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THE STUDY OF SUCCESS FACTORS FOR ENTREPRENEURS OF STEEL PROCESSING FIRMS IN TAIWAN

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ABSTRACT

Studies in the past have not been founded in regarding steel processing industry with the perspective of Entrepreneur, and this led to the motivation of this study. The main purpose of this study is to review the success factors for entrepreneurs of steel processing firms from the perspective of Entrepreneur. In this study, Taiwan steel processing industry, entrepreneurship, entrepreneur and critical success factor literature as the theoretical basis, and five productions of steel processing products professional firms for the study. In addition, the research method are adopted in this study are literature review and in-depth interviews, analysis of steel processing industry conditions and to examine the steel processing firms' first business process and key success factors. In the meantime, we also to find out the case, how can professional firms in the highly competive environment, the establishment of a unique competitive advantage to the follow-up for people wishing to enter the steel processing industry. Finally, this study found that the professional firms success and have the following nine key factors: (1) management skills; (2) product differentiation; (3) financial control; (4) work experience; (5) risk attitude; (6) economic condition; (7) venture capital; (8) start-up team; (9) organizational flexibility.

Keywords: *Steel Processing Firms, Entreprenearship, Entrepreneur, In-Depth Interview Method*

1. INTRODUCTION

The steel processing industry is one of the most fundamental and influential sectors in Taiwan's economic development. It not only drives upstream raw material supply and downstream product application, but also significantly contributes to industrial upgrading and national competitiveness. Despite its importance, there is a lack of studies that explore entrepreneurial success factors within this traditional industry. Most research has focused on high-tech industries, while little attention has been paid to entrepreneurship in the steel processing sector. This gap calls for deeper academic inquiry into the determinants of entrepreneurial success in this industry.

While entrepreneurship has been a topic of significant academic interest, existing research tends to emphasize entrepreneurial characteristics, motivations, and environmental factors in technology-oriented or service industries. However, relatively few studies address entrepreneurship in traditional manufacturing, particularly in steel processing. This study seeks to fill this gap by examining entrepreneurial success factors in Taiwan's steel processing industry, using qualitative approaches to capture the perspectives of entrepreneurs.

The primary objectives of this research are as follows:

1) To construct a conceptual framework of entrepreneurial success factors in the steel processing industry.
2) To conduct in-depth interviews with founders of selected steel processing firms in Taiwan.

3) To identify and analyze the critical factors that contribute to entrepreneurial success in this sector.

Steel Processing Industry

Definition of the Steel Industry
In this study, the "steel industry" refers to the category defined in the Standard Industrial Classification of the Republic of China (9th Revision) by the Directorate-General of Budget, Accounting and Statistics (2010). Specifically, it corresponds to Category C "Manufacturing" and Subcategory 24 "Basic Metal Manufacturing." This sector is defined as industries engaged in the smelting of metals and alloys to produce ingots, billets, or other basic cast products, as well as those engaged in rolling, extrusion, drawing, or other processes to manufacture plates, strips, bars, tubes, wires, and related products.

Importance and Industry Linkages
The steel industry has long been considered a "locomotive" industry of a nation, extending from the upstream to the midstream and downstream sectors. It not only drives related industries but also creates significant employment and substantial production value, thereby making a considerable contribution to a nation's economic growth rate. In other words, for Taiwan's steel industry, if upstream manufacturers can supply raw materials at competitive prices and quality to midstream and downstream firms, this will serve as the key driver for their vigorous development and a strong incentive to maintain their production base in Taiwan.

The linkages among upstream, midstream, and downstream sectors of the steel industry can be described as follows:

1) Upstream: Taiwan's steel industry distinguishes crude steel production methods into electric furnace and basic oxygen furnace processes. The primary raw material for electric furnaces is scrap steel, whereas coal and iron ore are the main inputs for blast furnace ironmaking and converter steelmaking. The final products are rolled into various steel materials (steel plates, hot-rolled, cold-rolled, coated sheets, and wire products).
2) Midstream: This sector includes rolling mills and cutting industries, which purchase various steel materials (plates, hot-rolled, cold-rolled, coated sheets, bars, and wires) from upstream manufacturers and further process them into different steel products.
3) Downstream: This includes construction, transportation equipment (ships, automobiles, motorcycles, bicycles), metal products (screws and nuts, hand tools, small hardware), industrial machinery, and electrical and electronic machinery (home appliances, motors, personal computers, electronic components).

