

## **Moderating Effects of Business Strategy and Environmental Uncertainty on the Relationship Between Personal Characteristics and Performance of Indonesian SMEs**



Sabihaini<sup>1\*</sup>, Januar Eko Prasetyo<sup>1</sup>, Rusdiyanto<sup>2</sup>, Arief Kurniawan<sup>3</sup>

<sup>1</sup> Faculty of Economics and Business, Universitas Pembangunan Nasional Veteran Yogyakarta, Depok 55283, Indonesia

<sup>2</sup> Faculty of Economics, Universitas Gresik, Gresik 61111, Indonesia

<sup>3</sup> STIKes Ibnu Sina Ajibarang, Jawa Tengah 53163, Indonesia

Corresponding Author Email: [sabihaini@upnyk.ac.id](mailto:sabihaini@upnyk.ac.id)

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### **ABSTRACT**

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This study explores the moderating effects of environmental uncertainty (EU) and business strategy (BS) in order to experimentally investigate the impact of entrepreneurial personal characteristics (EPCs) on the performance of small and medium-sized enterprises (SMEs). The study used a mixed-methods approach, gathering information from 213 SMEs through questionnaires and in-depth interviews. Using the Partial Least Squares (PLS) method, data were evaluated. According to empirical findings, EPCs improve the performance of SME. Additionally, BS modifies the association between EPCs and SME performance. EU, however, deteriorates this connection. These results clarify the debate around the effect of EPCs on the performance of SMEs. By highlighting the favorable impact of EPCs on SME performance and the crucial significance of individual traits and business strategies in SME sustainability in Indonesia, this research can practically inform management policy on future business plans. The report suggests raising environmental management awareness, implementing an environmental orientation plan, and boosting environmental performance and business strategy to improve SME performance. In the context of this study, corporate performance is defined as the degree to which a company meets its operational goals in accordance with its vision and mission.

## **1. INTRODUCTION**

Small and Medium Enterprises (SMEs) play a vital role in the Indonesian economy, especially during economic crises, as demonstrated during the financial crisis of 1998. Serving three main roles in the economy - equalizing the economies of scale, reducing poverty, and balancing income - SMEs are an independent component of the Indonesian economy with immense potential to improve public welfare. They also contribute significantly to the nation's foreign currency reserves.

SMEs, due to their substantial contribution to the Gross Domestic Product (GDP), play a pivotal role in mitigating the effects of the global recession. They are quick to explore potential export markets, absorb the majority of credit, and represent a potential market for the financial services sector. Recognizing the importance of SMEs, the government has implemented several strategic initiatives like the National Economic Recovery Program, the Job Creation Law, and the Proud Made in Indonesia program to aid in the recovery and growth of the country's economy.

As of 2018, there were 64,194,057 Micro, Small, and Medium Enterprises (MSMEs) in the Special Province of Yogyakarta, indicating a growth of 2.02% from 62,922,617 in 2017. However, the growth of new SME companies is not always accompanied by strong SME performance. For various reasons, micro and small businesses may underperform, leaving minimal profits for expansion. Previous studies on

Indonesian SME's performance suggest that these factors may vary across different regions [1-8].

It is often observed that SMEs operate based on individual decisions, with their owners typically being the primary decision-makers. These owners, often senior managers, carry high expectations for their management skills. Their values, beliefs, and business goals significantly influence their management approach. These entrepreneurial ideals, concepts, and strategies must be considered when evaluating business opportunities. Previous empirical data have shown contradictory results. The discrepancy in these findings could be attributed to multiple factors. First, the relationship between entrepreneurial orientation (EO) and SME performance could follow a different contingency model. Second, environmental factors like industry characteristics and organizational factors like structure, size, and strategy might have moderating, mediating, independent, and interaction effects.

This study aims to examine the moderating factors that might resolve the ongoing debate about the relationship between entrepreneurs' personal traits and firm performance. The owner's attributes are critical and directly impact SMEs' success [9]. Entrepreneurial orientation can improve an organization's performance [10, 11]. Previous studies have explored the relationship between the Personal Characteristics of Entrepreneurs and firm performance, but gaps remain in demonstrating the relationship between entrepreneurs' personal traits, the environment, and the adopted strategies [12]. Ranawaka and Samarakoon [13] claim that a variety of

factors influence how well SMEs perform. The personal struggles of SMEs managers are one of the elements, and they have been found to have the biggest impact on SMEs' performance.

