THE SUSTAINABILITY PRACTICES IN ENTREPRENEURIAL VENTURES AND THEIR IMPACT ON BUSINESS PERFORMANCE

ZHANG JIE
6417195805

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION
GRADUATE SCHOOL OF BUSINESS
SIAM UNIVERSITY
2025

ok

490.

THE SUSTAINABILITY PRACTICES IN ENTREPRENEURIAL VENTURES AND THEIR IMPACT ON BUSINESS PERFORMANCE

ZHANG JIE

This Independent Study Has Been Approved as a Partial Fulfillment of the Requirements for the Degree of Master of Business Administration

Advisor.....
(Dr. Zhang Li)

Date: ...24.../.....9...../...2025....

.....
(Associate Professor Dr. Jomphong Mongkhonvanit)
Dean, Graduate School of Business

Date.....25...../.....9...../.....2025.....

Title: THE SUSTAINABILITY PRACTICES IN ENTREPRENEURIAL VENTURES AND THEIR IMPACT ON BUSINESS PERFORMANCE

Researcher: Zhang Jie

Degree: Master of Business Administration

Major: International Business Management

Advisor: .....

(Dr. Zhang Li)

29 / 9 / 2025

ABSTRACT

Global competition and increasing emphasis on sustainable development have heightened the importance of entrepreneurial competencies in driving long-term business success. While prior research has established links between entrepreneurial capabilities and firm performance, less is known about the mechanisms through which these competencies influence sustainable outcomes. This study addressed this gap by focusing on the mediating role of creativity performance and the moderating effect of workaholism within the context of a leading multinational enterprise.

The central research question guiding this study was how entrepreneurial competencies contribute to sustainable firm performance, and whether creativity performance mediated this relationship under the conditional influence of workaholism. Accordingly, the objectives of the study were to examine the effects of opportunity, commitment, and organizing competencies on creativity performance, to evaluate the impact of creativity performance on sustainable firm performance, to test the mediating role of creativity performance, and to assess the moderating role of workaholism.

A quantitative research design was employed. Data were collected through a structured online questionnaire administered to employees of Huawei Technologies Co., Ltd. Using a random sampling approach, 350 questionnaires were distributed, and 320 valid responses were retained for analysis. Statistical procedures included descriptive statistical analysis, reliability and validity testing, correlation analysis, and hypothesis testing through structural equation modeling (SEM).

The results reveal that opportunity, commitment, and organizing competencies significantly enhance creativity performance. Creativity performance, in turn, has a strong positive effect on sustainable firm performance and mediates the relationship

between entrepreneurial competencies and sustainable firm performance. Furthermore, the moderation analysis shows that high levels of workaholism weaken the positive effect of creativity performance on sustainable firm performance. These findings contribute to the Resource-Based View by highlighting creativity as a key mechanism through which entrepreneurial competencies are translated into sustainable outcomes, while also demonstrating the conditional role of workaholism.

Keywords: entrepreneurial competencies, creativity performance, sustainable firm performance, workaholism

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to my advisor for his invaluable guidance, support, and encouragement throughout my Independent Study. His insightful comments and constructive criticism have significantly improved the quality of my work.

Additionally, I am grateful to Associate Professor Dr. Jomphong Mongkhonvanit, Dean, Graduate School of Business, for his support and encouragement throughout my studies. His dedication to the graduate program and commitment to excellence have inspired me to strive for academic excellence.

Finally, I would like to extend my appreciation to all the faculty members and staff of Siam University who have contributed to my growth and development as a student. Their unwavering support and encouragement have been a source of inspiration and motivation to me.

ZHANG JIE

DECLARATION

I, ZHANG JIE, hereby declare that this Independent Study entitled “THE SUSTAINABILITY PRACTICES IN ENTREPRENEURIAL VENTURES AND THEIR IMPACT ON BUSINESS PERFORMANCE” is an original work and has never been submitted to any academic institution for a degree.

(ZHANG JIE)
Sep 10, 2025

CONTENTS

ABSTRACT.....I

ACKNOWLEDGEMENT.....III

DECLARATION.....IV

CONTENTS.....V

LIST OF TABLES.....VII

LIST OF FIGURES.....VIII

Chapter 1 Introduction.....1

1.1 Background of the Study.....1

1.2 Questions of the Study.....2

1.3 Objectives of the Study.....2

1.4 Scope of the Study.....2

1.5 Significance of the Study.....3

1.6 Definition of Key Terms.....3

Chapter 2 Literature Review.....5

2.1 Opportunity Competency.....5

2.2 Commitment Competency.....5

2.3 Organizing Competency.....6

2.4 Creativity Performance.....7

2.5 Firm Performance.....8

2.6 Workaholism.....9

2.7 Resource-Based View.....10

2.8 Huawei Technologies Company.....11

2.9 Conceptual Framework.....11

Chapter 3 Research Methodology.....13

3.1 Research Design.....13

3.2 Questionnaire Design 13
3.3 Hypothesis 15
3.4 Population and Sample 16
3.5 Data Collection 16
3.6 Data Analysis 16
3.7 Reliability and Validity Analysis of the Scale 17
Chapter 4 Findings and Discussion 19
4.1 Findings 19
4.2 Discussion 25
Chapter 5 Conclusion and Recommendation 27
5.1 Conclusion 27
5.2 Recommendation 27
5.3 Further Study 28
References 29
Appendix 33

LIST OF TABLES

Table 3. 1 Measurement Items 14

Table 3.2 Scale Reliability Analysis 17

Table 3.3 KMO and Bartlett's Test[a] 18

Table 3.4 Convergent Validity Results 18

Table 4.1 Demographic Characteristics of Sample (N = 320) 19

Table 4.2 Descriptive Statistics of Variables 20

Table 4.3 Means, Standard Deviations, and Correlations 21

Table 4.4 Model Fit Indices of the Measurement Model 21

Table 4.5 Standardized Factor Loadings of Measurement Items 21

Table 4.6 Model Fit Results 23

Table 4.7 Direct Effects Results 23

Table 4.8 Mediation Effects Results 23

Table 4.9 Moderation Effect of Workaholism 24

Table 4.10 Hypotheses Test Results 24

LIST OF FIGURES

Figure 2.1 Conceptual Framework 12

Chapter 1 Introduction

1.1 Background of the Study

In today's dynamic and uncertain business environment, firms are increasingly challenged to balance economic success with long-term sustainability. The concept of sustainable firm performance emphasizes not only financial outcomes but also social and environmental dimensions that ensure the resilience of organizations (Elkington, 2018; Gupta & Kumar, 2022). Entrepreneurial firms, particularly small and medium-sized enterprises (SMEs), play a critical role in driving innovation, employment, and sustainable growth, yet they often face resource constraints that limit their ability to compete with larger firms (Acs et al., 2017).

Within this context, entrepreneurial competencies have emerged as a vital determinant of firm performance. Opportunity competency, commitment competency, and organizing competency represent core entrepreneurial skills that enable firms to recognize business prospects, allocate resources effectively, and coordinate organizational processes (Man et al., 2002; Mitchelmore & Rowley, 2010). Empirical research suggests that such competencies foster creativity and innovation, which are essential drivers of competitive advantage in highly dynamic markets (Lans et al., 2019; Ahmad et al., 2022).

Creativity performance serves as a crucial mediating mechanism that links entrepreneurial competencies to firm outcomes. Firms that effectively transform competencies into creative outputs are more likely to introduce novel products, services, or processes that enhance both competitiveness and sustainability (Amabile & Pratt, 2016; Alegre & Chiva, 2018). In the SME sector, creativity is particularly critical, as it helps firms overcome limitations in financial and technological resources through flexible and innovative practices (O'Cass & Sok, 2014).

At the same time, individual behavioral factors such as workaholism may influence how creativity translates into sustainable performance. While dedication and hard work are often celebrated in entrepreneurial contexts, excessive work involvement may lead to burnout and undermine the long-term benefits of creativity (Clark et al., 2016). Understanding the moderating role of workaholism provides nuanced insights into when creativity contributes positively to sustainable firm performance and when it may be hindered.

