

COMPETITIVE ADVANTAGE AND INNOVATION PERFORMANCE OF MSMES: THE EFFECTS OF GOVERNMENT SUPPORT, ENTREPRENEURIAL COMPETENCIES, AND CREATIVE SELF-EFFICACY

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ABSTRACT

Drawing on the Resource-Based View (RBV) and self-efficacy theory, this study investigates the effects of government support, entrepreneurial competencies (EC), and creative self-efficacy (CSE) on competitive advantage and innovation performance among micro, small, and medium enterprises (MSMEs). While existing literature explores MSME performance, few studies have integrated government mechanisms with psychological capital and competencies within a unified framework, especially in developing economies. Survey data were collected through questionnaires from 519 MSMEs registered under the One Tambon One Product (OTOP) program in Thailand. Structural equation modeling was employed to test the hypotheses empirically using LISREL. The findings indicated that government support has a substantial impact on EC and CSE. In addition, EC has positive direct relationships with CSE, competitive advantages, and innovative performance. Although CSE does not directly affect competitive advantage, it indirectly influences competitive advantage through innovation performance. Theoretically, this study addresses the research gap by extending the RBV to demonstrate how integrating intangible resources (EC) and psychological capital (CSE) fosters competitive advantage. In practice, the findings provide significant insights for governments and policymakers to foster EC and CSE, thereby helping MSMEs improve their innovation performance and competitive advantage.

Keywords: Entrepreneur Competencies, Innovation Performance, Creative Self-efficacy, Competitive Advantage, Government Support, Resource-Based View, SEM.

Submission: 28th May 2025

Accepted: 8th May 2026

<https://doi.org/10.33736/ijbs.14353.2026>

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1. INTRODUCTION

Micro, small, and medium enterprises (MSMEs) are vital to developing economies, substantially contributing to gross domestic product (GDP), employment, and local economic development (Tambunan, 2019). According to the Office of Small and Medium Enterprise (2020), MSMEs are classified by employment size and capital investment. Micro enterprises have fewer than five employees and fixed assets under 1 million baht. Small enterprises have 5 to 50 employees and fixed assets between 1 and 50 million baht. Medium enterprises have 51 to 200 employees and fixed assets between 50 and 200 million baht. Several factors affecting MSME performance include government support, entrepreneurial competencies (EC), and creative self-efficacy (CSE). In developing countries, government support, financial resources, training, and infrastructure empowers MSMEs to overcome resource limitations and pursue innovation (Braunerhjelm & Henrekson, 2024; Nakku et al., 2020).

The resource-based view theory (RBVT) asserts that enterprises achieve competitive advantage by leveraging distinctive resources to perform better than competitors (Barney, 1991). EC, such as risk-taking, proactiveness, and innovativeness, positively influence MSME performance by improving efficiency and effectiveness (Sakib et al., 2022). CSE, defined as the belief in one's ability to generate actionable ideas, is a critical factor influencing creativity (Newman et al., 2019). Innovation, involving new products or services, improved processes and emerging technologies, enable MSMEs to differentiate themselves, respond to market changes, and enhance operational and financial performance (Le & Ikram, 2022). Together, government support, EC, and CSE are central to MSME innovation and performance.

Several research gaps on innovation performance and competitive advantage remain. Theoretically, few studies have integrated RBV with self-efficacy theory to examine how psychological factors and organizational resources jointly influence MSME performance. Empirically, government support, EC, and CSE have largely been studied in isolation rather than within an integrated framework. Most research has focused on developed economies, leaving limited understanding of how these relationships operate in emerging markets where institutional conditions differ substantially (Tambunan, 2019). Methodologically, mediating mechanisms linking government support to competitive advantage remain underexplored (Pergelova & Angulo-Ruiz, 2014). This study addresses these gaps by testing a model that examines the relationships among government support, EC, CSE, innovation performance, and competitive advantage.

In Thailand, MSMEs comprise approximately 99.5% of all enterprises and generated GDP of 6.32 million baht in 2023, representing 35.2% of national GDP (Asian Development Bank, 2024). MSMEs requiring government support are registered under the One Tambon One Product (OTOP) program, which promotes local products, develops new entrepreneurs, and stimulates local economic growth. Prior Thai research confirms that entrepreneurial self-efficacy is a critical determinant of innovation strategy and firm performance (Ratchatakulpat et al., 2024; Wattanapunkitti, 2021). Government support can further enhance integrative idea generation and market leadership through collaboration with universities and professional organizations.

This study addresses the following research questions derived from the identified research gaps:

RQ1: How does government support influence EC and CSE among MSME entrepreneurs in Thailand?

RQ2: What are the effects of EC and CSE on innovation performance?

RQ3: How do EC, CSE, and innovation performance affect the competitive advantage of MSMEs?

RQ4: Does innovation performance serve as a mediator in the relationships among EC, CSE, and competitive advantage?

Although the government has allocated budgets to the OTOP program over the past two decades to continuously enhance the potential and competitiveness of MSMEs, there remains a lack of empirical studies investigating the effects of government support and related factors on MSME innovation performance and competitive advantage. Therefore, this study aims to examine the relationships among government support, EC, CSE, competitive advantage, and innovation performance. The implications of this study are particularly important for the government in evaluating previous policies and formulating strategies to enhance the competitiveness and innovativeness of MSMEs.