This study suggests operationalizing environmental uncertainty and business strategy as moderating variables between the Personal Characteristics of Entrepreneurs and firm performance to fill this research gap. By doing so, it is expected that an entrepreneur will be able to adapt to changes in the environment and determine and implement strategies effectively [14-16].

The research method employed in this study is a mixed qualitative and quantitative approach, with data collected through surveys and in-depth interviews from 213 SMEs. The collected data was analyzed using the Partial Least Square (PLS) approach.

This study has its limitations, and future research should consider these when filling the gaps. First, entrepreneurs typically seek high levels of achievement to deal with high environmental uncertainty. How firms build their core competencies and develop the six new types of intelligence highlighted in this study will determine their success in the evolving business environment. Second, the respondents in this study have similar backgrounds in terms of education, work experience, and business era. For more consistent responses, clusters can be formed based on the level of education, experience, and business age.

## 2. LITERATURE REVIEW

### 2.1 Stakeholder theory

The stakeholder theory posits that businesses should not operate solely for their own financial gain, but must also cater to their stakeholders, which include shareholders, clients, communities, and others [17]. Value creation is viewed by stakeholder theory as the vital engine of an organization, but it also recognizes that a multitude of stakeholders, including shareholders and management, share this value. Furthermore, this theory extends to everyone in the vicinity who might have an interest in the business's operation. Stakeholder theory [4] asserts that the sustainability of a corporation is intimately tied to the roles of stakeholders, both internal and external, each of whom bring diverse histories and interests to the table. This paper describes the hypothesized theory as follows:

2.1.1 The personal characteristics of entrepreneurs have a positive effect on the performance of SMEs

Dorcas et al. [14] noted that there is growing evidence that the success of corporate innovation correlates with entrepreneurial personality traits. These traits include a desire for success, a spirit of risk-taking, locus of control, and a penchant for innovation. Three motives — the desire for power, the need for affiliation, and the need for achievement — determine an entrepreneur's success, but only the need for achievement truly defines an entrepreneur. Moreover, SME owners often possess personality traits such as an optimistic outlook on life, a willingness to embrace new challenges and opportunities, a high level of self-confidence, and increasing optimism. Entrepreneurs with optimism, however, often think ahead. Owners form their unique personalities through both formal and informal education. As such, a business owner who has undergone an entrepreneurial education program will

likely receive greater consideration when they establish their company.

Researchers [18, 19] argue that the performance of individual enterprises, which stems from the strategies their owners implement [20], determines the extent to which SMEs contribute to overall economic development. This is because a newly formed firm is an element of the owner's personal life strategy, commonly referred to as the entrepreneur's personality attribute. Some researchers [21] have suggested that entrepreneurs are driven more by a desire to improve their standard of living through running their businesses than by personal satisfaction. Further research on micro and small enterprises has revealed that factors such as the location of the business, the age of employees, gender, parental employment history, educational attainment, and work experience all have a positive impact.

Compared to other variables such as the owner's competence, the owner's level of professionalism in the business, and the extent of the owner's formal planning, family has the most significant positive influence on business growth [22]. The impact of Asian culture on business management is undeniable. Individual backgrounds and unique characteristics, such as gender, age, and other personal background elements like education and work experience, that affect the performance of small businesses can be related to the success and limitations of micro and small enterprises [23].

Entrepreneurs are believed to possess unique characteristics based on their geographical location, which can also impact the performance of their businesses. The desire to increase income and job security in developing countries is a potent motivator for entrepreneurship, ultimately fostering creativity and a willingness to take risks [24, 25]. Conversely, it has been suggested that city dwellers are twice as likely to engage in economic activities as residents of rural regions [26].

The contingency approach to management does not offer a one-size-fits-all solution for success [27]. Every organization's situation and environment affect how it conducts its activities through its organizational structure. Businesses that flourish in a dynamic business environment require flexible and adaptable administrative systems and procedures. According to the contingency approach, the organization's internal characteristics serve as the dependent variable that is influenced by its operating environment. The contingency approach led to the emergence of the management decision position, recognizing that organizational characteristics were influenced by factors other than the environment and highlighting the importance of decision-makers in connecting the organization to its surroundings. This approach views the outcome of management decisions as the domain of activity.

Considering the dynamics of organizational behavior, the various sources of organizational attributes, and the alignment of environmental conditions achieved by managerial decisions, strategy is either created as a deliberate process or evolves alongside decision-making, step by step. A manager adjusts the nature of his position as the environment is constantly changing. The co-alignment process is not always necessary because the adaptive process still faces challenges, such as entrepreneurial issues that have not yet demonstrated how they interact with the environment. This study aims to provide a solution by modeling environmental unpredictability and business strategy as moderating factors between the impact of an entrepreneur's personal characteristics and firm success.