Development Overview of Taiwan's Steel Industry
Taiwan's steel industry features a fully developed structure encompassing comprehensive upstream, midstream, and downstream systems. Its primary raw materials for ironmaking (coal and iron ore) are almost entirely imported, while steel production capacity exceeds domestic consumption demand; surplus capacity must therefore be absorbed through exports. Since 1998, Taiwan's steel exports have increased steadily, surpassing import volumes and transforming Taiwan into a net exporter of steel.

In addition, import tariffs on steel products were reduced to zero starting in 2004. Following the signing of the Economic Cooperation Framework Agreement (ECFA) between Taiwan and Mainland China in 2010, tariff concessions for Taiwan's steel exports to Mainland China have

been implemented since 2011. Meanwhile, restrictions on steel imports from Mainland China were relaxed. As a result, Taiwan's steel industry has entered an era of fully liberalized and open competition.
4)

Entrepreneurship and Entrepreneurial Characteristics

The Meaning of Entrepreneurship
What is entrepreneurship? Chen and Wu (2007) point out that entrepreneurship is a dynamic and evolving process. Beyond merely establishing new ventures, it encompasses innovation and creativity, the ability to bear uncertainty, to identify opportunities, to pursue profit, and to embody distinctive psychological traits.

Entrepreneurship refers to the activities or behaviors of creating new businesses (Tsai & Hsieh, 2008). Tsai et al. (2008) state that entrepreneurship involves grasping opportunities arising from environmental changes and exploiting them effectively. For entrepreneurs, entrepreneurship is not only about pursuing wealth but also about creation, control, risk-taking, and the pursuit of opportunities (Yang et al., 2009). According to Chen (2010), entrepreneurship refers to innovative ventures that create tangible and intangible value, while the entrepreneurial process is influenced by multiple layers of culture, economy, society, and politics.

The Meaning of Entrepreneur
The concept of the entrepreneur originated in 1934, proposed by Schumpeter, who regarded the entrepreneur as an innovator—someone who responds to changes in the economic environment by devising appropriate measures, thereby generating individual profit and driving economic development (Chen & Wu, 2007; Chen, 2010; Tsai & Hsieh, 2008; Tsai et al., 2008; Carland et al., 1984; Gurel et al., 2010)

However, as the economic environment continues to develop and evolve, the academic community has yet to reach a consensus on the definition of "entrepreneur." Among the various perspectives, Lin et al. (2004) and Chen et al. (2006) suggest that from an economic standpoint, entrepreneurs emphasize resources and profit; from a psychological standpoint, they focus on individual goals and motivations; and from a management standpoint, attention is directed to the ways resources are utilized and the means to achieve personal objectives.

Summary
Based on the above review of domestic and international studies on entrepreneurship and entrepreneurs, this study defines entrepreneurs in the steel processing industry as "leaders of steel processing enterprises who possess the courage to initiate new ventures, integrate the necessary resources, and bear operational risks." In this study, the term "leaders of steel processing enterprises" refers to company representatives registered with the Department of Commerce, Ministry of Economic Affairs, whose businesses involve steel processing and trading.

Critical Success Factors (CSFs)

The Meaning of Critical Success Factors
The concept of Critical Success Factors (CSFs) originates from Commons' (1934) notion of "Limited Factors," which he applied to management and negotiation within economic systems,

thereby opening the field of CSF research (Lee et al., 2006; Peng, 2004; Yu & Liao, 2011). After several decades of development, many new definitions and interpretations of CSFs have emerged across different research fields. However, their essential meaning remains highly consistent: CSFs represent the primary sources through which enterprises attain sustainable competitive advantage in their industries, encompassing competitive capabilities or assets. This study further synthesizes relevant definitions of CSFs from previous research.

Methods of Identifying Critical Success Factors

For enterprises, possessing CSFs ensures survival in competition but does not automatically enable them to excel. This is mainly because CSFs originate from diverse sources and vary across time, space, and industry contexts. Therefore, business operators must continually adjust their policies and strategies to respond to the dynamic nature of CSFs, thereby sustaining competitive advantages that are difficult for rivals to substitute or imitate. Hofer and Schendel (1978) suggest the following steps for identifying CSFs (Lee et al., 2006; Huang & Lin, 2008; Tsai, 2009; Chen & Wan, 2010):

1) Identify industry- and competition-related factors.
2) Assign weights to each factor according to relative importance.
3) Adjust the weights according to the intensity of competition within the industry.
4) Calculate the weighted scores for each factor.
5) Compare each factor with actual conditions and rank priorities.

