



FAMILY SIZE, IMPULSIVITY, AND UNINTENDED ENTREPRENEURIAL ACTION: A STUDY BASED ON FUZZY SET QUALITATIVE COMPARATIVE ANALYSIS

Meijuan Zhao¹, Liangxing He², Yingran Jia³

¹*International Business School, Nanhang Jincheng College, Nanjing, China*

^{2,3}*School of Business Administration, Nanjing University of Finance & Economics; Innovation & Entrepreneurship Research Center, Nanjing University of Finance & Economics, Nanjing, China*

Abstract

This study uncovers the multiple pathways and complex influence mechanisms that drive unintended entrepreneurial action by examining the interplay between family size and impulsivity traits. Unlike entrepreneurship driven by conscious rational judgment, unintended entrepreneurship occurs without prior intention or systematic reasoning analysis. Using fuzzy set qualitative comparative analysis (fsQCA), we tracked 500 respondents over time and analyzed 49 valid samples of individuals who engaged in unintended entrepreneurial action. Drawing on trait activation theory, our findings reveal that two high-order configurations exert equivalent effects on unintended entrepreneurial action. The first configuration is characterized by planned or default actions in low-stimulus environments, where individuals with low deliberation and high sensation seeking pursue opportunities with less conscious analysis. The second configuration is driven by impulsive actions in high-stimulus environments, where high perseverance and low urgency enable individuals to persist despite uncertainty. By integrating family size and impulsivity dimensions (deliberation, urgency, sensation seeking, and perseverance), this study contributes to the literature on entrepreneurial action and personal traits through a configuration perspective, revealing the multi-path mechanisms through which impulsivity traits interact with different family contexts to trigger unintended entrepreneurship and expanding the boundary conditions of trait activation theory.

Keywords

Unintended Entrepreneurial Action, Family Size, Impulsivity, Qualitative Comparative Analysis (QCA)

1. Introduction

Entrepreneurial action is not necessarily driven by rational judgment but is rather triggered by some disinhibition factors (Hunt and Lerner, 2018). The disinhibition action accounts for a relatively small proportion in entrepreneurship, but it has been concerned and explored by some scholars as an important part of the entrepreneurial spectrum. Wiklund et al. (2018) constructed a conceptual framework for influencing entrepreneurial action from the perspective of impulsivity; they confirmed that the significant influence of ADHD on entrepreneurial action can be mediated through impulsivity by using dynamic tracking data (Wiklund et al., 2017; Yu et al., 2021). Lerner et al. (2018) investigated three entrepreneurs from different environments with the narrative method, and they found that they took entrepreneurial actions and started their own businesses by the trigger of impulsivity.

These studies have made interesting findings, but many areas are still worth further exploring. First, the initial findings have not yet revealed the complex influencing mechanism of impulsivity on unintended entrepreneurial action. For impulsivity, as a multidimensional construct, which dimension of impulsivity equivalent affects entrepreneurial action is unclear. Second, impulsivity plays an important role in entrepreneurial action, but existing studies have not clearly explained how impulsivity and environmental factors are interdependent with each other to further affect entrepreneurial action. Trait activation theory holds that individual behavioral differences depend on personality traits and environmental factors (Tett and Burnett, 2003). In a certain environment, personal traits can induce relevant actions (Postigo et al., 2021) because the external environment provides social cues that reveal the needs and expectations of the individuals in the external environment (Torres et al., 2025). Therefore, it is necessary to further explore the multiple pathways or complex influence mechanisms through which the interdependence of environmental factors and specific impulsivity traits influences unintended entrepreneurial action.

The influence of external environment on entrepreneurs' independent choice of work tasks depends not only on the entrepreneurs themselves (Miner et al., 1989) but also on the expectations of family members (Liñán and Chen, 2009). In a family environment with a large number of members, family responsibilities and life pressure are greater; people with impulsive traits are more likely to have a desire to improve life and consider entrepreneurship as an ideal career choice (Aldrich and Cliff, 2003; Azmat and Fujimoto, 2016; Molina, 2020). In a small family environment with less financial responsibility and less risk, people with impulsive traits are more likely to take actions in entrepreneurship with their intuition. Therefore, a configuration view can be adopted to reveal the equivalent effect of family size and specific impulsive traits on entrepreneurial action.

In this study, we used qualitative comparative analysis (QCA) to reveal the multi-path that drives unintended entrepreneurial action. The findings reveal two types of configurations that trigger unintended entrepreneurial action. First, in the non-high level of deliberation configuration, the individuals' urgency and sensation seeking are mutually exclusive in different family sizes. Second, in the high level of deliberation configuration, high level of perseverance works as marginal condition, non-high level of urgency works as core condition, and non-high level of sensation seeking works as marginal condition, these conditions can generate high level of entrepreneurial actions in a mutual dependent manner. The findings extend the literature on entrepreneurial action and personal trait, and they provide some implications for guiding people with different traits to start businesses.