Performance of the company is correlated with the results of its labor. As a multifaceted phenomena or construct,

company performance can be challenging to quantify due to the limits of both qualitative and quantitative metrics. As a result, it is advised that the two hands be utilized together.

From a focused to a broad perspective, strategists see firm performance as a sequential multidimensional construct. The first is financial performance, which offers some insight into how well a business or organization is doing. The core of the business effectiveness domain is this performance. Although necessary to assess overall effectiveness, this performance measure is not sufficient. Current profitability can be emphasized using standard accounting performance indicators including return on sales (ROS), return on equity (ROE), and return on assets (ROA) [28].

*H1: Entrepreneurs' characteristics have a positive effect on the performance of SMEs.*

2.1.2 Higher environmental uncertainty can strengthen the relationship between an entrepreneur's characteristics and SME performance

According to the contingency theory, a company's performance hinges on its ability to manage external factors such as the environment. One of the hallmarks of contingency theory, which recognizes the environment's critical role in managerial decision-making, has also advanced the field of management theory. The existence of cause-and-effect interactions between individuals and their environment shapes the relationship between the personal characteristics of entrepreneurs and their sphere of influence. Entrepreneurs tend to be high-risk takers and often hold a high social standing [29]. They are also willing to leave comfortable positions to start their businesses. An environment promoting generosity and entrepreneurial readiness has a strong correlation [30], particularly when entrepreneurs have strong convictions about their responsibilities in establishing new enterprises. However, when business owners lack the necessary information to predict the environment, they respond by reducing strategic planning.

Secure and transparent environment, businesses must deal with a certain degree of environmental uncertainty. The business operates in a dynamic climate fraught with some uncertainty. But no environment is entirely devoid of ambiguity. Environmental variables (culture, law, and geography) and external factors from governmental and financial institutions are the two primary categories of external factors impacting business growth [31]. These are divided into two groups due to cultural and national differences. The manner in which a business interacts with its environment significantly impacts its performance. Environmental unpredictability was moderated by business strategy and was the cause of performance differences among SMEs in Malaysia [32]. Environmental factors are quantified using two metrics: environmental uncertainty and competitive intensity [33].

Performance can be affected by how well the environment and corporate strategy align. The relationship between the environment and process benefits performance. As environmental complexity increases, performance levels also increase [34-36]. Additionally, Narkunienė and Ulbinaitė [37] noted that the business environment positively impacts the performance of SMEs in China. However, competitive pressure negatively affects the performance of SMEs. Furthermore, the business environment in Yogyakarta, Indonesia [38], positively impacts SME performance. These empirical findings are in agreement with previous results [39].

The results of earlier research have generally been contradictory, indicating that environmental influences can have both positive and negative effects on business performance. Additionally, because the ecological challenges that businesses must deal with differ, the environment can be employed as a moderating variable. One of the main forces behind this research in Indonesia is this:

*H2: Higher environmental uncertainty can strengthen the relationship between an entrepreneur's characteristics and SME performance.*

2.1.3 Business strategy can strengthen the relationship between the personal characteristics of entrepreneurs and the performance of SMEs

The integration of environmental and strategic factors by a corporation is a determinant of its performance. Business strategy can be employed as a moderating variable and is a differentiator in the performance of SMEs. A generic competitive strategy is the approach a business adopts to outperform its industry competitors [40]. Additionally, Sabihaini and Prasetyo [41] highlighted that even SMEs utilize generic strategies to determine a company's or an industry's competitive advantage. The empirical results [42] demonstrated the following: 1) competitive strategy significantly elevates overall performance; 2) differentiation, cost, and innovation strategies are essential competitive priorities for SMEs in Yogyakarta; and 3) strategic alliances significantly increase SME sales, but not their profits. Competitive strategy influences the performance of SMEs in China [43]. Furthermore, Mazzarol and Choo [44] found that a focus strategy enhances performance, leading to a larger market share.

Baharuddin and Wahyuni [45] identified a negative correlation between a low-cost strategy and a focus strategy in terms of sales and growth. To maintain a competitive edge in a rapidly changing world, SMEs must practice innovation scenarios. SMEs should not only implement innovation techniques but also establish strategic relationships, such as those with larger businesses. Innovation, cost generality, and differentiation strategy are effective tactics in a dynamic economy [46]. It can be underscored, based on previous research, that a competitive strategy is a strategic choice that may influence the performance of SMEs.

