negative consequences in decision-making (Hillson and Murray-Webster, 2007). The term of risk attitude is closely tied to how a person perceives risk, whether they see it as an opportunity or a threat. Additionally, risk attitude reflects an individual's perception of uncertainty. In the study of Lee and Foo (2020), personality traits as mentioned as Big five - a multidimensional approach to identify the characteristics by measuring openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism; and investigated that personality traits has relationships to risk attitude of managers in construction industry in Malaysia - a developing country as Vietnam. However, there is a limitation in term offormally researching about personality traits, risk attitudes and the relationship between personality traits and risk attitudes in Vietnamese business context.

Optimism and pessimism - expect a positive or negative feature. A person can be optimistic about a particular area of life but pessimistic about other aspects in future. An individual balancing between optimism and pessimism is considered as a successful person. Optimism encourages a person to take uncalculated financial risks. On the other hand, a person worrying too much about failures and dangers tends to avoid and have passive behavior (Hecht, 2013). Like all other human experiences, the basic mental attitudes of optimism and pessimism are closely linked to distinct physiological processes. The optimism and pessimism is reflected in people's thoughts, feelings, decisions, and behaviors. Therefore, optimism and pessimism are considered as important factors to study about the entrepreneurs' risk attitudes.

Each country has a different economic, social and cultural situation. The personality characteristics of business people are different based on the different contexts. Therefore, the objectives of this study were to characterize the general personality of young Vietnamese entrepreneurs.

2. Literature review

2.1 Risk management in business

Enterprise risk management encompasses the methods and processes utilized by business institutions to handle all risks and seize opportunities to achieve their objectives (Wu & Olson, 2009). Risk management involves identifying, analyzing, and accepting or minimizing uncertainty in investment decision-making. It can also be described as managing uncertainty related to threats. Sadgrove (2016) identifies two types of business risks. The first is traditional, dangerous risks, such as fire, pollution, or fraud, typically mitigated through insurance. The second type includes business or opportunity risks, which arise when a company implements new plans, launches new products, or acquires other companies. Incorrect forecasts in these areas prompt companies to eliminate risks, which is crucial for innovation and business success. Eliminating all potential hazards prevents value creation.

Risk is also a future event resulting from current actions. Therefore, managers must consider various options and evaluate their outcomes. Effective risk management helps a company avoid costs, disruptions, and dissatisfaction. It also aids in deciding which risks are worth taking and which should be avoided. Risk management practices can be customized to meet the specific needs of each business, educate employees, and deepen their understanding of corporate risk. This approach transforms managers into more effective business people, enhancing overall efficiency. Risk management tools might include innovative financial solutions that combine finance, insurance, and capital market strategies (Baranoff, 2004).

2.2. Risk attitude

The business environment is notoriously risky, especially for those pursuing high-growth opportunities. Knight (1921) proposed that entrepreneurs distinguish themselves by their ability to manage business risk and uncertainty, perceiving risks and capitalizing on opportunities. Kihlstrom & Laffont (1979) developed a theoretical model predicting that risk-averse individuals are more likely to become employees, whereas risk-takers are inclined to become entrepreneurs. A Westbrook et al. (2014) summarized the standard expected utility model, which ties risk preference to utility versus wealth. Most people are risk-averse, preferring stable wages, while a small percentage are attracted to the potential large returns from risky ventures such as trading.

Risk attitude is the evaluation of situations with intent, either favorably or unfavorably, in an appropriate manner. Rohmann (2005) identified risk bias and risk aversion as key characteristics of risk attitude, while Hillson & Murray-Webster (2007) considered various factors. Risk is not stable or homogeneous; people tend to have sector-specific attitudes toward physical, financial, and social risks. Weber et al. (2002) categorized risk scenarios into five areas—ethical, financial, safety, recreational, and social—creating the domain-specific risk attitudes (DOSPERT) scale, influenced by risk-taking, risk perception, and expected benefits. However, the reliability of this scale is debated (Lönnqvist et al., 2015).