2. Theoretical background

2.1 Unintended entrepreneurship

The unintended entrepreneurial action is different from the entrepreneurial action driven by will and rational judgment. The former emphasizes starting a new business without intention or reasoning analysis, or even awareness or consideration of the final consequences before undertaking entrepreneurial activities. The latter one emphasizes the conscious analysis of entrepreneurial opportunities to act (Lerner et al., 2018). In fact, conscious analysis and judgment are difficult to achieve or unreliable when the future market is unclear in the face of high uncertainty (Zhang and Cueto, 2017), and some people can react quickly with little information or environmental intuition (Hunt and Lerner, 2018; Wiklund et al., 2018). Entrepreneurship facts also show that some people do not have clear intentions before taking entrepreneurial actions (Branson, 2011; Hantula, 2006; Orfalea and Marsh, 2005). This behavior has characteristics of disinhibition, which means individuals turn their attention to external changes in specific situations to obtain more information that other people ignore. This situation generates a series of behavioral responses (Lerner et al., 2018) and breaks through behavioral boundaries in pursuit of entrepreneurial opportunities (Gavetti, 2012).

2.2 Impulsivity and unintended entrepreneurial action

Impulsivity, as a representation form of disinhibition, is important for predicting entrepreneurial action, especially for people without entrepreneurial ideas (Van Lent et al., 2024). It can prompt people to show limited attention to potential opportunities and generate impulsive action; once generated, people will ignore potential consequences and move toward the goal of entrepreneurial action. In personality psychology, deliberation, urgency, sensation seeking, and perseverance, as important dimensions of impulsive traits (Wiklund et al., 2018), they play an important role in unintended entrepreneurship.

In the process of establishing a new company, individuals are faced with high uncertainty when participating in entrepreneurial activities. On the one hand, the future market does not exist in advance; on the other hand, the existing information is incomplete (Shane and Venkataraman, 2000) and even unreliable, which causes difficulty in meeting the requirements of uncertain decision making. In this situation, different traits lead to different emotional responses, which in turn influence whether the individual takes actual action (Bergner et al., 2023). People with high level of sensation seeking and low level of deliberation are more likely to ignore the potential consequences in the face of unexpected opportunities (Wiklund et al., 2018). To be specific, their less conscious analysis and judgment will reduce their negative emotions and enhance their expectations and confidence for entrepreneurship, thus seeking gratification in the pursuit of uncertain and risky activities (Eysenck and Zuckerman, 1978; Hunt et al., 2022). On the contrary, people with high level of urgency and low level of perseverance are more negative to the results of unintended entrepreneurship (e.g., worry, fear, and scare). They are more likely to suffer from procrastination, which hinders entrepreneurial actions (Harima et al., 2021). People with high level of perseverance and low level of urgency are also more likely to persist in completing entrepreneurial activities; and those individuals who have low level of sensation seeking, high level of deliberation, perseverance and urgency are more likely to learn from the initial entrepreneurial actions and adjust their entrepreneurial actions (Wiklund et al., 2018). Therefore, the combination of traits such as deliberation, urgency, sensation seeking, and perseverance in participating in specific entrepreneurial activities provides a new perspective to explain the generation mechanism of unintended entrepreneurship.

2.3 Family size and unintended entrepreneurship

Family size plays an important role in prompting one's startup actions (Aldrich and Cliff, 2003; Kan and Tsai, 2006). Firstly, family size has a cumulative effect. A family with many members can take care of and support each other in life and disperse occupational pressure and risks (Block et al., 2023). A substitution effect (Hatak and Zhou, 2021) also exists between the number and quality of family members. Under the condition of limited family resources, the average available resources of a large family will decrease (Bagger et al., 2021). At this time, family members are faced with more life responsibilities and family burdens. Such pressure will motivate individuals to form improvement motivation and act quickly in the face of unexpected opportunities to take and develop opportunities. However, the resistance from family members is greater when the family size is larger. The reason is that entrepreneurs will face more pressure from relatives when consulting on important decisions (Arregle et al., 2015; Martinez and Aldrich, 2011).

Secondly, members of the small family size perceived fewer risks in entrepreneurial activities. These people are more likely to give up jobs and focus on unexpected opportunities; they seek satisfaction and sense of achievement through the exploitation of unexpected opportunities because they do not need to take more responsibility for their family economically (Aldrich and Cliff, 2003; Abaddi, 2025). They also have fewer relatives and encounter less resistance from subjective norms. However, small family size means a small resource base, and family members may perceive insufficient resource support from relatives. As a result, they may ignore unexpected opportunities and not participate in entrepreneurial activities.

In summary, this study proposes that impulsive traits and family size can have multiple effects on unintended entrepreneurship. In a large family size, people with high life pressure, high level of sensation seeking, and low level of deliberation are more likely to generate improvement motivation under such pressure, consider fewer unknown risks and uncertainties, and have more confidence in the potential returns of entrepreneurial activities to make entrepreneurial decisions. Individuals in a large family can also face more resistance from other family members. In this case, people with high level of perseverance and low level of urgency are more likely to persist in entrepreneurship, overcome entrepreneurial difficulties, and achieve entrepreneurial success. In a small family size, life responsibilities and members' resistance are relatively small. Individuals with high level of sensation seeking and low level of deliberation are also more likely to ignore the future outcomes and tend to obtain a sense of accomplishment and satisfaction through adventure activities. Moreover, a small family size can perceive insufficient resources and supports. People with high level of urgency and low level of perseverance can pay more attention to the negative future of uncertainty, which reduces the possibility of joining in entrepreneurship.