However, financial performance is just one facet of business performance. In essence, a corporation can gauge its level of success based on its performance. Performance measurement is less accurate when only one dimension or metric is used. Examples of business performance metrics include profitability, sales growth, competitiveness, and market share. Aliyyah et al. [47] used indicators such as profit, revenue, and asset growth to measure the performance of SMEs and small firms.

Lastly, organizational effectiveness is the most comprehensive perspective on business success compared to the first two. According to this viewpoint, a company's success is measured by how well it deals with stakeholders beyond shareholders, including those concerned about quality and social responsibility, as well as employee satisfaction. Organizational performance encompasses two elements: a) those related to quality, such as product and overall quality, and employee satisfaction, and b) those related to social responsibility, such as environmental and community responsibility.

*H3: Business strategy can strengthen the relationship between*

the entrepreneur's characteristics and the performance of SMEs.

### 2.2 Research framework

The goal of this study was to establish a link between the performance of small and medium-sized businesses (SME) and the personal traits of entrepreneurs. Additionally, using an alternative contingency model, this study looks at the moderating effect, which may highlight the disagreement over empirical evidence showing a connection between unique entrepreneur qualities and company performance. The research model is depicted in Figure 1 in the following manner, based on the literature review:

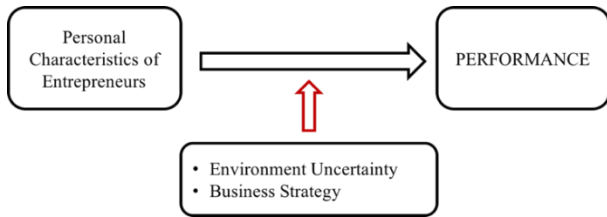


Figure 1. Research framework

### 3. RESEARCH METHODOLOGY

In-depth interviews and survey methodologies were employed to collect the research data for this study, which combined qualitative and quantitative research approaches. 213 small and medium enterprises (SMEs) were used in this study. Survey-style questionnaires with a Likert scale were utilized to gather research data, which was then analyzed using the partial least squares (PLS) method.

Cities and regencies in the Special Province of Yogyakarta were used as the sample in this study. The variance-based SEM (SEM-PLS) model and the overall sample size are the same. The following criteria form the basis for sampling: SMEs that the manager owns; SMEs that have engaged in export-related activities. These two requirements were met by 565 of the SMEs registered with DIY. A total of 565 questionnaires were distributed, and 213 were returned (a response rate of 37.7%).

#### 3.1 Operational definition of research variables

Performance is the degree of success in running a firm over a given time frame. Performance indicator variables include market share, sales growth rate, return on equity (ROE), the development of new products, and profit growth [48, 49].

The qualities of individual business owners as entrepreneurs who are assessed using four dimensions, namely locus of control indicators: the degree of self-assurance and faith in fate, the urge for success, are referred to as personal characteristics of entrepreneurs. Indications include a strong work ethic, a desire for excellence, and an adventurous nature. Arrows: the degree of risk-taking confidence, the story of risk-taking bravery, and the frequency of risk-taking, as well as favoring innovation indicators: the capacity to address issues in novel contexts or ways, and the frequency of innovation [50].

An environment that is unpredictable, unstable, competitive, dynamic, complicated, and volatile is known as an uncertain environment. These indicators, which include turbulent

environment indicators (level of environmental uncertainty, ability of SMEs to adapt), competitive environment indicators (level of competition, level of challenge for SMEs, ability of SMEs to adapt), and dynamic environment indicators (level of environmental predictability, level of SMEs' knowledge of climate prediction) [51]. The company plan, on the other hand, determines how SMEs or entrepreneurs can compete in the market. The business strategy calls for a lower cost leadership position than rivals, cost-effective products, cost analysis, the optimization of production facilities and equipment, the introduction of new product differentiation, market research, the creation of various effects, and a focus on particular products, customers, specific products, and specific market segments.

### 3.2 Data analysis models

Data analysis using the Partial Least Squares (PLS) technique with structural equation modeling (SEM). The PLS technique is a variance-based SEM that may simultaneously assess measurement models and structural models. While causality testing is hypothesis testing with a predictive model based on structural models, validity and reliability testing are based on measurement models.