2. THEORETICAL FRAMEWORK

This study integrates two theoretical perspectives—the RBV and self-efficacy theory—to provide a comprehensive understanding of how government support, EC, and CSE influence innovation performance and competitive advantage among MSMEs.

2.1. Resource-Based View (RBV)

The RBV, originating from Penrose (1959) and developed by Wernerfelt (1984) and Barney (1991), posits that firms achieve sustained competitive advantage by leveraging valuable, rare, inimitable, and non-substitutable (VRIN) resources—unique resources and capabilities difficult for competitors to replicate (Barney, 1991). For MSMEs, EC constitutes intangible resources satisfying the VRIN criteria. EC, encompassing knowledge, skills, and abilities acquired through experience and learning, is difficult to replicate because it is embedded within individuals and organizations (Teece et al., 1997). These competencies enable entrepreneurs to identify opportunities, acquire resources, and create value that differentiates their businesses from competitors (Man et al., 2002).

The RBV has evolved to encompass dynamic capabilities, which refer to an organization's capacity to integrate, build, and reconfigure internal and external competencies in response to rapidly changing environments (Teece, 2007). For MSMEs in dynamic markets, innovation and adaptation depend on EC that promotes continuous learning, and government support enhances these capabilities by providing access to training, knowledge, and networks (Nakku et al., 2020).

2.2. Self-Efficacy Theory

Bandura's self-efficacy theory (1977, 1997) provides the psychological foundation for this study's examination of CSE. Self-efficacy is defined as an individual's belief in their capability to execute the behaviors required to achieve specific outcomes (Bandura, 1997), with sources include mastery experiences, vicarious learning, social persuasion, and physiological states. CSE, a specific form

of self-efficacy, refers to an individual's perception of their ability to produce creative outcomes (Tierney & Farmer, 2002). In entrepreneurial contexts, CSE influences the extent to which entrepreneurs experiment with new ideas, persist in the face of creative challenges, and ultimately achieve innovative outcomes (Newman et al., 2019). Entrepreneurs with high CSE tend to set ambitious innovation goals, invest in creative activities, and persevere when confronted with obstacles (Karwowski et al., 2019). Self-efficacy theory therefore central to explaining how government support and EC enhance creative confidence. Government training and advisory services provide mastery experiences and social persuasion that strengthen CSE, while developing competencies through education and experience reinforces entrepreneurs' belief in their creative capabilities (Bandura, 2018).

2.3. Theoretical Integration

Integrating the RBV and self-efficacy theory yields a holistic framework for MSMEs. RBV explains how organizational resources—specifically EC—build competitive advantage, while self-efficacy theory clarifies how individual CSE drive innovative behavior. External government support enhances both variables. EC directly strengthens competitive advantage and reinforces CSE, which in turn drives innovation performance. By demonstrating how organizational- and individual-level factors jointly shape MSME outcomes, this integration bridges a crucial literature gap and offers a comprehensive view of competitive advantage development in emerging markets.

3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

3.1. Entrepreneurial Competencies

Entrepreneurial competencies are fundamental characteristics that facilitate the establishment, continuity, and expansion of business enterprises (Bird, 2019). These characteristics include general and specialized knowledge, motivations, traits, self-perceptions, and social roles (Robles & Zárraga-Rodríguez, 2015). Various studies have identified several dimensions of EC, such as opportunity, relationship, innovation, human, and strategic competencies, which influence business growth, performance, and competitiveness (Ibidunni et al., 2021; Kyndt & Baert, 2015; Tehseen & Anderson, 2020). According to the RBV, EC represents valuable human capital resources that are difficult to imitate because of their tacit nature and path-dependent development. These competencies enable entrepreneurs to recognize opportunities, mobilize resources efficiently, and make strategic decisions that enhance firm performance (Man et al., 2002).

3.2. Creative Self-Efficacy

Creativity self-efficacy refers to an individual's confidence in their ability to generate creative outcomes (Tierney & Farmer, 2002). Innovative capabilities, such as seeking alternatives, adopting new ideas, creating new systems, modifying products, and fostering creativity, are essential elements of EC. According to self-efficacy theory, performance accomplishments serve as a primary source of self-efficacy (Bandura, 1977; Bandura & Adams, 1977). Entrepreneurs with a high level of EC tend to have confidence in their diverse abilities, identify opportunities that others may overlook, and generate innovative ideas (Ahlin et al., 2014). Entrepreneurs who successfully create innovations are more likely to have confidence in their creative abilities. Previous research has consistently demonstrated that EC positively influences CSE through mastery experiences and skill development (Ferreira-Neto et al., 2023; Pranowo et al., 2020). As entrepreneurs acquire and

refine their competencies, they accumulate successful performance experiences that strengthen their belief in their creative capabilities. Accordingly:

H1: Entrepreneurial competencies have a direct positive effect on creative self-efficacy.

3.3. Government Support

Government support is critical for MSME development, particularly in developing countries (Al Mamun et al., 2016). Financial mechanisms—funding, subsidized loans, tax incentives, and credit facilities—are crucial in early business stages, while non-financial support includes information access, technology transfer, and specialized training and advisory services. Government-sponsored training, consulting, marketing, and networking programs help MSMEs strengthen innovation performance and competitiveness (Nakku et al., 2020; Park et al., 2020). From the RBV perspective, government support augments MSMEs' resource base with financial, informational, and social capital otherwise unavailable or costly, enabling MSMEs to build EC and creative abilities. Accordingly:

H2: Government support has a direct positive effect on MSME entrepreneurs' EC.