3. Methods

3.1 Sample and data collection

This study aims to investigate the unintended entrepreneurship groups. Unintended entrepreneurship refers that individuals participated in entrepreneurial actions unintendedly and started their own businesses without reasoning analysis, even without considering the final consequences. To identify the valid sample, the study set the following screening questions: “Do you plan to start your own business or a company?” and “Are you forced to do business now?” Those who answered “no” and “yes” respectively in the survey belonged to the sample group.

In data collection, this study takes some remedies to assure data quality and avoid common method bias, including evaluating items with different measurement scales, clarifying abstract items, avoiding ambiguous wording, specifying item contents, and collecting questionnaires anonymously (Podsakoff et al., 2003). This research also takes tracking survey to reduce the retrospect bias. In the first round, questionnaires were distributed randomly through an online survey platform, which covers the top 10 cities in the Entrepreneurship and Innovation Index ¹. These cities have a good foundation of environmental support and resource capacity, which helps identify different types of entrepreneurship groups. This round of questionnaire was randomly distributed to 15,823 individuals, and only 500 respondents completed the survey, which involved entrepreneurial intention and personal basic information. The second round survey was conducted 6 months later (e.g., Gielnik et al., 2014; van Gelderen et al., 2018). According to the screening questions, this study tracked the respondents in the first round and 49 respondents evaluated their reasons for unintended entrepreneurship, entrepreneurial actions, and personal traits. The proportion of effective samples is 9.8%, which is consistent with the research finding that “the median proportion of those who do not intend to take action in advance but finally take action is 7%” (Gollwitzer and Sheeran, 2006).

Considering that tracking survey may have nonresponse biases, T-test was used to examine the nonresponse issues. The results show no significant difference between the tracked and untracked groups: gender ($t=-0.893$, $p=0.372$), age ($t=-1.289$, $p=0.198$), educational background ($t=0.560$, $p=0.575$), and income ($t=0.565$, $p=0.572$). Therefore, there is no systematic variation caused by the differences of respondents. The descriptive statistics about the samples is shown in Table 1.

Table 1. Sample descriptive statistics

	Features	Quantity	Percentage
Gender	Male	36	73.5
	Female	13	26.5
Age	≤ 30 years	24	49
	31–35 years	20	40.8
	≥36 years	5	10.2
	Below undergraduates	13	26.5
Educational background	Bachelor	34	69.4
	Master	1	2.0
	PHD	1	2.0
	Less 5000 CNY	3	6.1
Income	5001-10000 CNY	22	44.9
	10001-15000 CNY	20	40.8
	Above 15000 CNY	4	8.2

3.2 Measurements

3.2.1 Unintended entrepreneurial action

First, the qualified samples were selected according to “no intention to start a business” and “no choice but to do business.” Second, the study investigated the samples’ evaluation on the specific content of entrepreneurial action. Entrepreneurial action reflects the scope of entrepreneurial activities that individuals have participated in the process of establishing new enterprises (Shirokova et al., 2016). Therefore, specific entrepreneurial activities mainly included (Davidsson and Honig, 2003; Rotefoss and Kolvereid, 2005; Caliendo et al., 2023): build a startup team, raise money from other people or

organizations, invest your own money in the startup, acquire raw materials, contact and contact suppliers, register with the industrial and commercial administration, hire employees, develop and sell products or services, conduct marketing promotion, and obtain the first income. Finally, the total number of entrepreneurial activities that respondents participated was calculated.

3.2.2 Family size

Family size reflects a base of resources mastered and allocated by a family; a family with a large population usually has a higher resource base to support entrepreneurship. Referring to the measurements by Gras and Nason (2015), this study calculated the family size based on the number of respondents' family members.

3.2.3 Impulsivity

The specific content of impulsivity is based on the measurement items of Whiteside and Lynam (2001). First, deliberation indicates whether an individual carefully considers the consequences of an action before taking it. It includes five items: I have a conservative and cautious attitude towards life; I am not the kind of person who speaks without thinking; I do not start a project without knowing how to do it; I tend to deal with things in a sensible way; I am a cautious person. The items were rated in a binary way ("yes" = 1; "no" = 0). Cronbach's $\alpha=0.753$.

Second, urgency reflects an individual's tendency to strongly feel negative emotions (e.g., anxiety, worry, sadness, and fear) and the behavioral response to these emotions. The specific items are as follows: I often engage in some things, but later wish to get rid of these things; when I feel bad, I often do things I regret later to make myself feel better; I often mess things up because I do things without thinking when I am upset. The items were assessed by "yes" = 1, "no" = 0. Cronbach's $\alpha=0.904$.

Third, sensation seeking indicates an individual's tendency to pursue exciting activities and openness to new experiences. People with this characteristic like to engage in novel, dangerous, and adventurous activities. Sample items include: I usually seek out new and exciting experiences and feelings; I will try anything; I am very adventurous; I love new, exciting experiences and feelings, even if they are a little scary and unusual. All the items were rated on a 4-point Likert scale (1= "strongly disagree"; 4= "strongly agree"). Cronbach's $\alpha=0.862$.

