

THE IMPACT OF FOUNDERS' PERSONALITY TRAITS ON THE  
PERFORMANCE OF CHINESE APPAREL NEW VENTURES

---

A Dissertation Presented to  
The Faculty of the Graduate School  
At the University of Missouri

---

In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Philosophy

---

By

LI ZHAO

Dr. Jung Ha-Brookshire, Dissertation Supervisor

JULY, 2015

© Copyright by Li Zhao 2015

All Rights Reserved

The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

THE IMPACT OF FOUNDERS' PERSONALITY TRAITS ON THE PERFORMANCE OF CHINESE APPAREL NEW VENTURES

presented by Li Zhao, a candidate for the degree of doctor of philosophy, and hereby certify that, in their opinion, it is worthy of acceptance.

---

Dr. Jung Ha-Brookshire

---

Dr. Pamela Norum

---

Dr. Sarah Southworth

---

Dr. Tracy Kitchel

## ACKNOWLEDGMENTS

I wish to express my heartfelt thanks to my academic advisor, Dr. Jung Ha-Brookshire, for guiding me throughout the Ph.D. process. I appreciate your willingness to pour yourself into my personal development. You have made constructive criticisms and suggestions on my work and equipped me with the concepts and skills necessary to be a good researcher and educator.

I would like to express my sincere thanks to Dr. Pamela Norum, Dr. Sarah Southworth, and Dr. Tracy Kitchel. Each of you has been a key source of inspiration and guidance throughout the dissertation process, as well as during my time as a doctoral student.

I would like to thank my understanding husband Pejun. I sincerely appreciate your love and joy throughout this process. I am happy that we have experienced this process together. Also, my entire family, thank all of you for your support of my educational journey through the years.

I am also indebted to all my friends at the University of Missouri. Especially, my sincere thanks and appreciation go to all graduate students of the Textile and Apparel Management department for always encouraging me with the best wishes, thanks to my roommate Shendu Yang for a wonderful friendship, and to Xintong Li for providing insights on my research.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS .....	ii
LIST OF TABLES .....	v
LIST OF FIGURES .....	vii
CHAPTER 1. INTRODUCTION .....	1
Background of the Study.....	1
Purpose of the Study .....	8
Significance of the Study .....	8
Definitions of Key Terms.....	10
Guiding Paradigms and Research Assumptions.....	17
Organization of the Study .....	18
CHAPTER II: LITERATURE REVIEW .....	19
Theoretical Framework for the Study .....	19
Summary of Study Hypotheses .....	71
CHAPTER III: METHODS.....	73
Research Design.....	73
Research Instruments .....	74
Translation Test.....	86
Sample Selection.....	87

Data collection.....	87
Data Analysis Procedure .....	89
CHAPTER IV: RESULTS AND ANALYSIS .....	94
Descriptions of the Study Sample .....	94
Results Analysis and Hypothesis Testing .....	97
Summary of Hypotheses Tests .....	130
CHAPTER V. CONCLUSIONS .....	133
Overview of the Study.....	133
Contributions and Implications .....	136
Limitations and Scope of Future Research .....	142
REFERENCES .....	144
APPENDIX A.....	164
APPENDIX B. ....	172
APPENDIX C. ....	179
APPENDIX D. ....	183
APPENDIX E. ....	188
VITA.....	220

## LIST OF TABLES

Table	Page
Table 1. Other Definitions for Key Terms .....	16
Table 2. The Main Views of Firms' Network Definition .....	35
Table 3. Survey Constructs, Item Sources, and Cronbach's Alphas .....	87
Table 4. Demographic Characteristics of Participants.....	100
Table 5. Demographic Characteristics of Participants and their Companies.....	101
Table 6. Confirmatory Factor Analysis, Measurement Model, and Scale Reliabilities (Openness to Experience) .....	104
Table 7. Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (Openness to Experience) .....	107
Table 8. Confirmatory Factor Analysis, Measurement Model, and Scale Reliabilities (Emotional Stability).....	110
Table 9. Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (Emotional Stability).....	113
Table 10. Confirmatory Factor Analysis, Measurement Model, and Scale Reliabilities (Extraversion) .....	116
Table 11. Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (Extraversion).....	119
Table 12. Confirmatory Factor Analysis, Measurement Model, and Scale Reliabilities (Agreeableness).....	122
Table 13. Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (Agreeableness).....	125

Table 14. Confirmatory Factor Analysis, Measurement Model, and Scale Reliabilities (Conscientiousness) .....	128
Table 15. Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (Conscientiousness).....	131
Table 16. The Results of the Multiple Regression Analysis.....	134
Table 17. Summary of Hypotheses Tests .....	136