CSFs are critical to enterprise management, but they differ across time and industries. Consequently, many scholars including Lee et al. (2006), Lee & Lin (2009), Yu & Liao (2011), Huang & Lin (2008), Tsai (2009), Su et al. (2008), Chen & Wan (2010), Salmeron & Herrero (2005), and Sambasivan & Fei (2008) have explored CSF-related issues and proposed various methods for their identification.

Critical Success Factors for Entrepreneurial Success

Doutriaus (1992) proposed a model of critical success factors for business start-ups, arguing that three dimensions affect entrepreneurial success: the external environment at the time of founding (e.g., market demand, competition, government support, socioeconomic conditions), the appropriateness of entrepreneurial behavior (e.g., choice of business, size of the entrepreneurial team), and the entrepreneur's managerial capabilities (e.g., past experience, age, areas of expertise). Empirical studies have also offered insights into entrepreneurial success factors (Chuang, 2000; Li, 2002; Kuo, 2006; Fang, 2009), summarized as follows:

1) Chuang (2000), through interviews, identified key factors affecting entrepreneurship, including the entrepreneur's background and characteristics, actual conditions and practices during start-up, and external environmental factors.
2) Li (2002), conducting case interviews with entrepreneurs who left defense R&D institutions to commercialize their technologies, proposed that a successful entrepreneurship model should include the entrepreneur's background and traits (e.g., education, work experience, innovative ideas), entrepreneurial environment (e.g., economic conditions, government policies, industrial structure), entrepreneurial technology (e.g., competitive niche, technical team, technology commercialization value), entrepreneurial organization (e.g., stability, resources, involvement), and entrepreneurial behavior (e.g., capital, management experience, operations planning, strategies). Among these, establishing a first-class entrepreneurial team was deemed the most critical factor.
3) Kuo (2006), drawing on the characteristics of the construction industry and Chuang's (2000)

findings, concluded that key entrepreneurial success factors for Taiwan's small and medium-sized construction firms include:Entrepreneur factors: age, education, expertise, work experience, risk tolerance, personality, entrepreneurial role models.Entrepreneurial environment factors: timing of entrepreneurship, government, taxation, interpersonal networks, business location, industrial competition, product markets.Entrepreneurial behavior factors: capital, financial control and management, organizational structure, management experience, operations planning, professional consulting, product and service quality, employees, marketing skills, operational flexibility.

4) Fang (2009) used SWOT analysis, Porter's Five Forces, and expert interviews to explore the key success factors of a professional LED chip manufacturing company (Company G). Findings revealed that G Company's key entrepreneurial success factors included accurate market and industry evaluation before start-up, clear company positioning, product differentiation (niche products), a strong entrepreneurial team, the entrepreneur's personality traits, and prudent financial control.

Summary
Based on the above review of studies on CSFs, this study defines CSFs as "critical resources enabling the steel processing industry in Taiwan's steel market to maintain sustainable competitiveness—resources that are difficult for competitors to imitate or substitute." In terms of identifying CSFs, this study adopts the in-depth interview approach proposed by Yu and Liao (2011), Chen and Wan (2010), and Salmeron and Herrero (2005).
Regarding the selection of critical entrepreneurial success factors, this study refers to Chuang (2000), Li (2002), Kuo (2006), Fang (2009), and Doutriaus (1992), classifying them into three dimensions: "entrepreneurial characteristics," "entrepreneurial environment," and "entrepreneurial behavior."

Relevant Studies

A considerable body of research has examined entrepreneurial success factors across various industries. Studies on high-tech entrepreneurship emphasize innovation and global market expansion, while service-sector research highlights customer orientation and human capital. In Taiwan, several studies have explored CSFs in areas such as biotechnology, construction, and cultural and creative industries. However, few studies have systematically analyzed entrepreneurship in the steel processing industry, creating a research gap that this study seeks to address.

2. RESEARCH METHOD

This chapter is divided into five sections. The first section presents the conceptual research framework, the second describes the research subjects, the third outlines the interview guidelines, the fourth discusses the data collection methods, and the final section elaborates on the data analysis procedures.