Fourth, perseverance is an individual's ability to stay focused on boring or difficult tasks. It was measured with five items: I usually like to see things through; once I start something, I do not want to stop; I am good at pacing myself to get things done on time; I am an efficient person who always gets the job done. We also evaluated these items in a binary way ("yes" = 1; "no" = 0). The consistency coefficient is below 0.7 (0.640), but it meets the standard that the internal consistency coefficient is greater than 0.6 when the number of questions is less than 6 (Fayers and Machin, 2002).

3.3 Fuzzy set qualitative comparative analysis (fsQCA)

This study adopted fuzzy set QCA (fsQCA) method. First, QCA method can be applied to small and large sample case analyses (Crilly et al., 2012; Greckhamer, 2016; Ragin, 2014). We adopted the QCA method to achieve the uniqueness and depth of respondent analysis and improve the promotion degree of small sample analysis. Second, this method can effectively analyze the effect of existence/nonexistence of antecedent conditions on the outcomes, and it can also reveal the configuration of different antecedent conditions acting on the results (Ragin, 2014). Finally, fuzzy sets can investigate the changes in antecedent conditions in different degrees or levels. In this study, conditions such as family size and personal traits are not simple binary variables (i.e., 0 and 1), which involve different categories and degree differences. Thus, fsQCA was adopted.

3.4 Calibration

Before conducting fsQCA, the variables should be calibrated. Calibration means that the category and degree differences between sample cases are considered at the same time, and the condition and result variables are calibrated as the set membership of the case (Ragin, 2014). QCA mainly discusses the sets of causality; thus, the original measurements can have the collective meaning to be explained only by calibrating the variables (Crilly et al., 2012). When the fuzzy-set membership is calibrated, it must be based on theoretical knowledge and empirical evidence (Ragin, 2008) and sets three breakpoints: full

membership, full non-membership, and crossover point. In this study, the actual sample distribution deviated from the scale anchors, so the conceptual anchors were reconciled with the actual distribution (Fiss, 2011, Misangyi et al., 2017). After a comprehensive analysis of the theoretical knowledge and practical situation of family size and impulsivity, we used three values (i.e., maximum, mean, and minimum) to calibrate the variables. To be specific, firstly, we integrated the original evaluations of respondents on measurement items by principal component factor analysis (PCA) to obtain the results of each variable. Secondly, three thresholds were set to calibrate each variable by using maximum, mean (or median), and minimum values as reference standards (see Table 2). Then, the value of each variable was transformed into fuzzy scores between 0 and 1.

Table 2. Calibration breakpoints

Variable	Calibration breakpoints		
	Full membership	Crossover point	Full non-membership
Entrepreneurial action ^a	9	5	1
Family size ^b	6	4	2
Deliberation	2.162	1.812	0.597
Urgency	15.912	13.075	7.699
Sensation Seeking ^c	2.443	0.990	0
Perseverance	1	0.853	0.3

Note: ^a ^b The mean values of the two variables are 4.1 and 3.8, respectively. Entrepreneurial action and family size can only be integer. Thus, the crossover points are 5 and 4, respectively. ^c As a personal trait, although a negative value appears after using principal component method (PCM), it can only be a positive value in practice. Thus, we set it as 0 in full non-membership.

4. Results

4.1 Common method bias

Harman's single factor test was used to test common method bias (Podsakoff et al., 2003). This study loads all the variables for the exploratory factor analysis to test whether one single factor accounts for a substantial amount of total variance. The result shows that two factors are extracted from the study variables with an unrotated factor solution and explain 61.803% of the variance among the study variables, and each factor explains 35.203% and 26.6%, respectively. The results indicate that neither a unique factor was extracted nor one factor's explanation held an excessive proportion (Podsakoff et al., 2003), indicating the absence of common method variance.

4.2 Necessity conditions analysis

This study examined the necessity for each antecedent condition (Table 3) before conducting truth table analysis on fuzzy sets. First, the single antecedent condition necessity test shows that the necessity consistency of deliberation, perseverance, and non-sensation seeking on entrepreneurial action is greater than 0.9, which constitutes the necessity condition for the result variable. The necessity consistency of non-sensation seeking on non-entrepreneurial action is more than 0.9, constituting the necessity condition for result variable. The necessity consistency of other antecedent conditions on the result variable is less than 0.9, which cannot constitute the necessary necessity for the outcome variable.

Table 3. Necessity and sufficient test for antecedent condition

Antecedent condition	Entrepreneurial action	~Entrepreneurial action
Family size	0.672	0.560
~ Family size	0.826	0.718
Deliberation	0.907	0.769
~Deliberation	0.524	0.471
Urgency	0.645	0.797
~Urgency	0.820	0.462
Sensation seeking	0.247	0.192
~Sensation seeking	0.966	0.927
Perseverance	0.916	0.723
~Perseverance	0.531	0.525

Note: “~” means logic negation (i.e., non-high)

Second, the study tested the necessity of the set of conditional variables on the result variables. In the set of conditional variables related to family size and impulsivity, the consistency of family size and deliberation on entrepreneurial action is 0.941, which constitutes the necessity condition for the result variable. The consistency of family size and perseverance on entrepreneurial action is 0.954, which constitutes the necessity condition for the result variable. The consistency of non-high level of family size and sensation seeking on non-entrepreneurial action is 0.971, which constitutes the necessity condition for the result variable. Accordingly, the research can propose that each antecedent condition has a weak effect on entrepreneurial action, and the configuration of antecedent conditions plays an important role in predicting entrepreneurial action. Therefore, integrating different antecedent conditions into fsQCA is necessary to reveal the different configurations that affect unintended entrepreneurial action.

