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Article

The impact of K-beauty entrepreneurship on technical competency and business performance—Focusing on the CEO

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Abstract: This study investigates the relationships among entrepreneurship, technical competency, and business performance, focusing on CEOs in the beauty service industry in the Busan area. A total of 215 survey responses were collected, with 213 valid responses selected for final analysis after excluding 2 unsuitable responses. The key findings of the study are as follows: First, entrepreneurship was found to partially influence technical competency. Second, technical competency was found to influence business performance. Third, entrepreneurship was found to partially influence business performance. Fourth, technical competency was found to partially mediate the relationship between entrepreneurship and business performance. Based on these results, the study systematically analyzes and explains the causal relationships among the entrepreneurship of CEOs in the beauty service industry, their technical competency, and business performance. It also seeks to provide useful reference materials for strengthening the innovation and competitiveness of CEOs in the beauty service industry and establishing a theoretical foundation for future research in related fields.

Keywords: K-beauty; beauty service industry CEO; entrepreneurship; technical competency; business performance

1. Introduction

K-beauty, like K-POP, is a compound word combining ‘K’ from KOREA and ‘BEAUTY’. Korean cosmetics and skincare products have gained global recognition, leading to increased usage worldwide. The Korean Wave, which also includes K-dramas and K-movies, began to gain popularity globally in the early 2000s. Concurrently, the K-beauty industry had a positive impact on the global market (Joo, 2022). Consequently, the makeup, hairstyles, and fashion styles associated with K-beauty became highly popular overseas, with many people aspiring to emulate Korean beauty culture. The emergence of a dedicated fanbase, known as K-Beauty, has established it as a significant aspect of K-cultural content, influencing global beauty trends (Jong, 2017).

The beauty service industry, a subset of the beauty industry, has historically catered to human desires for beauty, even before the term K-beauty was coined. This industry has experienced growth in income levels alongside economic development. As social and cultural changes have heightened interest in beauty, the beauty service industry has emerged as a future-oriented growth sector, recognized for its potential to create high added value, and contribute to the future development of the Korean economy (Kim, 2020).

The beauty service industry is characterized by its labor-intensive nature and

high reliance on human resources. It satisfies customers' aesthetic needs through skilled techniques and personal services rather than through physical systems. Business operations in this industry typically involve a small number of employees, led by a manager, who provide both tangible and intangible services to achieve desired outcomes. Despite its potential, the beauty service industry remains a small-capital sector primarily focused on subsistence. While technical competency is highly valued and adequately addressed through education, entrepreneurship education has been lacking.

Historically, new technologies, including ventures and IT, have been studied primarily in the context of technology-oriented companies and the manufacturing sector, which generate high value. However, it has been suggested that these technologies can also be applied to the service industry (Kaufmann and Dant, 1999). Entrepreneurship is recognized as a crucial factor in business performance, essential for the sustainable growth and development of the K-beauty service industry. This industry, being highly dependent on human resources and consisting largely of small-capital businesses, requires entrepreneurship to drive high-value creation and achieve organizational and business performance goals in a rapidly changing environment.

Despite its importance, there is insufficient prior research on the factors that enhance managerial competitiveness and entrepreneurship within the K-beauty service industry. In particular, empirical research focusing on managers in this industry is scarce. This study aims to re-emphasize the importance of entrepreneurship among managers in the K-beauty service industry, examine its impact on business performance, and investigate the mediating effect of technological capabilities in the relationship between entrepreneurship and business performance. The empirical analysis conducted in this study provides academic insights necessary for the growth and self-sufficiency of the K-beauty service industry and offers strategic directions to enhance managerial competitiveness.

2. Literature review

2.1. K-beauty service industry

The K-beauty industry boasts significant growth potential, driven by new tourism and export opportunities, an enhanced national image thanks to the Korean Wave, and a pool of high-quality human resources. It is evolving alongside the growth and sophistication of the consumer class, making it a service industry with considerable promise (Wi and Kim, 2019).

According to the Korea Health Industry Promotion Park (2012), the beauty service industry is defined as one that provides services to maintain the human body's beauty and health. This includes specific sectors such as hair beauty, skin care, nail art, and makeup, along with related services. It also encompasses manufacturing industries that produce beauty equipment and supplies. Park et al. (2020) describes this industry as one that fulfills the intrinsic desire to enhance human beauty, creating new demand through its connections with health, medicine, science, lifestyle arts, culture, and appreciation. It generates intangible emotions

combined with social value, thereby making it an industry rooted in consumption.