### 4. RESEARCH RESULTS AND DISCUSSION

#### 4.1 Descriptive statistics

Gender, age, education level, and business location were the traits of the respondents that were looked at in this study. Men made up 213 of the total responders, or 80.8%, and women made up 19.2%. While the respondents' ages were broken down into four groups, the majority of business owners were between the ages of 35 and 45 (40.85%), followed by those between the ages of 45 and 55 (30.52%), and those between the ages of 25 and 34 (27.23%). The middle-aged category dominated the key actors in entrepreneurship or business ownership in the Special Region of Yogyakarta, according to just three respondents under the age of 25, or 1.41% of all respondents.

Table 1. Characteristics of the respondent's#

Characteristics	Count	Percentage (%)
<b>Gender</b>		
Men	172	80.8
Women	41	19.2
<b>Age</b>		
Below 25	3	1.41
25 to below 35	58	27.23
35 to below 45	87	40.85
45 until 55	65	30.52
<b>Level of education</b>		
Junior High School (Grade 9)	5	2.3
Senior High School (Grade 12)	169	79.3
Vocational (Diploma)	22	10.3
University graduates (BSc/Honour)	17	8.0
<b>Location of business *</b>		
City of Yogyakarta	44	20.7
District of Sleman	69	32.4
District of Bantul	56	26.3
District of Kulonprogo	21	9.9
District of Gunung Kidul	23	10.8

Note: # manager/owner of a business; \*in the Special Province of Yogyakarta

High school level (79.3%), vocational high school or diploma level (10.3%), university or college level (8.0%), and junior high school level (2.3%) made up the distribution of respondents' educational levels. According to empirical research, middle-class education is the most common degree of education for business owners in Yogyakarta's Special Region. The respondents' knowledge, aptitude, and capacity to make business decisions, including policies and plans, are reflected in their level of schooling. In their 2000 study, Charney and Libecap looked at the impact of relevant educational attainment on business success. It has been suggested that education level affects how well small enterprises perform.

Only 8% of respondents were graduates of colleges or universities, despite the fact that Yogyakarta is recognized as a city of learning and home to more than 150 postsecondary institutions, including four prestigious state universities and one state fine arts college. Because Yogyakarta University graduates have only had a minor impact on the creation of local entrepreneurs, these empirical findings may be depressing. However, a number of variables, including the fact that many Yogyakarta university graduates opt to leave the city after graduation, are probably to blame for this modest contribution. They frequently start their own businesses in their hometowns or find employment in other provinces or cities. On the other hand, the academic culture that has emerged in the larger society as a result of the construction of numerous schools and universities near Yogyakarta can have a good and dynamic impact on business owners. Because of this, even if the majority of responders only have a high school diploma, they were still able to learn from the local community and enhance their business performance.

Yogyakarta only makes up 20% of the provincial SMEs despite being the administrative and commercial hub of the province. The city may have a lesser service area than other districts, which could account for this. Additionally, SMEs located in cities must contend with rising rent expenses, rising labor costs, and direct competition from other, more extensive and established businesses in the neighborhood. Sleman has the highest percentage of SMEs, followed by Bantul (26.3%). Nearly 10% of the businesses in the other districts, Kulonprogo and Gunung Kidul, are SMEs. This information is compatible with the fact that Sleman, Bantul, Kulonprogo, and Gunung South have the largest land areas. Additionally, due to its proximity to the city of Yogyakarta, Sleman has the greatest concentration of SMEs. This indicates that Yogyakarta keeps tight ties to its target corporate clients while providing less expensive renting space and simple access via public transit. Therefore, the Sleman district is the finest option for business owners, particularly novices who want to launch and grow their enterprises.

An example of a choice that affects a business's location is the owners' point of view and managerial skills. Every choice of business site has pros and cons, but for certain business owners, the cons can be both a challenge and an opportunity. Sometimes choosing a business location is purely determined by how close the entrepreneur's home is to the potential site. According to Mazarol and Choo's [44] research from 2003, SME owners prefer to have their company located close to where they live over other factors like convenience and access to transportation. This circumstance was seen in this study as well.

The presence of so many SMEs in the urban regions of Bantul, Kulonprogo, and Gunung Kidul is highly encouraging

because their success might support the entire local economy. Urban workers may also have a strong work ethic that is advantageous to SMEs. Baharuddin and Wahyuni [45] discovered a favorable effect of regional origin on work ethic when examining the work ethics of Muslim business owners in Batur Klaten, Central Java. However, it is well recognized that SMEs in these regions perform underwhelmingly and with a steady decline, particularly if SMEs in rural areas only rely on local raw material sources.

