

# How corporate entrepreneurship affects the performance of small and medium-sized enterprises in Korea: The mediating and moderating role of vision, strategy, and employee compensation

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## ABSTRACT

**Objective:** The objective of the article is to provide implications for improving the competitiveness of SMEs by analysing the structural impact relationship of the corporate entrepreneurship of Korean SMEs on business performance.

**Research Design & Methods:** The established research model based on precedent studies was empirically analysed with PLS-SEM by employing the 3299 survey data collected by the Ministry of SMEs and Start-ups in 2018.

**Findings:** Empirical analysis revealed that corporate entrepreneurship affects business performance through a relationship between moderation (employee compensation) and mediation (vision and strategy). Hence, the findings suggest that, along with the importance of corporate entrepreneurship, the proper management of vision and strategy and employee compensation has a significant influence on the business performance of SMEs.

**Implications & Recommendations:** The implications of this research are expected to be applied by the government in establishing policy direction to enhance the corporate entrepreneurship of SMEs in the future.

**Contribution & Value Added:** This study provides empirical evidence that shows the relationship between corporate entrepreneurship and business performance by using the data of Korean SMEs. In particular, it incorporated the effects of vision and strategy, and employee compensation and rendered theoretical and managerial implications.

**Article type:** research article

**Keywords:** corporate entrepreneurship; vision and strategy; employee compensation; business performance; moderated mediation

**JEL codes:** L26, M13

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## INTRODUCTION

Previous studies have labelled the orientation for entrepreneurial activity variously, including entrepreneurial orientation (EO), intensity, propensity, style, proclivity, and posture (Covin & Wales, 2012). If the tendency to pursue innovation by responding to market opportunities in a proactive manner is dominant, based on the entrepreneurship of a company's chief executive or enterprise, competitive advantages are likely to emerge (Ferreira, Coelho, & Moutinho, 2020; Jespersen, 2012). In this regard, EO not only has a positive impact on business performance (Wahyuni & Sara, 2020; Zahra, 1991), but also serves as a key factor that triggers the development of new products by the entity (Liao & Zhao, 2020; Wang & Yen, 2012).

Researchers have had a growing tendency to study individual-level entrepreneurship or EO by extending it to the culture and characteristics of the entire organisation. Lumpkin and Dess (1996) argue that entrepreneurship can be applied to individual, organisational, and overall levels that existing entities and start-ups can perform. Furthermore, Drucker (2015) argues that the application of entrepreneurship can be extended to all levels of the entity other than to entrepreneurial individuals. Therefore, entrepreneurship could be practised by entrepreneurs, managers, executives, and general members of SMEs or large corporations at the individual level; its value and importance have been shared by start-ups, SMEs, and large companies alike (Kao, 1991).

So far, entrepreneurship in start-ups has been actively studied, and innovative activities of large corporations have attracted a lot of attention. Compared with these prior efforts, entrepreneurship in SMEs has been relatively underexplored. However, in most countries, the participation and influence of SMEs in their economies are undoubtedly substantial. Therefore, we need to find an effective way to boost entrepreneurship in SMEs. By and large, SMEs necessitate more entrepreneurial elements, because they do not have sufficient resources compared with large corporations. Despite this drawback, corporate entrepreneurship (CE) can have a significant impact on business performance for SMEs (Chang & Zhu, 2012). Therefore, an attempt to understand CE to improve the competitiveness of SMEs and to reveal the structural relationship between CE and business performance can be very meaningful.

As of 2018, the number of SMEs in Korea stood at 6.63 million, accounting for 99.9% of all companies. Meanwhile, the number of SME workers was 17.1 million, accounting for 83.1% of all business workers. The number of SMEs has increased 5.4% year-on-year, and the number of employees has grown by 2.5% (Hwang, 2020). In general, SMEs form the basis of the national industry in Korea and play a crucial role in economic growth and social development. Therefore, without the sound growth of SMEs, countries can neither increase the competitiveness of national industries nor improve people's quality of life due to a vast gap between the rich and the poor. In this background, CE or EO has been attracting attention as a factor that strengthens the competitiveness of SMEs (Zahra & Covin, 1995).

In summary, this study aims to analyse the causal relationship among CE, vision and strategy, and employee compensation on the business performance of SMEs. In particular, it predicts that the vision and strategy presented by the leader will have a mediating effect on the influence of SMEs' CE on business performance. In addition, this mediating effect is expected to be moderated by employee compensation.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Corporate entrepreneurship (CE) and business performance (BP)

Corporate entrepreneurship refers to the entrepreneurial propensity of the members of an organisation. This concept has been actively studied, and it highlights the concept of EO. In particular, the research on EO originated from Mintzberg's approach for establishing entrepreneurial strategies (Mintzberg, 1973), and the dimensions of EO have been classified and structured into innovativeness, risk-taking, and proactiveness in Miller's research (Miller, 1983).