H3: Government support has a direct positive effect on MSME entrepreneurs' CSE.

3.4. Innovation Performance

Innovation is perceived as something new by potential adopters, encompassing the application of new concepts to technologies, products, systems, processes, programs, or services, and the successful implementation and economic value creation of new ideas (Damanpour, 1987; Saunila & Ukko, 2012). Innovation performance measures an organization's capability to develop and implement innovations that enhance competitiveness. Prior research identifies EC dimensions—strategic thinking, opportunity recognition, risk-taking, and networking—as critical to innovation performance (Man et al., 2008), and entrepreneurs with high CSE are confident in generating new ideas and solutions for innovative outputs (Bagheri et al., 2022). Drawing on the RBV, EC functions as a dynamic capability enabling firms to sense opportunities, seize them through innovation, and reconfigure resources for competitive positioning (Teece, 2007). Self-efficacy theory further suggests entrepreneurs with high CSE persist more strongly in pursuing innovative solutions and remain resilient amid creative challenges (Newman et al., 2019). EC and CSE are therefore instrumental in enhancing innovation performance. Accordingly:

H4: EC has a direct positive effect on MSME entrepreneurs' innovation performance.

H5: CSE has a direct positive effect on MSME entrepreneurs' innovation performance.

3.5. Competitive Advantage

Competitive advantage refers to the strategic edge enabling a firm to outperform industry rivals (Porter, 1980). A differentiation strategy creates distinctive features—product quality and standards, product and packaging design, business image, unique identity, comprehensive services including after-sales support, and value creation that competitors cannot imitate (Barney, 1991; Porter, 1980). Entrepreneurs with high CSE more readily engage in idea generation and creative problem-solving, producing innovative products, services, or business models that confer competitive advantage (Tantawy et al., 2021). Those with higher EC also demonstrate strong business analysis and strategic decision-making capabilities; EC dimensions—networking, opportunity recognition, creativity, and risk-taking—foster partnerships, rapid market adaptation,

and innovation (Anwar, 2018; Mokbel Al Koliby et al., 2022). Innovation performance further strengthens competitive advantage through market differentiation, cost efficiency and quality, faster market entry, stronger brand reputation, market expansion, and increased attraction of talent and investment (Nguyen & Chau, 2017). Accordingly:

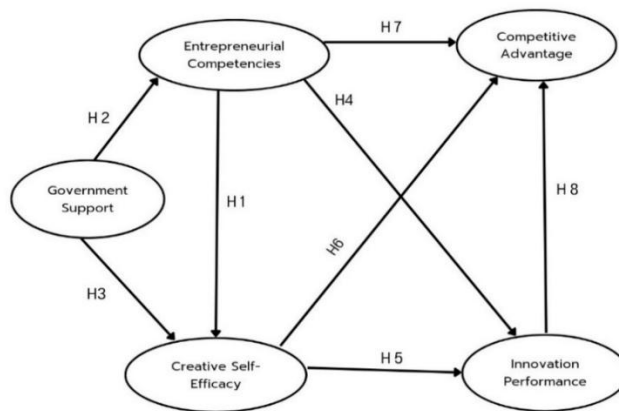
H6: CSE has a direct positive effect on MSMEs' competitive advantage.

H7: EC has a direct positive effect on MSMEs' competitive advantage.

H8: Innovation performance has a direct positive effect on MSMEs' competitive advantage.

Although prior studies have examined factors influencing competitive advantage and innovation performance, few integrate government support with organizational resources and psychological factors in a unified framework in the Thai context. The research model is presented in Figure 1.

Figure 1: Research model



4. METHODOLOGY

4.1. Data Collection and Sampling Procedures

The target population comprised Thai MSME entrepreneurs holding four- or five-star OTOP Product Champion awards. Due to the lack of a national population frame, purposive sampling was employed based on three criteria: registration for at least one year, holding a four- or five-star award, and participating in government-sponsored innovation projects. Data collection took place between March and August 2022 at Ministry of Interior OTOP exhibitions across five regions of Thailand. Trained research assistants explained the study's purpose and voluntary participation, obtained informed consent, and distributed questionnaires requiring 15–20 minutes to complete. Out of 624 responses collected, 105 incomplete surveys were excluded. The final sample of 519 respondents (an 83.2% response rate) met the statistical requirements for structural equation modeling (SEM), exceeding the minimum recommendation of 200 cases (Kline, 2011; Hair et al., 2010).

SEM was selected for several reasons. First, the model contains five latent constructs assessed via multiple indicators, and SEM separates measurement error from true score variance (Hair et al., 2010). Second, the study examines direct and indirect effects—particularly innovation performance's mediating role—which SEM estimates simultaneously (Zhao et al., 2010). Third, SEM provides a confirmatory methodological approach appropriate for evaluating theoretically derived hypotheses based on RBV and self-efficacy theory, following the two-step process of measurement model validation prior to structural model testing (Anderson & Gerbing, 1988). Finally, SEM provides comprehensive fit indices (χ^2 , CFI, GFI, RMSEA) for model evaluation (Hu & Bentler, 1999).