Research Framework

The purpose of this study is to investigate the entrepreneurial success factors in Taiwan's steel processing industry. Based on the literature review in Chapter 2, a conceptual research framework was constructed. The framework encompasses the steel processing industry in Taiwan, steel-processing entrepreneurs, and the critical success factors. At the exploratory stage, the literature review method was employed to identify potential success factors, while at

the empirical stage, in-depth interviews were conducted to validate the findings.

Research Objects

To identify the entrepreneurial success factors of Taiwan's steel processing industry, and to address the third research objective stated in Chapter 1—to ensure that the study's conclusions reflect the needs and perspectives of practitioners—this study conducted in-depth interviews with multiple entrepreneurs who possess extensive management and operational experience in the steel processing sector. Through these interviews, the research aimed to uncover the critical success factors for entrepreneurship. Furthermore, to avoid the limitations of a single, potentially subjective viewpoint and to enhance the robustness of the empirical findings, multiple perspectives were incorporated in the selection of interviewees.
In addition, the chosen interviewees were expected not only to have substantial managerial and operational experience in the steel processing industry but also to be able to articulate clearly the key factors contributing to entrepreneurial success. Accordingly, this study focused on steel processing firms in Taiwan and adopted the following criteria for sample selection:

1) Firms established for more than ten years.
2) Firms with a registered capital exceeding NT$10 million.
3) Firms engaged in secondary steel processing businesses.

Based on these criteria, qualified steel processing firms were contacted to assess their willingness to participate in the in-depth interviews. Ultimately, five firms agreed to take part in this study: Jhih-Chang Chiu Steel Co., Ltd. (hereafter referred to as Jhih-Chang Chiu), Yung-Ching Steel Co., Ltd. (Yung-Ching), Chang-Wei Steel Co., Ltd. (Chang-Wei), Teng-Hsing Steel Co., Ltd. (Teng-Hsing), and Tai-Te-Hsing Industrial Co., Ltd. (Tai-Te-Hsing). A brief introduction to each company is provided below:

1) Jhih-Chang Chiu**:** Founded in 1991 and headquartered in Annan District, Tainan City, Jhih-Chang Chiu later expanded by establishing a second plant in Gangshan District, Kaohsiung City, in 2011. The company primarily engages in the trading, cutting, slitting, and flat bar processing of hot-rolled and cold-rolled steel sheets and coils. Its business covers both domestic and international markets, with domestic sales concentrated in Taiwan and exports mainly to Southeast Asia. Its management philosophy emphasizes innovation and pragmatism.
2) Yung-Ching: Established in 1989 in Yongkang District, Tainan City, Yung-Ching is Taiwan's largest manufacturer of galvanized steel pallets. Through years of experimentation and R&D, the company successfully developed disposable galvanized steel pallets that eliminate the need for fumigation, while also being environmentally recyclable. Its services include customized galvanized steel pallets and iron pallets, along with the trading and processing of steel plates, coils, strips, checkered plates, and stainless steel sheets.
3) Chang-Wei: Founded in 1994, Chang-Wei introduced advanced sheet-metal processing equipment from Japan and continuously adopted new technologies. The company's main business includes the trading and processing of steel plates, hot-rolled coils and sheets, checkered plates, galvanized steel coils and sheets, cold-rolled coils and sheets, and stainless steel coils and sheets.
4) Teng-Hsing: Established in 1984, Teng-Hsing adheres to a management philosophy of integrity, fairness, and customer-first service, with a commitment to sustainable growth. Its primary services include the cutting and trading of round bars, angle bars, steel pipes, steel plates, and iron plates.

5) Tai-Te-Hsing: Founded in 1999 and located in Daliao District, Kaohsiung City, Tai-Te-Hsing specializes in the cutting and processing of galvanized steel coils.

Interview Guidelines

Since this study adopted a small-sample structured interview approach, it was important to ensure that participants could elaborate fully on the research topics during the interview process. Therefore, prior to the formal interviews, a semi-structured interview guide was sent to participants via email. The purpose was not only to enhance their understanding of the research themes but also to provide them with a useful tool in preparing materials and facilitating discussions during the interviews.