Later, Lumpkin and Dess (1996) modify these five dimensions by adding autonomy and competitive aggressiveness, including Miller's three dimensions. Follow-up studies on CE are mainly based on the three factors suggested by Miller (1983) and Covin and Slevin (1991) or the five factors of Lumpkin and Dess (1996) as shown in Table 1. In these studies, the measurements were devised by consulting EO questionnaires.

In this study, five EO dimensions proposed by Lumpkin and Dess (1996) were adopted to measure CE. Firstly, innovativeness refers to the willingness of an organisation to undertake creative experiments to launch or pursue new products and services that have not been commercialised in the existing market. Secondly, risk-taking pertains to the organisation's voluntary nature to bear the calculated risk. Thirdly, proactiveness refers to the characteristics of an organisation that incurs changes in the current market environment, pursues new opportunities, and embodies future-oriented products and services. Fourth, autonomy is the characteristic of proactively defining and solving problems free from the constraints of the surrounding environment. And finally, competitive aggressiveness means pursuing direct competition with other organisations with limited resources and opportunities (Lumpkin & Dess, 1996).

**Table 1. Dimensions of entrepreneurship orientation**

Researcher	I	R	P	A	C
Mintzberg (1973)		•	•		
Miller (1983)	•	•	•		
Covin and Slevin (1989, 1991)	•	•	•		
Zahra and Covin (1995)	•	•	•		
Lumpkin and Dess (1996)	•	•	•	•	•
Dickson and Weaver (1997)	•	•	•		
Becherer and Maurer (1997)	•	•	•		
Lee and Peterson (2000)	•	•	•	•	•
Wiklund and Shepherd (2005)	•	•	•		
Lee and Lim (2009)	•	•	•		•

Note: I – innovativeness, R – risk-taking, P – proactiveness, A – autonomy, C – competitive aggressiveness.

Source: own study.

In fact, the dimensions of EO interact with one another and shape a company's strategic orientation. Consequently, these correlations can affect business performance (BP). Representatively, an organisation's proactive tendency is to seize new market opportunities and trigger innovation to preempt the market. In addition, activated innovativeness enables organisations to take risks and react aggressively to market competitors. Lastly, the autonomy of the members of the organisation is the foundation for strengthening this system. To sum up, the dimensions of EO interact with one another to determine the level of EO, thus enabling companies to secure a competitive advantage (Covin & Slevin, 1989, 1991; Wiklund & Shepherd, 2005).

The literature generally agrees that organisations with higher EO tend to seize new opportunities and put these possibilities into action. Moreover, such organisations outperform those with lower EO. Thus, a positive correlation between EO and BP can be postulated (Gupta & Govindarajan, 1984). In recent studies, empirical research results have been reported on the positive effect of EO on BP. Bhatti, Rehman, and Rumman (2020) reported that the EO of Pakistani SMEs had a positive effect on the financial and non-financial performance of the organisation, and that organisational capabilities mediated this relationship. Onwe, Ogbo, and Ameh (2020) presented the conclusion that a hostile environment motivates firms to adopt EO, which ultimately improves their performance, as shown in a study of small firms in Nigeria. In addition, studies on Ghana, Yemen, and SMEs in the United States of America have reported that EO improved firms' performance (Al-Awlaqi, Aamer, & Habtoor, 2021; Amankwah-Amoah, Danso, & Adomako, 2019; Poudel, Carter, & Lonial, 2020).

The BP can be defined as the accomplishment of organisational goals related to profitability and growth in sales and markets share, and the achievement of innovative performance for new products (Hult, Hurley, & Knight, 2004; Laursen & Salter, 2006). Most of the previous studies that analyse the BP of a company measure general financial indicators, such as sales, sales growth, profit rate, profit rate growth, and market share. However, in the case of SMEs, as few public data are available and each variable is difficult to measure, subjective performance evaluation (self-reported) is commonly used as a measurement tool (Stam & Elfring, 2008). In this study, BP was also measured by combining the subjective performance evaluation for general financial performance and the subjective performance evaluation related to the development and launch of new products or new services. Therefore, the following hypotheses can be set by adopting the five EO dimensions suggested by Lumpkin and Dess (1996).

- H1:** Innovativeness has a positive effect on the BP of SMEs.
- H2:** Risk-taking has a positive effect on the BP of SMEs.
- H3:** Proactiveness has a positive effect on the BP of SMEs.
- H4:** Autonomy has a positive effect on the BP of SMEs.
- H5:** Competitive aggressiveness has a positive effect on the BP of SMEs.

### Vision and Strategy (VS)

The consistency and direction of the vision and strategy (VS) in corporate management are very important factors in forming the entrepreneurial characteristics of organization's members. In addition, the organisation's leadership acts as a driving force behind the change of various corporate components, such as the unique culture and structure at the organisational level, and the operating system for innovation and commercialisation.

