
FIRM PERFORMANCE, CRITICAL SUCCESS FACTORS AND FIRM
COMPETITIVENESS OF CLOTHING INDUSTRY IN CHINA

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- (1) This Research Project is the end result of my own work and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) The word count of this research report is 19960.

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LIST OF ABBREVIATION

CSF	Critical Success Factors
FC	Firm Competitiveness
OP	Operational Performance
OF	Organizational Factors
TF	Team Factors
CF	Communication Factors
PF	Production Factors

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PREFACE

This research project is the final result of the study of MBA course. This study aims on applying all knowledge, ideas and research techniques learned though past 2 years studies. The title of this research project is “Firm Performance, Critical Success Factors and Firm Competitiveness of Clothing Industry in China”. It focus on clothing manufacturing SMEs in China. Clothing industry has long been recognized as the signboard of “Made in China”, which is known by the world with low price, massive production, and low quality. With the rapid development in recent years in China, “Made in China” is transforming into higher cost performance product, with relatively low price and high quality. However, the condition for clothing industry in these years are declining. The highly competitive business environment has squeezed the last profitability. There is a new wave for giant clothing firms to merger and acquire SMEs to enhance their dominant position in the industry, which further influence the survival of SMEs. Thus, by conducting this research, may help any SMEs understand the role and importance of firm competitiveness and operational performance, for them to stably survive through this competitive environment.

ABSTRACT

The main objective of this study is to determine the relationship between critical success factors and operational performance of clothing manufacturing small and medium enterprises (SMEs) from China. In this study, firm competitiveness is introduced as the mediator between critical success factors and operational performance. This study adopts quantitative research approach by sending out questionnaires and collect primary data from target firms. For the data analysis, this study conducted structural equation modeling (SEM) analysis through SmartPLS. The data analysis examines the relationship between critical success factors (organizational factors, team factors, communication factors, production factors) and operational performance through firm competitiveness which is the mediator in the theoretical framework. The finding of data analysis indicates that there are strong and positive mediating effect from organizational factors, team factors, and production factors towards operational performance through the mediator of firm competitiveness. While there is partial mediating effect between production factors and operational performance through firm competitiveness. Moreover, firm competitiveness has strong and positive effect towards operational performance. In the last part of this study, discussed about the theoretical and practical implications of this study, discussed on how this mechanism will help clothing SMEs from China to improve firm competitiveness and firm's operational performance.

Keywords: Critical success factors, Firm competitiveness, Operational performance, Small and medium enterprise, Clothing industry from China

Chapter 1: Introduction

1.1 Introduction

This chapter of study discuss about the research background, which consists of the reason why to choose clothing manufacturing industry, why to choose SMEs, and why clothing manufacturing SMEs from China. Furthermore, this chapter discuss about research problem, research objectives, research questions and research significance.

1.2 Research Background

1.2.1 Small and Medium Enterprise

Small and medium enterprise, also known as SMEs, plays an important role in modern economic. SMEs contributes significant income and employment, provides opportunities for developing and adopting appropriate technology and is a major source for innovations (Shiu & Walker, 2007; Subrahmanya et al., 2010). According to the research conducted by Pletnev & Barkhatove, SMEs contribute approximately 56% of the GDP of many European countries (Pletnev & Barkhatove, 2016; Muller et al., 2017). On the other hand, SMEs are also struggling in their profitability and liquidity because of their size and ownership structure, which make them particularly vulnerable to external shocks (European Commission, 2019).

In Asia, SMEs plays an important role in ASEAN economy. The most significant contribution of SMEs is in financial perspective. According to the report from Asian Development Bank (ADB, 2019), in Indonesia, SMEs contributed 60.3% of GDP in the year 2013, and in Malaysia, SMEs contributes 35.9% of GDP in the yar 2014. SMEs not only contribute to financial income but also in employment generation, gender, and youth empowerment through their diverse business participation, and their widespread presence in non-urban and rural areas. SMEs in Indonesia generated incredibly 97% of employment in the year 2013, while Malaysia generates 65% of employment in the yar 2014 (ADB,2019). According to existing data, SMEs in

ASEAN countries contributes almost 89% to 99% of total establishments, and between 52% and 97% of total employment. Undoubtedly, SMEs do not only contribute to the world economic, but also in employment and social development (Autio,2005; Omri & Ayadi-Frikha, 2014).

Although SMEs takes important role in modern economic, they still face serious challenges from in growth and survival. A major challenge facing by the SMEs is the rising global competition in global market (Kiraka, 2009; Mensah & Acquah, 2015). Morden business environment has been characterized by globalization, rapid technological advancement and short product cycles. This requires firms to gain and maintain competitive through its business process to survive and stay growth (Kiarka, 2009). On the other hand, the sudden outbreak of Covid-19 pandemic has greatly interrupted business environment. Covid-19 pandemic has significantly affected global business environment, results in a worldwide issue of critical concerns across economics and supply chain (Khan et al., 2021). According to the report from UiTM's Faculty of Business and Management, larger firms would hesitate to hire more employees due to this pandemic, while SMEs were speculated to suffer bankruptcy (Marcus, 2020). The period of movement control policy carried out by governments in many countries has also greatly damaged SMEs in their operation, weakening their financial condition, and exposing them to financial risks (Omar et al., 2020; Oyewale et al., 2020). The study by Bernama indicated that food and beverage business has suffered about 90% loss in revenue throughout entire Malaysia Movement Control Order (MCO) period (Bernama, 2020).

Overall, SMEs is an important part of current world economic, they contribute greatly to economic and employment. SMEs can benefit from their smaller size and their relatively flattened management structure, but also struggle to survive for the same reasons (Jill Juergensen et al., 2020). It's always an issue for SMEs to survive in this rising competitive business environment.

1.2.2 Clothing Industry in China

The development of Chinese economy was triggered by authorities' decision to open-up in 1980s and 1990s. Chinese clothing industry catch the opportunity of industrial upgrade, and successfully achieved both horizontal and vertical upgrade (Rasiah, Miao & Kong, 2013). Joining WTO has greatly boosted the process of China to become "World factory". Until now, China has become the world's biggest producer and exporter of clothing products. According to study by Shen, until the year 2019, China has exported 27.34 billion US

dollars' worth of technical textiles (Shen et al., 2021).

However, the condition for clothing industry in these years are declining. The highly competitive business environment has squeezed the last profitability. There is a new wave for giant clothing firms to merger and acquire SMEs to enhance their dominant position in the industry, which further influence the survival of SMEs. Similar to any other manufacturing industries, global clothing industry is also facing challenges and changes brought by globalization (Truett, L. J. & Truett, D.B., 2014). The clothing industry is facing tariff barriers, inadequate infrastructure, environmental pollution, increasing competitive pressure, and a more complex internal and external development environment (Truett, L. J. & Truett, D.B., 2010). SMEs of clothing industry in China is now facing challenges, and in the urge to improve performance to survive (Dongmei Cao et al., 2013). As the biggest clothing manufacturer and exporter in the world, Chinese clothing industry was forced to seek for an opportunity to change.

Thus, this study will focus on Chinese clothing manufacture industry. It is an opportunity to examine firm competitiveness in relationship with critical success factors (CSFs) and firm performance.

1.3 Research Problem

There were many past studies focus on determine and analysis the role of CSFs towards firms' performance. Critical success factors originally referred to a set of circumstances, factors or influences which contribute to the project outcomes and results in measuring successful competitive performance for an organization. (Rockart, 1979; Lim & Mohamed, 1999). This study will be based on previous studies and extent further into this filed in determining the factors that affect clothing manufacturing SME's operational performance. This study provides a new insight of what are the exact critical success factors affecting SME's operational performance. Furthermore, this study based on previous studies to develop a new approach which in measuring critical success factors towards operational performance through the mediator of firm competitiveness. Firm competitiveness has long been widely recognized by researchers as an important indicator to operational performance (Sahoo, 2020). Pedraza defines firm competitiveness into several factors including productivity, market share, profitability, efficiency, product range, value creation and customer satisfaction (Pedraza, 2014). Thus, this study provide a mechanism on how to determine the which of the exact factors that influence operational performance.

1.4 Research Objective

The main objective of this study is to examine the relationships between critical success factors (organizational factors, team factors, communication factors, and production factors) and firm's operational performance with firm competitiveness which as the mediator in between. The specified objectives are:

RO1: To examine the mediating role of firm competitiveness in the relationship between organizational factors and firm performance.

RO2: To examine the mediating role of firm competitiveness in the relationship between team factors and firm performance.

RO3: To examine the mediating role of firm competitiveness in the relationship between communication factors and firm performance.

RO4: To examine the mediating role of firm competitiveness in the relationship between production factors and firm performance.

1.5 Research Questions

Based on the research objectives, the research questions of this study is to investigate on how firm competitiveness works as mediator between critical success factors (organizational factors, team factors, communication factors, and production factors) and operational performance, and in what way it mediates in between. Thus, the research questions are brought out as below:

RQ1: Does firm competitiveness have mediating effect between organizational factors and operational performance?

RQ2: Does firm competitiveness have mediating effect between team factors and operational performance?

RQ3: Does firm competitiveness have mediating effect between communication factors and operational performance?

RQ4: Does firm competitiveness have mediating effect between production factors and operational performance?

RQ5: Does firm competitiveness have positive effect towards operational performance?

1.6 Research Significance

Existing literatures on the sustainable clothing industry mainly discuss consumers' purchasing intentions of sustainable clothing (Kim and Jin, 2019; Rahman and Koszewska, 2020). In the era of globalization, companies are facing increased pressure to enhance profitability at the same time stay competitive in today's market. It is challenging for organizations to achieve its competitive edge while maintaining the ecological balance. Hence, this study will focus on four main success factors: organizational factors, team factors, communication factors and production factors, on how these factors can bring success to the firm's operational performance through firm competitiveness. This will bridge the gap in the research area of the relationship from critical success factors towards firm's operational performance. This study will contribute to a diversified approach to use firm competitiveness as a mediator in measuring firm's operational performance. Practically, this study provide a mechanism for clothing manufacturing SMESs on how to determine the which of the exact factors that influence operational performance. By that, clothing manufacturing SMEs will be able to improve their firm's operational performance by focusing on these critical success factors.