2.2. Entrepreneurship

Entrepreneurship was thoroughly addressed in the study by Schumpeter (1934). Referred to as an entrepreneur, it is defined as an innovator who renews the market through change. It encompasses the spirit, behavior, and execution process of an entrepreneur who leads innovation, takes calculated risks with an enterprising attitude, and creates new value with a challenging spirit. Stevenson and Jarillo (1990) defined entrepreneurship as the process by which individuals or organizations seize opportunities regardless of resource constraints. It has also been studied as a concept of activities that increase a company's competitiveness based on innovation, initiative, and a challenging spirit. An and Yang (2020) noted a trend toward expanding the recognition of entrepreneurship from a narrow concept limited to a few experts, such as entrepreneurs, to a broader concept aimed at solving social and economic problems from a global perspective.

Several scholars have studied entrepreneurship, proposing that it is composed of three core concepts: innovation, initiative, and risk-taking (Covin and Slevin, 1986, 1989; Miller, 1983; Morris and Kuratko, 2002; Schafer, 1991).

Innovation refers to comprehensive management activities aimed at producing products through innovative thinking, active market research, and the introduction of management techniques (Lumpkin and Dess, 1996). Innovativeness involves building an innovative work system through creative actions such as process innovation, technology innovation, and new market development in the production process (Miller, 1983). It is also described as the will to pursue new opportunities and to depart from established practices to achieve higher performance than the current business (Bae and Kim, 2019).

Proactiveness was defined by Ferreras-Mendez et al. (2021) as a company's tendency to actively compete with competitors by taking the initiative. It refers to innovative performance aimed at seizing market opportunities more quickly and leading the industry through active promotion (Zahra and Garvis, 2000). Proactiveness involves looking to the future in making new strategic decisions and predicting and acting on future problems, desires, and changes (Miller and Friesen, 1982).

Risk taking is described as the tendency to boldly take risks for opportunities, even when difficulties are anticipated (Kuratko, 2007). Dess et al. (2007) defined it as the intention to undertake bold challenges despite uncertain performance in a risky competitive environment, characterizing it as a personal trait involving the willingness to accept risk while actively pursuing opportunities. Additionally, Kim et al. (2021) referred to Risk taking as the attitude of choosing a new method, even if it involves risk, to pursue profits and the tendency to take risks and challenges to generate profits.

2.3. Technical competency

McClelland (1985) defined technical competency as a basic individual characteristic based on job standards that has a causal relationship with work

efficiency and business performance. Founders of small businesses with technical skills tend to prefer technical and functional work over managerial tasks, and individuals with technical skills often prefer working as experts rather than in general roles (Hoy and Hellriegel, 1982). Technical competency also includes the ability to identify and recognize customer needs to meet them effectively (Lim et al., 2021). Technological capabilities, which influence business performance, form the foundation of the core competencies of technology-based companies and are a critical success factor for gaining a competitive advantage. For small businesses or one-person companies, these capabilities are essential for sustainable growth and survival (Hong, 2022).

2.4. Business performance

Tanriverdi (2005) defines business performance as the outcome of a company's management activities, which can be divided into internal performance, such as productivity improvement and work performance, and external performance, such as customer satisfaction. In the current knowledge-based society, where intangible assets are as important as tangible assets, factors like the manager's philosophy and leadership, corporate culture, processes and systems, and customer relationships are considered vital evaluation criteria. Additionally, a comprehensive assessment that reflects the manager's innovation ability and subjective capabilities can also be viewed as performance (Lee, 2019).

A company's business performance is generally categorized into financial and non-financial business performance. Indicators of financial business performance include sales growth rate, profitability, and stock price return, while non-financial business performance indicators include customer satisfaction, new product launches, product quality, and marketing activities (Venkatraman and Ramanujam, 1986).

3. Methodology

3.1. Research hypothesis

The present study establishes the following research hypotheses and presents a research model (**Figure 1**) in order to investigate the relationship between entrepreneurship and technological capabilities as mediators affecting business performance, focusing on CEOs in the K-beauty service industry.