Koontz and O'Donnell (1972) define 'leadership' as the process of exerting influence to manage organisational goals, motivate members, participate in goal setting, and maintain organisational members' continuous behaviour. Giese and Stogdill (1974) define it as orienting the members of an organisation towards a specific goal and exerting influence to act to achieve that goal. Nanus describes leadership as a process of innovating an organisation and transforming it into a new organisation with greater potential by inducing and energising the followers' voluntary commitment through the presentation of a vision (Riggs, 1994).

One of the most important virtues for organisational leaders is to create a motivational mechanism that shows the strategic direction of a company to its members and encourages them to work for a single goal (Hitchcock & Stavros, 2017). In addition, a long-term VS for creating new opportunities and values is needed for the strong and continuous motivation and visible innovation performance of the organisation members (Hoffman & Hegarty, 1993).

Vision is an organisational goal that guides strategies, policies, and tasks, and it is a key source of organisational culture formation and sustainable management. Therefore, it plays an important role in the development of the company and can serve as a beacon that guides the business towards the mission (Liao & Huang, 2016). All organisations benefit from developing strategies that describe the values they intend to create, based on which they shall sustain themselves. The most widely used model for developing organisational strategies can be drawn from private sector (Miller & Dess, 1996; Moore, 2000). Jagersma (2003) found that vision and strategy are correlated and that a clear vision helps formulate business strategies. Thus, the extent to which organisational members support and understand its vision may become a key driver for improving performance (James & Lahti, 2011).

Based on this precedent research, we can infer that the leadership of the management is projected into the VS of the organisation and that it has a significant effect on the company's performance by strengthening the organisation's competitiveness. Therefore, in this study, we predicted that the VS affects the entrepreneurial performance by mediating the EO of the organisation. We then set the following hypotheses.

**H6:** VS mediates the relationship between innovativeness and BP.

**H7:** VS mediates the relationship between risk-taking and BP.

**H8:** VS mediates the relationship between proactiveness and BP.

**H9:** VS mediates the relationship between autonomy and BP.

**H10:** VS mediates the relationship between competitive aggressiveness and BP.

### Employee compensation (EC)

Human capital has been one of the major sources to enable firms to gain sustainable competitive advantage (Prahalad, 1983; Wright, McMahan, & McWilliams, 1994). Therefore, companies invest a lot of efforts to recruit talented human resources to attain employee-based innovation (Pandher, Mutlu, & Samnani, 2017), and this approach ultimately leads to increased BP (Wright, Gardner, & Moynihan, 2003). In particular, SMEs must acquire rare, inimitable, and valuable resources to obtain a sustainable competitive advantage (Barney, 2016). More often than not, SMEs offer better conditions and benefits to recruit and maintain quality human capital, thereby positively affecting BP (Branco & Rodrigues, 2006). In this process, SMEs that compensate for employees in advantageous ways have a high possibility of contributing to excellent BP (Youndt *et al.*, 1996).

Compensation has been considered a crucial element for both employees and employers in terms of motivation. In most cases, one of the most effective ways to motivate employees is to offer monetary rewards (Brockner, 2002). When employees are satisfied with the level of monetary compensation, firms can expect better job performance (Mulvey *et al.*, 2002), less turnover rate (Griffeth & Gaertner, 2001), and more organisational attractiveness for job seekers (Heneman & Berkley, 1999; Lambert, 2000). Therefore, compensation is deemed to be a very important factor that affects the BP.

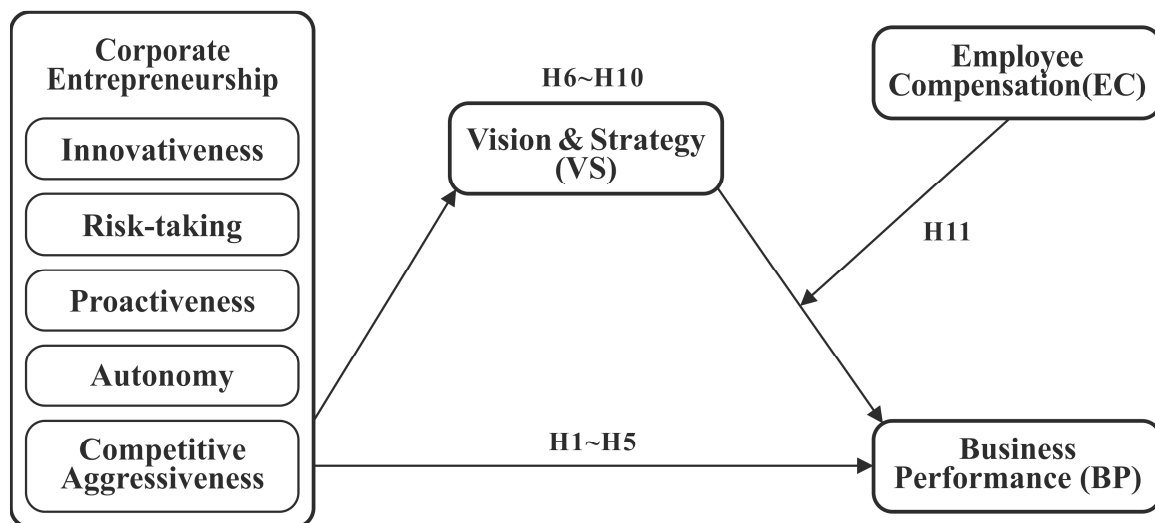
Previous research suggests that stock options and retirement benefits are useful tools to lower employee turnover rate (Dunford, Oler, & Doudreau, 2008; Sutton, 1985). Sometimes, employees place more emphasis on independence and flexibility of a work environment than on other benefits (Sauermann, 2018). These benefits affect employee retention rate (Hausknecht, Rodda, & Howard, 2009) or job satisfaction (Barber, Dunham, & Formisano, 1992) and are one of the powerful elements to affect positive BP (Koys, 2001).