## 4.2 Measurement models

The presence of so many SMEs in the urban regions of Bantul, Kulonprogo, and Gunung Kidul is highly encouraging because their success might support the entire local economy. Urban workers may also have a strong work ethic that is advantageous to SMEs. Endarto et al. [52] discovered a favorable effect of regional origin on work ethic when examining the work ethics of Muslim business owners in Batur Klaten, Central Java. However, it is well recognized that SMEs in these regions perform underwhelmingly and with a steady decline, particularly if SMEs in rural areas only rely on local raw material sources.

**Table 2.** Validity Test for the measurement model with SME performance and PCE

Variables	Outer Loading	Note
<b>SME Performance</b>		
SP1	0.84	Valid
SP2	0.92	Valid
SP3	0.82	Valid
SP4	0.87	Valid
SP5	0.81	Valid
<b>Personal Characteristics of Entrepreneurs (PCE)</b>		
PCE1	0.79	Valid
PCE2	0.90	Valid
PCE3	0.91	Valid
PCE4	0.89	Valid
PCE5	0.75	Valid
PCE6	0.82	Valid
PCE7	0.89	Valid
PCE8	0.90	Valid
PCE9	0.78	Valid

**Table 3.** Validity test for the measurement model with environmental uncertainty and business strategy

Variables	Outer Loading	Note
<b>Environmental Uncertainty</b>		
EU1	0.80	Valid
EU2	0.76	Valid
EU3	0.74	Valid
EU4	0.89	Valid
EU5	0.80	Valid
EU6	0.90	Valid
EU7	0.83	Valid
<b>Business Strategy</b>		
BS1	0.88	Valid
BS2	0.87	Valid
BS3	0.85	Valid
BS4	0.83	Valid
BS5	0.88	Valid

BS6	0.82	Valid
BS7	0.93	Valid
BS9	0.81	Valid
BS10	0.82	Valid

**Table 4.** Discriminant validity value (Cross loading)

Indicator	SME Performance	Personal Characteristics of Entrepreneurs (PCE)	Environmental Uncertainty	Business Strategy
SP1	<b>0.84</b>	0.73	0.79	0.75
SP2	<b>0.92</b>	0.82	0.84	0.82
SP3	<b>0.82</b>	0.63	0.65	0.66
SP4	<b>0.87</b>	0.68	0.74	0.74
SP5	<b>0.81</b>	0.79	0.78	0.79
PCE1	0.64	<b>0.79</b>	0.64	0.70
PCE2	0.80	<b>0.90</b>	0.79	0.74
PCE3	0.80	<b>0.91</b>	0.80	0.74
PCE4	0.86	<b>0.89</b>	0.81	0.78
PCE5	0.61	<b>0.75</b>	0.57	0.62
PCE6	0.71	<b>0.82</b>	0.65	0.67
PCE7	0.78	<b>0.89</b>	0.77	0.73
PCE8	0.82	<b>0.90</b>	0.82	0.81
PCE9	0.64	<b>0.78</b>	0.62	0.70
EU1	0.65	0.62	<b>0.80</b>	0.68
EU2	0.54	0.55	<b>0.76</b>	0.60
EU3	0.48	0.48	<b>0.74</b>	0.63
EU4	0.80	0.71	<b>0.89</b>	0.76
EU5	0.59	0.61	<b>0.80</b>	0.61
EU6	0.76	0.83	<b>0.90</b>	0.80
EU7	0.72	0.82	<b>0.83</b>	0.79
BS1	0.74	0.68	0.77	<b>0.88</b>
BS2	0.61	0.67	0.70	<b>0.87</b>
BS3	0.65	0.63	0.74	<b>0.85</b>
BS4	0.71	0.66	0.78	<b>0.83</b>
BS5	0.70	0.76	0.75	<b>0.88</b>
BS6	0.78	0.71	0.80	<b>0.82</b>
BS7	0.81	0.85	0.85	<b>0.93</b>
BS8	0.66	0.71	0.63	<b>0.86</b>
BS9	0.65	0.56	0.61	<b>0.79</b>
BS10	0.75	0.78	0.79	<b>0.82</b>

The test findings for Composite Reliability, Average Variance Extracted, and Cronbach's Alpha are shown in Table 4, where the AVE values for all of the constructs were over 0.5. This implied that each concept was measured by a variety of indicators. These findings corroborated the convergent and discriminant validity testing outcomes from before. Each construct's Cronbach's alpha value and composite reliability both exceeded 0.7. Thus, it was determined that each of the four constructs had high internal consistency reliability, leading to the conclusion that the model was reliable.