Chapter 2: Literature Review

2.1 Introduction

This chapter first includes the theoretical background of this research, contains the relevant theory of operational performance, firm competitiveness, and critical success factors. Second is the theoretical framework of this study. The last part is hypothesis development of this study.

2.2 Operational Performance

Performance measurement is being recognized as the process of forecasting outcomes of the decision and action made by an organization (Neely, Gregory & Platts, 2005). There were past study argues that performance measurement will affect the organization's capabilities and consequently helps in improving a firm in achieving its designated objectives (Koufteros, Verghese & Lucianetti, 2014). Firm's overall performance is defined as the on the level for a firm to achieve its goal, either financially or non-financially. There were past study suggests that most firms have primarily more focused on economic goals, or in other word, the financial perspective, to help in improve "financial return for shareholders" (Upward et al., 2016). According to stakeholder theory, the business should focus not only on the economic objectives, but also the objectives from other perspective, like social responsibilities or environmental benefits. By that, this business will be able to satisfy the various types of its stakeholders. (Freeman, 1984). Therefore, firm performance is usually being described as the ability to meet stakeholder's expectations to accomplish three basic business objectives, including environmental objective, social objective, and financial objective (Le Thanh et al., 2021). Firm performance can be described into two ways, either financial performance, or non-financial performance (De Wall & Kourtit, 2013). Thus, recent studies measures firm performance that is focusing on three different perspectives, including operational, environmental, and financial performance as critical indicators for sustainable development that will deliver outcomes (Xue, et al., 2019; Parida et al., 2019; Cillo et al., 2019).

Operational is the non-financial measurement which focus more on an organization's management commitment. Operational performance can be defined as the ability of a firm in reducing management costs, order-time, lead-time, improving the effectiveness of using raw material and distribution capacity (Heizer et al., 2008). Operational performance is an important indicator to the firms, it helps to improve effectiveness of production activities and to create high-quality products, which leads to increasing revenue and profitability for the firm (Kaynak, 2003). Different from other performance measurement like financial performance or environmental performance, operational performance focus on the firm's operation process or production process. Shah discussed six indicators that can be used to measure operational performance unit manufacturing cost, first pass yield, lead time, on-time delivery, scrap and rework cost, and productivity (Shah & Ward, 2003).

2.3 Firm Competitiveness

Firm competitiveness plays an important role in firm's performance, which is due to the reason that firm itself is directly competing in the international market. (Porter, 1998). Firm competitiveness is usually refers to the capability of a business to achieve better performance by gaining and maintaining competitiveness , which eventually defeat the potential competitors. The competitive advantage will grand the firm with minimized costs and maximized business opportunities (Hove et al, 2014). According to Lall's study, firm competitiveness is being defined as the capability of a firm to improve better than benchmark companies in the perspective of profitability, sales, or market share. (Lall, 2001). Firm competitiveness has also being defined as to be synonymous with a firm's long-term profitability and its capability to compensate employees and generate higher returns. for shareholders. (Buckley, Pass, & Prescott, 1988).

In pasts study, Liargovas and Skandalis investigated firm competitiveness in Greek firms, the study collected data samplings from 102 different companies from the year 1997 to 2004. The finding of this study indicates that leverage, company size, professional capabilities, liquidity and decision making have a strong and positive influence for a firm in gaining and maintaining firm competitiveness (Liargovas & Skandalis, 2010). Bartlett suggested that firm competitiveness, theoretically, was usually being considered as a perspective from the competency approach. Firm competitiveness is critical to the organization's resources such as product innovation, corporal strategy, both tangible and intangible assets, for gain and maintain firm

competitiveness (Bartlett et al., 1989). As the conclusion, firm competitive is defined as to achieve better operational efficiency and financial performance by improving all factors within the firm against its potential competitors.

There is a more recent study conducted by Pervan and Visic. They investigated the profitability of a sample firms of 2050 Croatian companies during the year 2002-2010. The finding of this study indicates that firm size and asset turnover have a weak but positive relationship towards firm's profitability, while debt ratio has a negative relationship towards profitability (Pervan & Visic, 2012). Therefore, for a firm to gain competitive advantage is through the measure such as "lower prices, rapid shorter delivery time" which will help in improving the firm's overall performance (Hove-Sibanda et al., 2017). Madzimure's study focus on market commitment that a firm that offers products with higher quality than its competitors that has higher performance on return on sales and investment. Therefore, an organization with better capability to sustainably innovate, products with higher quality, and a sensitive sense in launching products in the market on time which will lead to achieve first mover advantage and have improved market commitment (Madzimure, 2020).

2.4 Critical Success Factors (CSFs)

Critical success factors originally referred as limited several areas results measuring successful competitive performance for an organization (Rockart, 1979). It's also defined as a set of circumstances, facts or influences which contribute to the project outcomes (Lim & Mohamed, 1999). Critical success factors are also considered as the factors which are critical to the success of an organization. The organization may fail if the objectives which are associated with the contributing factors and not achieved (Rockhart, 1979). By any means, critical success factors is an effective tool in analyzing how these circumstances or facts contributes to the potential success. In other words, critical success factors is a useful approach for project managers to achieve successful outcome in management. If the critical success factors are adequately identified and controllable, the chance of a successful project outcome will be greatly increased (Turner, 2004). Critical success factors is also an applicable framework for project management to improve their performance and achieve potential success (Chen, 1999). It can also be used to support project managers in establishing performance indications for assessing project management (Andersen et al., 2006). A highly

professional team will be able to understand the exact requirements and instructions provided by decision making level or other stakeholders to help in achieving project success within the allocated budgets, time and cost (Sivasubramaniam et al., 2012). Which will eventually lead to gaining and maintaining firm competitiveness, and resulting in better organizational performance of the firm.

There were many past studies identified the effectiveness of critical success factors in improving firm's overall performance in different field and different industries (Alhabeeb & Rowley, 2018). While this study will focus on the critical success factors affecting firm's operational performance through the mediating role of firm competitiveness. There were many past studies focus on indicating the critical success factors in affect SMEs' firm performance . The study by Chawla collected data from SMEs in China and USA and the finding of this paper indicates that small business in China are easily affected by several success factors related to marketing commitment , competitive advantage, industry trends, supply chain management, financial support, and the top management's experiences (Chawla et al., 2010). Another study was focus on SMEs in Malaysia. Chong investigated on the critical success factors, and he identified that managerial skills, government support, training, access to capital, marketing, customer service, competitive prices, human resource management and more, are the key factors to success (Chong, 2012).

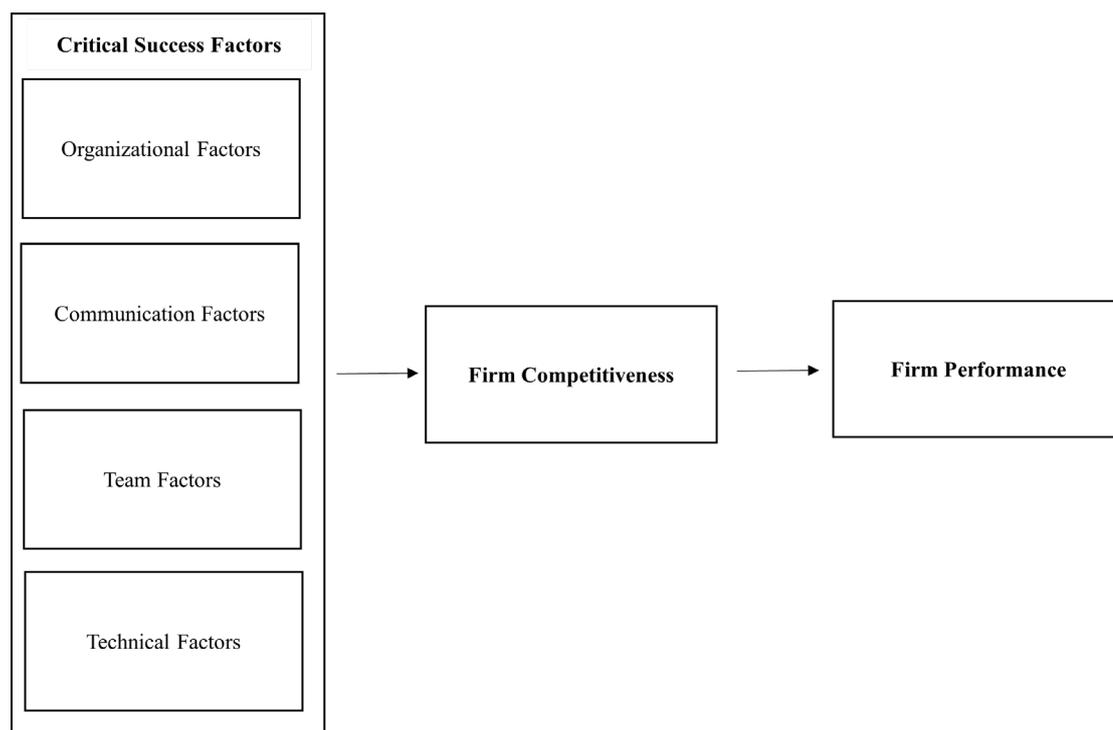
2.5 Theoretical Framework

The objective of this study is to determine how does critical success factors in achieving better firm competitiveness. There are four factors of CSFs in this study: organizational factors, communication factors, team factors, and production factors. Organizational factor refers to the strategic support from firms' top management level to the it's project or production. For example, providing its employees with necessary information and resource, or creating a positive and friendly organizational culture. Communication factor refers to the effectiveness and efficiency of information sharing and communication within the firm. Team factor refers to the employees' capability of complete their assigned work. Production factor refers to any physical practices like production equipment, facility, resources, and non-physical practices like work's training, management skill, rules and regulation.

Firm competitiveness will be introduced as mediator between CSFs and firm performance. Firm competitiveness plays a key role in business environment, and it's has long been widely recognized by

researchers as an important indicator to operational performance (Sahoo, 2020). Thus, this study will focus on the factors for a firm in gaining and maintaining firm competitiveness, and to examine CSFs in relation of firm competitiveness and firm operational performance.