Risk attitude varies across different situations and types of risk. Individuals assess risks uniquely, not consistently across sectors, and their motivation for risk tolerance varies by situation. Pearson et al. (2002) found that respondents did not consistently avoid or seek risk across all areas and that gender influences risk aversion, with women generally being more risk-averse than men, except in social risks. Gender differences and the context of risk-taking affect how activities are perceived through the benefits of risk. Additionally, Murray-Webster & Hillson (2008) grouped the factors driving risk awareness into three categories, which interact to form a triad of effects influencing any given situation.

Risk attitude in this context is described as either risk-taking or risk-aversion. The concept seeks to determine whether an individual's personality influences their acceptance of business risk conditions and how these characteristics impact outcomes.

2.3. Big five personality traits

The Big Five is a comprehensive framework for character identification, measuring openness, conscientiousness, extroversion, agreeableness, and neuroticism (OCEAN). This model, initially identified by Fiske in 1949, was further developed by Norman (1967) and McCrae & Costa (1987). According to Rauch (2014), these traits significantly influence career choices and job performance. John et al. (2008) describe the five major traits as follows:

Openness to experience: Reflects the breadth, depth, originality, and complexity of an individual's mental and experiential life.

Conscientiousness: Indicates behavioral control and is influenced by the environment to support task- and goal-oriented behavior.

Extroversion: Encompasses sociability, assertiveness, and positive emotions, implying a positive approach to social interactions.

Agreeableness: Characterized by traits such as altruism, kindness, dependability, and humility.

Neuroticism: Defined by emotional instability, with tendencies towards anxiety and stress.

Personality traits are not easily observed and must be interpreted through measurable responses. Zhao & Seibert (2006) found that entrepreneurs tend to score high on openness (O+), conscientiousness (C+), and extroversion (E+), but lower on agreeableness (A-) and neuroticism (N-). However, some

studies have produced different results. For instance, a survey of 218 entrepreneurs and managers in a major Canadian city revealed that entrepreneurs were significantly less conscientious and agreeable (Envick & Langford, 2000). The next section will examine these five characteristics of the Big Five model in detail.

Openness

Openness is the most debated factor among the Big Five personality traits (McCrae & John, 1992). The common perceptions about what defines openness are often inconsistent (Funder & Sneed, 1993). Researchers have posited that entrepreneurs are attracted to the ever-changing environment and new challenges in the business world. Those who thrive in such environments are typically those who develop innovative solutions, business models, and products. Thus, it is hypothesized that the entrepreneurial environment and job demands favor individuals who are more open to experience.

McCrae & Costa Jr. (1997) explored interpersonal differences in openness, categorizing them based on influences such as culture and cognitive ability. Openness is distinct from skill and knowledge; it involves an individual seeking and appreciating new experiences for personal benefit. Traits of open-minded individuals include curiosity, creative thinking, and a willingness to embrace unique ideas and values. These individuals often experience intense emotions. Conversely, those who score low on openness tend to have a conventional outlook, exhibit dogmatic and rigid beliefs, and are less emotionally reactive (Widiger & Costa, 2012).

Conscientiousness

Conscientiousness represents a facet of ego and enduring strength, commonly associated with terms like willpower, initiative, and responsibility. Costa Jr. et al. (1991) describe conscientiousness as encompassing both restrictive and proactive elements. The most apparent aspect is an individual's ambition and job commitment, while the downside is seen in moral prudence and caution. Proposed components of conscientiousness include competence, order, seriousness, ambition, self-discipline, and thoughtfulness (Costa Jr. et al., 1991). This dimension illustrates the level of organization, resilience, control, and goal-driven behavior. People who score high in conscientiousness are typically organized, independent, hardworking, self-controlled, careful, ambitious, and persevering. On the other hand, those with low scores tend to be aimless, lazy, careless, disorganized, and hedonistic (Widiger & Costa, 2012).