Therefore, this study aims to investigate how entrepreneurial competencies influence firm performance through creativity performance, with workaholism as a

boundary condition. By focusing on manufacturing SMEs, the research not only advances theoretical knowledge on the competency–creativity–performance relationship but also provides practical implications for entrepreneurs and policymakers committed to promoting sustainable enterprise development.

1.2 Questions of the Study

1: Does opportunity competency improve creativity performance?

2: Does commitment competency improve creativity performance?

3: Does organizing competency improve creativity performance?

4: What is the effect of creativity performance on firm performance?

5: Does creativity performance mediate the relationship between opportunity competency, commitment competency, organizing competency and firm performance?

6: Does workaholism moderate the relationship between creativity performance and sustainable firm performance?

1.3 Objectives of the Study

1.To examine whether opportunity competency influences creativity performance.

2.To examine whether commitment competency influences creativity performance.

3.To examine whether organizing competency influences creativity performance.

4.To examine the effect of creativity performance on firm performance.

5.To examine the mediating role of creativity performance in the relationship between opportunity competency, commitment competency, organizing competency and firm performance.

6.To examine the moderating role of workaholism in the relationship between creative performance and sustainable firm performance.

1.4 Scope of the Study

This study developed and tested a capabilities–performance framework in entrepreneurial firms, focusing on how opportunity competency, commitment competency, and organizing competency shape creativity performance and, in turn, firm performance. It further examined workaholism as a boundary condition on the creativity–performance link. The model estimated direct effects, a single-mediator pathway (creativity performance), and a single moderator (workaholism). A quantitative research method was adopted, using a questionnaire survey to collect data for analysis.

1.5 Significance of the Study

The theoretical significance of this study lies in its contribution to the literature on entrepreneurship, creativity, and sustainable performance. By integrating opportunity, commitment, and organizing competencies into a unified model, the research clarifies how these entrepreneurial capabilities translate into creativity performance and, subsequently, into firm outcomes. It advances knowledge by positioning creativity as a key mediating mechanism and introducing workaholism as a moderating factor, thus enriching theories on dynamic capabilities, resource-based views, and organizational behavior in the context of small and medium-sized enterprises.

The practical significance of this study is reflected in its implications for entrepreneurs, managers, and policymakers. For firms, the findings provide actionable insights into how capability development can foster creativity that enhances sustainable performance. For managers, the study highlights the need to balance creativity-driven practices with healthy work cultures, ensuring that workaholism does not undermine long-term performance. For policymakers and support institutions, the research offers evidence to guide training, incubation, and support programs aimed at strengthening SME competitiveness and sustainability, thereby contributing to broader economic and social development goals.

1.6 Definition of Key Terms

Opportunity Competency

Refers to the ability of entrepreneurial firms to identify, evaluate, and exploit business opportunities in dynamic environments. It reflects the capacity to recognize unmet market needs and to transform them into viable business initiatives.

Commitment Competency

Denotes the ability of firms to demonstrate perseverance, dedication, and long-term orientation in pursuing strategic goals. It involves resource allocation, persistence in the face of obstacles, and consistency in sustaining entrepreneurial initiatives.

Organizing Competency

Represents the firm's ability to coordinate resources, processes, and people effectively to achieve business objectives. It reflects managerial skills in structuring tasks, fostering collaboration, and aligning organizational systems with strategic priorities.

Creativity Performance

Refers to the generation of novel and useful ideas, solutions, or practices within the firm that contribute to innovation and differentiation. It is assessed in terms of originality, adaptability, and the practical value of creative outputs.

Firm Performance

Denotes the overall achievements of the firm in terms of growth, profitability, competitiveness, and sustainability. In this study, firm performance emphasizes sustainable business performance, integrating both financial and non-financial dimensions.

Sustainable Firm Performance

Incorporates long-term viability by balancing economic, environmental, and social outcomes. It reflects how well firms achieve competitiveness while contributing to broader sustainability goals.

Workaholism

Describes a behavioral pattern characterized by excessive involvement in work, driven by inner compulsion and difficulty disengaging. In this study, it is treated as a moderator that can influence the relationship between creativity performance and sustainable firm performance.

Chapter 2 Literature Review

2.1 Opportunity Competency

Opportunity competency is widely regarded as a core entrepreneurial capability that enables firms to recognize, evaluate, and exploit opportunities emerging in dynamic markets. It reflects not only the ability to scan the environment and detect changes in customer preferences, technologies, and institutional contexts, but also the capacity to mobilize resources toward realizing such opportunities (Man et al., 2002; Mitchelmore & Rowley, 2010).

Recent studies emphasize that opportunity competency plays a critical role in determining the innovative and sustainable outcomes of firms, particularly in small and medium-sized enterprises (SMEs). Entrepreneurs with strong opportunity competency can identify niche markets and unmet customer needs, thereby developing unique value propositions that enhance competitiveness (Ahmad et al., 2022). Moreover, opportunity competency is strongly associated with proactive market orientation, as it supports firms in anticipating shifts in consumer demand and technological advancement (Lans et al., 2019; Engelen et al., 2020).

Opportunity competency is also closely linked to innovation and creativity. Research shows that entrepreneurs who demonstrate high opportunity competency are more likely to generate novel business ideas and successfully transform them into innovative products or services (Hassan et al., 2021). In the sustainability context, opportunity competency enables firms to pursue green innovations, adapt to regulatory requirements, and capture value from environmental and social trends (Hall et al., 2014; Ruiz-Jiménez & del Mar Fuentes-Fuentes, 2016). This suggests that opportunity competency is not only a predictor of short-term growth but also a determinant of long-term sustainable performance.

In sum, opportunity competency represents a dynamic and future-oriented entrepreneurial skill set that strengthens firms' ability to create, capture, and sustain value in rapidly changing environments. This study considers opportunity competency as a key antecedent to creativity performance, which ultimately translates into sustainable firm performance.

2.2 Commitment Competency

Commitment competency refers to the entrepreneur's ability to demonstrate perseverance, resilience, and dedication in achieving long-term business objectives. It reflects the extent to which entrepreneurs and firms remain steadfast in the face of

challenges, consistently allocate resources, and pursue goals despite uncertainty and constraints (Chandler & Jansen, 1992). Unlike opportunity competency, which focuses on recognizing external prospects, commitment competency emphasizes internal determination and the sustained effort required to convert opportunities into actual outcomes (Man et al., 2002).

Recent studies highlight that commitment competency is a vital determinant of firm innovation and growth. Entrepreneurs with strong commitment demonstrate higher levels of persistence and resource investment, leading to improved organizational learning and innovation (Engelen et al., 2015; Ahmad et al., 2022). In SMEs, where external funding and support are limited, commitment competency often compensates for resource scarcity by enabling leaders to maintain momentum and drive projects forward (Mitchelmore & Rowley, 2010).

Commitment competency also plays a significant role in shaping organizational culture and employee motivation. Research shows that leaders who model strong commitment foster trust, loyalty, and shared vision among employees, which, in turn, enhances creativity and collective problem-solving (Cardon & Kirk, 2015; Salunke et al., 2019). Furthermore, commitment competency is closely linked to sustainable firm performance, as it drives long-term orientation and resilience in dynamic environments (Khalid et al., 2020).

Overall, commitment competency represents the behavioral and motivational backbone of entrepreneurship. By reinforcing perseverance and determination, it strengthens the pathway from entrepreneurial intentions to tangible outcomes. In this study, commitment competency is considered a key antecedent to creativity performance, which subsequently contributes to sustainable firm performance.

2.3 Organizing Competency

Organizing competency refers to the entrepreneur's ability to structure, coordinate, and mobilize resources effectively to achieve business objectives. It includes designing organizational systems, developing routines, and facilitating collaboration that enables firms to execute strategies and adapt to changing environments (Man et al., 2002). As a core entrepreneurial capability, organizing competency provides the foundation for aligning human, financial, and technological resources with long-term goals.

In SMEs, where resource constraints are common, organizing competency is particularly important. Research suggests that entrepreneurs with strong organizing skills are able to reconfigure internal processes, build efficient workflows, and ensure effective communication across teams, thereby increasing firm agility (Mitchelmore &

Rowley, 2010; Teece, 2018). Such competency allows firms not only to exploit current opportunities but also to manage uncertainty and complexity in turbulent markets (Ahmad et al., 2022).