Furthermore, EC has shown that the management team’s strategic vision has an interaction effect on the relationship that affects the firm’s innovation performance (Camelo-Ordaz, Fernández-Alles, & Valle-Cabrera, 2008). Some studies also demonstrate that the compensation system, one of the important factors in human resource management (HRM), has an interaction effect among various factors and affects the BP of the organisation (Angela, Sari, & Oktavianti, 2020; Weon, 2007).

Based on these theoretical and empirical arguments, we set the following hypothesis.

**H11:** The indirect relationship between CE and BP via VS is moderated by EC so that the relationship is stronger with increasing levels of EC.

On the basis of the hypotheses established in this study, a conceptual research model was constructed, as shown in Figure 1. It shows that CE, which consists of innovativeness, risk-taking, proactiveness, autonomy, and competitive aggressiveness, affects BP. In this process, VS mediates the relationship between CE and BP. In addition, EC moderates the relationship between VS and BP.



**Figure 1. Research model**  
Source: own elaboration.

## RESEARCH METHODOLOGY

### Instruments

The items used in the survey were composed by selecting the measurement items used in related previous studies (Table 2).

**Table 2. Instruments**

Construct	Item	Source
Innovativeness	3 items using a 7-point Likert scale	Covin & Slevin (1989)
Risk-taking	3 items using a 7-point Likert scale	
Proactiveness	3 items using a 7-point Likert scale	
Autonomy	3 items using a 7-point Likert scale	Lumpkin & Dess (1996)
Competitive Aggressiveness	5 items using a 7-point Likert scale	
Vision and Strategy	4 items using a 7-point Likert scale	Chrisman <i>et al.</i> (1998), Covin & Slevin (1991), Morris <i>et al.</i> (2008)
Employee Compensation	2 items using a 7-point Likert scale	Green <i>et al.</i> (2008)
Business Performance	8 items using a 7-point Likert scale	Covin & Slevin (1991), Laursen & Salter (2006), Kantur & İşeri-Say (2013)

Source: own assignment of the items based on previous research.

### Sampling and data collection

The Ministry of SMEs and Start-ups surveyed SMEs in Korea on the level of CE from September to October 2018. As a result, data from 3299 SMEs were collected. In this study, the hypothesis established using the collected data was tested. Table 3 indicates the characteristics of respondents. Among the data, SMEs with three-to-45-year business histories and 10 to 49 employees had the highest portion, and the locations of companies were evenly distributed throughout Korea. As for the industry, the total service business was the largest, followed by manufacturing, wholesale, and retail.

## RESULTS AND DISCUSSION

### Common method variance

As the data used in the analysis involved the same person simultaneously responding to the independent and dependent variables, a potential problem of common method variance (CMV) may have occurred.

To ascertain whether a CMV problem existed, the two methods were verified according to the recommendations of (Babin, Griffin, & Hair, 2016). Firstly, Harman's single-factor test was performed. The unrotated first factor was 47.974% and is less than 50%; thus, no CMV problem occurred (Podsakoff & Organ, 1986). Secondly, a full collinearity assessment with PLS-SEM revealed no CMV problem because all the VIF values of the variables for the random dummy variable are less than 3.3 (Table 4) (Kock & Lynn, 2012).

### Measurement model

To assess the convergent validity, the factor loadings, Cronbach's alpha, rho\_A, composite reliability, and average variance extracted (AVE) were calculated (Table 5). All loading values exceed 0.7 except for Bizpf3 which was therefore excluded. The Cronbach's alpha, rho\_A, and composite reliability values of the variables exceed 0.7. Moreover, the AVE values were more than the threshold value of 0.5. Therefore, the latent variables met convergent validity (Hair, Hult, Ringle, & Sarstedt, 2017).