4.2. Profile of Respondents

The profiles of the respondents and their firms are presented in Table 1. The majority of respondents were female, totaling 334 entrepreneurs (64.4%). The predominant age group was 50–59 years, comprising 223 respondents (43.0%). In terms of marital status, 296 respondents (57.0%) were married. Regarding educational qualifications, a significant majority of respondents held a bachelor's degree (264 respondents, 50.9%). In addition, the majority of respondents (271 respondents, 52.2%) had previous experience with other private business ventures. At the firm level, Table 1 shows that the majority of MSMEs had been operating for 6–10 years, accounting for 134 firms (25.8%) of the total. Regarding enterprise size, a significant proportion of the respondents' firms (32.4%) consisted of 1–5 employees, totaling 168 firms.

Table 1: Demographic profile of respondents

Description	N	%	Description	N	%
Gender			Previous Business Experience		
Male	185	35.6	Yes	271	52.2
Female	334	64.4	No	248	47.8
Total	519	100	Total	519	100
Age			Age of the firm		
20 – 29 years old	33	6.4	≤ 5 years	80	15.4
30 – 39 years old	108	20.8	6-10 years	134	25.8
40 – 49 years old	155	29.9	11-15 years	97	18.7
50 – 59 years old	223	43.0	16-20 years	115	22.2
Total	519	100	21-25 years	37	7.1
Marital Status			≥ 26 years	56	10.8
Single	175	33.7	Total	519	100
Married	296	57.0	Size of firms		
Divorced/ Widowed	36	6.9	1-5 employees	168	32.4
Other	12	2.3	6-10 employees	111	21.4
Total	519	100	11-15 employees	31	6.0
Education			16-20 employees	25	4.8
Never attended school	7	1.4	21-25 employees	12	2.3
Primary school	42	8.1	≥ 26 employees	35	6.7
Middle school	39	7.5	N/A	137	26.4
High school	130	25	Total	519	100
Undergraduate Degree	264	50.9			
Postgraduate	37	7.1			
Total	519	100			

4.3. Measurement of Variables

The survey questionnaire was developed from prior research and comprises two parts: organizational and respondent information; and the research constructs—five items on government support, three on CSE, four on EC, three on innovation performance, and four on competitive advantage—measured on a 5-point Likert scale from 1 ("strongly disagree") to 5 ("strongly agree"). The questionnaire was translated from English to Thai and back-translated for consistency. Content validity was assessed via the index of Item-Objective Congruence (IOC) by three experts in business management and entrepreneurship; items with $\text{IOC} \geq 0.5$ are acceptable (Rovinelli & Hambleton, 1977), and IOC values ranged from 0.67 to 1.00. Experts also confirmed semantic and conceptual equivalence in both languages. The revised 19-item questionnaire was submitted to the university's Research Ethics Committee for approval. Table 2 presents the items.

Table 2: Questionnaire items

Construct	Indicator	Description	Source
Government support	GS1	Financial or credit assistance.	Adapted from Idris and Saad (2019)
	GS2	Technical training.	
	GS3	Advisory services.	
	GS4	Market or marketing research	
	GS5	Infrastructure.	
Creative self-efficacy	CSE1	I am confident in my ability to generate innovative ideas.	Adapted from Hallak et al. (2018)
	CSE2	I am confidence in my ability to think creatively and solve difficulties.	
	CSE3	I have a talent for enhancing the ideas of others.	
Entrepreneurial competence	EC1	I recognize the products or services that customers want.	Adapted from Fazal et al. (2022)
	EC2	I establish long-term trusting relationships with others.	
	EC3	I engage in negotiations with others.	
	EC4	I acknowledge and work on my deficiencies.	
Innovation performance	IP1	Customers prefer us over competitors due to our innovative services.	Adapted from Ibidunni et al. (2021)
	IP2	Implements substantial modifications to services that enhance customers' satisfaction.	
	IP3	Continuously attempt to establish a relationship with our customers.	
Competitive advantage	CA1	We successfully differentiate ourselves from others through effective advertising and promotional campaigns.	Adapted from Anwar (2018); Danso et al. (2019)
	CA2	We effectively distinguish ourselves from competitors proficient design, such as brand and store identity.	
	CA3	We provide a broad range of products/services.	
	CA4	We emphasize on operating efficiency.	

A pilot study with 50 participants from a similar target group tested questionnaire reliability via Cronbach's alpha, with values above 0.70 deemed acceptable (Kline, 2011). Overall Cronbach's alpha was 0.849, indicating good reliability, with individual construct values ranging from 0.793

to 0.917 (Table 3). The results, consistent with Nunnally's (1994) standards, confirmed the questionnaire's suitability for data collection.

Table 3: The reliability test results of the research instrument

Variable	Cronbach's Alpha
1. Government support	0.900
2. Entrepreneurial Competencies	0.931
3. Creative Self-Efficacy	0.793
4. Innovation Performance	0.832
5. Competitive Advantage	0.852
Cronbach's Alpha	0.849

5. DATA ANALYSIS AND RESULTS

Confirmatory factor analysis (CFA) and SEM were performed using LISREL 12 to test the hypotheses. Prior to conducting SEM, the normality and correlation coefficients were evaluated to assess whether the data met the assumptions required for covariance-based SEM.