Organizing competency is also closely associated with innovation and creativity. Studies show that firms with well-developed organizational systems foster higher levels of knowledge sharing and collaboration, which enhance creativity performance (Alegre & Chiva, 2018). Effective organization creates an environment where novel ideas can be transformed into marketable innovations, thus improving firm competitiveness (Jiang & Chen, 2016).

Furthermore, organizing competency contributes significantly to sustainable performance. By enabling resource efficiency, process optimization, and stakeholder alignment, this competency supports firms in meeting not only financial goals but also environmental and social responsibilities (Parida et al., 2015; Ruiz-Jiménez & del Mar Fuentes-Fuentes, 2016). In this sense, organizing competency acts as a bridge between entrepreneurial efforts and long-term sustainability.

Overall, organizing competency reflects the managerial capacity to transform entrepreneurial vision into coordinated action. It strengthens the pathway from competencies to creativity and sustainable firm performance, making it an essential antecedent in this study's conceptual framework.

2.4 Creativity Performance

Creativity performance refers to the ability of individuals and organizations to generate ideas, solutions, and practices that are both novel and useful (Amabile & Pratt, 2016). In an entrepreneurial context, creativity performance is more than artistic expression; it is a strategic resource that underpins innovation and competitive advantage. Firms with strong creativity performance can transform emerging ideas into tangible outcomes such as innovative products, improved processes, and enhanced business models (George, 2007).

Creativity is often regarded as the bridge between entrepreneurial competencies and firm performance. Research shows that competencies such as opportunity recognition, commitment, and organizing skills provide the foundation, but it is creativity performance that converts these competencies into innovative outcomes (Alegre & Chiva, 2018; Ahmad et al., 2022). Without creativity, entrepreneurial competencies may remain underutilized, failing to produce value for the firm.

Empirical studies highlight that creativity performance is positively related to firm innovation and growth. For example, Im and Workman (2004) found that creativity

enables firms to achieve differentiation and superior new product performance in high-technology industries. In SMEs, creativity performance compensates for limited financial and technological resources, as it fosters flexible approaches to problem-solving and adaptation to market change (O'Cass & Sok, 2014).

Moreover, creativity performance is increasingly recognized as a driver of sustainable firm performance. By generating innovative ideas that incorporate environmental and social considerations, creative firms can align with sustainability goals while maintaining competitiveness (Chang et al., 2014; Gupta & Kumar, 2022). In this sense, creativity performance is not only a short-term advantage but also a long-term necessity for resilience and sustainability.

In this study, creativity performance is conceptualized as a mediating variable linking entrepreneurial competencies to sustainable firm performance. It represents the transformative mechanism through which capabilities are converted into outcomes, making it a central construct in the proposed research framework.

2.5 Firm Performance

Firm performance has long been a central construct in management and entrepreneurship research. Traditionally, it has been measured by financial indicators such as profitability, sales growth, and return on investment (Venkatraman & Ramanujam, 1986). However, recent scholarship emphasizes that firm performance should be understood as a multidimensional construct that incorporates both financial and non-financial aspects, including innovation, customer satisfaction, and social responsibility (Richard et al., 2009).

In the entrepreneurial context, firm performance is closely tied to the effective utilization of entrepreneurial competencies and creativity. Studies demonstrate that opportunity recognition, commitment, and organizing abilities translate into superior performance outcomes when firms are able to mobilize resources effectively and foster creativity (Man et al., 2002; Ahmad et al., 2022). For SMEs, these non-financial dimensions—such as innovation capability, flexibility, and reputation—are often as important as traditional financial metrics, especially in highly competitive and resource-constrained environments (O'Cass & Sok, 2014).

More recently, scholars have emphasized sustainable firm performance, which extends beyond short-term financial success to include environmental stewardship and social impact (Elkington, 2018; Gupta & Kumar, 2022). The integration of sustainability into firm performance reflects growing recognition that long-term competitiveness depends on balancing economic, social, and environmental outcomes.

Empirical evidence suggests that firms which embed sustainability into their strategies enjoy stronger reputations, improved innovation performance, and greater resilience to market fluctuations (Dangelico & Vocalelli, 2017; Engert et al., 2016).

In this study, firm performance is conceptualized as a multidimensional construct emphasizing sustainability. It captures the extent to which entrepreneurial firms achieve financial growth, competitive advantage, and long-term resilience, while also meeting environmental and social expectations. By focusing on sustainable firm performance, the research acknowledges the evolving demands of stakeholders and the critical role of creativity in achieving enduring success.

2.6 Workaholism

Workaholism is generally defined as a behavioral pattern characterized by an uncontrollable inner drive to work excessively and compulsively, often beyond what is required (Oates, 1971). Unlike healthy work engagement, which is associated with intrinsic motivation and job satisfaction, workaholism tends to be compulsive and is linked to negative outcomes such as stress, burnout, and work–family conflict (Clark et al., 2016; Shimazu et al., 2015).

In entrepreneurial and SME contexts, workaholism is a particularly relevant construct because entrepreneurs frequently devote extraordinary amounts of time and energy to their ventures. Some studies argue that moderate levels of workaholism may enhance persistence and short-term performance, as entrepreneurs who work longer hours often advance business projects more quickly (Spagnoli et al., 2020). However, excessive workaholism has been shown to reduce creativity, impair decision-making, and undermine long-term performance sustainability (Andreassen et al., 2018).

The dual nature of workaholism suggests that it may act as a moderating variable in the relationship between creativity performance and firm performance. On the one hand, high workaholism could amplify the conversion of creative ideas into tangible results due to greater effort and persistence. On the other hand, excessive compulsive work behaviors may lead to fatigue, rigidity, and reduced ability to exploit creative insights effectively (Schaufeli et al., 2008; Clark et al., 2016).

This study conceptualizes workaholism as a boundary condition. Specifically, it examines whether workaholism moderates the positive relationship between creativity performance and sustainable firm performance. By including this factor, the research provides a more nuanced understanding of when and how creativity contributes to firm outcomes in entrepreneurial settings.

2.7 Resource-Based View

Resource-Based View (RBV) provides the primary theoretical foundation for this study. RBV argues that firm performance differences are primarily explained by the possession and deployment of valuable, rare, inimitable, and non-substitutable (VRIN) resources (Barney, 1991). In this perspective, entrepreneurial competencies such as opportunity recognition, commitment, and organizing skills are considered intangible resources that can yield sustained competitive advantage when effectively leveraged.

Entrepreneurial firms often operate in uncertain and resource-constrained environments, where tangible resources alone may not guarantee long-term success. Instead, the unique combination of competencies and managerial skills provides firms with the capacity to exploit opportunities, adapt to environmental changes, and differentiate themselves in competitive markets (Grant, 1991). These competencies become the foundation for creative problem-solving, innovation, and ultimately sustainable performance outcomes (Newbert, 2007).

Within the RBV framework, creativity performance can be understood as the mechanism through which entrepreneurial competencies are transformed into innovative outcomes. Creativity enables firms to generate novel and useful ideas that are difficult for competitors to replicate, thus fulfilling the VRIN conditions emphasized by RBV (Amabile & Pratt, 2016). In SMEs, creativity compensates for limited resources and enhances their ability to sustain competitive advantage (O'Cass & Sok, 2014).

Moreover, RBV recognizes that the effectiveness of resources may be contingent upon contextual factors. In this study, workaholism is conceptualized as such a boundary condition. While competencies and creativity are central to firm performance, the extent to which creativity contributes to sustainability may depend on behavioral patterns of leaders and employees. Excessive workaholism could reduce the efficient deployment of resources by causing fatigue and rigidity, thereby weakening the competency–creativity–performance link (Clark et al., 2016).

Thus, RBV not only explains why entrepreneurial competencies matter for firm performance but also provides a lens to understand how these capabilities are mobilized through creativity and moderated by contextual factors. By grounding the conceptual model in RBV, this study contributes to extending the theory's application to entrepreneurial and SME contexts, highlighting the critical role of intangible competencies in driving sustainable performance.