4.3 Configuration solutions for (non) high level of entrepreneurial action

First, the study constructed different antecedent condition configurations through the truth table and coded all possible configurations. We dropped the conditional configurations with original consistencies that are lower than 0.8, and we coded the results as 0 or 1 based on the thresholds above 0.8. Second, standard analysis was conducted on the truth table and we kept the prime implication (family size*stimulus seeking) to cover all the conditional configurations for obtaining a high/non-high entrepreneurial action configuration solution (Table 4).

Three configuration solutions are obtained for entrepreneurial action. In configuration 1, non-high level of urgency serves as core condition and non-high level of family size, deliberation and sensation seeking serve as marginal conditions, and these conditions work together to fully trigger high level of entrepreneurial action. In configuration 2, high level of deliberation and perseverance, and non-high level of sensation seeking work as marginal conditions; non-high level of urgency works as core condition and is needed to fully realize high level of entrepreneurial action. As shown in configuration 3, high level of entrepreneurial action can be motivated under the core condition (i.e., high level of family size and sensation seeking) and marginal condition (i.e., non-high level of perseverance, high level of urgency).

Table 4. Different configuration solutions for entrepreneurial action

Conditional variable	High level of entrepreneurial action			Non-high level of entrepreneurial action			
	1	2	3	1	2	3	4
Family size	⊗		●	⊗			●
Deliberation	⊗	●	⊗	⊗		⊗	●
Urgency	⊗	⊗	●		●	●	
Sensation seeking	⊗	⊗	●	⊗	⊗	●	⊗
Perseverance		●	⊗			⊗	●
Consistency	0.806	0.902	0.879	0.923	0.898	0.981	0.862
Raw coverage	0.463	0.586	0.173	0.394	0.636	0.151	0.480
Unique coverage	0.038	0.041	0.003	0.119	0.171	0.031	0.036
Overall consistency	0.711			0.861			
Overall coverage	0.775			0.831			

Note: ● core condition exists, ⊗ core condition does not exist, ● marginal condition exists, ⊗ marginal condition does not exist.

Comparing the three configurations, it can be shown that non-high level of deliberation is a marginal condition in configurations 1 and 3, and high level of deliberation can be considered as a marginal condition in configuration 2. According to these marginal conditions, the configuration solutions can be further classified into two types to form a second-order equivalent configuration (Fiss, 2011): planned or default actions in low-stimulus environments, impulsive actions in high-stimulus environments.

In the first high-order configuration (Configurations 1 and 2), the core conditions – urgency and sensation seeking – are both absent ($\sim$ Urgency • $\sim$ Sensation seeking). This indicates that a high level of entrepreneurial action can still occur even when entrepreneurs do not perceive time pressure or seek sensory stimulation, which reflects two distinct sub-paths. On one hand, Sub-path A (Configuration 1) involves the absence of a large family size, the absence of deliberation, and the absence of perseverance. It suggests that in environments with lighter family burdens or limited resources, entrepreneurs can undertake entrepreneurial action even without careful planning or persistence. This action is driven by basic needs or external environmental factors, representing a relatively 'passive' or 'default' mode of entrepreneurship. On the other hand, Sub-path B (Configuration 2) involves the presence of deliberation and perseverance. It suggests that entrepreneurs can achieve entrepreneurial action through careful planning and persistent effort, in the absence of external pressure or sensation seeking. This path emphasizes intrinsic motivation and planning, where entrepreneurial action is the result of rational decision-making and long-term persistence. In summary, the first high-order configuration highlights that in low-pressure, low-stimulus environments, entrepreneurial action can be realized through various mechanisms, whether via simpler conditions or through planning and perseverance. The high raw coverage of Configurations 1 and 2 (0.463 and 0.586, respectively) suggests that this pattern is relatively common in reality.

In the second high-order configuration (Configuration 3), the core conditions – urgency and sensation seeking – are present (Urgency • Sensation seeking). This indicates that a high level of entrepreneurial action occurs when entrepreneurs perceive time urgency and seek sensory stimulation. The specific conditions of Configuration 3 include the presence of a large family size, the absence of deliberation, and the absence of perseverance. In contexts characterized by heavy family burdens or high resource demands, entrepreneurs are driven by a sense of urgency (e.g., economic pressure) and sensation seeking (e.g., the pursuit of risk or novel experiences) to take entrepreneurial action rapidly. This type of action often lacks detailed planning or long-term persistence, representing an 'opportunistic' or 'reactive' form of entrepreneurial behavior that relies more on immediate impulses and external stimuli. Overall, this high-order configuration emphasizes the catalytic effect of high-pressure and high-sensation environments on entrepreneurial action, while simultaneously revealing the potential vulnerability associated with a lack of deliberation and perseverance. The lower raw coverage of Configuration 3 (0.173) indicates that this pattern is less common in reality, being limited to specific contexts or individuals. For instance, some prominent entrepreneurs such as Richard Branson, David Neeleman, and Paul Orfalea insisted that much of their entrepreneurial actions and even their respective successes were based highly on impulse and not based on reasoned judgments (Branson, 2002; Orfalea and Marsh, 2005; Hantula, 2006; Wynbrandt, 2010).