The heterotrait-monotrait criterion was used to test discriminant validity. As shown in Table 6, the values are under 0.85, thereby providing evidence of discriminant validity (Henseler, Ringle, & Sarstedt, 2014).

**Table 3. Sample characteristics**

	Categories	Freq.	Pct.(%)
<b>Employees</b>	1~9	580	18
	10~49	1 313	40
	50~99	472	14
	100~299	617	19
	300 and above	317	10
<b>Industry</b>	Agriculture, forestry, and fisheries	42	1
	Manufacturing industry	466	14
	Wholesale and retail trade	336	10
	Accommodation business	198	6
	Total service business	1 293	39
	Financial and insurance industries	195	6
	Real estate and rental business	134	4
	Etc.	635	19
<b>Business Years</b>	~3	6	0
	3~7	342	10
	7~44	2 750	83
	45 and above	201	6
<b>District</b>	Gangwon-do	85	3
	Gyeonggi-do	644	20
	Gyeongsangnam-do	203	6
	Gyeongsangbuk-do	152	5
	Gwangju	62	2
	Daegu	252	8
	Daejeon	74	2
	Busan	287	9
	Seoul	931	28
	Sejong	8	0
	Ulsan	68	2
	Incheon	124	4
	Jeollanam-do	112	3
	Jeollabuk-do	70	2
	Jeju-do	36	1
	Chungcheongnam-do	104	3
	Chungcheongbuk-do	87	3
<b>Total</b>		3 299	100

Source: own study.

**Table 4. Full collinearity assessment**

Variable	Random Dummy Variable
Innovativeness	2.483
Risk-taking	2.991
Proactiveness	3.039
Autonomy	2.618
Competitive Aggressiveness	1.995
Vision and Strategy	1.522
Employee Compensation	1.406
Business Performance	2.195

Source: own study.

**Table 5. Results summary for measurement model**

Latent Variable	Indicators	Loadings	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Innovativeness	Innov1	0.894	0.907	0.913	0.942	0.843
	Innov2	0.943				
	Innov3	0.917				
Risk-taking	Rskta1	0.895	0.889	0.889	0.931	0.819
	Rskta2	0.920				
	Rskta3	0.899				
Proactiveness	Proac1	0.891	0.888	0.890	0.931	0.817
	Proac2	0.914				
	Proac3	0.907				
Autonomy	Autno1	0.879	0.885	0.889	0.929	0.814
	Autno2	0.931				
	Autno3	0.895				
Competitive Aggressiveness	Compe1	0.847	0.922	0.928	0.941	0.762
	Compe2	0.894				
	Compe3	0.851				
	Compe4	0.883				
	Compe5	0.890				
Vision and Strategy	Vinst1	0.917	0.940	0.941	0.957	0.847
	Vinst2	0.918				
	Vinst3	0.929				
	Vinst4	0.917				
Employee Compensation	Emplo1	0.894	0.785	0.794	0.902	0.822
	Emplo2	0.920				
Business Performance	Bizpf1	0.789	0.902	0.904	0.923	0.630
	Bizpf2	0.777				
	Bizpf4	0.786				
	Bizpf5	0.790				
	Bizpf6	0.817				
	Bizpf7	0.794				
	Bizpf8	0.803				

Source: own study.

**Table 6. Heterotrait-monotrait ratio (HTMT)**

Variable	1	2	3	4	5	6	7
1. Innovativeness							
2. Risk-taking	0.787						
3. Proactiveness	0.803	0.807					
4. Autonomy	0.687	0.827	0.788				
5. Competitive Aggressiveness	0.678	0.803	0.765	0.749			
6. Vision and Strategy	0.522	0.610	0.520	0.622	0.578		
7. Employee Compensation	0.609	0.656	0.675	0.654	0.665	0.546	
8. Business Performance	0.645	0.680	0.740	0.698	0.662	0.502	0.715

Source: own study.

### Structural model and hypothesis testing

Assessment of structural model was conducted to test the hypotheses. As suggested by Hair *et al.* (2017), variance inflation factor (VIF), effect size ( $f^2$ ), coefficient of determination ( $R^2$ ), and predictive relevance ( $Q^2$ ) were reported. Firstly, as shown in Table 7, all VIF values were clearly below the threshold of 5. Therefore, collinearity among the predictor constructs was not a critical issue in the structural model.