5.1. Normality

Normality refers to the distribution of data for a particular variable. This study employed skewness and kurtosis statistics to assess the normality of the data. The recommended range for skewness and kurtosis values is ± 2 (George & Mallery, 2010). Table 4 shows that the data for all items exhibited the characteristics of a normal distribution.

Table 4: Group statistics for the estimation of non-response bias

Variable	Mean	St. Dev.	Skewness	Kurtosis
EC1	4.164	0.729	-0.503	-0.038
EC2	4.229	0.730	-0.593	-0.207
EC3	4.202	0.750	-0.598	-0.223
EC4	4.202	0.703	-0.472	-0.280
GS1	3.480	1.036	-0.380	-0.290
GS2	3.050	1.155	-0.045	-0.719
GS3	3.426	1.057	-0.326	-0.384
GS4	3.499	1.034	-0.376	-0.291
GS5	3.665	1.021	-0.495	-0.241
CSE1	3.902	0.796	-0.330	-0.016
CSE2	3.988	0.774	-0.558	0.668
CSE3	3.998	0.760	-0.368	-0.002
IP1	4.033	0.784	-0.251	-0.841
IP2	4.116	0.752	-0.549	0.107
IP3	4.308	0.728	-0.819	0.428
CA1	4.012	0.805	-0.466	-0.094
CA2	4.029	0.779	-0.468	-0.080
CA3	4.139	0.769	-0.498	-0.414
CA4	4.289	0.717	-0.838	0.766

5.2. Multicollinearity

The variance inflation factor (VIF) was used to assess multicollinearity. The findings presented in Table 5 demonstrate no evidence of multicollinearity, as all VIF values remained below the threshold value of 5 (Hair et al., 2016). Consequently, the preliminary screening assessments confirmed that there were no significant issues with the data that might have affected the validity and reliability of the model.

Table 5: Variance inflation factor (VIF) results

Variable	Mean	St. Dev.	CSE		IP		CA	
			VIF	Tolerance	VIF	Tolerance	VIF	Tolerance
GS	3.424	0.918	.956	1.046	.917	1.091	.917	1.469
EC	4.199	0.615	.956	1.046	.745	1.342	.675	1.481
CSE	3.963	0.681			.720	1.390	.641	1.560
IP	4.152	0.642					.681	1.469
CA	4.117	0.640						

5.3. Correlation

Table 6 presents the correlation coefficients, providing preliminary support for the hypotheses. Almost all variables exhibited statistically significant positive correlations at the 0.01 level, with coefficients ranging from 0.156 to 0.628 across low ($r < 0.30$), moderate ($0.30 < r < 0.70$), and high ($0.70 < r < 0.90$) levels. All coefficients were below 0.90, indicating that inter-variable relationships were within acceptable limits (Akoglu, 2018).

Table 6: Correlation coefficients

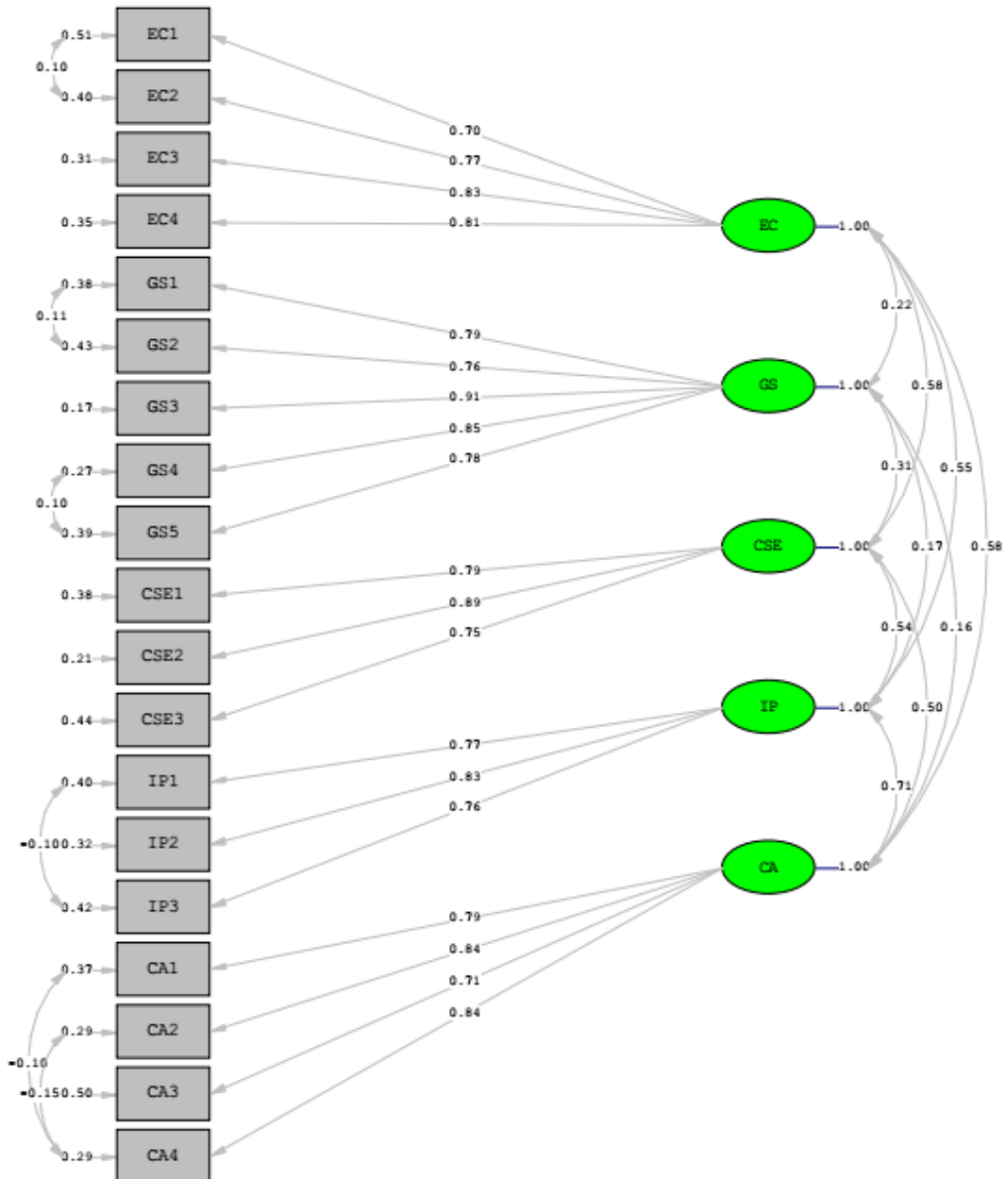
Variable	GS	EC	CSE	IP	CA
GS	1				
EC	.209**	1			
CSE	.276**	.499**	1		
IP	.156**	.472**	.471**	1	
CA	.157**	.507**	.443**	.628**	1