This study also investigated the solutions for non-high level of entrepreneurial action to test the asymmetry of causality. Comparing the four configuration solutions in Table IV, it shows that they can also be classified into two types based on the marginal condition, which forms a second-order equivalent configuration: non-high level of and high level of sensation seeking configuration conditions. In the first configuration, the conditional variables, namely, related family size and personal trait, are mutually exclusive to achieve non-high level of entrepreneurial action. In the second one, high level of urgency exists as the core condition, while other conditions do not exist, which can achieve non-high level of entrepreneurial action.

4.4 Robustness test

If the subset relationships between configuration solutions can be found after an alternative operation in QCA, then the results are robust—the substantive interpretation of the research findings will not be changed. First, robustness test can be conducted with changing the threshold of original consistency (Chen and Tian, 2022). In detail, this study increased the original consistency value from 0.8 to 0.85. Thus, a configuration solution that is consistent with one of the initial configuration solutions is obtained. Specifically, high level of deliberation serves as marginal condition, non-high level of urgency serves as core condition, non-high level of sensation seeking serves as marginal condition, and high level of perseverance works as core condition, they can achieve high level of entrepreneurial action. Second, the study enhanced the threshold of case frequency from 1 to 2. As a result, a configuration solution that is consistent with the one in the initial solutions. In particular, high level of deliberation and perseverance works as marginal condition, non-high level of urgency works as core condition, and non-high level of sensation seeking works as marginal condition, these conditions can achieve high level of entrepreneurial action. The tests show that the initial configuration solution is robust.

5. Conclusion and discussion

5.1 Theoretical contributions

This study contributes to the literature on entrepreneurial action and personal trait from two aspects. First, it expands the literature content and research perspective of unintended entrepreneurship through configuration view. The research on the mechanism of unintended entrepreneurial action is still in the exploratory stage, and the multi-path or complex mechanism of impulsive-trait interdependence has not yet been revealed. By introducing configuration view, this study finds that non-high level of- and high level of deliberation configurations are equivalent paths to trigger individual unintended entrepreneurship. In the non-high level of deliberation configuration, the urgency and sensation seeking traits of different family sizes are mutually exclusive. In the high level of deliberation configuration, high level of perseverance serves as marginal condition, non-high level of urgency works as core condition, non-high level of sensation seeking works as the marginal condition, and their interdependence can improve high level of entrepreneurial action. These findings not only complement the current view that only certain high-level traits can lead to entrepreneurship but also provide configuration evidence for Wiklund et al. (2018) to explain the overall effect of impulsivity on entrepreneurial action.

Second, by integrating family size and impulsivity traits, the study reveals the multi-path and mechanism that unintended entrepreneurial action is driven by impulsivity traits under different family sizes, and it expands the boundary conditions of trait activation theory. It emphasizes that environment can regulate the relationship between individual trait and action. However, the current studies have ignored the relevant clues of external environment. From the perspective of family size, this study reveals the configuration of conditions related to impulsivity trait in different family sizes. People with non-high level of deliberation trait can start a business if they have high level of urgency and sensation seeking trait in a large family. Meanwhile, people with non-high level of deliberation only need non-high level of traits to start a business. People with high level of deliberation trait, regardless of family size, need high level of perseverance trait to start their own business. Thus, the findings extend the contextual cues for trait activation theory.

5.2 Practical implications

This study offers some implications for taking entrepreneurship. First, for the groups who have the trait of non-high deliberation, some impulsive traits, not all of them, can drive entrepreneurial success. It depends on one's family size. Specifically, cultivating urgency and sensation seeking is necessary in a large family. The sense of satisfaction and the expectation and confidence of entrepreneurial success also need to be enhanced by participating in uncertain and adventurous activities. In a non-high level of family size, high level of urgency and sensation seeking traits are not quite necessary.

Second, people with high level of deliberation trait may have negative feelings in the face of uncertainty and high risk of entrepreneurial activities. However, they can improve their focus on difficult or boring tasks and cultivate solid volition and perseverance toward entrepreneurial success.

Third, family members or education and training institutions should offer more support and care to people who have non-high level of deliberation trait, high level of urgency trait and sensation seeking trait in a large family. More support and care should also be provided for individuals who have non-high level of deliberation and urgency, and high level of sensation seeking traits in an average family size. If we do not know the family size, then care and support should be offered to people who have high level of deliberation and perseverance traits. In summary, personal traits and family circumstances should be matched to stimulate relevant actions for meeting the requirements of the environment.

5.3 Limitations and future directions

This study has the following limitations. First, measurements for unintended entrepreneurial action have not been established. This study first screened the samples with "whether they have to do business," and then, it investigated the respondents' specific evaluations on entrepreneurial action. Thus, the other group of unintended entrepreneurial actions may be ignored. Future studies are encouraged to develop measurements that represent unintended entrepreneurship and consider more groups of unintended entrepreneurship for improving the facet and reliability of unintended entrepreneurial action. Second, this study focused on impulsive perspective to reveal the effect of "negative traits" on entrepreneurial action. The findings indicate that positive and negative traits can significantly influence entrepreneurial action.