**Table 5.** Average variance extracted, Composite Reliability, and Cronbach's Alpha

Variables	AVE	Composite Reliability	Cronbach Alpha
- SME Performance	0.693	0.966	0.948
-Personal Characteristics of Entrepreneurs	0.692	0.947	0.928
- Environmental uncertainty	0.545	0.942	0.885
- Business strategy	0.575	0.961	0.904

The test findings for Cronbach's Alpha, Average Variance Extracted, and Composite Reliability are shown in Table 5 above. All constructs had AVE values greater than 0.5. In other words, each concept is measured by a variety of indicators. The outcomes of the earlier convergent and discriminant validity tests were supported by these findings. Each construct's Cronbach's alpha value and the composite reliability both exceeded 0.7. As a result, it is ensured that each of the four constructs has a high level of internal consistency reliability, leading to the conclusion that the model is reliable.

### 4.3 Internal and structural models

There is only one little correlation between the nature of the entrepreneur and SME success that is influenced by environmental uncertainty. A larger degree of environmental uncertainty is indicated by the coefficient's negative sign (-0.017). With a probability threshold of 0.05, the relationship between other constructs is also significant at the same time.

**Table 6.** Inner model

Relationship Path	Original Sample	Probability Value	Note
Personal Characteristics of Entrepreneurs → SME Performance	0.130	0.027	Significant
Personal Characteristics of Entrepreneurs → SME Performance moderated by Environmental uncertainty	-0.017	0.404	Insignificant
Personal Characteristics of Entrepreneurs → SME Performance moderated by Business strategy	0.307	0.001	Significant

### 4.4 Discussion

The Table 6 above displays the empirical results from the partial least squares (PLS) study. The empirical results demonstrate that the personal traits of entrepreneurs have a favorable impact on the performance of SMEs. Accordingly, the Special Region of Yogyakarta should see a decrease in the performance of SMEs if the personal traits of entrepreneurs are lower than they should be. The improved performance of SMEs will aid in the expansion of the national economy, particularly that of Yogyakarta's Special Region. Results of business performance are a result of entrepreneurs putting their strategies into practice. This is so because a business owner's life strategy which is generally referred to as the entrepreneur's characteristic includes their business development. Risk-taking, the need for success, the locus of control motive, and a preference for innovation are the characteristics that make the entrepreneur in question special. High degrees of self-confidence, self-efficacy, and destiny are indicative of these four reasons. Entrepreneurs typically have a strong work ethic, high levels of drive to succeed, high levels of confidence in their abilities and the fortitude to take calculated risks, as well as the capacity to innovate and find new ways to address issues.



The empirical findings also demonstrate that (1) Javanese cultural traits play a significant role in determining business growth, (2) entrepreneurs are more motivated by their desire to increase their profit/income and standard of living than by running their businesses for personal growth and satisfaction, and (3) because the ownership and management of the company is made up of a combination of family members, the success of the business is primarily influenced by the owner's lifestyle. These empirical findings concur with numerous reports [53].

According to the research results, there is no consensus or evidence in favor of environmental uncertainty regulating the association between entrepreneur qualities and SME performance. The results experimentally show a negative sign on the coefficient value (-0.017), demonstrating that the Special Region of Yogyakarta's higher level of environmental uncertainty has an effect on SMEs' performance decline. These empirical results show that the association between the traits of entrepreneurs and the success of SMEs is further weakened by environmental uncertainty. In other words, because of their special traits, entrepreneurs are unable to foresee the effects of growing environmental uncertainty on declining economic performance. These empirical results are a result of entrepreneurs' failure to adapt to or foresee an ever-increasingly competitive market, while also dealing with ever-more particular issues for SMEs and foreseeing the business climate. Entrepreneurs who can effectively manage their personal traits tend to have a good outlook on the world, actively seek out new possibilities and challenges, and exhibit high levels of optimism and self-assurance. Entrepreneurs find it challenging to anticipate the future due to increased environmental unpredictability, which makes developing business plans difficult. Managers or business owners want success, and inventing is one approach to handle this unstable climate. As a result, an organization's success in the constantly evolving business environment depends on its capacity to grow its core skills.