Next, the bootstrapping method was employed with a resampling of 5 000 to test the significance of the path coefficient (Hair *et al.*, 2017). Risk-taking showed an insignificant relationship with BP ( $\beta = 0.033$ ,  $t = 1.479$ ,  $p > 0.05$ ,  $f^2 = 0.001$ ). Thus, H2 was not supported. By contrast, H1: innovativeness ( $\beta = 0.097$ ,  $t = 5.097$ ,  $p < 0.01$ ,  $f^2 = 0.009$ ), H3: proactiveness ( $\beta = 0.260$ ,  $t = 11.938$ ,  $p < 0.01$ ,  $f^2 = 0.051$ ), H4: autonomy ( $\beta = 0.157$ ,  $t = 7.782$ ,  $p < 0.01$ ,  $f^2 = 0.021$ ), and H5: competitive aggressiveness ( $\beta = 0.089$ ,  $t = 4.399$ ,  $p < 0.01$ ,  $f^2 = 0.007$ ) were found to have significant positive relationships. The mediation results for VS (proactiveness to VS to BP) were insignificant, thereby indicating that H8 was not supported. However, other mediation results were supported for H6, H7, H9, and H10.

Lastly, in the path coefficient results, BP yielded a coefficient of determination ( $R^2 = 57.0\%$ ) that can be described as having a moderate level of predictive accuracy. Moreover, the relationship between CE on VS exhibited an  $R^2$  of 38.8%. In addition to evaluating the magnitude of the  $R^2$  values as a criterion of predictive accuracy, the  $Q^2$  values were obtained by using the blindfolding procedure to examine the model's predictive relevance. The  $Q^2$  values for the endogenous constructs were more than zero and thus indicate the out-of-sample predictive power of this path model (Geisser, 1974; Stone, 1974).

**Table 7. Results summary for structural model**

Hyp.	Path	$\beta$	t-value	95% BCa CI		VIF	$f^2$	$R^2$	$Q^2$
				LB	UB				
H1	I <sup>1</sup> -> BP	0.097	5.097**	0.060	0.134	2.526	0.009	0.570	0.349
H2	R <sup>2</sup> -> BP	0.033	1.479	-0.011	0.076	3.336	0.001		
H3	P <sup>3</sup> -> BP	0.260	11.938**	0.215	0.301	3.048	0.051		
H4	A <sup>4</sup> -> BP	0.157	7.782**	0.116	0.195	2.772	0.021		
H5	C <sup>5</sup> -> BP	0.089	4.399**	0.049	0.129	2.694	0.007		
H11	VS * EC -> BP	0.060	4.518**	0.034	0.086	1.069	0.008		
	VS -> BP	0.037	2.283*	0.006	0.069	1.698	0.002		
	EC -> BP	0.229	12.814**	0.194	0.263	1.821	0.067		
	I -> VS	0.106	4.869**	0.062	0.147	2.494	0.007	0.388	0.326
	R -> VS	0.175	6.854**	0.125	0.225	3.278	0.015		
	P -> VS	-0.063	2.512*	-0.112	-0.015	2.982	0.002		
	A -> VS	0.280	11.814**	0.234	0.326	2.619	0.049		
	C -> VS	0.202	8.649**	0.156	0.246	2.559	0.026		
H6	I -> VS -> BP	0.004	2.029*	0.001	0.009			-	
H7	R -> VS -> BP	0.006	2.154*	0.001	0.013				
H8	P -> VS -> BP	-0.002	1.644	-0.006	0.000				
H9	A -> VS -> BP	0.010	2.248*	0.002	0.020				
H10	C -> VS -> BP	0.007	2.199*	0.001	0.015				

Note: I – innovativeness, R – risk-taking, P – proactiveness, A – autonomy, C – competitive aggressiveness; \*  $p < 0.05$ , \*\*  $p < 0.01$ . Source: own study.

To explore the mediation effects (H7) further, the approach proposed by Nitzl, Roldan, and Cepeda (2016) was used. Firstly, by employing the bootstrapping procedure with a resample of 5 000, the indirect effect was generated to test the mediation effect of VS (Preacher & Hayes, 2008). As shown in Table 8, zero was not included in the 95% bias-corrected bootstrap and accelerated confidence interval (BCa CI). Therefore, the mediation effect of VS between risk-taking and BP was significant. Moreover, H7 showed a full mediation result given that the relationship between risk-taking and BP was insignificant.

In the pathway of the indirect effect of CE on BP, EC showed a moderating effect, thereby resulting in a moderated mediating effect (Hayes, 2018). In other words, CE affected the magnitude of the indirect effect according to the value of EC. To assess this conditional effect, a test called the index of the moderated mediation was conducted (Hayes, 2015). The index of moderated mediation represents the extent of the linear relationship between the moderator and the indirect effect. The hypothesis about the moderated mediation (H11) was therefore supported as zero was not included in the confidence interval (95% CI: 0.013 to 0.035). Thus, the indirect effect of CE on BP through VS depended on the levels of EC.

**Table 8. Index of moderated mediation**

Mediator	Index	SE (Boot)	95% BCa CI	
			BootLLCI	BootULCI
VS	0.024	0.006	0.013	0.035

Source: own study.