Conscientiousness combines achievement, motivation, and confidence. Collins et al. (2004) concluded that entrepreneurs are more likely to succeed, suggesting that highly motivated individuals are drawn to environments where success is closely tied to their efforts, unlike large institutional settings where success or failure is less dependent on personal effort.

Conscientiousness is one of the most valued personality traits, along with agreeableness. These traits represent traditional views of 'good' versus 'evil' and 'strong will' versus 'weak will.' Conscientiousness merges aspects of organization and behavior, influenced by conscience or diligence (Widiger & Costa, 2012). Previous studies have considered conscientiousness as a means of controlling impulsive behavior (Lee & Foo, 2020).

Extraversion

Extraversion is a personality trait that gauges how active, talkative, and enthusiastic a person is (Costa Jr. & McCrae, 1992). People who are highly extroverted tend to be socially active, talkative, people-oriented, optimistic, cheerful, and likable. On the other hand, individuals with low extraversion scores are more reserved, independent, and quiet, but not necessarily socially hostile. It's important to note that introverts are not pessimists; they simply have less interest in spiritual experiences compared to extroverts (Widiger & Costa, 2012).

Extraversion is evident in individual differences through patterns of feelings, actions, thoughts, and goals, akin to other personality traits. There are three primary elements of extraversion that have been studied: first, it is seen as a fundamental aspect of personality, crucial for describing various behaviors and a major area of focus in personality research. Second, extraversion predicts efficiency and well-being across multiple domains, such as cognitive performance, social engagement, and socioeconomic status. Lastly, extraversion is a good predictor of risk-taking and resilience in various mental forms (Leary & Hoyle, 2009).

Researchers suggest that entrepreneurs typically exhibit higher levels of extraversion because they need to sell their ideas to partners, employees, customers, or investors (Kerr et al., 2017). However, Envick & Langford (2000) propose that entrepreneurs might establish small businesses to avoid bureaucratic environments that require constant mediation. Zhao & Seibert (2006) found no significant difference in the level of extraversion between entrepreneurs and related groups, such as managers.

Agreeableness

While extraversion concerns the preferred level of social interaction, agreeableness deals with the quality of interpersonal behavior. It affects how individuals view those around them and shapes their attitudes and originality. According to Costa Jr. et al. (1991), traits that define agreeableness include trust, straightforwardness, altruism, compliance, modesty, and tenderness. Entrepreneurs are typically thought to have low agreeableness, as they are less concerned with pleasing others and more focused on their roles as future business leaders (Kerr et al., 2017).

People with high agreeableness strive to be pleasant and likable and expect the same from others. Instead of seeing agreeableness as just a factor that influences mood, it should be considered an equal partner in social interactions. The presence of individuals with different levels of agreeableness can

significantly change social dynamics (Leary & Hoyle, 2009). Those with low agreeableness tend to be skeptical, rude, irritable, manipulative, hostile, and cruel (Widiger & Costa, 2012).

Agreeableness moderates various types of individual behavior. When individuals are motivated to maintain good relationships, those with high agreeableness are more likely to engage in positive and constructive behaviors. Research has shown that these individuals are crucial in conflict resolution, cooperation, helping others, and reducing prejudice (Leary & Hoyle, 2009).

Neuroticism

Neuroticism is defined as the degree of instability in emotional regulation within an individual. Those with high neuroticism scores are prone to negative emotional states, including anger, hostility, depression, anxiety, and mood swings. This trait correlates with heightened susceptibility to stress, increased self-awareness, strong desires, and difficulty coping with frustration when unable to act on impulses (Widiger & Costa, 2012). Individuals with high levels of neuroticism often exhibit poor stress responses, perceiving normal situations as risky and experiencing minor disappointments as overwhelming. They tend to be self-conscious, shy, and struggle to manage their desires or impulses during periods of sadness. Nonetheless, neuroticism is now recognized as a well-defined and fundamental aspect of cognitive function (Widiger & Costa, 2012).