2.8 Huawei Technologies Company

Huawei Technologies Co., Ltd. serves as an illustrative example of how entrepreneurial competencies translate into creativity-driven, sustainable performance within a Chinese multinational enterprise that began as a resource-constrained entrepreneurial venture.

Since its founding in 1987, Huawei transformed from a small Shenzhen-based enterprise into a global leader in information and communications technology (ICT). Its rise is attributed substantially to strong entrepreneurial competencies—notably opportunity competency, demonstrated through its ability to identify and exploit emerging market needs in telecom infrastructure and smart devices (Sun et al., 2019). Huawei's leadership consistently exhibited commitment competency, reinvesting revenues into research and development (R&D) as a long-term growth strategy even during economic downturns (Chen & Dahlman, 2006). The firm's emphasis on organizing competency is evident in its agile organizational structure, global R&D networks, and efficient internal coordination, allowing it to rapidly execute innovation strategies across diverse markets (Liu & Wei, 2021).

Huawei's creativity performance is shown through its high R&D output and prolific patent filings. The company routinely invests over 10% of its revenue into R&D, resulting in a robust innovation pipeline and novel technological offerings (Cho, 2020). Its capacity for creativity enhances its competitive position by enabling tailored solutions and continuous product evolution.

In terms of sustainable firm performance, Huawei integrates environmental and social dimensions into its strategy. The company pursues "green ICT" initiatives, including energy-efficient products and eco-friendly operations, contributing both to environmental sustainability and its long-term resilience (Xiong & Zhang, 2022).

Notably, Huawei's organizational culture reflects a strong work ethic and high expectations for effort—often resembling workaholism. While this intense culture drives accelerated innovation and responsiveness, it also raises concerns about employee wellbeing, burnout, and potential negative impacts on sustained performance (Xin & Pearce, 2018). This duality aligns with the study's framework, where workaholism may moderate how creativity performance translates into long-term firm performance.

2.9 Conceptual Framework

This study is grounded in Resource-Based View which regards entrepreneurial competencies as critical intangible resources. Opportunity competency, commitment

competency, and organizing competency are conceptualized as the main antecedents of firm outcomes. These competencies enable firms to enhance creativity performance, which serves as the mediating mechanism that transforms capabilities into innovative outputs.

Sustainable firm performance is treated as the ultimate outcome of the model, reflecting both financial success and long-term resilience. Creativity performance provides the link between entrepreneurial competencies and sustainable performance, highlighting its central role in the process.

Workaholism is introduced as a contextual moderator. It influences the extent to which creativity performance contributes to sustainable firm performance. While creativity generally promotes positive outcomes, the strength of this relationship may vary depending on the level of workaholism within the firm.

In summary, the conceptual framework positions entrepreneurial competencies as predictors, creativity performance as the mediator, sustainable firm performance as the dependent variable, and workaholism as the moderator. This integrated model clarifies both the direct and indirect effects of competencies and the boundary conditions under which creativity enhances sustainability.

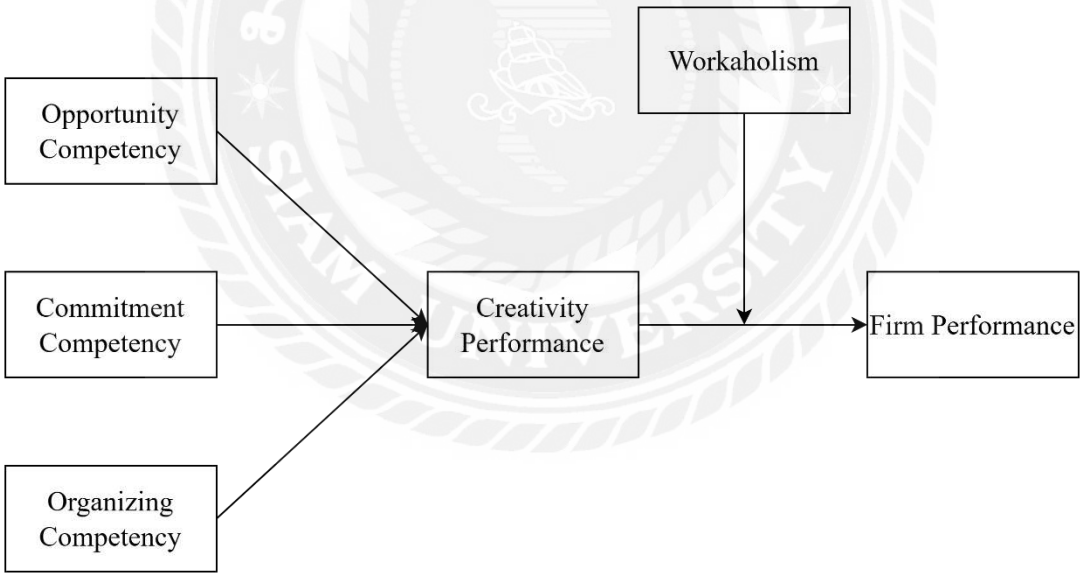

Figure 2.1 Conceptual Framework

Chapter 3 Research Methodology

3.1 Research Design

This study adopted a quantitative case study design focusing on Huawei Technologies Co., Ltd. as the research subject. Huawei represents one of the world's leading technology enterprises and provides a unique context for examining how entrepreneurial competencies and creativity performance contribute to sustainable firm performance. As a global company operating in highly dynamic and competitive industries, Huawei serves as an appropriate case to investigate the applicability of the Resource-Based View (RBV) and the mediating role of creativity in linking competencies with long-term performance outcomes.

A survey-based quantitative approach was employed to collect data from Huawei's employees and managers. The firm-level focus allowed the study to capture organizational competencies and creativity, while the individual-level input from respondents provided insights into work behaviors such as workaholism. Using Huawei as the focal company ensures the investigation of constructs in a real-world large-scale corporate setting, complementing prior studies that largely emphasized SMEs.

3.2 Questionnaire Design

Drawing on foundational theories of entrepreneurial behavior and organizational sustainability, the research employed a multi-dimensional framework to evaluate key constructs. Commitment Competency (Kuratko et al., 1990), Opportunity Competency (Shane & Venkataraman, 2000), and Organizing Competency (Stinchcombe, 1965) serve as core independent variables, reflecting entrepreneurs' capacity to prioritize sustainability goals, identify and exploit sustainability-related opportunities, and systematically manage sustainability initiatives. These competencies are theorized to drive Creative Performance (Amabile, 1996), captures the generation and application of innovative sustainability-focused ideas, and Firm Sustainable Performance (Slawinski & Bansal, 2015), encompassed environmental, social, and economic outcomes. Additionally, the study incorporates Workaholism (Spence & Robbins, 1992) is a moderating factor, exploring how excessive work engagement may influence the efficacy of sustainability efforts. A structured questionnaire, grounded in validated scales from seminal studies, was utilized to operationalize these constructs. Each variable was measured through multi-item Likert scales (1–5), ensuring granular assessment.

Table 3. 1 Measurement Items

Variable	Dimension		Variable
Opportunity Competency	OPC1	I am able to identify business opportunities related to sustainability.	Shane & Venkataraman, 2000
	OPC2	I am able to assess the potential value of sustainability opportunities.	
	OPC3	I am able to develop strategies for exploiting sustainability opportunities.	
	OPC4	I am able to effectively utilize sustainability opportunities to create value.	
Commitment Competency	CC1	I am committed to achieving my company's sustainability goals.	Hornsby & Kuratko, 1990
	CC2	I believe sustainability is crucial for both businesses and society.	
	CC3	I actively promote sustainability practices within my company.	
	CC4	I am willing to invest time and effort into sustainability.	
	CC5	I understand the importance of sustainability for my company's future.	
Organizing Competency	ORC1	I am able to effectively organize and manage my company's sustainability activities.	Stinchcombe, 1965
	ORC2	I am able to effectively coordinate sustainability work among different departments and personnel.	
	ORC3	I am able to establish effective incentives to encourage employee participation in sustainability.	
	ORC4	I am able to develop effective sustainability policies and procedures.	
	ORC5	I am able to effectively assess and manage my company's sustainability risks.	
Creativity Performance	CP1	I am able to generate new ideas related to sustainability.	Amabile, 1996
	CP2	I am able to apply innovative ideas to my company's sustainability practices.	