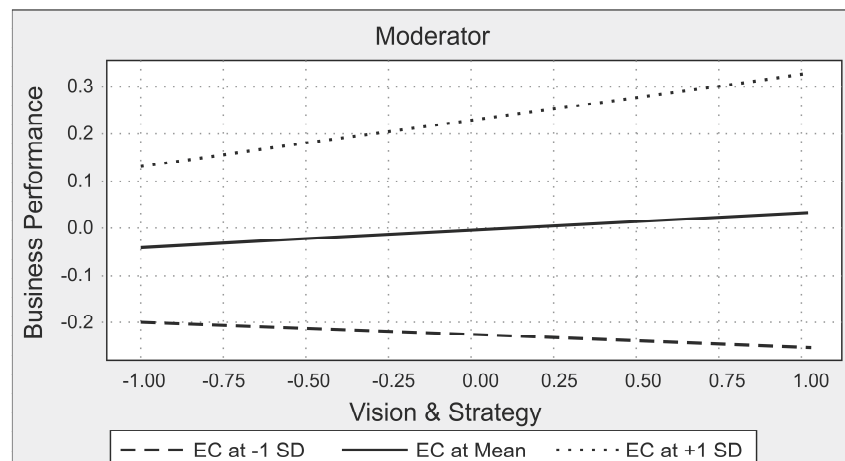
If the index of moderated mediations had supported the existence of moderated mediation, we would have to investigate the indirect effect at the representative values of the moderator (depicted as the conditional indirect effect) to explore further the condition under which mediation did (not) exist (Preacher & Hayes, 2008). As shown in Table 9, no significant indirect effect for VS with a low EC (effect: -0.016; 95% CI: -0.035 to 0.004) was observed. In contrast, the effect was significant both for moderate (effect: 0.013; 95% CI: 0.001 to 0.029) and high EC (effect: 0.043; 95% CI: 0.021 to 0.065) groups. Therefore, we concluded that CE affected BP via VS and the mediation relationship, which increased with the increment of EC.

**Table 9. Conditional indirect effect at values of the EC**

Mediator	Moderator (EC)	Effect	Boot SE	BootLLCI	BootULCI
VS	(-1 SD EC) -1.243	-0.016	0.010	-0.035	0.004
VS	(Mean EC) 0	0.013	0.008	0.001	0.029
VS	(+ SD EC) 1.243	0.043	0.011	0.021	0.065

Source: own study.

Figure 2 shows that the indirect relationship between CE and BP was conditional depending upon the effect of EC such that the path became solid at the high levels of EC. Therefore, these results supported H11 in an overall sense.



**Figure 2. The plot of conditional indirect effect**

Source: own elaboration.

### CONCLUSIONS

This study examined the relationship among the CE, VS, EC, and BP of 3 299 Korean SMEs. As a result, firstly, we found that all four dimensions of CE, excluding risk-taking, had a direct positive effect on BP (H1, H3, H4, and H5). Most preceding studies targeting start-up companies share a common consensus that all dimensions, including risk-taking, positively affect BP (Rauch, Wiklund, Lumpkin, & Frese, 2009). However, the ages of SMEs vary between three and 45 years. Habib’s previous research results suggested that ‘the tendency for risk-taking becomes higher in the introduction and decline stages of the life cycle, but lower in the growth and mature stages’ (Habib & Hasan, 2017). Accepting

the results of this study, we can infer the cause of the ineffective relationship between risk-taking and BP in this research. In other words, we presumed that the relationship did not show consistent direction because the sample firms' ages were varied.

Secondly, we determined that risk-taking did not have a positive effect on BP (H2). However, with the influence of VS, a positive effect between risk-taking and BP was observed, which epitomised complete mediation (H7). This outcome explained the important role of VS in helping companies strengthen their organisation's competitiveness and improve their performance. In previous studies, Guth and Ginsberg (1990) asserted that the VS established by strategic leaders have a structural impact on organisational performance and CE. The results of this study can be understood in the same context.

Thirdly, innovativeness, risk-taking, autonomy, and competitive aggressiveness were also found to positively affect BP via VS (H6, H7, H9, and H10). However, no mediating effect was observed on proactiveness. Proactiveness was found to have the strongest positive effect on BP but a negative effect on VS. In the end, VS did not mediate proactiveness (H8). Thus, we could infer that the negative relationship between the proactiveness of Korean SMEs and VS was probably due to Koreans' 'ppalli-ppalli culture ("hurry up" culture)' (Crawford, 2018). Several economists note that the Korean ppalli-ppalli culture is behind the rapid economic growth after the ruins of the Korean War. Although proactiveness can contribute to improving BP in this cultural background, we should note that it was far from promoting work systematically or stepwise on the basis of vision or strategy.