** Correlation is significant at the 0.01 level (2-tailed).

5.4. Measurement Model

The measurement model assesses relationships between latent variables and indicators via CFA, as shown in Figure 2. Model fit indices were: chi-square = 200.50 with 136 degrees of freedom, yielding $\chi^2/df = 1.474$; CFI = 0.990; NFI = 0.970; RMSE = 0.030; GFI = 0.960; and AGFI = 0.950. These indices meet the recommended criteria, supporting measurement model validity (Hair et al., 2010).

Figure 2: Measurement model



5.5. Validation and Reliability

Reliability analysis examined whether indicators consistently measure latent variables; construct validity assessed convergent and discriminant validity. Table 7 reports factor loadings, scale reliability, and validity. Factor loadings ranged from 0.70 to 0.91, exceeding the 0.70 threshold and

significant at the 0.05 level, confirming item reliability (Hair et al., 2010). Cronbach's alpha values ranged from 0.808 to 0.916, exceeding 0.70 (Hair et al., 2016), and composite reliability values ranged from 0.830 to 0.911, indicating reliable indicator-to-construct measurement (Bagozzi & Yi, 1988; Nunnally, 1978).

Table 7: Factor loadings, scale reliability, and validity of variables

Item	Stand. Coeff. (Factor loading)	Cronbach's Alpha	Composite Reliability (CR)	AVE
EC1	0.70	0.867	0.860	0.607
EC2	0.77			
EC3	0.83			
EC4	0.81			
GS1	0.79			
GS2	0.76	0.916	0.911	0.672
GS3	0.91			
GS4	0.85			
GS5	0.78			
CSE1	0.79			
CSE2	0.89	0.850	0.853	0.660
CSE3	0.75			
IP1	0.77			
IP2	0.83			
IP3	0.76			
CA1	0.79	0.808	0.830	0.620
CA2	0.84			
CA3	0.71			
CA4	0.86			

Notes: Significant at 0.001.

Convergent validity indicates whether indicators collectively measure the latent variable, with AVE > 0.50 recommended (Fornell & Larcker, 1981; Hair et al., 2010; Henseler et al., 2015). AVE values ranged from 0.607 to 0.672, supporting convergent validity.

Discriminant validity, assessed by comparing the square root of AVE with inter-construct correlations, is established when the correlation between two constructs is lower than the square root of each construct's AVE (Hair et al., 2010). As shown in Table 8, the square root of AVE for each construct exceeded its correlations with others, confirming discriminant validity.

Table 8: Discriminant validity analysis

Scale	EC	GS	CSE	IP	CA
EC	0.779				
GS	0.220	0.820			
CSE	0.580	0.310	0.812		
IP	0.550	0.170	0.540	0.787	
CA	0.580	0.160	0.500	0.710	0.797

Consequently, the findings validated the reliability and validity of the measures, providing preliminary support for the research hypotheses.

5.6. Structural Model

The hypotheses were tested using SEM based on the framework shown in Figure 1. The model fit indices were within the acceptable range: $\chi^2/df = 1.454$, GFI = 0.960, AGFI = 0.950, NFI = 0.970, IFI = 0.990, and CFI = 0.990, indicating a good model fit. Similarly, RMSEA = 0.030 also indicated a good model fit, consistent with the recommendations of previous studies (Hair et al., 2010; Hu & Bentler, 1999; Thanaka, 1993). The goodness-of-fit indices of the structural model are presented in Table 9.