Entrepreneurs are generally thought to exhibit low levels of neuroticism, as the confidence required to take business risks is incompatible with high neurotic tendencies (Zhao & Seibert, 2006). Bolger & Schilling (1991) investigated the link between neuroticism and distress, finding that individuals with high neuroticism take longer to recover from daily stressors compared to those with lower levels. Factors such as the availability of social support and the presence of chronic stress significantly influence recovery rates; those receiving less support tend to show prolonged effects of stressors (Bolger & Schilling, 1991).

Optimism and Pessimism

Optimism and pessimism, reflecting positive or negative future expectations, are not simply opposing concepts but rather exist along a spectrum with varying degrees (Hecht, 2013). Neurophysiological research suggests that these two modes of thinking are associated with distinct brain hemispheres. Positive self-esteem and optimistic attitudes, characterized by a focus on the positives and a hopeful outlook, are linked to activity in the left hemisphere, whereas a negative perspective, dwelling on problems, low self-esteem, and pessimism are tied to activity in the right hemisphere (Hecht, 2013). Kahneman (2011) emphasizes the importance of finding a balance between optimism and pessimism for success. While excessive optimism can lead to reckless financial decisions and overconfidence, excessive pessimism can result in avoidance of risks and missed opportunities. Achieving success requires navigating between these extremes.

3. Methodology

A questionnaire was used to explore the connection of research factors in the practices. Before collecting the preliminary data, the author conducted a pilot test with the aim of reviewing a questionnaire by using 35 offline participants. The data was collected through online surveys. 167 young Vietnamese entrepreneurs have participated in fully answering the questionnaire. The structured questionnaire includes four major sections for data collection: The first section has 20 items about the Big Five inventory adapted from (John and Srivastava, 1999), the second part consists of 8 items related to optimism and pessimism (followed Extended Life Orientation Test (ELOT), the third contains 9 items exploring about risk attitudes of respondents adapted (Weber et al. 2002), and the last section focuses on collecting demographic information on respondents, including their business fields, gender, and education.

After that the data were analyzed by descriptive statistics including mean, standard deviation and distribution test.

4. Data analysis and Discussion

4.1. Sample Profile

The survey participants consist of individuals from Small and Medium Enterprises (SMEs) operating in various sectors including Trading (31.7%, n=53), services (34.1%, n=57), manufacturing (13.2%, n=22), and other sectors (21%, n=35). All respondents are business owners who directly oversee decision-making processes critical for their business's growth and sustainability.

Regarding age demographics, the young Vietnamese entrepreneurs occupy nearly 70%: under 25 (30.5%, n=51), from 25 to under 30 (37.1%, n=62), from 30 to under 35 (16.8%, n=28), and from 35 and above (15.6%, n=26). There exists a notable gender disparity, with males comprising 52.7% (n=88) and females 47.3% (n=79) of the sample.

Moreover, the majority of participants are married (74.9%, n=125), followed by single individuals (22.8%, n=28), divorced or other marital statuses representing a minimal proportion of 2.4% (n=4). The duration of their business tenure is categorized as follows: less than 1 year (12.6%, n=21), from 1 to under 4 years (36.5%, n=61), from 4 to less than 6 years (18.6%, n=31), and 6 years and more (32.3%, n=54).

Table : Sample profile

Demographic	Classification	Proportion	
		n	%
Genders	Female	88	52.7
	Male	79	47.3
Married status	Single	38	22.8
	Married	125	74.9
	Divorce	2	1.2
Business field	Other	2	1.2
	Services	57	34.1
	Trading	53	31.7
Busiess start	Manufacturing	22	13.2
	Others	35	21.0
	Under 25 years old	51	30.5
Length of business	From 25 to under 30 years old	62	37.1
	From 30 to under 35 years old	28	16.8
	From 35 years old and above	26	15.6
Length of business	Less than 1 year	21	12.6
	From 1 to less than 4 years	61	36.5
	From 4 to less than 6 years	31	18.6
	From 6 years and above	54	32.3