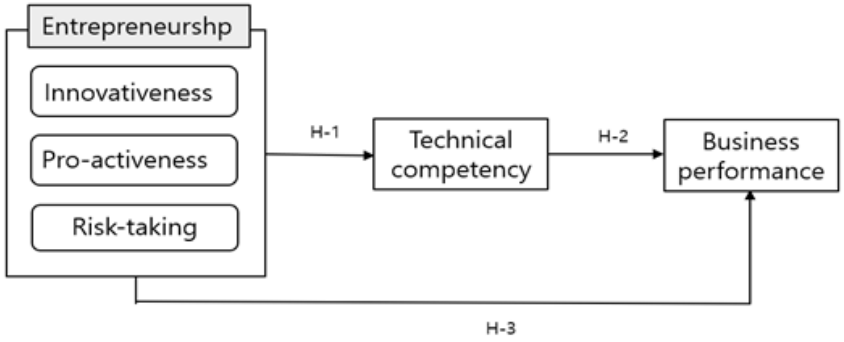

Figure 1. Research model.

H1: Entrepreneurship will have a positive effect on technical competency.

H2: Technical competency will have a positive impact on business performance.

H3: Entrepreneurship will have a positive impact on business performance.

H4: Technical competency will mediate the relationship between entrepreneurship and business performance.

3.2. Survey subjects and data collection

This study conducted a survey targeting CEOs of the beauty service industry in Busan. The survey period was 30 days, from 1 April 2024, to 30 April 2024. Data were collected both online and offline, resulting in a total of 215 responses. After excluding 2 unfaithful responses, 213 responses were used in the final analysis.

3.3. Composition of measurement tools

The survey questions used in this study's measurement tool utilized a nominal scale for general characteristics and consisted of a total of 32 questions using a 5-point Likert scale. General characteristics were covered by 4 questions. The section on entrepreneurship included a total of 15 questions, divided into 5 questions each on innovation, initiative, and Risk taking, modified, and supplemented from the study by Jo and Kim (2022). Technical competencies were assessed with 5 single-factor questions, revised and supplemented from the study by Kim and Yang (2020). business performance was evaluated with 5 single-factor items, revised and supplemented from the study by Lim and Song (2024).

3.4. Data analysis

The collected data were processed through data coding and data cleaning, and then analyzed using the SPSS 28.0 statistical package program. The analysis methods are as follows: frequency analysis was used to examine the general characteristics of the survey subjects; factor analysis was conducted to assess the validity and reliability of entrepreneurship, technical competence, and business performance; correlation analysis was performed to investigate the relationships between variables; linear regression analysis was used to test the hypotheses; and a three-step mediation regression analysis was conducted to examine the mediating effect of technical competence.

The mediation regression analysis must meet three conditions suggested by Baron and Kenny (1986). In regression Equation (1) $M = \alpha 1 + \beta 1X1$, the independent variable must have a statistically significant effect on the mediating variable. In regression Equation (2) $Y = \alpha 2 + \beta 2X1$, the independent variable must have a statistically significant effect on the dependent variable. In regression Equation (3) $Y = \alpha 3 + \beta 3X1 + \beta 4M$, the mediating variable must have a statistically significant effect on the dependent variable.

4. Result and discussion

4.1. General characteristics of survey subjects

Table 1 shows the results of the frequency analysis of the general

characteristics of the survey subjects. The total number of respondents was 213, consisting of 139 females (65.3%) and 74 males (34.7%). The age distribution was predominantly in the 30s, with 93 respondents (43.7%), followed by 81 respondents in their 40s (38.1%), 25 respondents aged 50 and above (11.7%), and 14 respondents in their 20s (6.6%).

The distribution of respondents by type of business was as follows: 73 in hair beauty (34.3%), 64 in skin beauty (30.0%), 43 in nail beauty (20.2%), and 33 in makeup beauty (15.5%). Regarding beauty industry experience, the majority had 10 to 15 years of experience, accounting for 104 respondents (48.8%). This was followed by 71 respondents with 5 to 10 years of experience (33.3%), 17 respondents with 15 to 20 years of experience (8.0%), 14 respondents with over 20 years of experience (6.6%), and 7 respondents with 1 to 5 years of experience (3.3%).

Table 1. Sample descriptive.

Characteristics		***N***	**%**
Gender	Male	74	34.7
	Female	139	65.3
Age of firm	20’s	14	6.6
	30’s	93	43.7
	40’s	81	38.1
	Over 50s	25	11.7
Sectors	Hair beauty	73	34.3
	Skincare	64	30.0
	For nail beauty	43	20.2
	Makeup beauty	33	15.5
Beauty experience	More than 1 year~ less than 5 years	7	3.3
	More than 5 years~ less than 10 years	71	33.3
	More than 10 years~ less than 15 years	104	48.8
	More than 15 years~ less than 20 years	17	8.0
	20+ years	14	6.6
	Total	213	100.0

(*n*: 213).