Businesses must be adaptable in times of extreme environmental instability. Companies can adapt to environmental changes if they are flexible. The business can also choose the type of plan that will work best in the circumstances. According to some existing literature, organizations can use flexibility as a tool to adapt and promote organizational change, and it has been linked to operational effectiveness. Practices in knowledge management that provide businesses a lot of flexibility might also show this. Having such a great degree of flexibility will boost competition. Organizational structure and change, human resource management, creativity, and the application of technology in manufacturing are all ways to boost competitiveness.

Other intelligence is required to deal with environmental uncertainty, which is defined by a quickly changing environment, in order to grab opportunities. For entrepreneurs to seize these opportunities, six new types of intelligence are required, including 1) Technological intelligence, or the ability to use, understand, and support technology. Entrepreneurs must therefore become accustomed to employing technology going forward; 2) Contextual intelligence. Due to the complexity of new technologies, entrepreneurs frequently lack a thorough understanding of the context of their circumstances. Consequently, practical experience is necessary to develop contextual intelligence; 3) Emotional and social acumen. Given that many people today spend all of their time in front

of technology and lack the social and emotional intelligence to deal with others and their varied behaviors, social and emotional intelligence is important; 4) Opportunity-seizing intelligence, or creative intelligence. In the actual world, there are many opportunities, however frequently people are unable to seize these opportunities; 5) Explorative intelligence, or the capacity to consider options before acting on them; this quality is crucial for older individuals; The interaction between the personal traits of the entrepreneur and the environment is molded by the causal relationship between the individual and the environment. Moral intelligence, or intelligence that seeks to uphold universally recognized values. Entrepreneurs may struggle to predict the environment due to a lack of information, a lack of time to react, and inadequate strategic planning.

Entrepreneurial traits and SME performance are correlated, however business strategy can temper this relationship. The empirical results demonstrate that the association between an entrepreneur's traits and SME success may be strengthened by using business methods such as strategy, differentiation, cost leadership, and focus that are based on Porter's generic typology. These empirical results show that SMEs can use a mixed strategy (hybrid strategy), which combines cost leadership, differentiation, and focus strategies, to enhance company performance through increased market share, sales growth, return on equity (ROE), new product development, growth profits, and employees' satisfaction with their company goals. Whereas a differentiation strategy is chosen to meet the needs of those farther up the marketing chain, a cost leadership approach is used to control costs. A focus strategy, in contrast, is chosen because it can handle particular products and market groups. Small and medium-sized businesses (SMEs) will perform better after the business strategy is put into action than they did previously. It will make a difference in how well SMEs perform. As a result, the business strategy used is a major moderating factor. This result supports Porter's generic strategy, which is also a contingency variable, and is logically consistent with contingency theory.

#### 4.5 Research limitations

It is impossible to escape the limitations of this study. Regulations disclosure attempts to make this study understandable with accurate interpretations. Additionally, by disclosing the rules, it will enable future research to fill in the gaps left by the analyses in this study: 1) The majority of sample SMEs only view business strategy as a determining factor for their company's performance; 2) the sample used in this study is diverse in terms of industry, age, and educational background, and of course some respondents are less able than others to express their ideas clearly, leading to consistently low response rates and a tendency to answer incorrectly.

This research also yields some key findings that merit additional study. First, entrepreneurs typically aim for high levels of performance; one strategy for coping with this high amount of environmental uncertainty is through innovation. The ability of firms to build their core competences as well as the six new types of intelligence highlighted in this research will determine how successful they are in the business environment, which will evolve over time. The development of these six types of new intelligence and an organization's core competences should therefore be the subject of future research. Second, in other studies, clusters can be created according to the degree of education, experience, and business

age so that respondents' responses to questions will be more consistent. This is done if the respondents share a common educational background, professional experience, or business age. Last but not least, it is recommended that other methods or applications be used in other studies and the creation of alternative contingency models.

## 5. CONCLUSION

Based on the analysis and discussion in this study, an alternative contingency model is used to describe the relationship between the traits of entrepreneurs and the performance of SMEs. This model explains the direct effect and the moderating effect. The study and debate lead to the conclusion that the entrepreneur's traits have a beneficial impact on business success for Indonesian small and medium companies (SMEs). The association between an entrepreneur's distinctive qualities and business performance can be moderated by business strategy. However, the relationship between entrepreneur traits and SME performance is lessened as environmental unpredictability rises.

These empirical results run counter to (1) the entrepreneur's life plan, which is generally referred to as the entrepreneur's traits. Risk-taking, locus of control motives, a need for achievement, and a preference for innovation are the characteristics that make the entrepreneur in question unique; (2) contingency theory, which holds that a company's success depends on its ability to deal with environmental uncertainties.

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