"N = sample size, n= Frequency, % = percentage of sample"

4.2. Descriptive Statistics

Table 4. 2: Descriptive analysis

Variable	Items	Mean	Std. Deviation
Openness	I come up with new ideas	3.52	.79
	I am curious about many different things	3.49	.82
	I am inventive	3.49	.83
	I have an active imagination	3.42	.85
	Overall	3.48	
Conscientiousness	I do a thorough job	3.40	.95
	I am a reliable worker	3.46	.92
	I always persevere until the task is finished	3.41	.89
	I do things efficiently	3.35	.87
	Overall	3.40	
Extraversion	I am talkative	3.44	.73
	I am full of energy	3.32	.66

	I generates a lot of enthusiasm	3.46	.70
	I am outgoing and sociable	3.52	.73
	Overall	3.44	
Agreeableness	I am helpful and not selfish towards others	3.43	.98
	I have a forgiving nature	3.35	1.04
	I am generally trusting	3.43	1.06
	I am considerate and kind to almost everyone	3.56	.97
	Overall	3.44	
Neuroticism	I can get depressed and blue	3.02	1.04
	I can be tense	3.02	1.02
	I worry a lot	3.18	1.35
	I can get moody easily	3.05	1.05
	Overall	3.07	
Optimism	In uncertain time, I usually expect the best	3.37	.88
	When there's a will, there's a way	3.44	.82
	When I undertake something new I expect to success	3.45	.88
	In general, things turn out alright in the end	3.42	.80
	Overall	3.42	
Pessimism	If something can go wrong for me, it will	3.21	.99
	Things never work out the way I want them to	3.21	1.11
	I make decision on my own. I can pretty much on the fact that it will turn out to be a poor me	3.25	1.01
	Give me 50/50 odds and I will choose the wrong answer every time	3.19	.97
	Overall	3.21	
Risk Attitudes	I am more likely to illegally copy a piece of software	2.96	1.08
	I spend on money impulsively without thinking about the consequences	3.05	1.12
	I ignore some persistent physical pain by not going to the doctor	3.13	1.08
	I bet a day's income at the lottery.	3.10	1.17
	I disagree with an authority on a major issue.	3.14	1.03
	I drive a car without wearing a seat belt.	3.06	1.11
	I choose a career that I truly enjoy over a more secure one.	3.11	1.09
	I invest 10% of my annual income in a new business venture.	3.10	1.12
	I move to a city far away from my extended family.	3.26	1.04
	Overall	3.10	

Table 4.2 displays the descriptive statistics results, with variable values ranging from a minimum of 1 (strongly disagree) to a maximum of 5 (strongly agree). It includes the mean and standard deviation of the watched items, providing insights into the general personality traits and risk attitudes of Vietnamese entrepreneurs. In the context of a market economy and global integration, these entrepreneurs often face risks. They cannot thrive in a competitive business environment without the courage to embrace these risks. The survey findings show that Vietnamese entrepreneurs favor stability and are reluctant to make high-risk decisions (the mean of risk attitude is 3.10). While they are willing to accept some risks, they avoid high-risk breakthroughs.

Additionally, the survey reveals that most Vietnamese entrepreneurs are quite young resulting in different personality traits. The entrepreneurs are more open (mean value is 3.48), extroverted (mean value is 3.44), agreeable (mean value is 3.44), pretty conscientious in their work (the mean value is 3.4) and quite neurotic. The Vietnamese entrepreneurs are generally more optimistic than pessimistic, which is essential for making decisions that affect their businesses' survival and growth. This optimism is reflected in an average score of 3.42 for optimism, compared to 3.21 for pessimism, as shown in the table.