4.2. Reliability analysis

Table 2 shows the reliability analysis results of the scale used in the study. According to the results, Cronbach’s alpha value for entrepreneurship was confirmed to be 0.853. The Cronbach’s alpha value for technical competency was found to be 0.923, and the value for entrepreneurship will was found to be 0.938. The reliability (Cronbach’s α) coefficient of all measurement items was over 0.7, ensuring high reliability of the measurement tool.

Table 2. Reliability results of the scales.

Scale	Sub-Dimension	Number of Items	Cronbach's Alpha	
Entrepreneurship	Pro-activeness	5	0.933	0.950
	Innovativeness	5	0.932	
	Risk-taking	5	0.896	
Technical competency		5	0.923	
Business performance		5	0.938	

4.3. Correlation verification

Prior to testing the hypothesis of the causal relationship between entrepreneurship, technical competency, and business performance in this study, Pearson correlation analysis was conducted to identify the correlation and direction between each construct, and the results are shown in **Table 3**. The analysis revealed that innovation, proactiveness, and risk-taking, as sub-factors of entrepreneurship, had a statistically significant positive (+) correlation with technical competency ($p < 0.01$). Additionally, innovation, proactiveness, and risk-taking, as sub-factors of entrepreneurship, had a statistically significant positive (+) correlation with business performance ($p < 0.01$). Furthermore, technical competency was found to have a statistically significant positive (+) correlation with business performance ($p < 0.01$).

Table 3. Correlation verification.

Division	Entrepreneurship			(4)	(5)
	(1)	(2)	(3)		
Innovativeness (1)	1				
Pro-activeness (2)	0.699**	1			
Risk-taking (3)	0.611**	0.699**	1		
Technical competency (4)	0.773**	0.654**	0.519**	1	
Business performance (5)	0.648**	0.716**	0.568**	0.728**	1

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

4.4. Regression findings

Table 4 presents the regression analysis results of Hypothesis 1 and the verification outcomes of Hypotheses 1-1, 1-2, and 1-3. The model's explanatory power (R^2) was determined to be 63.3%, with $F = 119.919$ ($p = 0.001$), indicating statistical significance. Innovation ($\beta = 0.621$, $p < 0.001$) and proactiveness ($\beta = 0.278$, $p < 0.001$) were found to exert a significant positive effect on technical competency. However, risk taking ($\beta = -0.056$, $p > 0.05$) did not show a significant impact on technical competency. These findings suggest that managers in the beauty service industry demonstrate keen interest in adopting new and original technologies and actively apply innovative ideas, products, and services. Their entrepreneurial mindset, characterized by continuous pursuit of improvement, introduction of new management practices, and efforts to enhance performance, ultimately contributes positively to their technical competency. Conversely, the willingness to take risks and embrace new ventures despite uncertain profit expectations, or to confront

environmental changes with proactive measures, did not significantly influence managers' technical competency.

In a study by No et al. (2018), it was found that the entrepreneurial spirit in technology start-ups positively affects technological innovation capabilities, while Jeon et al. (2020) indicated a relationship between entrepreneurship in domestic small and medium-sized manufacturing firms and technological innovation. This study aligns with these findings, suggesting a similar impact on performance through entrepreneurship.

Table 4. Impact of entrepreneurship on technical competency.

Dependent Variable	Independent Variable	Non-standardized Coefficient		Standardized Coefficient	*t*	*p*	Collinearity Statistics	
		B	**S.E**	***β***			**Tolerance**	**VIF**
Technical competency	(Constant)	0.367	0.192		1.917	0.057		
	Innovativeness	0.609	0.057	0.621	10.587***	0.001	0.511	1.957
	Pro-activeness	0.280	0.065	0.278	4.283***	0.001	0.419	2.389
	Risk-taking	−0.058	0.064	−0.056	−0.913	0.362	0.473	2.115

$R^2 = 0.633$, adj $R^2 = 0.627$, $F = 119.919$, $p = 0.001$.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

The regression analysis results for Hypothesis 2 are presented in **Table 5**. The model's explanatory power (R^2) was found to be 53.1%, with $F = 238.528$ ($p = 0.001$), indicating statistical significance. technical competency ($\beta = 0.728$, $p < 0.001$) were found to exert a significant positive (+) effect on business performance.