Figure 2.1. Framework



Source: Developed from this study

2.6 Hypothesis Development

2.6.1 Organizational factors, firm competitiveness, and operational performance

Organizational factors plays an important role in firm's operation. Organizational factors refers to any organizational support from top management, middle management, operational staff, decision-making department, not more important, the allocated of maximum resources that needed for firm's operation, which will resulting in better firm performance

(Alpkan et al., 2010). Organizational factors will affect the leadership style of the organization through the organization's behavior, support or ignorance. An organization which provide support from the top management to its leaders from other level on different occasions will affect their leaders positively (Laschinger et al., 2014). The organizational support provided by the top management will significantly improve operational performance and helps in resolving the firm's operational process. (Dunkl and Jimenez, 2017). At the top management level, it's their responsibility to improve employees' productivity and performance in order to achieve the assigned objectives of improving firm competitiveness (Lambert, 2000). Moreover, organizational factors is the expression of the organization's management commitment from top to the bottom (Morgan et al., 2018). According to the past studies and discussion above, the hypothesis of this study is developed as below:

H1: Firm competitiveness mediates the relationship between organizational factors and operational performance

2.6.2 Team factors, firm competitiveness, and operational performance

Team factors refers to any team commitment, which is more related to a team's leadership style, achievement, team's performance, and working condition(Wendt et al., 2009). (Wendt et al., 2009). The experienced and skillful team is another critical factor in firm's operation. Therefore, an expert and capable team is critical to project success. A highly professional team will be able to understand the exact requirements and instructions provided by decision making level or other stakeholders to help in achieving project success within the coordinated budgets, time and efforts (Sivasubramaniam et al., 2012). Which will eventually lead to gaining and maintaining firm competitiveness and resulting in better organizational performance of the firm. While in the other hand, a team with unfriendly and toxic environment, having no sense of responsibilities, with bad organizational behavior, having no organizational responsibility and consistently cause in organizational resource expenses, will result in a negative impact on firm's overall performance. Thus, the hypothesis of this study is developed as below:

H2: Firm competitiveness mediates the relationship between team factors and operational performance

2.6.3 Communication factors, firm competitiveness, and operational performance

Communication is very important to any organization, since every project will start and end with communication. (Rajkumar, 2010). Communication factors plays a critical role that will bring supportive behavior among the firm's managers and directors. These leaders are extensive towards information sharing from their leaders to the employees (Srivastava & Jaiswal, 2015). There were past studies discussed that project success and firm performance depends on efficient and timely information sharing capabilities (Jugdev & Mathur, 2012). Effective and timely internal information sharing between leaders to leaders, leaders to employees, will improve firm's performance and achieve project success (Johson & Hackman, 2018). Ineffective communication management is the worst thing to an organization, which will lead to decreased project outcomes. (Kwofie et al., 2015). While an effective information sharing channel takes the role of an engine to the project team. Effective will improve communication, which affect the efficiency of internal communication, avoid misunderstanding in information sharing, and further improve the organization's operational efficiency, which ultimately lead to better project outcomes. (Kia et al., 2015). Effective communication is critical to all levels of management in the firm, especially to management levels related to firm's strategic decisions. (Baccarini & Collins, 2003). In conclusion, communication factors affect all level of management and production with a firm. According to the past studies discussed above, this study will suggest the hypothesis below:

H3: Firm competitiveness mediates the relationship between communication factors and operational performance

2.6.4 Production factors, and firm competitiveness and operational performance

In order for a firm to stay competitive, one of the most common measures can take by the firm is to adopt the quality and up-to-date production machine, equipment and facility to fulfill the production goals by the organization (Waheed et al., 2021). The firms who focus on continues improving their production equipment and facility are resulting in better production efficiency and productivity, which increase their productivity, ultimately increase firm's overall performance (Berman, 2015; Kaydos, 2020). Production factors is not only about the ability of using advanced production tool, but also the ability to maintain them. Past study

demonstrated that highly competitive firms rely on quality production equipment and facility with skill full technical workers. The skillful workers and technical professionals minimized the potential production risk and miscalculations. While only skillful workers will be able to maximize the capability of production equipment and facility, and contributes to the firm's overall performance (Wang et al., 2020).

H4: Firm competitiveness mediates the relationship between production factors and operational performance

2.6.5 Firm competitiveness and operational performance

There was past study described firm competitiveness as “the ability of a firm to outweigh their rivals because of certain competitive advantages that accrue to them in the form of minimized costs and maximized business opportunity” (Hove et al, 2014).

Vieira described the term firm performance as how well the organization achieves in its market related orientated goals as well as its financial goals (Vieira, 2010). It's important to examine through the potential factors which will affect and benefits from firm competitiveness, which in this study, is operational performance. There was a past study suggest that there were three measures can take for firms to examine their firm performance, which are: operational performance, environmental performance and financial performance (Xue et al., 2019).

H5: There is a positive relationship between firm competitiveness and firm performance.

Chapter 3: Research Methodology

3.1 Introduction

This chapter is the overview of the research methodology that will be used in this study. Including research designed, data collection, sampling designed, questionnaire designed, and data analysis.

3.2 Research Design

The research design is defined as the overall strategy that researchers choose to integrate the different components of the study in a coherent and logical way. Therefore, researchers will need to effectively address the research problem, which constitutes the blueprint for the data collection, measurement, and data analysis (De Vaus, 2001; Trochim & William, 2006). This study will adopt descriptive and quantitative research design.

3.2.1 Descriptive Design

Descriptive research will be applied in this study to analysis the relationship between critical success factors and operational performance through firm competitiveness. Descriptive research design means to identify the general background of selected respondents, for example, the gender, age and educational background, which are all the information related to the particular research problem (Given & Lisa, 2007). This research design is used to obtain information concerning the current status of the phenomena and to describe “what exists” with respect to variables or conditions in a situation (Anastas & Jeane, 1999).

3.2.2 Quantitative Design

Quantitative research design is a method emphasize objective measurement and the statistical, mathematical,

or numerical analysis of data collected (Babbie & Earl, 2010). Quantitative research design is defined as the research method focuses on collecting statistic data and interpret the collected data into groups of respondents to explain a the connection behind the respondents (Creswell, 2013).

3.3 Data Collection

The objective of this study is to determine the relationship between critical success factors (organizational factors, team factors, communication factors, and production factors) and operational performance of clothing manufacturing SMEs from China. While firm competitiveness is introduced as the mediator between critical success factors and operational performance.

This research focus on collecting primary data. Primary data feres to the research data directly acquired from respondents by various means, including personal interview, observations, surveys, experiments, and questionnaires. Primary data is also defined as the first- hand data which is directly collected by this particular research for the first time (Ajayi, 2017). In this study, a questionnaire will be carried out for this study. The questionnaire develop by this study includes in total of 33 items, and all items will be measured by a 5-point Likert scale, form number 1 to 5, 1 is “Not at all/ Not applicable”, and 5 is “Very great extent”.

3.4 Sampling Design

This questionnaire targets on employees from clothing industry SMEs in China. The coverage of potential participants including all level of members in the target firm. The questionnaire of this study is mean to investigate the effect of critical success factors on firm’s operational performance, which will need to consider every level in target firm.

3.4.1 Target Population

The target population for this study will focus on respondents from clothing manufacturing SMEs from China. The respondents includes all level of selected firm, including employees, workers, team managers, department managers, project managers, and project directors.

3.4.2 Sampling Location

The target population indicates that this study will focus on respondents from clothing manufacturing SMEs from China. While in this case, the sampling location will be selected in China. This study will focus on convenience sampling, which means will focus on any appropriate respondents who are readily and easily available. A constraint for sampling of this study will be the physical distance from Malaysia to China. Thus, the questionnaire of this study will carry out through online.

3.4.3 Sampling Technique

There are usually two major types of sampling technique, probability sampling and non-probability sampling. Probability sampling refers to that item for the respondents have an equal chance of being included in sampling. Probability sampling does not easily affect by statistic bias, but it may result in the most expensive in time and energy for a given level of sampling error (Brown, 1947).

Non-probability sampling is commonly used by qualitative research or case studies. According to Yin, case studies is usually focusing on small size of samples, while it also focus on investigation on practical, or in other word, real-life situation, instead of focus on statistical research which targets on the general population (Yin, 2003).

Convenience sampling, as the name, is a sampling technique that selectin participants who a readily and easily available. According to past study, convenience sampling tends to be a favored sampling technique students as it is a convenient and less expensive method towards other sampling techniques (Ackoff, 1953). Thus, this study will use convenience sampling technique for sampling design.

3.4.4 Sampling Size

There are many researchers suggest determining sample size through power analysis (Hair et al., 2018; Kline, 2016; Ringle et al, 2018). Power analysis refers to the method of determining minimum sample size by taking into account the part of model with the largest number of predictors (Hair et al., 2014); Roldán & Sánchez-

Franco, 2012). Power analysis method involves information related to power, effect size, and significance level in order to calculate the minimum sample size for the study (Hair et al., 2018). This study will conduct power analysis using G*Power software, version 3.1.9.4. According to the power analysis method run on G*Power software, the minimum sample size for this study would be 92.

3.5 Research Instrument

Research instrument refers to any instruments that is being used by researchers to collect, evaluate, and examine the data for the study (Robert & Stone, 2003). There are various types of research instrument which is related to the method that researcher chooses to collect data from, including personal interview, observations, questionnaires, experiments and others. While in this study, a questionnaire is developed for data collection, which these items will be adopted from past studies.

3.5.1 Questionnaire Design

This questionnaire is divided into three parts, Section A, B and C. Section A will include questions about respondents' background, including gender, age, educational background, position in the organization, and working experience. Section B will divide into five part, the prior four parts are four critical success factors proposed by this study: organizational factors, team factor, communication factors and production factors. The last part of Section B consists questions of firm competitiveness. Section C consists of questions regarding firm's operational performance.