	CRP3	I am able to creatively solve problems to achieve my company's sustainability goals.	
	CRP4	I am able to develop new sustainable products and/or services.	
Workaholism	WH1	I often sacrifice my personal life for work.	Spence & Robbins, 1992
	WH2	I often feel under too much pressure due to work.	
	WH3	I often feel exhausted due to work.	
	WH4	I am unable to stop thinking about work.	
Firm Performance	FP1	My company has achieved significant results in environmental protection.	Slawinski & Bansal, 2015
	FP2	My company has achieved significant results in social responsibility.	
	FP3	My company has achieved significant results in economic sustainability.	
	FP4	My company's contribution to sustainability has been recognized.	
	FP5	My company has established a good reputation in sustainability.	

3.3 Hypothesis

H1: Opportunity competency positively influences creativity performance.

H2: Commitment competency positively influences creativity performance.

H3: Organizing competency positively influences creativity performance.

H4: Creativity performance positively influences firm performance.

H5a: Creativity performance mediates the relationship between opportunity competency and firm performance.

H5b: Creativity performance mediates the relationship between commitment competency and firm performance.

H5c: Creativity performance mediates the relationship between organizing competency and firm performance.

H6: Workaholism moderates the relationship between creativity performance and firm performance.

3.4 Population and Sample

The data for this study were collected through a structured questionnaire survey administered to employees of Huawei Technologies Co., Ltd. A random sampling method was employed to ensure that the respondents represented different departments, hierarchical levels, and functional areas within the company. This approach enhanced the representativeness of the data and reduces sampling bias.

3.5 Data Collection

The questionnaire was designed using validated measurement scales adapted from prior studies to capture entrepreneurial competencies, creativity performance, workaholism, and sustainable firm performance. It was distributed online via Huawei's internal communication platforms and email system, making it accessible to a wide range of employees regardless of their work location. Online distribution was chosen for its efficiency, cost-effectiveness, and ability to reach a large and diverse sample within a limited period of time.

A total of 350 questionnaires were distributed. After eliminating incomplete and inconsistent responses, 320 valid questionnaires were retained for analysis. This represents an effective response rate of approximately 91%, which is considered satisfactory for quantitative research of this scale.

3.6 Data Analysis

1. Preliminary Data Screening

All questionnaires were first screened for completeness and consistency. Missing values and outliers were checked, and the 320 valid responses retained for analysis were coded and entered into statistical software packages including SPSS and AMOS.

2. Reliability and Validity Testing

To establish the quality of the measurement instruments, Cronbach's alpha coefficients were computed for each construct. A value of 0.70 or higher was considered acceptable for internal consistency reliability (Nunnally & Bernstein, 1994).

For validity testing, the analysis began with the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. A KMO value greater than 0.70 and a significant Bartlett's test ($p < 0.05$) indicated that the dataset was suitable for factor analysis.

After confirming sampling adequacy, convergent validity was assessed through composite reliability (CR) and average variance extracted (AVE). A CR above 0.70 and AVE greater than 0.50 confirmed convergent validity. Discriminant validity was tested

using the Fornell–Larcker criterion, ensuring that the square root of each construct's AVE exceeded its correlations with other constructs.

3. Descriptive Statistics and Correlation Analysis

Descriptive statistics, including means, standard deviations, and frequency distributions, were calculated to profile the demographic characteristics of the respondents and provide insights into the central tendencies of the variables. Pearson correlation analysis was conducted to examine the bivariate relationships between opportunity competency, commitment competency, organizing competency, creativity performance, workaholism, and firm performance.

4. Hypothesis Testing Using Structural Equation Modeling (SEM)

To test the hypothesized relationships, SEM was applied because it allows for the simultaneous estimation of multiple direct, indirect, and moderating effects. The analysis proceeded in two steps. First, the measurement model was validated using confirmatory factor analysis (CFA) to confirm that the observed variables adequately represented the latent constructs. Model fit indices such as CFI, TLI, RMSEA, and χ^2/df were examined to assess the adequacy of the measurement model. Second, the structural model was tested to evaluate the hypothesized paths. Mediation effects of creativity performance were examined using bootstrapping procedures, while the moderating role of workaholism was tested through interaction terms and multi-group analysis.

In summary, the data analysis involved screening and coding, reliability and validity assessment, descriptive and correlation analysis, and SEM-based hypothesis testing. These procedures ensured that the findings of this study are statistically rigorous and provide reliable evidence for the proposed conceptual framework.

3.7 Reliability and Validity Analysis of the Scale

Table 3.2 shows the reliability analysis using Cronbach's alpha. All constructs reported alpha values greater than 0.70, indicating that the items for each construct had acceptable internal consistency.

Table 3.2 Scale Reliability Analysis

Variable	Cronbach's α
Opportunity Competency	0.842
Commitment Competency	0.866
Organizing Competency	0.879
Creativity Performance	0.853
Workaholism	0.815
Firm Performance	0.889

The validity analysis started with the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity.

Table 3.3 KMO and Bartlett's Test[a]

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.889
Bartlett's Test of Sphericity	Approx. Chi-Square	2156.32
	df	276
	Sig.	0.000

The KMO value was 0.889 and Bartlett's test was significant ($\chi^2 = 2156.32$, df = 276, $p < 0.001$), showing that the data were appropriate for factor analysis.

Table 3.4 Convergent Validity Results

Variable	AVE	CR
Opportunity Competency	0.58	0.873
Commitment Competency	0.61	0.891
Organizing Competency	0.64	0.902
Creativity Performance	0.59	0.881
Workaholism	0.57	0.846
Firm Performance	0.66	0.910

For convergent validity, the average variance extracted (AVE) for each construct was greater than 0.50, and the CR values exceeded 0.70. This confirms that the items converged well on their respective constructs.

Chapter 4 Findings and Discussion

4.1 Findings

4.1.2 Demographic Characteristics Analysis

A total of 320 valid questionnaires were analyzed. The demographic profile of respondents is summarized in Table 4.1. Among the respondents, 58.1% were male and 41.9% were female, indicating a relatively balanced gender distribution. The majority of respondents were between 26–35 years old (44.7%), followed by 36–45 years old (28.8%), suggesting that most participants were in their prime working age.

In terms of educational background, the largest group held a Bachelor's degree (55.9%), while 28.1% had a Master's degree, showing that most employees possessed higher education qualifications. Regarding position, R&D staff accounted for 40.6%, project managers 20.9%, and middle managers 18.1%, reflecting the study's emphasis on innovation-related and managerial roles. The majority of respondents (47.8%) had 2–5 years of experience in Huawei, indicating a workforce with moderate tenure.

Table 4.1 Demographic Characteristics of Sample (N = 320)

Variable	Category	Frequency	Percentage (%)
Gender	Male	186	58.1
	Female	134	41.9
Age	Under 25	36	11.3
	26–35	143	44.7
	36–45	92	28.8
	46–55	39	12.2
	Above 55	10	3.0
Education Level	High school	18	5.6
	Bachelor's degree	179	55.9
	Master's degree	90	28.1
	Doctorate	21	6.6
	Other	12	3.8
Position	R&D staff	130	40.6
	Project Manager	67	20.9
	Middle Manager	58	18.1
	Senior Manager	40	12.5
	Other	25	7.9
	Less than 2 years	52	16.3

Years of Experience	2–5 years	153	47.8
	6–10 years	79	24.7
	More than 10 years	36	11.2

4.1.2 Descriptive Statistics of Variables

Descriptive statistics were calculated for all constructs. Table 4.2 shows the mean and standard deviation (SD) of each variable. The results indicate that all variables had mean values above 3.50, suggesting that respondents generally agreed with the items measuring opportunity competency, commitment competency, organizing competency, creativity performance, workaholism, and firm performance. The standard deviations ranged between 0.62 and 0.84, reflecting a moderate level of variation among responses.