This finding suggests that having proficient technical competency and the ability to incorporate cutting-edge trends into customer offerings through various beauty technology concepts positively influences business performance. According to a study by Lee and Yang (2016), CEOs with higher technical competency are better positioned to acquire necessary technical information for business operations. This capability can be leveraged for sales and marketing initiatives based on human resources, thereby enhancing overall business performance.

Table 5. Impact of technical competency on business performance.

Dependent Variable	Independent Variable	Non-standardized Coefficient		Standardized Coefficient	*T*	*p*
		B	**S.E**	***β***		
Business performance	(Constant)	0.542	0.192		2.841	0.005
	Technical competency	0.831	0.054	0.728	15.444***	0.001

$R^2 = 0.531$, adj $R^2 = 0.528$, $F = 238.528$, $p = 0.001$.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table 6 presents the regression analysis results for Hypothesis 3 and the verification outcomes of Hypotheses 3-1, 3-2, and 3-3. The model's explanatory power (R^2) was found to be 28.4%, with $F = 26.915$ ($p = 0.001$), indicating statistical significance. Entrepreneurial spirit ($\beta = 0.485$, $p < 0.001$) and innovativeness ($\beta = 0.293$, $p < 0.001$) were found to have a significant positive (+) effect on business performance, whereas risk-taking ($\beta = 0.050$, $p > 0.05$) showed no significant effect.

These findings highlight that proactive pursuit of innovative changes, active adoption of new products and technologies, continuous efforts to stay competitive, and introduction of novel management approaches positively impact business performance. However, the lack of significant impact from Risk taking in entrepreneurship suggests a reluctance to undertake tasks with uncertain profit expectations, particularly during economic downturns where success is uncertain.

In a study by Lim and Kim (2018), it was suggested that higher levels of entrepreneurial capacity enhance the speed and quality of product innovation, thereby positively affecting business performance. Similarly, Pack and Kang (2023) proposed that entrepreneurship influences both financial and non-financial performance in technology start-ups.

Table 6. The impact of entrepreneurship on business performance.

Dependent Variable	Independent Variable	Non-standardized Coefficient		Standardized Coefficient	*t*	*p*	Collinearity Statistics	
		B	**S.E**	***β***			**Tolerance**	**VIF**
Business performance	(Constant)	−0.126	0.238		−0.531	0.596		
	Innovativeness	0.328	0.071	0.293	4.596	0.001	0.511	1.957
	Pro-activeness	0.557	0.081	0.485	6.878***	0.001	0.419	2.398
	Risk-taking	0.059	0.079	0.050	0.748	0.455	0.473	2.115

$R^2 = 0.565$, adj $R^2 = 0.559$, $F = 90.594$, $p = 0.001$.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table 7. The mediating effect of technological capabilities on the relationship between entrepreneurship and business performance.

Step	Dependent Variable	Independent Variable	Non-standardized Coefficient		Standardized Coefficient	*t*	*p*
			B	**S.E**	***β***		
1	Technical competency	(Constant)	0.181	0.208		0.871	0.385
		Entrepreneurship	0.851	0.054	0.741	16.018***	0.001
		$R^2 = 0.549$ Adj. $R^2 = 0.547$, F-value = 256.570***, $p = 0.001$					
2	Business performance	(Constant)	−0.282	0.240		−1.177	0.240
		Entrepreneurship	0.961	0.061	0.733	15.674***	0.001
		$R^2 = 0.538$, Adj. $R^2 = 0.536$, F-value = 245.668***, $p = 0.001$					
3	Business performance	(Constant)	−0.367	0.220		−1.667	0.097
		Entrepreneurship	0.563	0.084	0.430	6.730***	0.012
		Technical competency	0.468	0.073	0.510	6.427***	0.001
		$R^2 = 0.614$, Adj. $R^2 = 0.610$, F-value = 166.948***, $p = 0.001$					

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

The results of the mediation effect analysis for Hypothesis 4 are presented in **Table 7**. First, upon analyzing the mediation conditions in the first stage, the independent variable, entrepreneurship, was found to significantly and positively influence the mediator, technical competency, thereby satisfying the mediation condition ($\beta = 0.741$, $p < 0.001$). In the second-stage mediation analysis, the independent variable, entrepreneurship, was found to significantly and positively

affect the dependent variable, business performance, also meeting the mediation condition ($\beta = 0.733$, $p < 0.001$).