Future studies can enrich related factors from the two aspects to explore the mechanisms of interdependence of multiple traits on unintended entrepreneurial action. Third, trait activation theory emphasizes that the differences in individual behavior are influenced by environmental factors. This study mainly investigated the boundary conditions of trait factors affecting entrepreneurial action from the perspective of individuals' intimate environment. Future works can consider other environmental factors to reveal the path by which multiple external factors and traits drive entrepreneurial action.

Notes

1. Top 10 cities in entrepreneurship and innovation: SHENZHEN, BEIJING, SHANGHAI, GUANGZHOU, SUZHOU, HANGZHOU, NANJING, WUHAN, NINGBO, and XIAN. Retrieved from China Innovation and Entrepreneurship Development Report (2020–2021).

References

- Abaddi, S. (2025), "Metaverse, entrepreneurial learning and opportunity exploitation." *Journal of Entrepreneurship in Emerging Economies*, 17(3), 744-773.
- Aldrich, H. E., and Cliff, J. E. (2003), "The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective." *Journal of Business Venturing*, 18(5), 573-596.
- Arregle, J. L., Batjargal, B., Hitt, M. A., et al. (2015), "Family ties in entrepreneurs' social networks and new venture growth." *Entrepreneurship theory and Practice*, 39(2), 313-344.
- Azmat, F., and Fujimoto, Y. (2016), "Family embeddedness and entrepreneurship experience: A study of Indian migrant women entrepreneurs in Australia." *Entrepreneurship & Regional Development*, 28(9-10), 630-656.
- Bagger, J., Birchenall, J. A., Mansour, H., et al. (2021), Education, birth order and family size. *The Economic Journal*, 131(633), 33-69.
- Bergner, S., Auburger, J., and Paleczek, D. (2023), "The why and the how: A nexus on how opportunity, risk and personality affect entrepreneurial intention." *Journal of Small Business Management*, 61(6), 2656-2689.
- Block, J., Hansen, C., and Steinmetz, H. (2023), "Are family firms doing more innovation output with less innovation input? A replication and extension." *Entrepreneurship Theory and Practice*, 47(4), 1496-1520.
- Branson, R. (2002), "Losing my virginity: the autobiography." *Virgin Books*, London.
- Branson, R. (2011), "Losing my virginity." *Random House*.
- Caliendo, M., Kritikos, A. S., Rodriguez, D. et al. (2023), "Self-efficacy and entrepreneurial performance of start-ups." *Small Business Economics*, 61(3), 1027-1051.
- Crilly, D., Zollo, M., and Hansen, M. T. (2012), "Faking it or muddling through? Understanding decoupling in response to stakeholder pressures." *Academy of Management Journal*, 55(6), 1429-1448.
- Davidsson, P., and Honig, B. (2003), "The role of social and human capital among nascent entrepreneurs." *Journal of Business Venturing*, 18(3), 301-331.
- Eysenck, S., and Zuckerman, M. (1978), "The relationship between sensation-seeking and Eysenck's dimensions of personality." *British Journal of Psychology*, 69(4), 483-487.
- Fayers, P. M., and Machin, D. (2002), "Multi-item scales, quality of life: Assessment, analysis and interpretation." *John Wiley & Sons, Ltd.*, pp.72-90.
- Fiss, P. C. (2011), "Building better causal theories: A fuzzy set approach to typologies in organization research." *Academy of Management Journal*, 54(2), 393-420.
- Gavetti, G. (2012), "Perspective—Toward a actional theory of strategy." *Organization Science*, 23(1), 267-285.
- Gielnik, M. M., Barabas, S., Frese, M., et al. (2014), "A temporal analysis of how entrepreneurial goal intentions, positive fantasies, and action planning affect starting a new venture and when the effects wear off." *Journal of Business Venturing*, 29(6), 755-772.
- Gollwitzer, P. M., and Sheeran, P. (2006), "Implementation intentions and goal achievement: A meta-analysis of effects and processes." *Advances in Experimental Social Psychology*, 38), 69-119.
- Gras, D., and Nason, R. S. (2015), "Bric by bric: The role of the family household in sustaining a venture in impoverished Indian slums." *Journal of Business Venturing*, 30(4), 546-563.