Skewness and kurtosis were also tested to measure symmetrical distribution. For a normal distribution skewness = 0: it's absolutely symmetrical and kurtosis = 0 too: it's neither peaked ("leptokurtic") nor flattened ("platykurtic"). So if we sample many values from such a distribution, the resulting variable should have both Skewness and Kurtosis close to zero. The results obtained from the scales all have Skewness and kurtosis indexes close to 0. This means that statistics have a symmetrical distribution, and have no outliers.

5. Implications and limitations

The result of this study has significant implications for young entrepreneurs, policymakers, and investors in Vietnam. These insights will be valuable for policymakers in crafting policies related to entrepreneurship and investment, offering sound financial advice, and guiding start-ups on the appropriate level of risk to undertake. The study reveals that Vietnamese entrepreneurs are willing to make high-risk decisions to achieve their objectives. By understanding the general personality traits and risk attitudes of entrepreneurs, policy researchers can develop more effective policies. As discussed, this study focuses on entrepreneurs who own businesses in Vietnam, particularly those operating small and medium-sized enterprises (SMEs), a crucial economic sector, these entrepreneurs exhibit a wide range of personalities. To help Vietnamese businesses succeed and compete with foreign firms, authorities need to comprehend their personalities and cautious risk attitudes.

The paper contains several limitations which may be suitable for further study in the future. This study used descriptive statistics test only, therefore in the future, researchers should apply SEM test to understand more about the Vietnamese entrepreneurs' risk attitudes and relationships with their personalities. Furthermore, the participants of this study were entrepreneurs who own small and medium businesses. The result can not be representative of all Vietnamese entrepreneurs. In other words, it is only suitable for Therefore, future studies should separately synthesize the general personality characteristics of small and medium-sized business owners with groups of large business owners or other groups with similar strength as the management group.

REFERENCES

- Ajzen, I. (2005). *Attitudes, personality, and behavior*. McGraw-Hill Education (UK).
- Astebro, T., Herz, H., Nanda, R., & Weber, R. A. (2014). Seeking the roots of entrepreneurship: Insights from behavioral economics. *Journal of Economic Perspectives*, 28(3), 49–70.
- Baranoff, E. G. (2004). Risk management: A focus on a more holistic approach three years after September 11. *Journal of Insurance Regulation*, 22(4), 71–82.
- Bengtsson, O., & Ekeblom, D. (2014). *The bright but right view? A new type of evidence on entrepreneurial optimism*.
- Beyer, A. R., Fasolo, B., De Graeff, P. A., & Hillege, H. L. (2015). Risk attitudes and personality traits predict perceptions of benefits and risks for medicinal products: a field study of European medical assessors. *Value in Health*, 18(1), 91-99.
- Bolger, N., & Schilling, E. A. (1991). Personality and the problems of everyday life: The role of neuroticism in exposure and reactivity to daily stressors. *Journal of Personality*, 59(3), 355–386.
- Collins, C. J., Hanges, P. J., & Locke, E. A. (2004). The relationship of achievement motivation to entrepreneurial behavior: A meta-analysis. *Human Performance*, 17(1), 95–117.
- Costa Jr, P. T., McCrae, R. R., & Dye, D. A. (1991). Facet scales for agreeableness and conscientiousness: A revision of the NEO Personality Inventory. *Personality and Individual Differences*, 12(9), 887–898.
- Envick, B. R., & Langford, M. (2000). The five-factor model of personality: Assessing entrepreneurs and managers. *Academy of Entrepreneurship Journal*, 6(1), 6–17.
- Funder D, Sneed C. (1993). Behavioral manifestations of personality: an ecological approach to judgmental accuracy. *J Personality Soc Psychol*. 64(3): 479–490.