Table 9: Goodness-of-fit statistics of the structural model

Indices	Abbreviation	Observed value	Recommended criteria	References
Normed chi square	χ^2/df	1.454	≤ 2	Ullman (2001)
Goodness of Fit Index	GFI	0.960	≥ 0.90	Jöreskog and Sörbom (1989)
Adjust Goodness of Fit Index	AGFI	0.950	≥ 0.90	Diamantopoulos and Siguaw (2000)
Normed Fit Index	NFI	0.970	≥ 0.90	Bentler and Bonett (1980)
Comparative Fit Index	CFI	0.990	≥ 0.90	Bentler (1990)
Root Mean Square Error of Approximation	RMSEA	0.030	< 0.05	Steiger and Lind (1980)

Hypothesis testing in this research involved evaluating eight hypotheses using SEM to determine their statistical significance. The path coefficients were considered statistically significant at the 0.05 significance level, as indicated by p-values less than 0.001 and t-values greater than 3.291. Path coefficients meeting these criteria were considered to support the proposed hypotheses. The results of the hypothesis testing are presented in Table 10.

Table 10: Summary of hypothesis tests

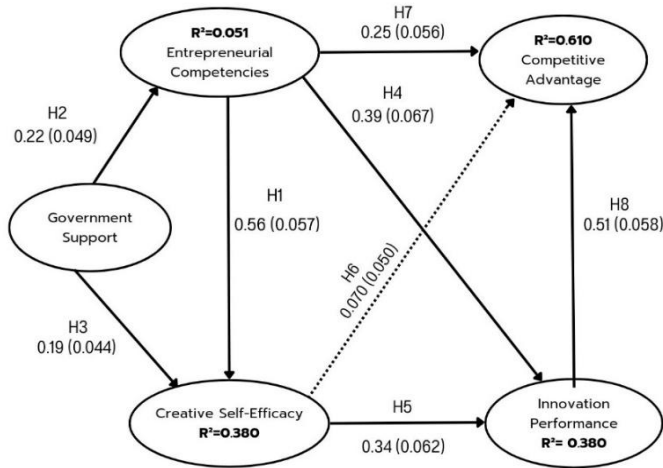
Hypothesis	Estimate	T-Value	Result
H1: EC→CSE	$\beta = 0.56$	9.83***	Accepted
H2: GS→EC	$\beta = 0.22$	4.49***	Accepted
H3: GS→CSE	$\beta = 0.19$	4.30***	Accepted
H4: EC→IP	$\beta = 0.39$	5.92***	Accepted
H5: CSE→IP	$\beta = 0.34$	5.53***	Accepted
H6: CSE→CA	$\beta = 0.07$	1.38	Rejected
H7: EC→CA	$\beta = 0.25$	4.51***	Accepted
H8: IP→CA	$\beta = 0.51$	8.94***	Accepted

Notes: *** Significant at 0.001.

H1 was supported, with EC positively influencing CSE ($\beta = 0.56$, $p < 0.001$). H2 was supported, with GS positively influencing EC ($\beta = 0.22$, $p < 0.001$), and H3 with GS positively affecting CSE ($\beta = 0.19$, $p < 0.001$). H4 was supported, with EC positively influencing IP ($\beta = 0.39$, $p < 0.001$),

and H5 with CSE positively influencing IP ($\beta = 0.34$, $p < 0.001$). H6 was not supported ($\beta = 0.07$). H7 was supported, with EC positively influencing CA ($\beta = 0.25$, $p < 0.001$), and H8 with IP positively affecting CA ($\beta = 0.51$, $p < 0.001$). The final structural model is shown in Figure 3.

Figure 3: Final structural model



5.7. Validation of the Mediating Effect

The Sobel test (Sobel, 1982) was used to evaluate the significance of indirect effects. GS had a significant indirect effect on CSE through EC: direct effect = 0.19 ($p < 0.001$), indirect effect = 0.12 ($p < 0.001$), total effect = 0.31 ($p < 0.001$). Hence, EC partially mediates the GS-CSE relationship.

EC also influenced CA indirectly through IP: direct effect = 0.25 ($p < 0.001$), indirect effect = 0.20 ($p < 0.001$), total effect = 0.45 ($p < 0.001$), confirming IP as a partial mediator. CSE exerted a significant indirect effect on CA through IP: direct effect = 0.07 ($p > 0.05$), indirect effect = 0.17 ($p < 0.001$), total effect = 0.24 ($p < 0.001$). CSE therefore does not directly influence CA but does so indirectly through IP—indicating full mediation by IP.

Empirical results of the structural model are shown in Figure 3. The model explained 61.0% of the variance in CA, 38.0% in IP, 38.0% in CSE, and 5.1% in EC. Table 11 presents the significant direct, indirect, and total effects among the variables.

Table 11: Significant direct, indirect, and total effects among the factors

Path Analysis	Direct Effect	Indirect Effect	Total Effect
GS→EC	0.22***	-	0.22***
EC→CSE	0.56***	-	0.56***
GS→CSE	0.19***	0.12***	0.31***
EC→IP	0.39***	-	0.39***
IP→CA	0.51***	-	0.51***
EC→CA	0.25***	0.20***	0.45***

Path Analysis	Direct Effect	Indirect Effect	Total Effect
CSE→IP	0.34***	-	0.34***
IP→CA	0.51***	-	0.51***
CSE→CA	0.07	0.17***	0.24***

Notes:

1: Government support (GS), creative self-efficacy (CSE), entrepreneurial competencies (EC), innovation performance (IP), and competitive advantage (CA).