In the third-stage mediation condition analysis, the regression coefficient of the independent variable, entrepreneurship, on the dependent variable, technical competency, decreased compared to the second stage but remained significant ($\beta = 0.733$, $p < 0.001 \rightarrow \beta = 0.430$, $p < 0.05$). The mediating variable, technical competency ($\beta = 0.510$, $p < 0.001$), was also found to be significant, indicating that technical competency partially mediates the relationship between entrepreneurship and business performance.

Yang and Hyeon (2023) confirmed that technological innovation capability partially mediated the relationship between entrepreneurship and business performance among employees of small and medium-sized manufacturing companies, similar to the findings of this study. Although Risk taking did not directly affect performance, introducing mediating variables showed its influence on business performance.

5. Conclusion

This study aimed to investigate the influence of entrepreneurship and technical competency on business performance, alongside the mediating role of technical competency among CEOs in the beauty service industry in Busan. A total of 215 responses were collected through online and offline surveys, with 213 deemed suitable for final analysis after excluding 2 unreliable responses.

Data analysis involved frequency analysis to profile survey participants and factor analysis to assess the validity and reliability of measures for entrepreneurship, technical competency, and business performance. Correlation analysis and hypothesis testing were conducted using regression analysis, supplemented by a three-stage mediation regression analysis to explore the mediating impact of technical competency. The findings are summarized as follows.

Firstly, entrepreneurship demonstrated a partially positive influence on technical competency. Results indicated that CEOs in the beauty service industry exhibit strong tendencies towards progressiveness and innovativeness, actively responding to environmental changes and pursuing challenging new initiatives, even if they entail risks. However, the approach to risk-taking appeared more passive in practical scenarios.

Secondly, technical competency was found to positively impact business performance. Approximately 50% of respondents possessed 10 to 15 years of hairdressing experience, leveraging advanced technology and expertise to deliver high-value services that enhance customer satisfaction. Enhanced technological capabilities enable diverse service offerings, thereby boosting overall business performance.

Thirdly, entrepreneurship showed a partial positive effect on business performance. While progressiveness and innovation significantly influenced business performance, Risk taking did not demonstrate a significant impact. These findings underscored the importance of progressiveness, innovation, and technical competencies in effective business management among beauty service industry

CEOs.

Lastly, technical competency acted as a mediator in the relationship between entrepreneurship and business performance. CEOs' entrepreneurial leadership was found to enhance business performance when complemented by strong technical competencies. Although Risk taking in entrepreneurship did not directly affect business performance, increased technical competency were associated with improved management perception and overall performance.

As a result of this study, it was found that the elements of entrepreneurship—namely innovation, progressiveness, and risk-taking—positively impact the business performance of CEOs in the beauty service industry. Particularly, progressiveness and innovativeness were significantly related to enhanced business performance. However, Risk taking did not show a significant effect on business performance.

Majority of the survey participants (66%) were female CEOs who demonstrated progressive and innovative management approaches. Given the nature of the beauty service industry, which comprises small-scale, customer-centric businesses focused on stability rather than high-risk ventures, it is inferred that risk sensitivity does not directly influence business performance. Therefore, there is a recommendation to systematically expand entrepreneurship education among CEOs in this industry. It is important to invite experts from each beauty field or to hold customized workshops and seminars regularly to maximize practical education. and A specialized management education program could provide insights into industry trends, latest technologies, and effective strategies, supplemented by continuous guidance and feedback from experienced beauty industry leaders. Initiatives such as mentoring programs and financial education, including financial statement analysis and profit and loss preparation, can enhance CEOs' analytical and planning skills, equipping them to successfully navigate dynamic market environments.

This study has certain limitations. Firstly, it focused on CEOs of the beauty service industry specifically in the Busan area, limiting the generalizability of findings due to the sample size of 213 subjects. Future research should aim to broaden the sample geographically across the country to derive more comprehensive empirical insights. Secondly, the measurement of business performance in this study relied on subjective evaluations from CEOs regarding customer growth satisfaction and sales growth rates. Future studies should incorporate objective measures to complement subjective responses and mitigate potential biases.

Entrepreneurship among CEOs in the beauty service industry plays a crucial role in sustaining business success. Supporting and conducting further research in this area can not only enhance business performance but also foster the overall development of the beauty service sector. The implications of this study underscore the importance of educational initiatives aimed at enabling beauty industry CEOs to effectively leverage entrepreneurship and achieve sustainable business operations.

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and SYO. All authors have read and agreed to the published version of the manuscript.

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