- Feng, Y., & Rauch, J. E. (2015). *The Impact of Entrepreneurial Risk Aversion on Wages in General Equilibrium*. National Bureau of Economic Research.
- General Statistics Office. (2024). *A picture of the business registration situation in 2023 and forecast of business trends in 2024*. Retrieved January 6, 2024, from <https://www.gso.gov.vn/du-lieu-va-so-lieu-thong-ke/2024/01/buc-tranh-ve-tinh-hinh-dang-ky-doanh-nghiep-nam-2023-va-du-bao-xu-huong-doanh-nghiep-trong-nam-2024/>.
- Hecht, D. (2013). The neural basis of optimism and pessimism. *Experimental Neurobiology*, 22(3), 173.
- Hillson, D., & Murray-Webster, R. (2007). *Understanding and managing risk attitude*. Gower Publishing, Ltd.
- John OP, Srivastava S. (1999). The Big-Five trait taxonomy: history, measurement, and theoretical perspectives. In: Pervin LA, John OP, editors. *Handbook of personality: theory and research*. Vol. 2. New York: Guilford Press; p. 102–138.
- Kahneman, D. (2011). *Thinking, Fast and Slow*, Farrar, Straus and Giroux, ISBN 9780374275631. *Reviewed by Freeman Dyson in New York Review of Books*, 40–44.
- Kerr, S. P., Kerr, W. R., & Xu, T. (2017). *Personality traits of entrepreneurs: A review of recent literature*.
- Kihlstrom, R. E., & Laffont, J.-J. (1979). A general equilibrium entrepreneurial theory of firm formation based on risk aversion. *Journal of Political Economy*, 87(4), 719–748.
- King, L. A. (1995). Wishes, motives, goals, and personal memories: Relations of measures of human motivation. *Journal of Personality*, 63(4), 985–1007.
- Knight, F. H. (1921). *Risk, uncertainty and profit* (Vol. 31). Houghton Mifflin.
- Leary, M. R., & Hoyle, R. H. (2009). *Handbook of individual differences in social behavior*. Guilford Press.
- Lee, C. K., & Foo, M. Y. (2020). Risk attitudes and the big five personality traits: A study on construction project practitioners in Malaysia. *International Journal of Construction Management*, 1–11.
- Lönnqvist, J.-E., Verkasalo, M., Walkowitz, G., & Wichardt, P. C. (2015). Measuring individual risk attitudes in the lab: Task or ask? An empirical comparison. *Journal of Economic Behavior & Organization*, 119, 254–266.
- McCrae, R. R., & Costa Jr, P. T. (1997). Conceptions and correlates of openness to experience. In *Handbook of personality psychology* (pp. 825–847). Elsevier.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81.
- McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60(2), 175–215.
- Ministry of Planning and Investment. (2022). *The White Book. Vietnamese Enterprises 2022*. Statistical Publishing House, 34–35.
- Norman, W. T. (1967). *2800 PERSONALITY TRAIT DESCRIPTORS—NORMATIVE OPERATING CHARACTERISTICS FOR A UNIVERSITY POPULATION*.
- Pearson, M. N., Russell, R. L., & Rohrmann, G. F. (2002). Functional analysis of a conserved region of the baculovirus envelope fusion protein, LD130. *Virology*, 304(1), 81–88.
- Puri, M., & Robinson, D. T. (2007). Optimism and economic choice. *Journal of Financial Economics*, 86(1), 71–99.
- Rauch, A. (2014). Predictions of entrepreneurial behavior: A personality approach. In *Handbook of research on small business and entrepreneurship*. Edward Elgar Publishing.
- Rohrmann, B. (2005). Risk attitude scales: Concepts, questionnaires, utilizations. *Project Report. Online Access Http://Www.Rohrmannresearch.Net/Pdfs/Rohrmann-RasReport.Pdf*, 13, 2012.
- Sadgrove, K. (2016). *The complete guide to business risk management*. Routledge.
- Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, 15(4), 263–290.
- Widiger, T. A., & Costa, P. T. (2012). Integrating normal and abnormal personality structure: The five-factor model. *Journal of Personality*, 80(6), 1471–1506.
- Wu, D. D., & Olson, D. L. (2009). Enterprise risk management: Small business scorecard analysis. *Production Planning and Control*, 20(4), 362–369.

Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of Applied Psychology, 91*(2), 259