Fourthly, we found that VS had a conditional mediating effect incurred by EC (H11), which meant that the EC below the average showed a negative control effect on BP. Meanwhile, a positive control effect appeared above the average level. This result was in line with Burgelman's research findings (Burgelman, Christensen, & Wheelwright, 2004), which revealed that entrepreneurship in the process of corporate strategy formulation influences and reinforces structural contexts, such as performance measurement and compensation systems. In other words, determining the appropriate level of employee compensation imposes an enormous responsibility on managers, and their decision-making affects a company's BP. This finding is the most important practical implication that was empirically verified in this study.

As one of the success factors of SMEs, this study focused on CE and identified the structural relationship between VS and EC provided by the management. SME leaders should strive to present and implement a VS that can gather the consensus of members in the long term. In addition, given that the wage level of SME employees is relatively lower than that of conglomerates, various compensation systems suitable for each SME must be devised and implemented. Korea's SME support policy has so far focused mainly on external support, such as tax relief or financial support. However, researchers need to explore more diverse measures in the future, including the development and implementation of educational programs that can promote the CE of SME members. This practice may eventually create more economic value for SMEs, thereby enhancing the sustainability of SMEs in Korea.

Despite the aforementioned contributions, this study has some limitations that future research could address. Firstly, the results of this research, as shown in the  $R^2$  of 0.570 for BP, imply that innovativeness, risk-taking, proactiveness, autonomy, competitive aggressiveness, VS, and EC jointly explained a 57.0% variance in BP. That is, 43.0% variance in BP was explained by factors not included in the model. More explanatory models can be proposed in future research by discovering and adding more internal and external factors affecting BP. Secondly, this study used self-reported questionnaires whereby common method variance may occur. While Herman's single factor analysis and full collinearity assessment indicated that common method variance was not present in this study, future studies should rule out this issue by obtaining more objective responses. Finally, the sample used in this study covered SMEs in various industries. However, the characteristics of each industry on BP was not included in this work. Therefore, a detailed analysis of the differences among SMEs by industry is deemed necessary in a follow-up study.

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### Appendix A: Table Scale Items

#### Corporate Entrepreneurship (Covin & Slevin, 1991; Lumpkin & Dess, 1996)

##### Innovativeness

1. Our organisation emphasises R&D, technological superiority, and innovation.
2. Our organisation has had a large number of product and service lines over the past three years.
3. Our organisation has seen significant changes and innovations in product and service lines over the past three years.

##### Risk-taking

1. Our organisation believes that bold and broad action is the best way to achieve corporate goals.
2. Our organisation has a strong tendency to pursue projects with high-risk, high-profit opportunities.
3. Our organisation is bold and aggressive to explore potential opportunities when making decisions in uncertain situations.

##### Proactiveness

1. Our organisation takes action before our competitors and our competitors take action accordingly.
2. Our organisation often introduces new products, new management techniques, and new process technologies first in the industry.
3. When it comes to introducing new products or ideas, our organisation takes a 'be ahead of competitors.'

##### Autonomy

1. Our organisation often works by individuals or teams to create and complete ideas or action plans independently.
2. Members are self-directed in creating market opportunities.
3. Members are free to perform their duties regardless of their own regulations or restrictions.

**Competitive Aggressiveness**

1. Our organisation enjoys competition and is motivated by competition.
2. Our organisation tends to take a bold and aggressive approach to competition.
3. Our organisation tends to neutralize and overwhelm its competitors.
4. Our organisation acts very aggressively to win the competition with other companies in the same industry.
5. The management style of our organisation's management is very aggressive and is always competitive.

**Vision and Strategy** (Chrisman, Bauerschmidt, & Hofer, 1998; Covin & Slevin, 1991; Morris, Kuratko, & Covin, 2008)

1. I (our leader) constantly explain and present the vision and objectives to the members.
2. I (our leader) encourage challenging, innovative thinking and behaviour of members.
3. I (our leader) am change-oriented and constantly evidence motivation.
4. I (our leader) have a long-term vision and strategy for creating new business opportunities.

**Employee Compensation** (Green, Covin, & Slevin, 2008)

1. Separate compensation for the entrepreneurial performance of members is operated.
2. Systems such as compensation, education, and career management for employees' innovative performance are operating as prescribed.


**Business Performance** (Covin & Slevin, 1991; Kantur & İşeri-Say, 2013; Laursen & Salter, 2006)

1. Our organisation has a high percentage of new products and new services compared to its competitors.
2. Our organisation continuously emphasizes the development of new products and new services of its members.
3. Our organisation's top executives emphasize cost reduction rather than new product development.
4. Our organisation has launched more new products and new services than its competitors in the last three years.
5. Our organisation has a higher sales growth rate than its competitors.
6. Our organisation has a higher return on investment than its competitors.
7. Our organisation has a higher return on sales than its competitors.
8. Our organisation has a higher market share than its peers.

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**Conflict of Interest**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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