Table 3.1. Questionnaire Items

Variables	Items	Sources
Section B		
Organizational factors	7 Questions	Arthur et al., (2015)
Team factors	6 Questions	Arthur et al., (2015)

Communication factors	7 Questions	Albert et al., (2004)
Production factors	4 Questions	Mustafa & Jamaluddin, (2017)
Firm competitiveness	5 Questions	Hermundsdottir et al. (2021)
Section C		
Operational performance	4 Questions	Xue et al. (2019)

Source: Developed from this study

3.5.2 Construct Design

Table 3.2 to table 3.8 indicates the constructs, the source of constructs, and the detail item of this study. Organizational factors and team factors were referenced from the study conducted by Arthur Ahimbisibwe, Robert Y. Cavana, and Urs S. Daellenbach. The items of communication factors were referenced from study conducted by Albert Chan, Daniel Chan, Y. H. Chiang, B. S. Tang, Edwin Chan, and Kathy Ho. The items of production factors are from study conducted by Zainol Mustafa & Z. Jamaluddin. Firm competitive constructs was applied from the study by Hermundsdottir F., Aspelund, A. Operational performance measurement was referenced from the study by Xue M., Boadu, F., and Xie, Y.

Table 3.2. Organizational Factors

Variables	Sources	Items
Organizational Factors	Arthur et al., (2015)	The top-level management in my organization supports employees with necessary information and resources.
		My organization have positive

		organizational culture (for example, encourage teamwork, flexibility)
		My organization have positive leadership style. (for example, encourages quality improvement, employee involvement, communication, and responsibility).
		My organization always have meticulous project planning, and strictly execute its plan.
		My organization explain vision and mission to employees and stick to its vision and mission throughout business process.
		My organization keeps on monitoring and controlling project process according to project plan.
		My organization has the flexibly in changing the management skills to adopt to different situation.

Source: Developed from this study

Table 3.3. Team Factors

Variables	Sources	Items
Team Factors	Arthur et al., (2015)	My team/department members are willing to contribute to product success and team commitment.
		My team/department encourages effective information sharing.
		My team/department leader encourages positive working attitude by introducing employee empowerment practices.
		My team/department leader encourages members to develop different characteristics to enhance team composition.
		My team/department leader encourages members to develop their professional expertise in their assigned task.
		My team/department leader encourages members to develop their general expertise to better adopt to diversified task.

Source: Developed from this study

Table 3.4. Communication Factors

Variables	Sources	Items
Communication Factors	Albert et al., (2004)	My organization encourages effective communication within the team.
		My organization consistently and publicly endorse team collaboration.
		My organization develops control and resolutions to deal with problems.
		My organization develop control and resolutions to deal with conflict among employees.
		All levels of management support collaboration process.
		All teams/departments will have benefited from collaboration process.
		My team/department leader set a clarified goal for team/department members.

Source: Developed from this study

Table 3.5. Production Factors

Variables	Sources	Items
Production Factors	Mustafa & Jamaluddin, (2017)	My organization provide training for its employees.
		My organization keeps on track and managing the whole production process.
		My organization provides quality equipment and facility for production process.
		My organization have continuous improvement of on production process, for example, training, upgrade in equipment and tool.

Source: Developed from this study

Table 3.6. Firm Competitiveness

Variables	Sources	Items
Firm Competitiveness	Hermundsdottir et al. (2021)	My organization have first mover advantage in the market.
		My organization can find new market opportunities.
		My organization provide premium quality product
		My organization have improved efficiency.

		My organization have improved corporate reputation.
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Source: Developed from this study

Table 3.7. Operational Performance

Variables	Sources	Items
Operational Performance	Xue et al. (2019)	My organization have outstanding product lines.
		My organization have improved capacity utilization.
		My organization have outstanding customer satisfaction.
		My organization can respond to market need in time.

Source: Developed from this study

3.6 Data Analysis

The data analysis will be conduct after data collection procedure. It’s the most important research procedure in a study. This study will conduct structural equation modeling (SEM) method to examine the relationship between critical success factors, firm competitiveness, and operational performance. This data analysis will be conduct through SmartPLS.

3.6.1 Descriptive Analysis

Descriptive analysis is a widely used method applied to investigating the primary hypotheses of a study (Marczyk, DeMatteo & Festinger, 2021). This study also apply descriptive analysis to analysis the demographic status of respondents. The items including gender, age, educational level, position in the organization, working experience, and the yearly income range of respondents' firm.

3.6.2 Reliability Analysis

Reliability test is the method to test the stability or consistency of data sample. A reliable data sample will accurately measure mathematical knowledge for researchers for every researcher who takes it, and reliable research findings can be replicated over and over (Everitt & Skrondal, 2010; Gonick, 1993). This study will also conduct reliability analysis before proceed to data structural equation modeling.

3.6.3 Structural Equation Modeling

This study will apply the structural equation modeling (SEM) method to analysis the relationship between critical success factors, firm competitiveness, and operational performance. This data analysis will be conduct through SmartPLS. According to Hair, SmartPLS approach has less opportunity to be affected by the sample size as compared to Analysis of Moment Structures (AMOS) (Hair et al., 2019). The application of SEM is one of the commonly used data analysis methods for research that focus on investigating and analysis the relationship between latent and construct variables. It's also usually being used to investigate and identify the influence of chosen variables (Thanh Tiep Le & Muhammad Ikram, 2022). Hence, this SmartPLS approach helps this study in analyzing the mediating effect of the mediator role of firm competitiveness between critical success factors and operational performance.

Chapter 4: Data Analysis

4.1 Introduction

This chapter discuss the outcomes of data analysis of this study. The data collected will be analyzed first through reliability and validity test. Then, this chapter will continue to descriptive analysis and structural equation modeling. Descriptive analysis discusses about demographic statistics and descriptive statistics. Structural equation modeling examines the relationship between critical success factors, firm competitiveness and operational performance.

4.2 Reliability and Validity

This study will need to first verify the reliability and validity of each factor in this theoretical framework. The data and details is shown in Table 4.1. The result of reliability and validity check indicates that the factor loading value of each variable is above 0.60. According to Awang, for a newly developed item, the factor loading value should exceed 0.5, while for an established item, the factor value loading should be 0.60 or higher (Awang, 2014). On the other hand, the crobach's alpha value, rho_A, and composite reliability value for each of these constructs are all higher than recommended value of 0.70. The average variance extracted (AVE) value for each construct are all above recommended value of 0.50. As the result, the data collected from this questionnaire are reliable and valid.

Table 4.1. Reliability and Validity Analysis

Constructs	Factor Loading	Crobach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)

Firm Performance, Critical Success Factors and Firm Competitiveness of Clothing Industry in China

Organizational Factors		0.836	0.844	0.875	0.501
OF1	0.685				
OF2	0.737				
OF3	0.697				
OF4	0.728				
OF5	0.674				
OF6	0.743				
OF7	0.687				
Team Factors		0.806	0.809	0.860	0.506
TF1	0.705				
TF2	0.755				
TF3	0.712				
TF4	0.700				
TF5	0.718				
TF6	0.677				
Communication Factors		0.840	0.841	0.879	0.510
CF1	0.749				
CF2	0.714				
CF3	0.686				
CF4	0.689				
CF5	0.749				
CF6	0.710				
CF7	0.699				
Production Factors		0.703	0.714	0.816	0.527
PF1	0.735				

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PF2	0.740				
PF3	0.652				
PF4	0.771				
Firm Competitiveness		0.755	0.759	0.836	0.505
FC1	0.689				
FC2	0.745				
FC3	0.705				
FC4	0.757				
FC5	0.653				
Operational Performance		0.715	0.714	0.823	0.538
OP1	0.729				
OP2	0.759				
OP3	0.722				
OP4	0.722				

Source: Developed from this study

4.3 Descriptive Analysis

4.3.1 Demographic Analysis

Table 4.2. is the demographics of participants. This study collected data from a total of 104 participants from clothing SMEs in China. According to the data analysis, majority of the participants are male, 71.2% of total 104 participants, which is 74 in number. While the rest 30 participants are female, about 28.8% of total participants. As for the age, this study listed out 4 criteria of age, these are: 20 to 39 years old, 30 to 49 years old, 40 to 49 years old, and above 50 year old. According to the analysis, middle-age are the majority in the population, from 30 to 49 years old, which includes 59.6% of total participants. Young generation and old generation accounts for around 36.5% and 3.8% of total participants respectively.

The other characteristics are work and career related items, including educational level, position in the firm, working experience, and company's income range. The data of educational background shows that most of participants are from "Others" educational background, in number of 69, around 66.3% of total 104 participants. "Others" category refers to educational level less than bachelor's degree, can be technical secondary school or college level. This study collected data from 3 position from the firm, project manager, team/department leader, and employees. Project managers and team/department leaders account for around 7.7% and 17.3% of total participants respectively, compares to the majority of 75% for the position of employee. The working experience of participants is divided into four categories, the longest working experience is more than 15 years, which shows the least among participants, the number is 10, take around 9.6% of total participants. While in the other categories, less than 2 years, 2 to 5 years, 6 to 15 years, takes in part of 21.2%, 35.6% and 33.7% of total participants. The last characteristics is company's income range of participants.

This study carried out four criteria of company's income range. According to the definition provide by Chinese government, a company has yearly income that is less than 1 million RMB is defined as micro size business. The participants from company that has yearly income less than 1 million RMB is 12 in number, 11.5% of total participants. A company has yearly income between 1 to 10 million RMB is defined as small size business. In this study, it's divided into 2 categories, 1 to 5 million RMB and 6 to 10 million RMB, each account for 33.7% and 41.3% of total participants. The last income range is more than 10 million RMB, which is 14 in number, takes 13.5% of total participants.