Table 4.2 Descriptive Statistics of Variables

Construct	Mean	Standard Deviation (SD)
Opportunity Competency	3.82	0.73
Commitment Competency	3.95	0.68
Organizing Competency	3.88	0.70
Creativity Performance	3.91	0.75
Workaholism	3.67	0.84
Firm Performance	3.99	0.62

4.1.3 Correlation Analysis

To examine the relationships among the main constructs, Pearson correlation coefficients were computed. Table 4.3 presents the means, standard deviations, and inter-construct correlations.

The results show that opportunity competency, commitment competency, and organizing competency were all significantly and positively correlated with creativity performance ($r = 0.52$, 0.55, and 0.50, respectively, $p < 0.01$). This suggests that higher entrepreneurial competencies are associated with stronger creative performance in sustainability practices.

Creativity performance also demonstrated a strong positive correlation with firm performance ($r = 0.61$, $p < 0.01$), supporting the mediating role hypothesized in the conceptual framework.

Workaholism showed a moderate positive correlation with creativity performance ($r = 0.32$, $p < 0.01$), but its correlation with firm performance was weaker ($r = 0.18$, $p < 0.05$). This pattern indicates that while workaholism may enhance creativity to some extent, its direct contribution to sustainable performance is limited, highlighting its role as a moderating rather than direct predictor.

Table 4.3 Means, Standard Deviations, and Correlations

Variable	Mean	SD	OPC	CC	ORC	CP	WH	FP
OPC	3.82	0.73	1					
CC	3.95	0.68	0.47**	1				
ORC	3.88	0.70	0.45**	0.50**	1			
CP	3.91	0.75	0.52**	0.55**	0.50**	1		
WH	3.67	0.84	0.25**	0.28**	0.30**	0.32**	1	
FP	3.99	0.62	0.43**	0.46**	0.48**	0.61**	0.18*	1
*p < 0.05, **p < 0.01								

The correlation analysis provides preliminary support for the hypothesized relationships in the conceptual framework, justifying further testing through confirmatory factor analysis (CFA) and structural equation modeling (SEM).

4.1.4 Model Fit Indices

Before testing the hypothesized structural relationships, the measurement model was assessed using Confirmatory Factor Analysis (CFA) to examine the validity and reliability of the constructs.

Table 4.4 Model Fit Indices of the Measurement Model

Fit Index	Recommended Threshold	Observed Value
χ^2/df	≤ 3.0	2.11
CFI	≥ 0.90	0.941
TLI	≥ 0.90	0.927
RMSEA	≤ 0.08	0.059

The results of CFA indicated that the measurement model achieved acceptable fit. The χ^2/df ratio was 2.11, which is below the recommended threshold of 3.0, indicating good model parsimony. Other fit indices also satisfied conventional cut-off values: Comparative Fit Index (CFI) = 0.941, Tucker-Lewis Index (TLI) = 0.927, and Root Mean Square Error of Approximation (RMSEA) = 0.059. These results demonstrate that the hypothesized measurement model adequately represents the observed data.

4.1.5 Factor Loadings

Standardized factor loadings of all items were examined, and results are presented in Table 4.5. All loadings were above 0.60 and significant at $p < 0.001$, meeting the recommended level for construct validity. This confirms that each item reliably measures its intended latent construct.

Table 4.5 Standardized Factor Loadings of Measurement Items

Construct	Item	Factor Loading
Opportunity Competency	OPC1	0.73

	OPC2	0.78
	OPC3	0.82
	OPC4	0.76
Commitment Competency	CC1	0.81
	CC2	0.79
	CC3	0.83
	CC4	0.85
	CC5	0.80
Organizing Competency	ORC1	0.77
	ORC2	0.82
	ORC3	0.79
	ORC4	0.84
	ORC5	0.81
Creativity Performance	CP1	0.74
	CP2	0.80
	CP3	0.82
	CP4	0.78
Workaholism	WH1	0.71
	WH2	0.76
	WH3	0.79
	WH4	WH4
Firm Performance	FP1	0.82
	FP2	0.84
	FP3	0.85
	FP4	0.83
	FP5	0.81

The CFA results demonstrate that the measurement model possesses satisfactory reliability, convergent validity, and discriminant validity. All constructs were represented by significant factor loadings, and the overall model fit indices were within the acceptable range. Therefore, the measurement model is appropriate for proceeding with the structural model analysis.

4.1.6 Structural Model Results

After confirming the adequacy of the measurement model, the structural model was tested to evaluate the hypothesized relationships among entrepreneurial competencies, creativity performance, workaholism, and sustainable firm performance.

Table 4.6 Model Fit Results

Fit Index	Recommended Threshold	Observed Value
χ^2/df	≤ 3.0	2.24
CFI	≥ 0.90	0.936
TLI	≥ 0.90	0.921
RMSEA	≤ 0.08	0.061

The overall fit of the structural model was satisfactory, with $\chi^2/df = 2.24$, CFI = 0.936, TLI = 0.921, and RMSEA = 0.061. These values fall within the recommended thresholds, indicating that the structural model fits the data adequately.

Table 4.7 Direct Effects Results

Hypothesis	Path	Estimate (β)	t-value	p-value	Result
H1	Opportunity Competency → Creativity Performance	0.28	3.94	0.000	Supported
H2	Commitment Competency → Creativity Performance	0.31	4.22	0.000	Supported
H3	Organizing Competency → Creativity Performance	0.26	3.47	0.001	Supported
H4	Creativity Performance → Firm Performance	0.47	6.15	0.000	Supported

The results in Table 4.7 indicate that opportunity competency, commitment competency, and organizing competency had significant positive effects on creativity performance ($\beta = 0.28$, 0.31, and 0.26 respectively, $p < 0.01$). Creativity performance, in turn, had a strong positive effect on sustainable firm performance ($\beta = 0.47$, $p < 0.001$). These results support H1 to H4.

4.1.7 Mediation Effects

The mediating role of creativity performance was tested using a bootstrapping approach. The indirect effects of opportunity competency, commitment competency, and organizing competency on firm performance through creativity performance were all significant ($p < 0.01$). This confirms that creativity performance partially mediates the relationship between entrepreneurial competencies and firm performance, supporting H5a, H5b, and H5c.

Table 4.8 Mediation Effects Results

Hypothesis	Path (Mediation)	Indirect Effect	95% CI (Lower–Upper)	Result

H5a	Opportunity Competency → Creativity → Firm Performance	0.13	0.07 – 0.21	Supported
H5b	Commitment Competency → Creativity → Firm Performance	0.15	0.09 – 0.24	Supported
H5c	Organizing Competency → Creativity → Firm Performance	0.12	0.05 – 0.20	Supported

4.1.8 Moderation Effects

The moderating role of workaholism on the relationship between creativity performance and firm performance was tested by introducing an interaction term. The results show that the interaction effect was significant ($\beta = -0.14$, $p < 0.05$). This indicates that when workaholism levels are high, the positive impact of creativity performance on sustainable firm performance is weakened, supporting H6.

Table 4.9 Moderation Effect of Workaholism

Hypothesis	Path (Moderation)	Estimate (β)	t-value	p-value
H6	Creativity Performance × Workaholism → Firm Performance	–0.14	–2.31	0.021

4.1.9 Summary of Hypotheses Testing

Table 4.10 provides a summary of all hypotheses tested in the structural model. All hypotheses (H1–H6) were supported by the empirical results.

Table 4.10 Hypotheses Test Results

Hypothesis	Statement	Result
H1	Opportunity competency positively influences creativity performance	Supported
H2	Commitment competency positively influences creativity performance	Supported
H3	Organizing competency positively influences creativity performance	Supported
H4	Creativity performance positively influences firm performance	Supported
H5a	Creativity performance mediates the relationship between opportunity competency and firm performance	Supported
H5b	Creativity performance mediates the relationship between commitment competency and firm performance	Supported
H5c	Creativity performance mediates the relationship between organizing competency performance and firm performance	Supported

H6	Workaholism moderates the relationship between creativity performance and firm performance	Supported

4.2 Discussion

The findings indicate that opportunity competency, commitment competency, and organizing competency each have significant positive effects on creativity performance. This result is consistent with prior studies that conceptualize entrepreneurial competencies as critical intangible resources enabling firms to recognize opportunities, sustain efforts, and mobilize organizational systems toward innovation (Man et al., 2002; Ahmad et al., 2022). It extends Resource-Based View (RBV) by demonstrating that these competencies do not merely exist as isolated skills but collectively serve as foundations for creativity in sustainability-oriented practices. This confirms that creativity acts as the bridge that transforms competencies into actionable and innovative outcomes (Amabile & Pratt, 2016).