## LIST OF FIGURES

Figure	Page
Figure 1. Research conceptual model .....	21
Figure 2. The relationship between Chinese apparel new ventures' competitive advantages and Chinese apparel new venture performance .....	26
Figure 3. The relationships among the Chinese apparel new ventures' resources, Chinese apparel new ventures' competitive advantages, and Chinese apparel new venture performance. ....	28
Figure 4. The relationship between Chinese apparel new venture network relationship quality and competitive advantages .....	47
Figure 5. Revised research conceptual model for the founders' personality traits, Chinese apparel new ventures' competitive advantages and new venture performance. ....	49
Figure 6. Model for the hypothesis that openness to experience affects perceived Chinese apparel new venture performance .....	69
Figure 7. Model for the hypothesis that emotional stability affects perceived Chinese apparel new venture performance .....	71
Figure 8. Model for the hypothesis that extraversion affects perceived Chinese apparel new venture performance .....	73
Figure 9. Model for the hypothesis that agreeableness affects perceived Chinese apparel new venture performance .....	74
Figure 10. Model for the hypothesis that conscientiousness affects perceived Chinese apparel new venture performance .....	75

Figure 11. Visual portrayal of the results of the structural model analysis with openness to experience .....	106
Figure 12. Visual portrayal of the results of the structural model analysis with emotional stability.....	112
Figure 13. Visual portrayal of the results of the structural model analysis with extraversion.....	118
Figure 14. Visual portrayal of the results of the structural model analysis with agreeableness .....	124
Figure 15. Visual portrayal of the results of the structural model analysis with conscientiousness .....	130

## **CHAPTER 1. INTRODUCTION**

Chapter 1 contains the following sections: (a) background of the study, (b) purpose of the study, (c) significance of the study, (d) definition of key terms, (e) guiding paradigms and research assumptions, and (f) organization of the study.

### **Background of the Study**

#### **Chinese Apparel Industry**

In light of the unique market characteristics of the Chinese apparel industry, this study focuses on Chinese apparel new ventures. In December 1978, an economic open-door policy was launched by the Chinese Communist Party (Li, 2014). As a result of this policy, the Chinese apparel industry also started to reform. With the rapid development that has taken place during the 36 years since this policy began, the apparel industry is now a significant pillar of the nationwide economy. By the mid-2000s, China had become the world leader in apparel production and consumption (Fu, 2008).

This period of growth in the Chinese apparel industry was marked by three stages of development. In the initial stage (1979 to 1991), the apparel industry was under the jurisdiction of the state Department of Light Industry (Yuan, 2009). It was under the textiles division until November 1986. At that time, state-owned apparel manufacturers dominated in the industry and private apparel businesses accounted for only a very small portion (Fu, 2008). The quality of employees was very low, with almost no college graduates. However, some joint ventures started to implement advanced foreign technologies and management principles in the Chinese apparel industry. Supporting industries, such as fashion education and fashion media, appeared at that time (Fu, 2008). The Chinese apparel industry began to focus on exchanges and cooperation with international markets.

Given the economic conditions of that time, the relevant departments of government and industry associations played a very important role (Gu, 2002). For example, Wenying Wu, who was the minister of the National Department of Textiles, stressed the importance of innovation and brand. He emphasized that the education of fashion designers was the most important part of the development of the Chinese apparel industry. Under his leadership, the first domestic apparel professional college, the Beijing Institute of Fashion Technology, was set up at that time (Yuan, 2009). The Chinese apparel research and design center was also established. It conducted basic research in the apparel area and contributed important work to national apparel projects (Fu, 2008). In the 1990s, the first professional exhibition and domestic apparel magazines, named “China Apparel” and “Clothing Technology,” appeared (Yuan, 2009).

Second, during the middle stage (1991 to 2001), the Chinese apparel industry began to upgrade and move towards the world market (Fu, 2008). In the late 1980s, the Chinese apparel industry was marked by slow growth. After 1992, when Xiaoping Deng’s inspection tour in South China took place, more policy supports were offered for Chinese apparel brand development (Yuan, 2009). However, most Chinese apparel manufacturers were in existence for only a relatively short period of time and were small in size (Gu, 2002). As a result, there was still a significant disparity between the Chinese manufacturers and foreign apparel manufacturers in China, in both size and the degree of influence they were able to exercise in the marketplace (Chen & Shih, 2004). Meanwhile, some of the leading domestic apparel businesses started to create their own brands to compete against foreign brands (Fu, 2008).