Table 4.2 Demographic Analysis

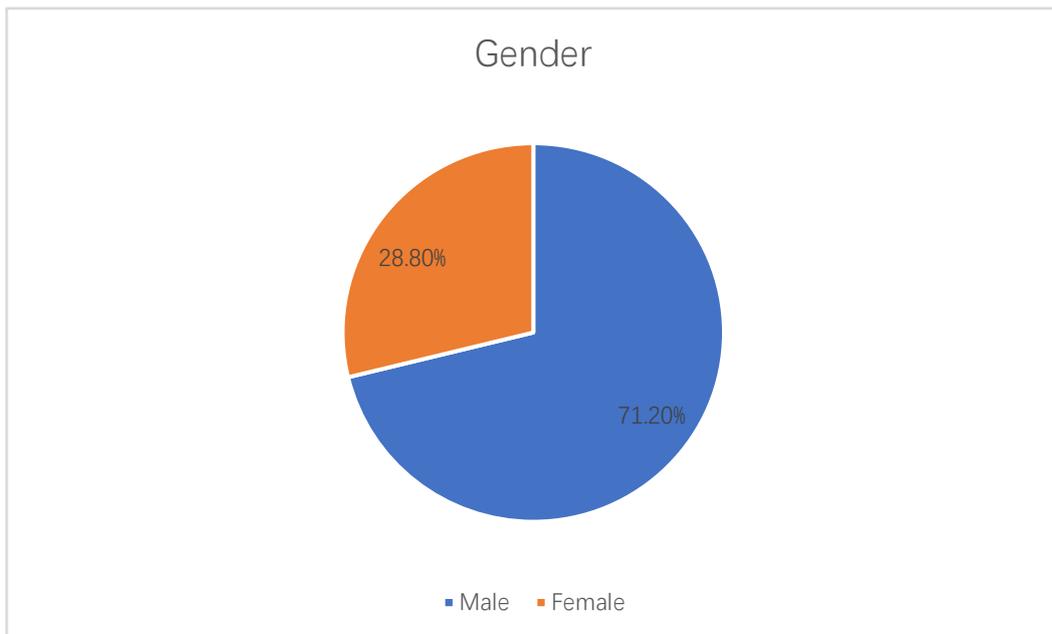
Characteristics	Categories	Frequency (n)	Percentage (%)
Gender	Male	74	71.2
	Female	30	28.8
Age	20-39	38	36.5
	30-39	38	36.5

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	40-49	24	23.1
	Above 50	4	3.8
Education	Bachelor	35	33.7
	Others	69	66.3
Position	Project Manager	8	7.7
	Team Leader	18	17.3
	Employee	78	75.0
Working Experience	Less than 2 years	22	21.2
	2 to 5 years	37	35.6
	6 to 15 years	35	33.7
	More than 15years	10	9.6
Company Income Range	Less than 1 million RMB	12	11.5
	1 to 5 million RMB	35	33.7
	6 to 10 million RMB	43	41.3
	More than 10 million RMB	14	13.5