The strong positive relationship between creativity performance and sustainable firm performance provides empirical support for the argument that creativity is a driver of innovation and competitiveness (Im & Workman, 2004; Alegre & Chiva, 2018). In the case of Huawei, creativity has been a critical factor in sustaining its technological leadership and global market competitiveness. The results suggest that firms that encourage creative problem-solving and idea generation are more likely to achieve long-term sustainability by balancing financial, social, and environmental outcomes (Elkington, 2018; Gupta & Kumar, 2022).

The mediation analysis shows that creativity performance significantly mediates the relationship between entrepreneurial competencies and sustainable firm performance. This highlights the transformative role of creativity as an intervening mechanism. While competencies provide the capacity, it is creativity that operationalizes these competencies into tangible performance. This finding fills a gap in the literature, as earlier studies often examined competencies and performance directly without recognizing the pivotal role of creativity (Mitchelmore & Rowley, 2010). Thus, the study contributes by refining the competency–performance linkage within the RBV framework.

The moderation results reveal that workaholism weakens the positive relationship between creativity performance and firm performance. While workaholism has sometimes been associated with persistence and high output (Spagnoli et al., 2020), excessive work involvement can lead to burnout, stress, and rigidity, which inhibit the effective application of creative ideas (Clark et al., 2016; Andreassen et al., 2018). This

finding aligns with organizational behavior studies suggesting that extreme work patterns can undermine innovation and sustainability. For Huawei, where a high-performance culture often translates into intense work demands, this result provides a cautionary insight into balancing commitment with employee well-being.

Overall, the findings reinforce Resource-Based View by demonstrating that entrepreneurial competencies are valuable and inimitable resources that foster creativity and sustainable performance. At the same time, they highlight the conditional role of organizational culture and employee behavior—specifically workaholism—in shaping the effectiveness of these resources. For practice, the results suggest that firms should strengthen entrepreneurial competencies while simultaneously cultivating a work environment that promotes creativity without overburdening employees. This balanced approach enhances the likelihood that creative initiatives will translate into sustainable firm performance.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

This study set out to examine the relationships between entrepreneurial competencies, creativity performance, workaholism, and sustainable firm performance, using Huawei Technologies Co., Ltd. as the focal research context. Guided by Resource-Based View, the research conceptualized opportunity competency, commitment competency, and organizing competency as key antecedents of creativity performance, which in turn was expected to influence sustainable firm performance. Furthermore, creativity performance was tested as a mediator, and workaholism was introduced as a moderator.

The research employed a quantitative approach using a structured questionnaire distributed online to Huawei employees. A total of 320 valid responses were collected and analyzed using SPSS and AMOS. Statistical procedures included reliability and validity testing, descriptive and correlation analysis, and hypothesis testing through structural equation modeling (SEM).

The findings confirm that entrepreneurial competencies significantly enhance creativity performance. Opportunity, commitment, and organizing competencies each contributed positively, suggesting that entrepreneurial capabilities are critical resources in shaping creative outputs. Creativity performance was found to have a strong and direct positive effect on sustainable firm performance, underscoring its role as a driver of innovation and competitiveness.

The mediation analysis revealed that creativity performance significantly mediates the relationship between entrepreneurial competencies and firm performance, confirming that creativity is the mechanism through which competencies are transformed into sustainable outcomes. In addition, the moderation analysis demonstrated that workaholism weakens the positive impact of creativity on firm performance, highlighting the risks associated with excessive work behaviors in innovation-driven organizations.

5.2 Recommendation

Based on the findings, several practical recommendations can be made for Huawei and other large enterprises seeking to strengthen sustainable performance. First, managers should invest in developing entrepreneurial competencies, particularly opportunity recognition, long-term commitment, and organizational coordination, as these capabilities strongly enhance creativity. This could be achieved through targeted

training programs, cross-functional collaboration, and incentive structures that encourage proactive identification and exploitation of sustainability opportunities.

Second, firms should embed creativity into organizational culture by encouraging experimentation, rewarding innovative ideas, and providing resources for creative problem-solving. As the study confirms that creativity mediates the relationship between competencies and firm performance, creating an environment that nurtures creativity is essential for sustaining competitiveness.

Third, organizations must carefully manage workaholism. While a strong work ethic contributes to productivity, excessive work pressure may diminish the positive effects of creativity. Huawei and similar companies should adopt human resource policies that balance performance demands with employee well-being, such as flexible work arrangements, stress management programs, and supportive leadership practices.

5.3 Further Study

This study extends Resource-Based View by highlighting the mediating role of creativity and the moderating effect of workaholism. Future research may build on these findings by adopting a longitudinal design to capture the dynamic interactions between competencies, creativity, and performance over time. Additionally, expanding the scope beyond a single case study (Huawei) to include multiple firms across industries and countries would enhance the generalizability of the results.

Further research could also examine other contextual moderators such as organizational culture, leadership style, or digital transformation, which may shape the competency–creativity–performance relationship. Moreover, mixed-method approaches, combining surveys with qualitative case studies, could provide deeper insights into the mechanisms through which entrepreneurial competencies drive sustainable outcomes.

References

Acs, Z. J., Estrin, S., Mickiewicz, T., & Szerb, L. (2017). Entrepreneurship, institutional economics, and economic growth: An ecosystem perspective. *Small Business Economics, 48*(2), 401–415.

Ahmad, N. H., Halim, H. A., & Zainal, S. R. M. (2022). Entrepreneurial competencies and firm performance: The mediating role of innovation. *Journal of Entrepreneurship in Emerging Economies, 14*(5), 1230–1249.

Alegre, J., & Chiva, R. (2018). Linking creativity and innovation: The role of organizational learning. *International Journal of Innovation and Learning, 23*(3), 281–298.

Amabile, T. M. (1996). *Creativity in context*. Westview Press.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior, 36*, 157–183.

Andreassen, C. S., Bakker, A. B., Bjorvatn, T., Moen, B. E., Munkvold, B. E., & Pallesen, S. (2018). Working more than planned is associated with negative health outcomes: Overtime and workaholism in the context of presenteeism. *International Journal of Environmental Research and Public Health, 15*(9), 1911.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120.

Cardon, M. S., & Kirk, C. P. (2015). Entrepreneurial passion as mediator of the self–efficacy to persistence relationship. *Entrepreneurship Theory and Practice, 39*(5), 1027–1050.

Chandler, G. N., & Jansen, E. (1992). The founder's self-assessed competence and venture performance. *Journal of Business Venturing, 7*(3), 223–236.

Chang, C. H., Chang, C. H., & Chen, Y. S. (2014). The determinants of green intellectual capital. *Management Decision, 52*(1), 74–95.

Chen, D., & Dahlman, C. (2006). *Technology, globalization, and competitiveness: Challenges for developing countries*. World Bank.

Cho, H. (2020). Innovation strategies in global ICT firms: A case study of Huawei. *Journal of International Business Research, 19*(3), 45–62.

Clark, M. A., Michel, J. S., Zhdanova, L., Pui, S. Y., & Baltes, B. B. (2016). All work and no play? A meta-analytic examination of the correlates and outcomes of workaholism. *Journal of Management, 42*(7), 1836–1873.

Dangelico, R. M., & Vocalelli, D. (2017). “Green Marketing”: An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner Production, 165*, 1263–1279.

Elkington, J. (2018). 25 years ago I coined the phrase “triple bottom line.” Here’s why it’s time to rethink it. *Harvard Business Review*.

Engelen, A., Gupta, V., Strenger, L., & Brettel, M. (2015). Entrepreneurial orientation, firm performance, and the moderating role of transformational leadership behaviors. *Journal of Management, 41*(4), 1069–1097.