For example, a well-known brand called “SHANSHAN” was the first to invite foreign experts to bring Corporate Identity Systems (CIS) to the company. This was considered a sign of the revolution of the new period of the Chinese apparel industry (Gu, 2002). More and more

domestic apparel brands considered branding, management, and the like. From 1993 to 2001, the government changed its leadership style as it pertains to the Chinese apparel industry from leading to serving. This change meant that the Chinese apparel industry had more freedom to develop and companies were encouraged to participate in highly competitive markets as much as possible (Yuan, 2009). By the end of the 20th Century, the market orientation of Chinese apparel companies became more mature.

Third, since 2001, when China became a member of the World Trade Organization (WTO), the growth of the Chinese apparel industry has been even more rapid. Participation in the WTO provided China greater access to the world as an apparel supplier as well as an importer. While content to be the world's largest apparel producer, Chinese apparel businesses today are trying to change the perception of products "Made in China" to "Created in China," seeking further opportunities as a strong brand incubator in the global marketplace (Chen & Shih, 2004). At the same time, they are also faced with a flood of foreign apparel brands that would like to tap into the market of affluent Chinese middle-class consumers.

There were several characteristics of the globalization of the Chinese apparel industry (Yuan, 2009). First, Western fashion media were widely accepted by Chinese apparel consumers. High fashion magazines such as "Harper's Bazaar" and "Vogue" began publishing in China in 2001 and 2005, respectively. This helped Chinese fashion trends synchronize with those of the world. Second, with the cultural exchange activities between China and Western countries, the cooperation among Chinese apparel companies, foreign designers, and professionals was also increasing throughout this time. Third, brand management patterns have become more diverse. More and more apparel companies are transitioning away from labor-intensive manufacturing to

an “Original Branding Manufacturing” (OBM) type of producer in the global market (Yuan, 2009).

In sum, several significant events and policies have promoted the Chinese textile and apparel industry development: (a) optimizing coordination between the textile and clothing sectors and other related industries; (b) upgrading the industrial structure to adjust and support apparel production; and (c) cancelling the use of clothing tickets.

A China apparel industry report (Sun, 2014) showed that during 2012-2013, the process of regulation of the Chinese apparel industry was continued, with enterprises focusing on destocking and production growing at a low rate. In 2012, China's apparel output was 26.728 billion pieces, up 6.2% from the previous year, while the growth rate declined by 1.94 %. In the first quarter of 2013, China's apparel output was 5.754 billion pieces, up 1.06%, and the growth rate fell by 6.89% year to year.

According to China's National Bureau of Statistics, during the first quarter of 2014, China's textile and apparel industry realized a total profit of 66.7 billion Yuan (or US\$11 billion), representing an increase of 10.9% since the first quarter of 2013 (Liu, 2014). There are over 50,000 apparel enterprises currently operating in China (China Connection, 2011). Over 90% of those are considered small- or medium-sized enterprises (SMEs) (Sina, 2008). However, these SMEs contribute less than 10% of the profit to the whole Chinese apparel industry (Sina, 2008).

Meanwhile, Chinese apparel consumers' consumption patterns and preferences have also evolved. Until 1983, Chinese consumers would need government-issued coupons if they wanted to buy clothing (Zhao, 2013). After the elimination of government coupons, there was a steep increase in Chinese consumers' apparel purchases. However, consumer psychology was very

immature and, therefore, the tendency to establish “blind conformity” was high among Chinese apparel consumers (Fu, 2008). Since the early 1990s, more and more Chinese apparel consumers have started to pay attention to brands rather than products themselves.

Chinese apparel consumers desire diversification and differentiation (Fu, 2008). Today, Chinese apparel consumers have access to the world’s fashion trends and markets through multiple channels and are able to choose whatever they want. A significant portion of Chinese apparel consumers prefer Western brands (Fu, 2008). They are willing to pay premium prices for these products, rather than purchasing domestic brands (Fu, 2008). By 2030, it is estimated that the population in China will reach 1.5 billion and will account for a large portion of world product consumption. High-income-level cities such as Shenzhen, Guangzhou, Shanghai, and Beijing have already been targeted by domestic and foreign retailers (Kwan, Yeung & Au, 2003). Increasingly, foreign companies with adequate investment and advanced technology have entered China to gain market share in the apparel sector as Chinese consumers’ purchasing levels keep growing (Kwan, Yeung & Au, 2003; Wang, Siu, & Hui, 2004).