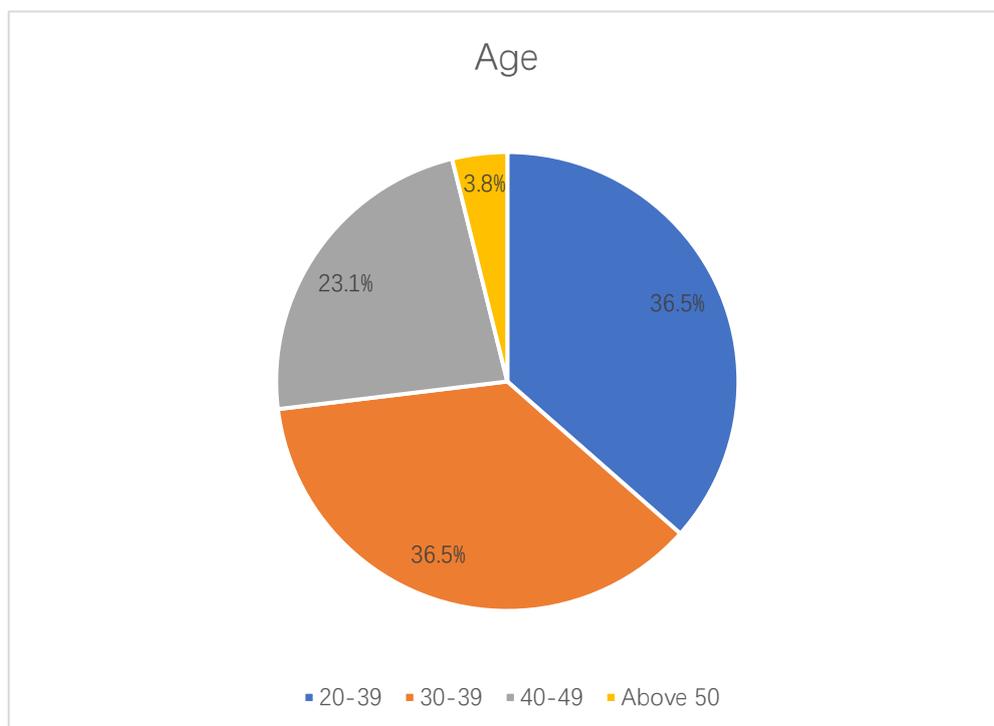
Source: Developed from this study

Figure 4.1 Gender



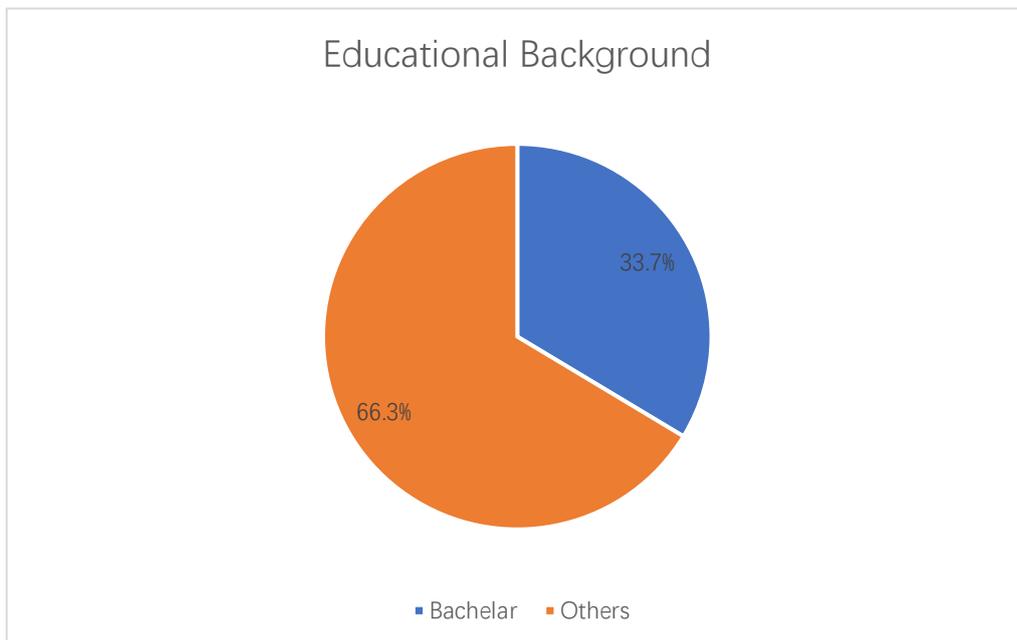
Source: Developed from this study

Figure 4.2. Age



Source: Developed from this study

Figure 4.3. Educational Background



Source: Developed from this study

Figure 4.4. Position

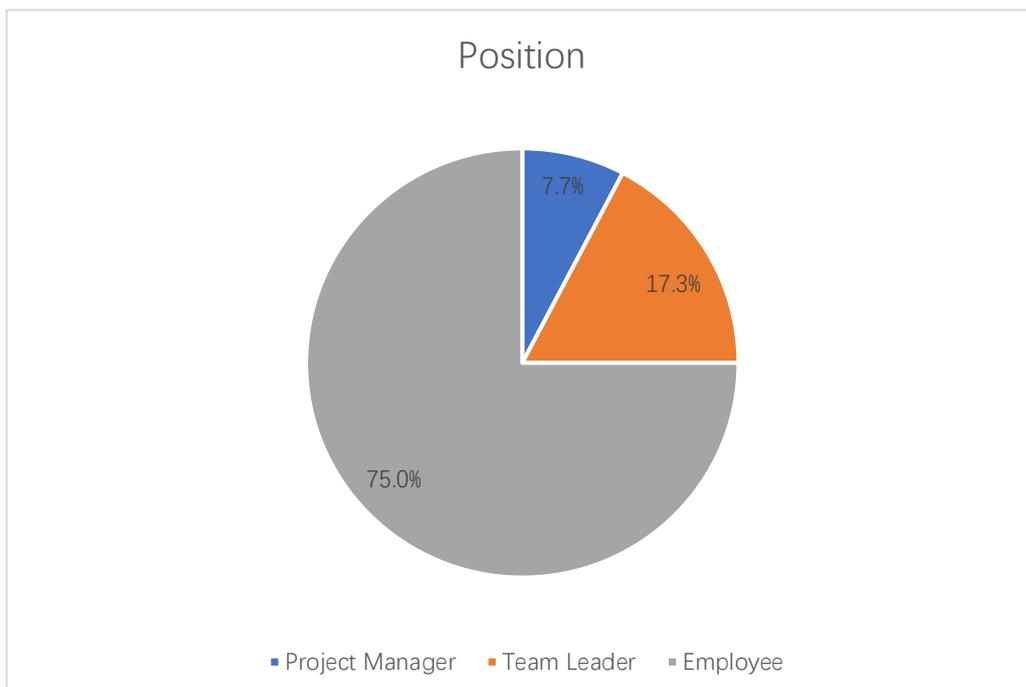
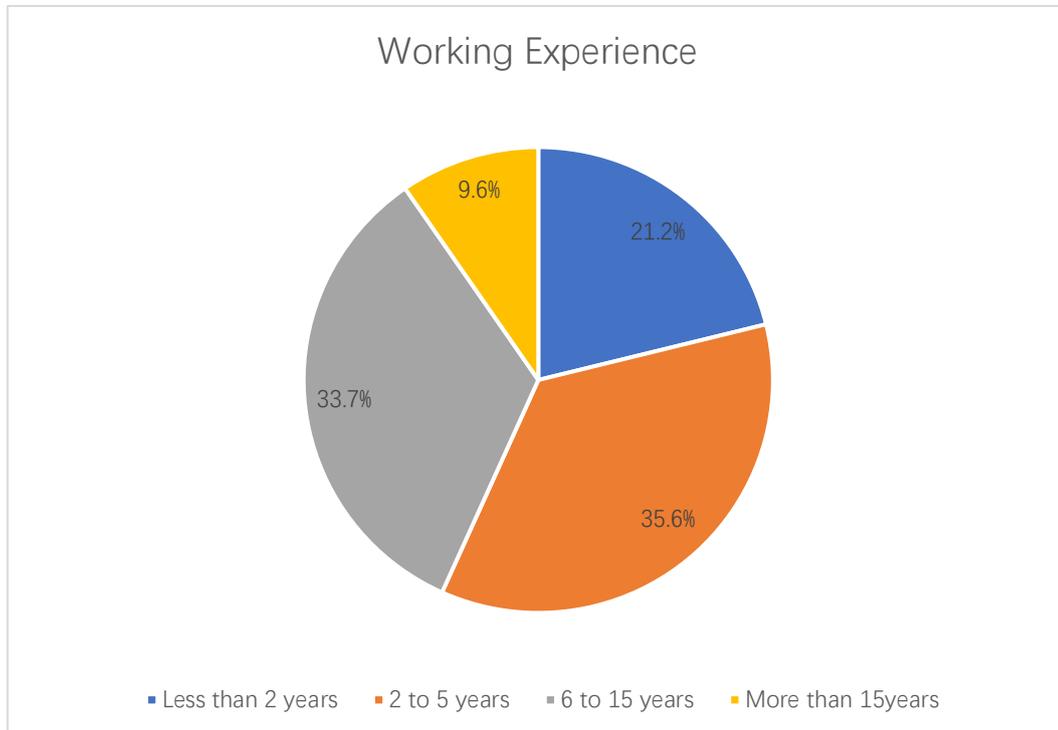
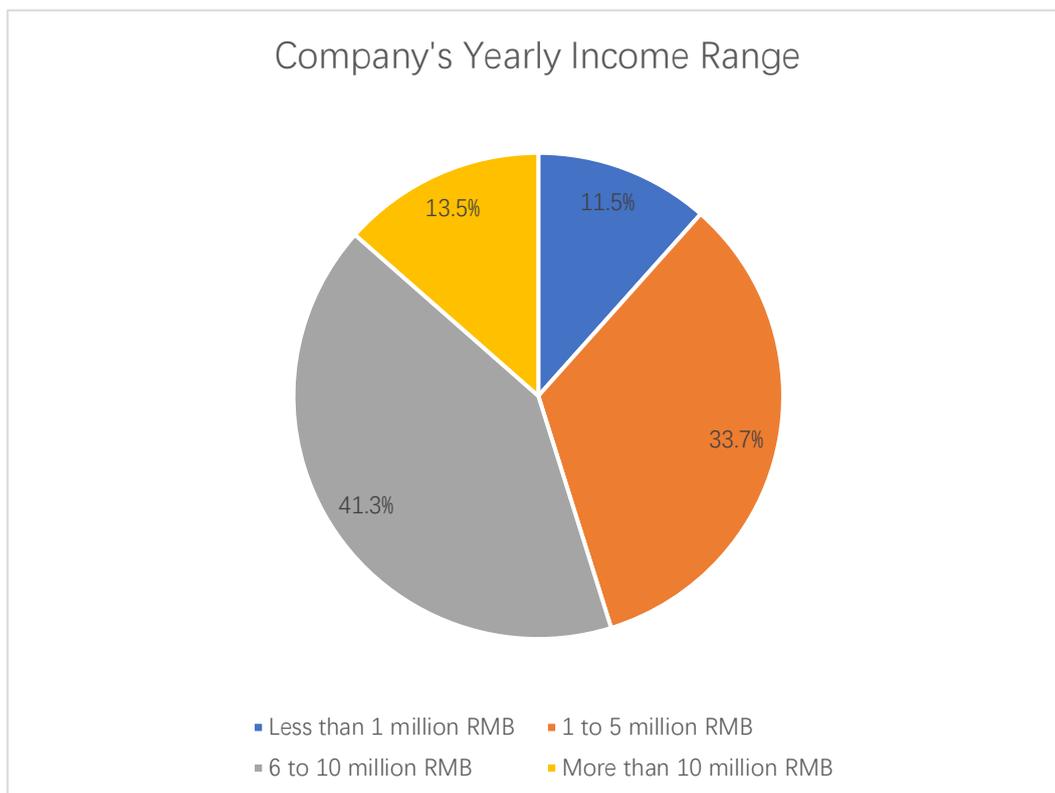


Figure 4.5. Working Experience



Source: Developed from this study

Figure 4.6. Company's Yearly Income Range



Source: Developed from this study

4.3.2 Descriptive Statistics

Table 4.3. shows descriptive statistics of the questionnaire participants. The participants were given a questionnaire based on 5-point Likert scale, from number 1 to 5, 1 is “Not at all/ Not applicable”, and 5 is “Very great extent”. The mean value of all participants is in the range of 2.979 to 3.110. The lowest mean value is from team factors, which shows team factors is less applicable for participants. The highest mean value is from firm competitiveness, which indicates that participants considered that their firm is gaining and maintaining competitiveness. The standard deviation value falls between 0.900 and 0.996, which are all fall near 1.0.

Table 4.3. Descriptive Statistics

Constructs	Mean	Standard Deviation
Organizational Factors (OF)	3.055	0.900
Team Factors (TF)	2.979	0.988
Communication Factors (CF)	3.000	0.905
Production Factors (PF)	3.079	0.961
Firm Competitiveness (FC)	3.110	0.981
Operational Performance (OP)	2.983	0.996

Source: Developed from this study

4.4 Structural Equation Modeling

4.4.1 Coefficient of Determination

The coefficient of determination, or the R^2 value, means to examine the explanatory power of the research model. The R^2 value should falls between 0 and 1, at this range, the greater value of R^2 means the better explanatory power. Which in the opposite, the lower value of R^2 means the less explanatory power. There were many studies discussed about the explanatory power of R^2 value. Cohen recommended that R^2 value for endogenous latent variable are described as 0.26, 0.13, and 0.02, be respectively described as substantial, moderate, and weak (Cohen, 1988). Chin suggested that R^2 value should base on 0.67 (substantial), 0.33 (moderate), and 0.19 (weak) (Chin, 1998). While the most widely accepted criteria for R^2 value is 0.75, 0.50, and 0.25, be respectively described as substantial, moderate, and weak (Hair et al., 2011).

Thus, Table 4.4. indicates that firm competitiveness has a strong and positive explanatory power with the R^2 value is 0.533 as the mediator of the model. While operational performances has a moderated explanatory power which the number of the R^2 value is 0.363. Therefore, the research model in this study has moderated to strong explanatory power towards latent variables.

Table 4.4 Coefficient of Determination

Dimensions	R Square	R Square Adjusted
Firm Competitiveness (FC)	0.551	0.533
Operational Performance (OP)	0.369	0.363

Source: Developed from this study

4.4.2 Total Effect

This study applied structural equation modeling (SEM) for measuring the total effect used in the research model. This study conduct bootstrapping technique to measure path coefficient, sample mean, standard deviation (STDEV), T value and P value. The result in Table 4.5. reveal that the total effect of critical success factors (CSFs) on operational performance (OP) was significant:

The total effect of OF on OP (H1: $\beta = 0.428$, $t = 5.212$, $p < 0.001$) was significant.

The total effect of TF on OP (H2: $\beta = 0.583$, $t = 8.163$, $p < 0.001$) was significant.

The total effect of CF on OP (H3: $\beta = 0.463$, $t = 5.362$, $p < 0.001$) was significant.

The total effect of PF on OP (H4: $\beta = 0.570$, $t = 8.818$, $p < 0.001$) was significant.

Moreover, table 4.5. has also indicates that there is strong total effect from critical success factors towards operational performance. The finding of this data analysis indicates that there is strong relationship from CSFs towards operational performance.

The total effect of OF on FC (H1: $\beta = 0.569$, $t = 0.569$, $p < 0.001$) was significant.

The total effect of TF on FC (H2: $\beta = 0.584$, $t = 8.539$, $p < 0.001$) was significant.

The total effect of CF on FC (H3: $\beta = 578$, $t = 11.185$, $p < 0.001$) was significant.

The total effect of PF on FC (H4: $\beta = 0.605$, $t = 11.190$, $p < 0.001$) was significant.

The finding of total effect analysis proves that critical success factors have positive and valid relationship towards both firm competitiveness and operational performance.

Table 4.5. Total Effect

Firm Performance, Critical Success Factors and Firm Competitiveness of Clothing Industry in China

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
OF -> FC	0.569	0.583	0.079	0.569	0.000
TF -> FC	0.584	0.597	0.068	8.539	0.000
CF -> FC	0.578	0.588	0.052	11.185	0.000
PF -> FC	0.605	0.621	0.054	11.190	0.000
OF -> OP	0.428	0.437	0.082	5.212	0.000
TF -> OP	0.583	0.595	0.071	8.163	0.000
CF -> OP	0.463	0.478	0.086	5.362	0.000
PF -> OP	0.570	0.579	0.065	8.818	0.000
FC -> OP	0.615	0.634	0.053	11.503	0.000

Source: Developed from this study

4.4.3 Direct Effect

This study applied structural equation modeling (SEM) in order to analysis the direct effect between critical success factors and operational performance. This study conduct bootstrapping technique to measure path coefficient, sample mean, standard deviation (STDEV), T value and P value. With the inclusion of the mediating variable FC, the impact of CSFs on OP became diversified.

The direct effect of OF on OP (H1: $\beta = 0.122$, $t = 1.028$, $p = 0.305$) was insignificant.

The direct effect of TF on OP (H2: $\beta = 0.356$, $t = 3.252$, $p = 0.001$) was insignificant.

The direct effect of CF on OP (H3: $\beta = 0.167$, $t = 1.446$, $p = 0.149$) was insignificant.

The direct effect of PF on OP (H4: $\beta = 0.377$, $t = 3.925$, $p = 0$) was significant.