Moreover, although the interviewees were carefully selected entrepreneurs with extensive managerial and practical experience in the steel processing industry, measures were taken to prevent digressions or off-topic discussions. At the beginning of each formal interview, the research objectives and the interview guide were introduced objectively. This not only allowed the researcher to address any questions raised by the participants but also encouraged them to articulate more precisely the critical success factors in their entrepreneurial processes.

The interview guide included the following questions:

1) What were your primary motivations for starting a business?
2) To what extent did your entrepreneurial characteristics (e.g., age, educational background, work experience, risk-taking attitude, and social networks) influence your entrepreneurial success?
3) To what extent did external environmental factors (e.g., economic conditions, government policies, and industry competition) influence your entrepreneurial success?
4) To what extent did your entrepreneurial strategies (e.g., financial resources, financial control, managerial skills, product differentiation, teamwork, and business flexibility) influence your entrepreneurial success?
5) Based on the above discussion, what do you consider to be the top five critical success factors in your entrepreneurial journey? Please rank them in order of importance.
6) Are there any additional insights or perspectives you would like to share that were not covered in the above questions?

Data Collection

In general, research methods in the social sciences can be divided into qualitative and quantitative approaches. During the research process, the development of hypotheses often requires a solid theoretical foundation or prior in-depth interviews and observations, for which qualitative research methods are particularly suitable. However, when it comes to hypothesis testing, quantitative methods become indispensable, as empirical data are necessary to provide strong and convincing support (Yang, 2011; Yin, 2005).

Accordingly, this study follows the perspectives of Yang (2011) and Yin (2005), adopting the literature review method for data collection and the in-depth interview method for data analysis. Based on the classification of academic data collection, research data can be divided into primary data and secondary data (Yin, 2005). Data collected through in-depth interviews are considered primary data (Chen, 2000), whereas documents obtained from government or semi-official publications, prior research archives, mass media reports, and institutional project

reports are categorized as secondary data (Yang, 2011).

In light of this, the literature review method employed in this study falls within the scope of secondary data. Specifically, this study collected multiple sources of information, including domestic and international master's and doctoral theses, academic journals, research reports issued by institutions, and electronic databases, focusing on topics related to the steel processing industry, entrepreneurship, and critical success factors. Through systematic organization, synthesis, and extraction, this study compiled valuable insights necessary for constructing the conceptual research framework.

Data Analysis Methods

According to Chen (2000) and Patton (1990), in-depth interviews are among the most widely used analytical methods in qualitative research. The primary reason is that face-to-face verbal interactions with participants allow for in-depth discussion and communication on unstructured issues, thereby providing valuable first-hand data.

Based on the forms of in-depth interviews, they can be categorized into structured interviews, unstructured interviews, and semi-structured interviews, as summarized below (Yin, 2005):

(1). Structured Interview: Participants respond to a pre-designed set of interview questions, expressing their views in a logical and sequential manner following the fixed structure.
(2). Unstructured Interview: No fixed interview guide is provided in advance, giving participants maximum freedom to articulate their own perspectives and opinions.
(3). Semi-structured Interview: Participants respond to a fixed set of interview questions but are not required to follow a specific order, allowing them to express their views more freely.

In light of the above discussion, and drawing upon Yin's (2005) perspective, this study employed small-sample semi-structured interviews. This approach not only avoids the rigidity and lack of flexibility associated with structured interviews but also prevents the excessive digressions and lack of focus that may arise in unstructured interviews.

3. RESULTS AND DISCUSSIONS

This chapter is divided into four sections. The first section introduces the interviewees, the second analyzes the interview content, the third discusses the distribution of critical success factors for entrepreneurship, and the final section provides a summary of the data analysis.

Introduction of Interviewees

This study is exploratory in nature and builds on domestic and international research concerning the steel processing industry, entrepreneurship, and critical success factors. Its purpose is to examine the key success factors that emerged during the entrepreneurial processes of steel-processing entrepreneurs in Taiwan. To avoid overly subjective perspectives from a single participant and to ensure that the conclusions reflect the needs and viewpoints of practitioners, this study adopted a multiple-perspective approach in selecting interviewees from the steel processing industry for in-depth interviews.

Prior to conducting the formal interviews, the researcher first contacted potential participants by phone to confirm their willingness to participate. For those who agreed, interview appointments were scheduled. In addition, to enhance the interviewees' understanding of the research topic, a semi-structured interview guide was sent to them via email beforehand.

Finally, to ensure the completeness of the interview data and to minimize semantic bias in manual transcription, the researcher sought the participants' consent to record the interviews.