Throughout these changes and developments, many new apparel ventures were born and perished as Chinese consumers’ demands and preferences changed. Therefore, it has been a huge challenge for apparel businesses to maintain a balance between fast growth and long-term survival (Gu, 2002). After all, over 80% of new apparel ventures were reported to have failed in the first five years after opening (China Connection, 2011).

### **New Ventures in the Chinese Apparel Industry**

During this period of growth in the Chinese apparel industry, numerous new ventures emerged. Schumpeter (1961) claimed new ventures provide a huge number of new employment opportunities, reduce inflation and accelerate industrial technology innovation and development.

New ventures create new wealth, thus becoming a powerful driving force behind national and local socio-economic development (Schumpeter, 1961). Since Birch's (1979) study on the contribution to job growth in the United States by firms with fewer than 100 employees, researchers have taken note of the importance of small and new ventures for a region's economic health. On the basis of this study, Kirchoff and Phillips (1988) established that new businesses with under 500 employees across industries dominate job creation in the United States. Further, they found that net firm formation positively correlates to overall economic activity for both the United States and the United Kingdom for the periods studied. New venture creation has also been shown to correct inefficiencies (Kirzner, 1985), and solve an incentive problem that plagues employees of large organizations (Shane, 2000).

New ventures are also significant drivers of growth. Especially for developing countries such as China in the transition from central planning, the partial marketization depend on on the rapid growth of the non-state sector (Feng, 2008). According to a Global Entrepreneurship Monitor report (2013), which monitors more than 60 countries and regions of the world, the number of Chinese new ventures has ranked second in the world in 2013. Meng (2013) points out that new ventures play a key role in Chinese economic development. They are a driving force of innovation and increase employment opportunities. Today, two-thirds of apparel output in the Chinese apparel industry is produced by small- and medium-sized enterprises (SMEs). Most of these SMEs in the Chinese apparel industry are new ventures, playing an important role in both promoting economic development and maintaining social order (Feng, 2008).

However, new ventures have a low survival rate and many fail in the early stages (Shirokova & Shatalov, 2010). Studies have shown that about 50% of new ventures survive about a year and a half, and less than 30% survive more than six years (Van de Ven, Hudson, &



Schroeder, 1984). The average business life of Chinese high technology new ventures is 2.6 years (Wang, 2001). In the Chinese apparel industry, approximately 80% of new ventures are reported to have failed within the first five years of company establishment (Chinatown Connection, 2011).

The reasons for the high mortality of new ventures are manifold. As Stinchcombe (1965) declared, the high mortality rate is rooted in the liability of newness. Disadvantages faced by new ventures include the higher costs of learning new skills, the lower the quality of the new product or service, the lack of a stable relationship with partners, and the lack of legitimacy in the marketplace (Hannan & Freeman, 1984). More common causes behind the high failure rates are small-firm scale, difficulties in obtaining profits of scale benefits, the lack of stable external network relationships, insufficient corporate reputation, and so on.

Despite the importance of apparel new ventures in China, research is limited on analyzing factors impacting apparel new venture performance during the initial stage of business statements in the Chinese apparel industry. Most research about new ventures in China focuses on technology-related industries, which have different characteristics from the apparel industry. Past studies have investigated many factors that may not apply to Chinese apparel new ventures.

Most recently, after interviewing founders of apparel new ventures in China, Zhao and Ha-Brookshire (2014) found that, in the Chinese apparel industry, specifically, the founders' unique personality traits and their firms' network relationships are key reasons for their success. In fact, one of the participants stated that the founders are the "souls" of the new venture (Zhao & Ha-Brookshire, 2014). As a prominent cultural phenomenon in China, the term "relationship" ("guanxi" in Chinese), refers to a mixture of both personal relationships and public relationships that affects all individual and organizational lives in China (Yum, 1988). In the context of new

ventures, founders are critical for building external relationships, and their personality traits play an important role in forming network relationships and, in turn, affecting new venture performance (Ostgaard & Birley, 1994). However, limited research exists on the role of the founders' personality traits and firm network relationships in the success rates of apparel new ventures in China.

### **Purpose of the Study**

With the gap in the new venture literature within the Chinese apparel industry context, this research investigated the relationships among founders' personality traits, firm network relationships, and new venture performance in the Chinese apparel industry. Particularly, by using the Big Five factors of personality, this research was designed to examine the different impacts of five factors on Chinese apparel new ventures through their influence on the quality of external network relationships at the firm level, which are critical to the success of Chinese apparel new ventures during the initial stage of business.