The direct effect analysis is mean to determine the relationship between independent variables and dependent variables. A significant direct effect between independent variables and dependent variables indicates that there is direct connection in between, which means less mediating effect from the mediator. While on the other hand, an insignificant direct effect indicates that there is not direct connect between independent

variables and dependent variables, which means there is mediating effect from the mediator. The finding of data analysis of direct effect proves that there are insignificant relationship from organizational factors, team factors and communication factors towards operational performance. This finding indicates that there are mediating effect from organizational factors, team factors and communication factors towards operational performance through the mediator of firm competitiveness. While the finding also indicates that there is significant direct effect from production factors towards operational performance. Therefore, there is less or no mediating effect from the mediating role of firm competitiveness between production factors and operational performance.

Table 4.6. Direct Effect

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
OF -> FC	0.569	0.583	0.079	7.229	0
TF -> FC	0.584	0.597	0.068	8.539	0
CF -> FC	0.578	0.588	0.052	11.185	0
PF -> FC	0.605	0.621	0.054	11.19	0
OF -> OP	0.122	0.109	0.119	1.028	0.305
TF -> OP	0.356	0.364	0.109	3.252	0.001
CF -> OP	0.167	0.175	0.115	1.446	0.149
PF -> OP	0.377	0.382	0.096	3.925	0
FC -> OP	0.615	0.634	0.053	11.503	0

Source: Developed from this study

4.4.4 Indirect Effect

This study applied structural equation modeling (SEM) in order to analysis the indirect effect between critical

success factors and operational performance. This study conduct bootstrapping technique to measure path coefficient, sample mean, standard deviation (STDEV), T value and P value. The indirect effect of CSFs on OP through FC was found significant:

The indirect effect of OF on OP through FC (H1: $\beta = 0.305$, $t = 3.964$, $p < 0.05$) was significant.

The indirect effect of TF on OP through FC (H2: $\beta = 0.227$, $t = 3.323$, $p < 0.05$) was significant.

The indirect effect of CF on OP through FC (H3: $\beta = 0.296$, $t = 4.847$, $p < 0.05$) was significant.

The indirect effect of PF on OP through FC (H4: $\beta = 0.296$, $t = 3.214$, $p < 0.05$) was significant.

The indirect effect analysis means to determine the relationship from independent variables towards dependent variables through the mediator. In this case, a significant indirect effect indicates that there is mediating effect between independent variables and dependent variables. In this study, the indirect effect analysis indicates that there are strong and positive mediating effect from organizational factors, team factors, communication factors and production factors towards operational performance through the mediating role of firm competitiveness.

Table 4.7. Indirect Effect

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
OF -> FC -> OP	0.305	0.328	0.077	3.964	0.000
TF -> FC -> OP	0.227	0.231	0.068	3.323	0.001
CF -> FC -> OP	0.296	0.303	0.061	4.847	0.000
PF -> FC -> OP	0.296	0.197	0.060	3.214	0.001

Source: Developed from this study

Chapter 5: Discussion and Conclusion

5.1 Introduction

This chapter will first discuss about the outcome of mediating effect and hypothesis commitment of this study. Second, this chapter discuss about the theoretical and practical of this study. Lastly, this chapter discuss about the limitation and final conclusion of this study.

5.2 Mediating Analysis

The finding from SEM analysis reveals the direct and indirect effect from each CSFs to operational performance. Mediation analysis is used to assess the mediation role of firm competitiveness as the mediating role on the linkage between each critical success factors (organizational factors, team factors, communication factors, production factors) and operational performance. While the finding of data analysis from 4.4 Structural Equation Modeling leads to a comprehensive result.

The result in Table 4.5. reveal that the total effect of operational factors (OF) (H1: $\beta = 0.428$, $t = 5.212$, $p < 0.001$) was significant. With the inclusion of the mediating variable firm competitiveness (FC) the impact of OF on operational performance (OP) (H1: $\beta = 0.122$, $t = 1.028$, $p = 0.305$) became insignificant. The indirect effect of OF on OP through FC (H1: $\beta = 0.305$, $t = 3.964$, $p < 0.05$) was found significant. As the conclusion, the relationship between OF and OP is fully mediated by FC. Thus, H1 of this study “Firm competitiveness mediates the relationship between organizational factors and operational performance” is accepted.

Then the previous data analysis reveal that the total effect of team factors (TF) (H2: $\beta = 0.583$, $t = 8.163$, $p < 0.001$) was significant. With the inclusion of the mediating variable FC the impact of TF on OP (H2: $\beta = 0.356$, $t = 3.252$, $p = 0.001$) became insignificant. The indirect effect of TF on OP through FC (H2: $\beta = 0.227$, $t = 3.323$, $p < 0.05$) was found significant. As the conclusion, the relationship between TF and OP is fully mediated by FC. Thus, H2 of this study “Firm competitiveness mediates the relationship between team factors and operational performance” is accepted.

Therefore, the total effect of communication factors (CF) (H3: $\beta = 0.463$, $t = 5.362$, $p < 0.001$) was significant. With the inclusion of the mediating variable FC the impact of CF on OP (H3: $\beta = 0.167$, $t = 1.446$, $p = 0.149$) became insignificant. The indirect effect of CF on OP through FC (H3: $\beta = 0.296$, $t = 4.847$, $p < 0.05$) was found significant. As the conclusion, the relationship between CF and OP is fully mediated by FC. Thus, H3 of this study “Firm competitiveness mediates the relationship between communication factors and operational performance” is accepted.

While the last factor is production factors. The total effect of production factors (PF) (H4: $\beta = 0.570$, $t = 8.818$, $p < 0.001$) was significant. With the inclusion of the mediating variable FC the impact of PF on OP (H4: $\beta = 0.377$, $t = 3.925$, $p = 0$) became significant. The indirect effect of PF on OP through FC (H4: $\beta = 0.296$, $t = 3.214$, $p < 0.05$) was found significant. In this case, direct effect and indirect effect are both significant. The direct effect of production factors towards operational performance is significant indicates that there are strong and positive relationship between production factors and operational factors. It results that there is negative mediating effect through firm competitiveness. While the indirect effect from production factors towards operational performance is significant indicates that there are mediating effect through firm competitiveness. Hayes suggested that it is the indirect effect matters not the test on the individual paths in the model (Hayes, 2018). The indirect effect is a more accurate and more precise way to explain the mediating effect in the model. In this study, production factors has significant direct effect on operational performance, while also has significant indirect effect on operational performance. By applying on Hayes’ theory, having significant effect on both direct and indirect effect can be considered that firm competitiveness has practical meditation between production factors and operational performance. However, the H4 of this study “Firm competitiveness mediates the relationship between production factors and operational performance” is rejected.

5.3 Hypothesis Discussion

5.3.1 Organizational factors, firm competitiveness, and operational performance

The finding of this study indicates that firm competitiveness has strong and positive mediating effect between operational factors and operational performance. The major reason for SMEs to have better organizational

factors may be due to their own size. SMEs has relatively a smaller number of employees, relatively flattened management structure, and most important, less resources need to allocate with. Therefore, a firm who provide more allocated resource and valid information from its top management level to their team directors and managers, will have improved operational efficiency. The improvement of a firm's internal operational efficiency will significantly affect the firm competitiveness, and further affect the firm's overall operational performance. This find is supported by the previous study that organizational factors refers to an organizational support from all levels of management and allocated of maximum resources that need for firm's operation, which leads to better firm performance (Alpkan et al., 2010). In this case, organizational factors also have a positive and significant influence towards organizational performance, which supports H1. Thus, organizational factors plays a critical role in gaining and maintaining firm competitiveness, which ultimately lead to better operational performance.

5.3.2 Team factors, firm competitiveness, and operational performance

According to the data analysis above, the finding of this study also indicates that team factors have significant relationship towards operational performance. Team factors refers to any team commitment, which is more related to a team's leadership style, achievement, team's performance, and working condition(Wendt et al., 2009). The project team plays a role as an executor in the firm. In which, any decision made by top management will be implemented and executed by these project teams. In this case, an experienced and skillful team will significantly influence the outcome strategic decision made by the organization. This finding is supported by Verburg, that an expert team will understand how to achieve the project outcome by using allocated resources (Verburg, 2013). Thus, team commitment contributes to firm competitiveness and operational performance. Therefore, the result of this study support the H2 of this study that team factors contributes to firm competitiveness as well as operational performance.

5.3.3 Communication factors, firm competitiveness, and operational performance

The result of analysis on communication factors also indicates that there is positive and strong relationship towards operational performance, while through the strong mediator of firm competitiveness.

Communication plays an important role in a firm's operation, project success and firm performance depends on efficient and effective communication channels (Jugdev & Mathur, 2012). Effective communication with the organization will enrich the supportive behavior of leaders, which eventually leads to better daily operation, and contributes to firm competitiveness and operational performance. Thus, the H3 of this study, firm competitiveness mediates the relationship between communication factors and operational performance, is accepted.

5.3.4 Production factors, and firm competitiveness and operational performance

Production factors is the only CSFs that with diversified outcomes. According to mediating analysis, the total effect, direct effect, and indirect effect of production factors towards operational performance through firm competitiveness are all result in significant. The result of mediating analysis indicates that firm competitiveness have partial mediating effect. The reasons behind this is that production factors refers to production commitment. Previous study indicates that production commitment is more effective towards firm's financial performance, rather than operational performance. Production commitment is more focusing on allocating resources, output, inventory and supply chain. While SMEs have relative smaller company size, less financial support and less employees, which make them difficult to compete through production means. This finding is supported by the study of Mustafa and Jamaluddin, the study analyzed CSFs of 219 Malaysian manufacturing organization, indicates that the key factor to better operational performance is a combination of the ability of the project team to use right tools, innovation management and creativity in problem solving (Mustafa & Jamaluddin, 2017). In conclusion, production factors among SMEs do not have significant effect on firm competitiveness, but on operational performance. Thus, H4 of this study is rejected.