Analysis of Interview

The interview period for this study was from March 9 to March 28, 2016. During this time, the researcher conducted face-to-face, in-depth interviews with five participants. Based on these sessions, the key points of the interview content are summarized as follows:

Entrepreneurial Motivation
The analysis revealed that most entrepreneurs in the steel processing industry were primarily motivated by economic considerations, including profit-making and securing family livelihood. Some entrepreneurs also demonstrated social motivations, such as creating job opportunities and contributing to the local community.

Entrepreneurial Characteristics
The interviews highlighted that entrepreneur in this industry typically began their ventures between the ages of 20 and 30. Common characteristics included extensive work experience, professional expertise, strong networks of personal contacts, and a willingness to take risks. These traits enabled them to recognize market opportunities and mobilize resources effectively.

Entrepreneurial Environment
External environmental factors significantly influenced entrepreneurial success. Economic conditions emerged as the most decisive factor, as fluctuations in global and domestic markets had direct effects on profitability. Government policies, industry competition, and access to financial resources also shaped the business environment for entrepreneurs in this sector.

Entrepreneurial Behavior
In terms of behavior, successful entrepreneurs emphasized product differentiation, effective management practices, financial control, teamwork, and organizational flexibility. These strategic behaviors allowed them to maintain competitiveness, adapt to environmental uncertainty, and sustain long-term business growth.

The Nine Critical Success Factors
The thematic analysis identified nine critical success factors shared across the five case companies.

1) Management skills
2) Product differentiation
3) Financial control
4) Work experience
5) Risk-taking attitude
6) Economic conditions
7) Capital resources
8) Teamwork
9) Organizational flexibility

Distribution of Key Success Factors in Entrepreneurship

To better understand the distribution of key success factors in the steel processing industry

under the dimensions of entrepreneurial traits, entrepreneurial environment, and entrepreneurial behavior, this study employed frequency distribution and percentage calculations. The results of the analysis are summarized as follows:

Entrepreneurial Traits
Within entrepreneurial traits, work experience and risk-taking attitude appeared most frequently, each occurring 2 times (8.00% of the total). These were followed by educational attainment and social networks, each occurring 1 time (4.00% of the total). Age appeared 0 times (0.00% of the total).

Entrepreneurial Environment
In terms of entrepreneurial environment, economic conditions appeared most frequently, with 2 occurrences (8.00% of the total). Next was government support, which appeared 1 time (4.00% of the total). Industry competition appeared 0 times (0.00% of the total).

Entrepreneurial Behavior
For entrepreneurial behavior, management skills and product differentiation were the most frequently mentioned, each occurring 4 times (16.00% of the total). These were followed by financial control, with 3 occurrences (12.00% of the total). Next were teamwork and operational flexibility, each appearing 2 times (8.00% of the total). Finally, capital appeared 1 time (4.00% of the total).

4. CONCLUSIONS AND SUGGESTIONS

This chapter is divided into three sections. The first section presents the research conclusions, the second outlines the research contributions, and the final section offers recommendations for future studies.

Based on the analysis results, the most important entrepreneurial traits contributing to the success of entrepreneurs in the steel processing industry are work experience and risk attitude. For steel processing entrepreneurs, entrepreneurship represents an endless journey of learning. Some succeed on their first attempt, while others may start several ventures without gaining valuable experience or lessons, leading to repeated cycles of failure and reattempt. One possible explanation is that these entrepreneurs lacked sufficient work experience or social exposure before starting their businesses, which left them unable to effectively address the challenges encountered during the entrepreneurial process. This in turn created difficulties in business operations and management. Consequently, the importance of work experience is evident in this study, as most entrepreneurs in the steel processing industry had accumulated approximately five years of work experience or had previously engaged in steel-related work (e.g., rolling door materials, iron sheet housing) prior to establishing their companies.
In addition, regarding risk attitude, most of the interviewees in this study were clear about their entrepreneurial ideals and business goals. Even though they were aware that the early stages of entrepreneurship might involve financial shortfalls and debt burdens, they were willing to bear the significant pressure and risks associated with starting a business. Interestingly, although many steel processing entrepreneurs admitted that they did not consider risk factors at the outset, it was precisely this disregard that enabled them to take bold actions, work tirelessly, and ultimately achieve favorable outcomes.
From this perspective, it is evident that entrepreneurs' willingness and capacity to assume risk directly influence their approach to business management. Thus, entrepreneurs in the steel processing industry also emphasized that risk attitude is indeed a key factor in entrepreneurial

success.