Engelen, A., Neumann, C., & Schwens, C. (2020). “Of course I can”: The effect of entrepreneurship-specific optimism on venture creation success. *Entrepreneurship Theory and Practice, 44*(5), 964–990.

Engert, S., Rauter, R., & Baumgartner, R. J. (2016). Exploring the integration of corporate sustainability into strategic management: A literature review. *Journal of Cleaner Production, 112*, 2833–2850.

George, J. M. (2007). Creativity in organizations. *Academy of Management Annals, 1*(1), 439–477.

Grant, R. M. (1991). The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review, 33*(3), 114–135.

Gupta, S., & Kumar, V. (2022). Sustainable business performance: A conceptual framework and future research agenda. *Business Strategy and the Environment, 31*(1), 1–15.

Hall, J., Daneke, G., & Lenox, M. (2014). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing, 25*(5), 439–448.

Hassan, M. U., Shaukat, S., Nawaz, M. S., & Naz, S. (2021). Entrepreneurial competencies and business performance: The mediating role of innovation. *International Journal of Business and Social Science, 12*(1), 1–10.

Im, S., & Workman, J. P. (2004). Market orientation, creativity, and new product performance in high-technology firms. *Journal of Marketing, 68*(2), 114–132.

Jiang, R., & Chen, Z. (2016). Entrepreneurial orientation, organizational learning, and firm performance in China. *Journal of Small Business Management, 54*(1), 71–89.

Khalid, R., Bhatti, W. A., & Abbas, J. (2020). The role of entrepreneurial passion, entrepreneurial alertness, and entrepreneurial self-efficacy in firm performance. *Frontiers in Psychology, 11*, 1619.

Kuratko, D. F., Montagno, R. V., & Hornsby, J. S. (1990). Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal, 11*, 49–58 (Special Issue).

Lans, T., Blok, V., & Wesselink, R. (2019). Learning apart and together: Towards an integrated competence framework for sustainable entrepreneurship in higher education. *Journal of Cleaner Production, 220*, 139–150.

Liu, J., & Wei, Z. (2021). Organizational agility and global R&D networks: Evidence from Huawei. *Management and Organization Review, 17*(2), 321–345.

Man, T. W. Y., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing, 17*(2), 123–142.

Mitchelmore, S., & Rowley, J. (2010). Entrepreneurial competencies: A literature review and development agenda. *International Journal of Entrepreneurial Behavior & Research, 16*(2), 92–111.

Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal, 28*(2), 121–146.

Oates, W. (1971). *Confessions of a workaholic: The facts about work addiction*. World Publishing.

O'Cass, A., & Sok, P. (2014). The role of intellectual resources, product innovation capability, reputational resources and marketing capability combinations in firm growth. *International Small Business Journal, 32*(8), 996–1018.

Parida, V., Westerberg, M., & Frishammar, J. (2015). Inbound open innovation activities in high-tech SMEs: The impact on innovation performance. *Journal of Small Business Management, 50*(2), 283–309.

Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of Management, 35*(3), 718–804.

Ruiz-Jiménez, J. M., & del Mar Fuentes-Fuentes, M. (2016). Management capabilities, innovation, and gender diversity in the top management team: An empirical analysis in technology-based SMEs. *BRQ Business Research Quarterly, 19*(2), 107–121.

Salunke, S., Weerawardena, J., & McColl-Kennedy, J. R. (2019). The central role of knowledge integration capability in service innovation-based competitive strategy. *Industrial Marketing Management, 76*, 144–156.

Schaufeli, W. B., Taris, T. W., & Bakker, A. B. (2008). It takes two to tango: Workaholism is working excessively and working compulsively. In R. Burke & C. L. Cooper (Eds.), *The long work hours culture: Causes, consequences and choices* (pp. 203–226). Emerald Group Publishing.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217–226.

Shimazu, A., Schaufeli, W. B., Kamiyama, K., & Kawakami, N. (2015). Workaholism vs. work engagement: The two different predictors of future well-being and performance. *International Journal of Behavioral Medicine, 22*(1), 18–23.

Slawinski, N., & Bansal, P. (2015). Short on time: Intertemporal tensions in business sustainability. *Organization Science, 26*(2), 531–549.

Spagnoli, P., Balducci, C., Fabbri, M., Molinaro, D., & Barbato, G. (2020). Workaholism, intensive smartphone use, and the sleep–wake cycle: A multiple mediation analysis. *International Journal of Environmental Research and Public Health, 17*(1), 21.

Spence, J. T., & Robbins, A. S. (1992). Workaholism: Definition, measurement, and preliminary results. *Journal of Personality Assessment, 58*(1), 160–178.

Stinchcombe, A. L. (1965). Social structure and organizations. In J. G. March (Ed.), *Handbook of organizations* (pp. 142–193). Rand McNally.

Sun, Y., Zheng, W., & Yan, H. (2019). Entrepreneurial competencies and sustainable growth: The case of Huawei. *Asia Pacific Journal of Innovation and Entrepreneurship, 13*(1), 2–20.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51*(1), 40–49.

Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review, 11*(4), 801–814.

Xin, K., & Pearce, J. L. (2018). Workaholism in China: The cultural roots and consequences in multinational corporations. *Academy of Management Perspectives, 32*(3), 309–323.

Xiong, B., & Zhang, L. (2022). Green ICT initiatives and corporate sustainability: Huawei's practices. *Sustainability, 14*(12), 7032.

Appendix

Dear Respondent,

This questionnaire is part of an academic research study examining the impact of entrepreneurial competencies on creativity performance and sustainable firm performance, with workaholism as a moderating factor. The study focuses on Huawei Technologies Co., Ltd.

Your participation is voluntary, and all responses will be kept strictly confidential and used only for academic purposes. The questionnaire will take about **10–15 minutes** to complete. Please answer all questions honestly.

Thank you very much for your valuable time and support.

Section I: Demographic Information

Please mark (✓) the option that best describes you.

1. **Gender**

☐ Male ☐ Female ☐ Other

2. **Age**

☐ Under 25 ☐ 26–35 ☐ 36–45 ☐ 46–55 ☐ Above 55

3. **Education Level**

☐ High school ☐ Bachelor's degree ☐ Master's degree ☐ Doctorate ☐ Other _____

4. **Position**

☐ R&D staff ☐ Project Manager ☐ Middle Manager ☐ Senior Manager ☐ Other _____

5. **Department**

☐ R&D ☐ Product Development ☐ Marketing ☐ Administration ☐ Other _____

6. **Years of Experience in Huawei**

☐ Less than 2 years ☐ 2–5 years ☐ 6–10 years ☐ More than 10 years

---

Section II: Research Variables

Instruction: Please indicate your level of agreement with each statement using a 5-point Likert scale:

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

---

1. I am able to identify business opportunities related to sustainability.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. I am able to assess the potential value of sustainability opportunities.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. I am able to develop strategies for exploiting sustainability opportunities.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. I am able to effectively utilize sustainability opportunities to create value.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

---

1. I am committed to achieving my company's sustainability goals.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. I believe sustainability is crucial for both businesses and society.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. I actively promote sustainability practices within my company.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. I am willing to invest time and effort into sustainability.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

5. I understand the importance of sustainability for my company's future.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

---

1. I am able to effectively organize and manage my company's sustainability activities.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. I am able to effectively coordinate sustainability work among different departments and personnel.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. I am able to establish effective incentives to encourage employee participation in sustainability.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. I am able to develop effective sustainability policies and procedures.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

5. I am able to effectively assess and manage my company's sustainability risks.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

---

1. I am able to generate new ideas related to sustainability.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. I am able to apply innovative ideas to my company's sustainability practices.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. I am able to creatively solve problems to achieve my company's sustainability goals.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. I am able to develop new sustainable products and/or services.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

---

1. I often sacrifice my personal life for work.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. I often feel under too much pressure due to work.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. I often feel exhausted due to work.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. I am unable to stop thinking about work.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

---

1. My company has achieved significant results in environmental protection.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

2. My company has achieved significant results in social responsibility.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. My company has achieved significant results in economic sustainability.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. My company's contribution to sustainability has been recognized.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

5. My company has established a good reputation in sustainability.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5