5.3.5 Firm competitiveness and operational performance

The result of this study also indicates that there is positive and strong relationship between firm competitiveness and operational performance. The path coefficient between FC and OP is 0.615, T value is 11.503, P value 0.000, which is less than 0.05. The finding is significant. Therefore, the H5 of this study "there is a positive relationship between firm competitiveness and firm performance" is accepted. Firm

competitiveness has long been widely recognized by researchers as an important indicator to operational performance (Sahoo, 2020). The measures can take for a firm in gaining and maintaining competitiveness is by improve market commitment, production commitment and management commitment. While operational performance is also a non-financial perspective of firm performance, which also focus on market commitment, brand reputation, production commitment and management commitment. This finding is supported by previous studies. These studies suggested that by gaining and maintaining firm competitiveness, which includes improve firm's management system, improved firm's overall efficiency, and first mover advantages in the market, which will help in improving the production line, including production equipment and facility, which will eventually lead to higher quality product, respond to market on time, and achieve n better customer satisfaction and brand reputaion (Hove-Sibanda et al., 2017; Kotler et al., 2011; Severo et al., 2017; Boons et al., 2013).

5.4 Theoretical Implication

This study provide contribution in extending the current study in the field of measuring firm's operational performance in some ways. There are many previous studies measures organizational performance through critical success factors or firm competitiveness. While this study provide a different approach towards measuring organizational performance by using critical success factors theory through the mediating role of firm competitiveness. The finding of this study indicates that both CSFs (organizational factors, team factors, communication factors, production factors) and firm competitiveness have strong and positive effect towards operational performance. As the result of this study, it contributes to a diversified approach to use firm competitiveness as a mediator in measuring firm's operational performance. The finding supports that firm competitiveness has positive mediating effect between CSFs and organizational performance.

5.5 Practical Implication

This research scope of this study is on SMEs in clothing industry from China. Which, this study provides important practical implications towards clothing manufacture SMEs in China. First, the finding of this study indicates that CSFs (organizational factors, team factors, communication faction, production factors) have

significant influence on firm competitiveness, either in gaining competitive advantage or maintaining competitive. Clothing industry is a highly labor intensified industry, with low technical content, in which resulting in a highly competitive business environment. This study may provide a vivid approach for clothing manufacture SMEs or any entrepreneurs to understand what the factors effecting firm competitiveness. By that, they will be able to determine and analysis on which of these listed factors needed improvement within their firm, and in what extent they may improve their firm competitiveness.

Second, the finding of this study indicates that firm competitiveness has strong and positive effect towards operational performance, which was supported by many other previous studies in the discussion above. This finding indicates that firm competitiveness increase firm's operational performance, in the sense of gaining first mover advantage, gaining new market opportunities, providing premium quality, improving efficiency, improving corporate reputation, and improved profitability (Hermundsdottir et al., 2021).

Lastly, firm competitiveness works as the mediator between CSFs and operational performance. The finding of this study indicates that organizational factors, team factors and communication factors have strong and positive effect towards organizational performance through the mediating role of firm competitiveness. While production factors have positive but partial influence towards organizational performance through firm competitiveness. The reasons behind this is that production factors refers to production commitment, while organizational factors, team factors and communication factors are organizational management commitment. Which indicates that production factors is more effective towards financial performance rather than organizational performance. This finding is supported by the study by Mustafa and Jamaluddin, the study analyzed CSFs of 219 Malaysian manufacturing organization, indicates that the key factor is a combination of the ability of the project team to use right tools, innovation management and creativity in problem solving (Mustafa & Jamaluddin, 2017). While firm competitiveness as a mediator still shows a moderated effect between production factors and operational factors. Therefore, this finding provides an insight for clothing manufacturing SMEs that if they want to improve their firm competitiveness, it will be more effective to improve organizational management commitment rather than invest on production line. This finding is supported by Hermundsdottir's study that firm competitiveness is more on management commitment, including first mover advantage, new market opportunities, corporate reputation and firm efficiency (Hermundsdottir et al., 2021).

5.6 Limitation of Study

This study may provide contribution in improving firm competitiveness and operational performance. However, there are still limitations to this study. First is the number of sample size. This study was facing time constraint, which resulting in collect of only 104 completed questionnaires. This number of sample size is only slightly above the minimal sample size calculated through G*Power analysis. It will defiantly provide a better data analysis result with more appropriate sample size. Second, the questionnaire of this study did not collect data from all management level from target SMEs. The questionnaire fail to collect data from project director. This study can be more persuasive with more sample data from top management level. Lastly, this study focus on clothing manufacturing SMEs from China, in which, the finding of this study may only be applicable to clothing manufacturing SMEs in China.

5.7. Conclusion

This study works in the field of SMEs' operational performance from the perspective of critical success factors (organizational factors, team factors, communication factors, and production factors). This study also introduced firm competitiveness as a mediator between CSFs and organizational performance. The finding of study confirmed that there is strong and positive relationship from organizational factors, team factors and communication factors towards firm's operational performance through the mediating role of firm competitiveness. While this study also indicates that there is moderated mediating effect from production factors towards operational performance through firm competitiveness. Then, this study indicates that firm competitiveness has strong influence towards operational performance. This outcome supports further analysis in this study for firm competitiveness as a mediator between CSFs and operational performance. Lastly, this study conducted mediation analysis, which indicates that there is strong and positive mediating effect from organizational factors, team factors, communication factors towards operational performance through the mediating role of firm competitiveness. The hypothesis of this study, H1, H2, H3 and H5 are all being accepted. While H4, the mediating effect between production factors towards operational performance was being proved insignificant. Thus, H4 is rejected.

This study also provide some theoretical contribution. This study has extended the field of measuring

operational performance, in which contributes to a diversified approach to use firm competitiveness as a mediator in measuring firm's operational performance. This study also provide a few partial implications. The outcome of this study provide a mechanism on how to determine the which of the exact factors that influence operational performance. By that, clothing manufacturing SMEs will be able to improve their firm's operational performance by focusing on these critical success factors. Thus, by conducting this research, may help any SMEs understand the role and importance of firm competitiveness and operational performance, for them to stably survive through this competitive environment.

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Appendix A Questionnaire



UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ACCOUNTANCY AND MANAGEMENT

Dear Sir/Madam,

I am Huang Jingkai a candidate from Universiti Tunku Abdul Rahman. The purpose of this research is to investigate firm competitiveness. I would like to invite you to complete the attached survey, which will take approximately 20 minutes of your valuable time.

I would require a total of 200 respondents. Hence your participation is extremely important to the success of my study and will help organizations plan and improve better environmental performance. The data collected will provide useful information regarding firm competitiveness and firm performance. Hence, I would appreciate if you would answer all questions as honestly as possible.

All your responses are completely confidential. Results will only be reported in aggregated form and no individual participant will be identified in any way. The results of this research will be used for academic purposes only. Summary of the findings of this study will also be made available to all participants should you require it. Please return your completed questionnaires by July 20 and promptly mail the completed questionnaire back to me using the provided pre-stamped envelope.

Should you have any questions or require additional information regarding this study, please contact me at the number/email address listed below. Thank you for taking the time to assist me in my data collection.

Yours Sincerely,

Huang Jingkai

PhD candidate

H/P No: +8618802061504, +60129851504

Email: jessejkhuang@gmail.com

There are **THREE (3) sections** in this questionnaire. Please answer ALL questions in ALL sections. Thank you

SECTION A: Profile of Respondents

Gender

- Male
- Female

I. What is your age? (Broad range)

- 20-29
- 30-39
- 40-49
- Above 50

II. What is your highest education level?

- PhD/Master
- Bachelor
- Others

III. What is your position in the organization?

- Project director
- Project manager
- Team leader
- Employee

IV. How many years of working experience do you have?

- Less than 2 years.
- 2 to 5 years.
- 6 to 15 years.

- More than 15 years.

V. What is your company's yearly income fall under??

- Less than 1 million RMB.
- 3 to 5 million RMB.
- 6 to 10 million RMB.
- More than 10 million RMB.

SECTION B

(I) This section aims to determine the critical success factors in the firms. Please indicate the extent to which your firm has implemented the following actions by using the scale provided below.

Use a scale of 1 to 5 where: (IV1)

1	2	3	4	5
Not at all / Not applicable	Less extent	Moderate extent	Great extent	Very great extent

IV1

Organization Factors	1	2	3	4	5
The top-level management in my organization supports—employees with necessary information and resources.					
My organization have positive organizational culture (for example, encourage teamwork, flexibility)					
My organization have positive leadership style. (for example, encourages quality improvement, employee involvement, communication, and responsibility).					
My organization always have meticulous project planning, and strictly execute its plan.					
My organization explain vision and mission to employees and stick to its vision and mission throughout business process.					
My organization keeps on monitoring and controlling project process according to project plan.					
My organization has the flexibly in changing the management skills to adopt to different situation.					
Team Factors					
My team/department members are willing to contribute to product success and team commitment.					
My team/department encourages effective information sharing.					
My team/department leader encourages positive working attitude by introducing employee empowerment practices.					
My team/department leader encourages members to develop different characteristics to enhance team composition.					
My team/department leader encourages members to develop their professional expertise in their assigned task.					
My team/department leader encourages members to develop their general expertise to better adopt to diversified task.					

Communication Factors					
My organization encourages effective communication within the team.					
My organization consistently and publicly endorse team collaboration.					
My organization develops control and resolutions to deal with problems.					
My organization develop control and resolutions to deal with conflict among employees.					
All levels of management support collaboration process.					
All teams/departments will have benefited from collaboration process.					
My team/department leader set a clarified goal for team/department members.					
Production Factors					
My organization provide training for its employees.					
My organization keeps on track and managing the whole production process.					
My organization provides quality equipment and facility for production process.					
My organization have continuous improvement of on production process, for example, training, upgrade in equipment and tool.					
Firm Competitiveness					
My organization have first mover advantage in the market.					
My organization can find new market opportunities.					
My organization provide premium quality product					
My organization have improved efficiency.					
My organization have improved corporate reputation.					

SECTION C

(I) This section aims to determine the firm performance. Please indicate the extent to which your firm has implemented the following actions by using the scale provided below.

Use a scale of 1 to 5 where: (IV1)

1	2	3	4	5
Not at all / Not applicable	Less extent	Moderate extent	Great extent	Very great extent

Operational Performance					
My organization have outstanding product lines.					
My organization have improved capacity utilization.					
My organization have outstanding customer satisfaction.					
My organization can respond to market need in time.					