According to the analysis of interview data, among the key success factors in the entrepreneurial environment of the steel processing industry, the most important factor is economic conditions. The findings reveal that while most entrepreneurs in this sector started their businesses during periods of economic downturn and stagnation, some did so under prosperous or average economic conditions. This suggests that regardless of whether the economy is strong or weak, entrepreneurial opportunities are always present. Thus, it cannot be claimed absolutely that economic recessions are more favorable for entrepreneurship, nor that times of prosperity are necessarily unfavorable.

Strictly speaking, when starting a business during unfavorable economic conditions, entrepreneurs must maintain a heightened sense of crisis awareness and adopt flexible crisis management processes. After all, every industry inevitably experiences stages of initiation, growth, maturity, decline, and recovery. From this perspective, steel processing entrepreneurs emphasized the importance of building a solid foundation during the entrepreneurial process. Even if their businesses enter a downturn in the future, they should be able to adjust and improve their organizational structure so that they can once again reach peak performance without easily facing the risk of closure.

Based on the analysis results, the most important key success factors in entrepreneurial behavior within the steel processing industry are product differentiation and managerial skills. The underlying reason may be that the entrepreneurs studied generally had pragmatic entrepreneurial goals, such as earning income and improving their personal financial situation. However, sustaining long-term business operations and achieving stable profitability continuously test the managerial wisdom of steel processing entrepreneurs. Many respondents believed that through product positioning, quality stability, and diversification strategies, developing new products becomes the key to enhancing product competitiveness and penetrating niche markets. At the same time, managerial skills—such as production management and financial control—can be adopted to reduce product costs, thereby creating a competitive advantage in processing or manufacturing expenses.

Research Contributions

This study, from the perspective of entrepreneurs, explores the key success factors of entrepreneurship in Taiwan's steel processing industry. The concrete contributions of this research can be summarized as follows:

1) A review of previous studies on entrepreneurship reveals that although a substantial body of research findings has been accumulated, the entrepreneurial success factors of the steel processing industry have rarely been examined specifically from the entrepreneur's perspective. By addressing this gap, this study supplements and enriches the existing literature.
2) Based on the results of the in-depth interview analysis, the findings indicate that in terms of entrepreneurial characteristics, the key success factors influencing steel processing entrepreneurs are work experience and risk attitude; in terms of the entrepreneurial environment, the most influential factor is economic conditions; and in terms of entrepreneurial behavior, the most critical success factors are product differentiation and managerial skills.

Suggestions

In-depth Exploration of Subfields within the Steel Processing Industry

This study focused on the steel processing industry and identified the key success factors of entrepreneurship among Taiwanese steel processing entrepreneurs. According to the industrial classification standards mentioned in Chapter 2, the steel manufacturing industry can be divided into steel smelting, steel casting, steel rolling and extrusion, and steel wire drawing. However, this study did not further categorize the interviewees by these subfields; all five companies interviewed were primarily engaged in general steel processing. Strictly speaking, the results of the in-depth interviews should not be overgeneralized to the entire steel processing industry in Taiwan. Therefore, it is recommended that future studies refer to the business scope of steel companies and expand interview subjects to include entrepreneurs from smelting, casting, rolling and extrusion, and wire drawing sub-industries. Through such in-depth interviews, researchers could gain a more comprehensive understanding of the success factors across different subcategories of the steel processing industry.

Adoption of Methods or Theories for Confirming Success Factors

This study, drawing on the perspectives of Yu & Liao (2011), Chen & Wan (2010), and Salmeron & Herrero (2005), employed in-depth interviews as the primary method to confirm entrepreneurial success factors. In addition, based on the viewpoints of Chuang (2000), Li (2002), Kuo (2006), Fang (2009), and Doutriaus (1992), entrepreneurial success factors were categorized into three dimensions: entrepreneurial characteristics, entrepreneurial environment, and entrepreneurial behavior. Accordingly, it is suggested that future research adopt different approaches to validate entrepreneurial success factors—such as Analytic Hierarchy Process (AHP), questionnaire surveys, factor analysis, or regression analysis—in order to achieve more comprehensive findings and results.

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