- Greckhamer, T. (2016), "CEO compensation in relation to worker compensation across countries: The configurational impact of country-level institutions." *Strategic Management Journal*, 37(4), 793-815.
- Hantula, D. A. (2006), "Book review." *Journal of Organizational Action Management*, 26(3), 79-85.
- Harima, A., Gießelmann, J., Göttisch, V., et al. (2021), "Entrepreneurship? Let us do it later: Procrastination in the intention–action gap of student entrepreneurship." *International Journal of Entrepreneurial action & Research*, 27(5), 1189-1213.
- Hatak, I., and Zhou, H. (2021), "Health as human capital in entrepreneurship: individual, extension, and substitution effects on entrepreneurial success." *Entrepreneurship Theory and Practice*, 45(1), 18-42.
- Hunt, R. A., and Lerner, D. A. (2018), "Entrepreneurial action as human action: Sometimes judgment-driven, sometimes not." *Journal of Business Venturing Insights*, 10: e00102.
- Hunt, R. A., Lerner, D. A., Johnson, S. L. et al. (2022), "Cracks in the wall: Entrepreneurial action theory and the weakening presumption of intended rationality." *Journal of Business Venturing*, 37(3), 106190.
- Kan, K., and Tsai, W. D. (2006), "Entrepreneurship and risk aversion." *Small Business Economics*, 26(5), 465-474.
- Lerner, D. A., Hunt, R. A., and Dimov, D. P. (2018), "Action! Moving beyond the intendedly-rational logics of entrepreneurship." *Journal of Business Venturing*, 33(1), 52-69.
- Liñán, F., and Chen, Y. W. (2009), "Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions." *Entrepreneurship Theory and Practice*, 33(3), 593-617.
- Martinez, M. A., and Aldrich, H. E. (2011), "Networking strategies for entrepreneurs: Balancing cohesion and diversity." *International Journal of Entrepreneurial action & Research*, 17(1), 1355-2554.
- Miner, J. B., Smith, N. R., and Bracker, J. S. (1989), "Role of entrepreneurial task motivation in the growth of technologically innovative firms." *Journal of Applied Psychology*, 74(4), 554-560.
- Misangyi, V. F., Greckhamer, T., Furnari, S., Fiss, P. C., Crilly, D., & Aguilera, R. (2017). Embracing causal complexity: The emergence of a neo-configurational perspective. *Journal of management*, 43(1), 255-282.
- Molina, J. A. (2020), "Family and entrepreneurship: New empirical and theoretical results." *Journal of Family and Economic Issues*, 41(2), 1-3.
- Orfalea, P., and Marsh, A. (2005), *Copy This!: Lessons from a Hyperactive Dyslexic who Turned a Bright Idea Into One of America's Best Companies*, Workman Publishing, New York, NY.
- Podsakoff, P. M., Mackenzie, S. B., Lee, J. Y., et al. (2003), "Common method biases in actional research: A critical review of the literature and recommended remedies." *Journal of Applied Psychology*, 88(5), 879.
- Postigo, Á., Cuesta, M., García-Cueto, E., Prieto-Díez, F., & Muñiz, J. (2021). General versus specific personality traits for predicting entrepreneurship. *Personality and Individual Differences*, 182, 111094.
- Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. Chicago, IL: University of Chicago Press.
- Ragin, C. C. (2014), *The comparative method: Moving beyond qualitative and quantitative strategies*, Univ of California Press.
- Rotefoss, B., and Kolvereid, L. (2005), "Aspiring, nascent and fledgling entrepreneurs: An investigation of the business start-up process." *Entrepreneurship & Regional Development*, 17(2), 109-127.
- Shane, S., and Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research." *Academy of Management Review*, 25(1), 217-226.
- Shirokova, G., Osiyevskyy, O., and Bogatyreva, K. (2016), "Exploring the intention–action link in student entrepreneurship: Moderating effects of individual and environmental characteristics." *European Management Journal*, 34(4), 386-399.
- Tett, R. P., and Burnett, D. D. (2003), "A personality trait-based interactionist model of job performance." *Journal of Applied Psychology*, 88(3), 500-571.
- Torres, P., Dimas, I., and Godinho, P. (2025), "The moderating role of cultural leadership ideals on the relationship between entrepreneurship and life satisfaction." *International Journal of Entrepreneurial Behavior & Research*, 31(9), 2315-2334.

- van Gelderen, M., Kautonen, T., Wincent, J., et al. (2018), "Implementation intentions in the entrepreneurial process: concept, empirical findings, and research agenda." *Small Business Economics*, 51(4), 923-941.
- Van Lent, W., Hunt, R., and Lerner, D. (2024), "Back to which future? Recalibrating the time-calibrated narratives of entrepreneurial action to account for non-deliberative dynamics." *Academy of Management Review*, 49(2), 435-440.
- Whiteside, S. P., and Lynam, D. R. (2001), "The five factor model and impulsivity: Using a structural model of personality to understand impulsivity." *Personality and Individual Differences*, 30(4), 669-689.
- Wiklund, J., Yu, W., and Patzelt, H. (2018), "Impulsivity and entrepreneurial action." *Academy of Management Perspectives*, 32(3), 379-403.
- Wiklund, J., Yu, W., Tucker, R. et al. (2017), "ADHD, impulsivity and entrepreneurship." *Journal of Business Venturing*, 32(6), 627-656.
- Wynbrandt, J. (2010), "Flying high: How JetBlue founder and CEO David Neeleman beats the competition... Even in the world's most turbulent industry." *John Wiley & Sons*.
- Yu, W., Wiklund, J., and Pérez-Luño, A. (2021), "ADHD symptoms, entrepreneurial orientation (EO), and firm performance." *Entrepreneurship Theory and Practice*, 45(1), 92-117.
- Zhang, S. X., and Cueto, J. (2017), "The study of bias in entrepreneurship." *Entrepreneurship Theory and Practice*, 41(3), 419-454

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