### **Significance of the Study**

The study investigated how founders' personality traits and firm network relationships may affect new venture performance in the Chinese apparel context. Due to the highly competitive and hyper-dynamic development paths of the Chinese apparel industry and Chinese apparel consumption behavior, it was deemed important to understand what aspects of founders' personality traits might be important to start up and maintain a successful new apparel business in China. Also, with the unique cultural background of Chinese society, how firm network relationships could affect new venture performance was thought to be an important question to ask.

On the basis of the resource-based theory of the firm, the research findings were expected to show how critical a resource the founders' personality traits and firm network relationship

would be for Chinese apparel new venture performance. The findings show how founders' personality traits and firm network relationships could be key for Chinese apparel new ventures to survive and even thrive during the initial stage of business development.

Second, the study findings were expected to provide further evidence of the importance of the relationship between founders' personality traits and the quality of a firm's network relationships and, in turn, the impact on Chinese apparel new venture success. It would also provide empirical evidence that can be used by founders and potential founders to learn more about the influences of personality traits as an important factor in new venture performance. In addition, the findings may help people who are interested in starting new ventures in the Chinese apparel industry manage external network relationships that are critical for new venture success.

Third, the research findings would improve academic understanding of the Chinese apparel industry. It has been reported that students of the industry have a strong interest in starting their own businesses after graduation (Li et al., 2013). Also, there are over 50,000 new ventures seeking qualified employees in the Chinese apparel industry (Li et al., 2013). Therefore, educating today's students to be an effective workforce for apparel new ventures is critical. The study findings can help shape apparel-related curricula to provide relevant knowledge and skill sets so that graduates can be successful in their new venture careers.

Finally, supply chain partners could utilize these findings to make appropriate strategies for improving relationships with Chinese apparel new ventures to cope with the critical business challenges of globalization and collaboration.

## **Definitions of Key Terms**

### **Definition of New Ventures**

A new venture is defined as “the end result of the process of creating and organizing a new business that develops, produces, and markets products or services to satisfy unmet market needs for the purposes of profit and growth” (Sandberg, 1986).

The term “new venture” was analyzed through various approaches in the literature. Gruber (2004) summarized several characteristics of new ventures including newness, small size, and inherent uncertainty in business. Stinchcombe (1965) stated that new ventures face various liabilities of newness that are considerable. Compared to mature firms, these liabilities lead to higher failure rates among new firms. The challenge for new ventures is to define their new roles, tasks, and exchange relationships, which are associated with costly time, temporary inefficiency, worry, and conflict. A majority of new ventures begin as relatively small business with only a handful of employees (Yu, 2012). Although some new ventures are able to acquire venture capital, most of them operate with limited financial resources. Lack of resources makes it even harder for small businesses to survive in the highly competitive business environment. In addition, new ventures also face the risk, or opportunity, of uncertainty. Such uncertainty is unavoidable and comes with both challenges and opportunities (Yu, 2012).

Scholars define the age of new ventures as being from one to eight years (Lussier, 1995, Yli-Renko, Autio, Sapienza, 2001). Many new ventures fail in the early stages (Shirokova & Shatalov, 2010). In the United States, researchers found that only 50% of new ventures survive the first year and a half (Van de Ven, Hudson, & Schroeder, 1984). Similarly, only 55% of small businesses in the United Kingdom survive the first four years (Saridakis Mole, & Storey, 2008). In Australia, Watson and Everett (1996) also found that approximately 50% of startups failed by

their fifth year. In China, approximately 80% of apparel new ventures are reported to have failed within the first five years of company establishment (Chinatown Connection, 2011). Today, approximately 50,000 fashion enterprises operate in China (Chinatown Connection, 2011). If the 80% failure rate is correct, it can be assumed that over 200,000 fashion enterprises have failed within the first five years of establishment in recent years.

Given the extremely high rate of failure within the first five years of establishment in both China and Western countries, this study defines new ventures as businesses established for five years or less. The next section discusses differences and similarities between new ventures, entrepreneurs, and small businesses.

### **New ventures vs. entrepreneurs**

There are various definitions of entrepreneurship in the literature. The most common definition of entrepreneurship has become a central argument within the study of these businesses. Entrepreneurs were defined by Schumpeter (1965) as individuals who exploit market opportunity through technical and/or organizational innovation. Stevenson (2000) proposed that the common working definition of entrepreneurship is “the pursuit of opportunity beyond the resources you currently control.” In 2001, Meyer gave a much broader definition of entrepreneurship, which he defined as a scholarly field that “seeks to understand how opportunities to bring into existence ‘future’ goods and services are discovered, created and exploited, by whom, and with what consequences.”