2: ***p < 0.001, t > 3.291.

6. DISCUSSION

6.1. Discussion of Results

The results show that government support positively affects EC and CSE, and that EC and CSE substantially enhance innovation performance, which strengthens the competitive advantage of Thai MSMEs. These findings highlight the importance of government support in fostering entrepreneurial and creative competencies.

First, government support significantly improves EC and CSE, while EC also enhances CSE, supporting H1–H3. These results align with prior evidence that government support influences CSE both directly and indirectly through EC (Nguyen et al., 2023). MSMEs require financial support—subsidies, tax incentives, and credit—alongside non-financial support such as training, advisory services, and networking (Pergelova & Angulo-Ruiz, 2014). From the RBV perspective, government support serves as an external resource enabling competitive advantages otherwise difficult to acquire (Nakku et al., 2020), particularly because MSMEs typically lack resources to develop innovation independently. Entrepreneurs with high EC are also more likely to initiate innovation projects and create new products, thereby enhancing CSE (Ferreira-Neto et al., 2023; Pranowo et al., 2020).

Second, EC and CSE influence innovation performance, while EC and IP affect competitive advantage among Thai MSMEs. EC significantly enhances innovation capability, enabling entrepreneurs to recognize opportunities and generate organizational value (Pranowo et al., 2020; Somwethee et al., 2023), promoting innovation performance and competitive advantage through dynamic learning, resource allocation, and organizational culture (Ibidunni et al., 2021; Mohsin et al., 2015). Entrepreneurs with strong creative confidence tend to be adaptable, persistent, and committed throughout the innovation process (Karwowski et al., 2019).

Finally, CSE has no statistically significant direct effect on competitive advantage, suggesting that firm competitive advantage may not be directly linked to individuals' creative confidence. However, innovation performance's mediating role demonstrates a substantial indirect effect. This aligns with self-efficacy theory, which posits that self-efficacy primarily influences outcomes through behavioral engagement—particularly innovation performance—rather than directly affecting organizational outcomes (Bandura, 1997). Innovation performance is thus a critical pathway through which CSE shapes organizational outcomes via unique products, operational efficiency, and adaptability (Hanaysha et al., 2021; Olaleye et al., 2024), with CSE influencing competitive advantage indirectly through product uniqueness, process improvements, and organizational flexibility (Lee & Kim, 2021; Rabbani et al., 2020).

6.2. Theoretical Implications

This study makes several theoretical contributions. First, it extends the RBV by demonstrating how intangible resources—EC—foster competitive advantage both directly and indirectly through innovation performance. Second, this research extends self-efficacy theory by demonstrating CSE indirectly influence competitive advantage via innovation. Third, integrating the RBV with self-efficacy theory provides a comprehensive framework that connects organizational-level resources (EC) with individual-level psychological factors (CSE) to explain MSME performance. Finally, this study demonstrates how government support in emerging economies. The findings suggest that government interventions fosters innovation-driven growth by enhancing both tangible capabilities and psychological capital.

6.3. Practical Implications

This study provides practical implications for MSME growth. Governments seeking to support Thai MSMEs should promote entrepreneurial development by enhancing EC and CSE through skills training, consulting services, financial support, networking opportunities, and knowledge-sharing platforms. Innovation and research centers can also facilitate development of new products and services, strengthening competitiveness.

Entrepreneurs should prioritize innovation performance as a strategic imperative, as innovation drives growth, differentiation, and sustainability. Fostering an innovation culture through emerging technologies, continuous process improvement, and peer networking facilitates idea exchange and creativity. Positioning innovation at the core of competitive strategy enables better adaptation to market changes and sustainable competitive advantages.

6.4. Limitations and Future Research Directions

The primary limitation is the focus on successful MSMEs registered under the OTOP program in Thailand, which may limit generalizability to MSMEs without government support. The cross-sectional design also limits causal inference; future studies should adopt longitudinal designs to capture temporal dynamics. Additional determinants of EC and CSE—such as business networking and strategic collaborations—warrant examination.

7. CONCLUSION

This study provides empirical evidence on MSMEs by examining the causal relationships among government support, EC, CSE, innovation performance, and competitive advantage. Drawing on the RBV and self-efficacy theory, it demonstrates how organizational resources and psychological capital interact to drive competitive outcomes. SEM results indicate that government support is crucial in fostering EC and CSE, which in turn influence competitive advantage, and that enhancing innovation performance is essential for establishing competitive advantage. Government agencies should cultivate entrepreneurs' entrepreneurial competencies (EC) and creative self-efficacy (CSE), while MSMEs must prioritize innovation for competitive advantage. This study directly aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), SDG 1 (No Poverty), and SDG 10 (Reduced Inequalities). Government support, EC, and CSE collectively enhance innovation performance, positioning MSMEs as key drivers of resilient, sustainable economic

growth. Moreover, empowering OTOP entrepreneurs in local communities through targeted capability development generates income, reduces poverty, and ensures equitable opportunities. Ultimately, policies that foster EC, CSE, and innovation not only boost firm-level competitiveness but also meaningfully advance the global sustainable development agenda.

ACKNOWLEDGEMENT

This research received funding from the National Research and Innovation Fund (NSRF) and Prince of Songkla University (Grant No. LAM6601130S).

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