These three definitions are different in terms of bias and orientation. The first two definitions focus on individual behavior in pursuing opportunity and give a strategic orientation. The latter relates to creative activities applied toward an organizational orientation and focuses on the social consequences of those actions. To clarify this distinction, some define

entrepreneurship as the startup stage of a company (Cooper, Dunkelberg, Woo, & Dennis, 1990; Bhave, 1994) in light of Schumpeter's (1942) force of creative destruction. In the opposite view, entrepreneurship is not necessarily tied to newly formed firms. The process of innovation and the making of new combinations are defined as entrepreneurial and its instigator is an entrepreneur (Stopford & Badenfuller, 1994). From this view, the sub-field of mature firm entrepreneurship emerged. Stopford and Badenfuller (1994) use entrepreneurship to refer to mature corporations instead of new ventures in the journal article "Creating Corporate Entrepreneurship."

In this light, entrepreneurship can be understood as a broader concept of which new ventures could be a subset. That is, creating new ventures is similar to entrepreneurship in terms of seeking opportunities and resources. However, a new venture could be different from entrepreneurship in that the former only refers to a start-up business, while entrepreneurship could be found in mature companies as well. Therefore, in this study, the term new venture is used to explain "the end result of the process of creating and organizing a new business that develops, produces, and markets products or services to satisfy unmet market needs for the purposes of profit and growth with an entrepreneurial approach" (Sandberg, 1986).

#### **New venture vs. small business**

Small size is an important characteristics of new ventures (Gruber, 2004). The U.S. Small Business Administration (SBA) uses a definition of "small business" that classifies firm size relative to each industry sector. Two size standards has been used widely to define small businesses (US SBA, 2014). First, for most manufacturing and mining industries, a maximum is 500 employees. Second, for many non-manufacturing industries, average annual revenues is less than \$7.5 million (US SBA, 2014). However, there are several exceptions. The definition may be too inclusive for many research purposes. Various criteria are used by different researchers for

deciding what a small business is. Cochran (1981) stated that these criteria should include total dollar value of business, relative size in an industry, number of employees, value of products, annual sales or total income, net worth, or the combined any of these. Compared to a large-size company, a small business is likely to encounter abnormal situation and gaps in required skills due to disadvantages related to lower diversity-related knowledge base or skills. Several empirical research confirmed that smallness has the negative relationship with survival rates (Gruber, 2004).

In China, according to the definition used by the Ministry of Industry and Information Technology (MIIT), various criteria are used for different industries. A business with fewer than 50 employees can be considered a small business in the Chinese apparel industry (MIIT, 2011). Private SMEs have significant contributions to the developing economy such as China. They represent about 99% of all enterprises (MIIT, 2011). Output value and all sales revenues account for 60% and 57% respectively, and tax revenues account for 40% (MIIT, 2011). During the process of SMEs' productivity and success, entrepreneurial competencies play a critical role (Rasmussen, Mosey, & Wright, 2011). In China, more and more SME centers established to create a more coherent and effective synergy for supporting SMEs (Ouyang & Fu, 2012).

In the Chinese apparel industry, two-thirds of apparel output is produced by SMEs (Feng, 2008). Most of these SMEs in the Chinese apparel industry are new ventures that have been established less than five years. They play an important role in both promoting economic development and maintaining social order (Feng, 2008). Although new ventures could also be large in other industries, the typical Chinese apparel new ventures are small businesses. According to China SME (2014), typical apparel new ventures are established as small businesses, such as tailor shops with a few employees and limited values, or small apparel

manufacturing companies under original equipment manufacturing contracts with fewer than 50 sewing workers. Therefore, it can be said that typical Chinese apparel new ventures are small businesses.

In sum, in this study, new venture refers to “the end result of the process of creating and organizing a new business that develops, produces, and markets products or services to satisfy unmet market needs for the purposes of profit and growth (Sandberg, 1986)”, which is a subset of entrepreneurship and whose majority is small in size. Therefore, the characteristics of entrepreneurship and small business can be adapted to the new venture setting.

### **Definitions for Other Key Terms**

Other definitions for key terms used throughout this text are provided in Table 1.



Table 1:

*Other Definitions for Key Terms*

Key Terms	Definitions
New Venture Performance	Business performance measured in terms of how founders perceive the degree to which their firms have achieved their goals based on a comparison with their perceived major competitors (Murphy, Trailer, & Hill, 1996).
Founder(s)	The person or persons responsible for setting up/establishing and currently managing the new venture (McGee, Dowling & Meggison, 1995; Mintzberg & Waters, 1982; Kimberly, 1980).
Personality	Individual's different characteristic in complex psychological functioning such as feeling, thinking, striving and behaving (Kazdin, 2000).
Personality Traits	Descriptions of enduring personal characteristics shown in a particular pattern that are varying across circumstances, situations, and events (Fleeson, 2001)
Personality Trait 1: Openness to Experience	Characteristics of someone who is open to new experiences and ideas and who is a creative thinker and always looking for ways to do things better (Costa & McCrae, 1992; McCrae, 1987).
Personality Trait 2: Neuroticism	The representation of someone who is tend to be nervous and anxious, individual differences in adjustment and emotional stability (Costa & McCrae, 1992.)
Personality Trait 3: Extraversion	The description of someone who is warm, assertive, dominant, energetic, active, talkative, and enthusiastic (Costa & McCrae, 1992).

Table 1 (Continued)

---

Personality Trait 4: Agreeableness	The assessment of one's interpersonal orientation, someone who is kind, dependable, trusting, forgiving, caring, altruistic, and gullible (Costa & McCrae, 1992).
Personality Trait 5: Conscientiousness	The indication of someone who has a high degree of organization, high level of discipline, persistence, hard work, and motivation in the pursuit of goal accomplishment (Costa & McCrae, 1992).
Firm External Network	"A firm's set of relationships, both horizontal and vertical, with other organizations—be they suppliers, customers, competitors, or other entities" (Zaheer, Gulati, & Nohria, 2000: p. 203).
Quality of Relationship	The common cognitive appraisal of a relationship that is subjective, and the intangible benefits of enhancing the trust and commitment necessary to maintaining a long-term relationship (Liu & Yao, 2005).

---

## **Guiding Paradigms and Research Assumptions**

Understanding phenomena and making sense of reality is the critical work of researchers. Since reality appears complex, dynamic, unique, and mostly obscure, guiding paradigms and assumptions are important for researchers to employ in order to explore and interpret reality (Jaccard & Jacoby, 2010). Two guiding paradigms used in this research are (a) structuralism and (b) critical realism.

The first guiding paradigm that underlies this research is that of structuralism, which focuses on discovering how people think rather than what people think (Jaccard & Jacoby, 2010). The researcher assumes that under the surface structure of phenomena, a deeper underlying structure can be found that represents a set of organizing principles (Jaccard & Jacoby, 2010). From the structuralist perspective, the potential role of both conscious and unconscious factors should be considered and matters should be thought of in binary or dialectical terms, focusing on opposites and contrasts (Jaccard & Jacoby, 2010). This study aims to discover the relationships among founders' personalities, firm external network relationships, and competitive advantages and new venture performance. By following the first guiding paradigm, it is assumed that there will be an underlying structure to assist in understanding how new venture performance will be affected by founders' personality traits through a firm's external network relationships.

The second guiding paradigm of this study is critical realism. From this standpoint, reality is indeed seen through human conceptions of it. The empirical world reverts back to support or reject human conceptions (Jaccard & Jacoby, 2010). Researchers following critical realism assume that reality exists and they try to know about reality through questions and data collection (Jaccard & Jacoby, 2010). In this study, several hypotheses will be proposed based on

resource-based theory, and data will be collected to support or reject the hypotheses. Through this approach, the research will investigate what is happening in the present society (Jaccard & Jacoby, 2010).

### **Organization of the Study**

This dissertation is divided into five chapters. Chapter 1 presents background of the study, purpose of the study, and significance of the study, as well as key terms, guiding paradigms and research assumptions, research context, and organization of the study. Chapter 2 provides a literature review of the theoretical framework for the study, and new venture performance is described. Research gaps and research hypotheses are proposed along with a conceptual model. Chapter 3 presents the research methods, including the research design and survey development, sample data collection procedures, and data analysis techniques. Chapter 4 details the results of data collection, including the demographic characteristics of the study's sample, scale reliabilities, and finally, SEM analyses and post-hoc analysis. In conclusion, Chapter 5 summarizes the study with discussions of the major findings, contributions and implications, along with limitations and future research opportunities.

## **CHAPTER II: LITERATURE REVIEW**

The literature review section includes the following: (a) theoretical frameworks for study; (b) measuring new venture performance; (c) firm network relationships and new venture performance; (d) founders and new venture performance; and (e) research hypotheses summary.

### **Theoretical Framework for the Study**

#### **Conceptual Model of This Study**

This research employs the resource-based theory to understand how founders' personality traits and the quality of firm external network relationships impact Chinese apparel new venture performance. Figure 1 shows the research conceptual model for the founders' personality traits, quality of firm network relationships, competitive advantages, and Chinese apparel new ventures performance. The conceptual model was developed backward to elaborate the relationships among variables within the resource-based theory of the firm framework. Following sections explain each part of this conceptual model in detail.

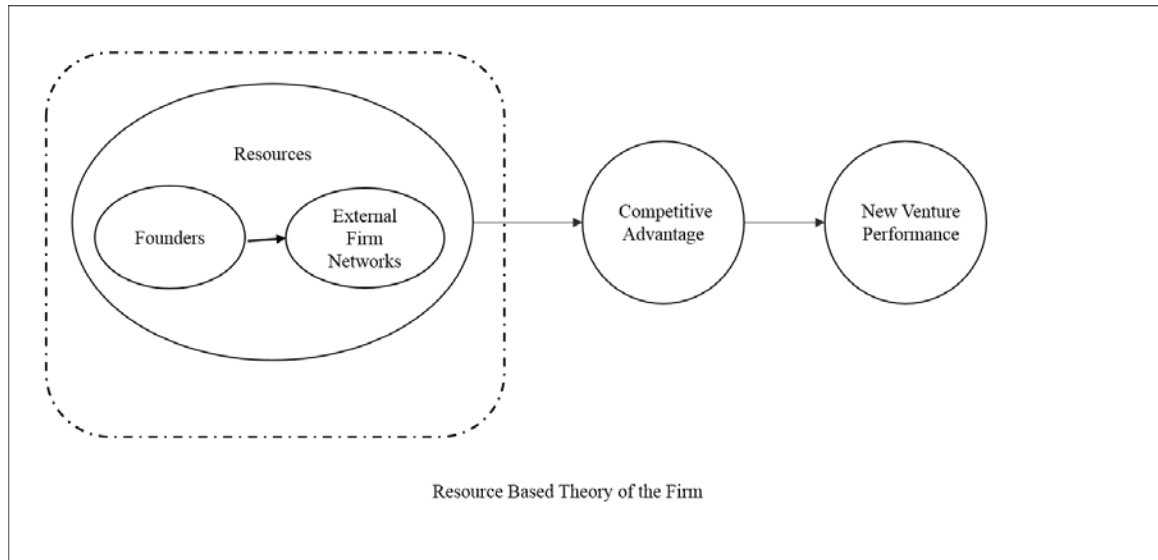


Figure 1: Research conceptual model

### Resource-Based Theory of the Firm

The resource-based theory of the firm by Barney (1991) explains that a firm is configured by various sets of unique, costly-to-copy, and rare resources that the firm possesses. These resources would help the firm gain a competitive advantage and, in turn, superior performance. This theory explains what the sources of a firm's competitive advantage are and why certain firms produce different levels of performance from others. Firm resources are formally defined as all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness. These resources are thought to create and add value directly and/or indirectly to a firm's competitive advantage by obtaining strategic competence, such as cost advantage or differentiation advantage in an industry (Porter, 1981; Wright & McMahan, 1992).

In the new venture performance context, Caves (1980) proposed that new venture resources are the sum of all kinds of tangible and intangible resources in the whole process of starting up firms in order to achieve the business goal. Tangible resources refer to a firm's

properties that have physical existence. A tangible resource is one that you can reach out and touch (Osborne, 2014). Meanwhile, Hall (1993) divided the intangible resources into two different dimensions—assets and skills. He said that a firm’s assets include the intellectual property rights of patents, trademarks, copyrights and registered designs, as well as contracts, trade secrets and databases. Skills refer to the know-how of employees, and the collective attributes that add up to organizational culture. More recently, Grande, Madsen and Borch (2011) summarized that new venture resources refer to all sorts of materials, energy, and information invested and utilized in new venture startups’ processes. Financial means and investments (e.g., financial resources, nongovernmental financial support, research and development investments) and intellectual property (e.g., patent protection, licensing) are considered important factors under new venture internal resources (Song, Podoyntsyna, Van Der Bij, & Halman., 2008).

Despite the significant growth in recent new venture development in China, only a few studies have looked into these new ventures’ resources that are fundamental to influencing their performance. For example, Yu (2012) argued that Chinese new ventures must have financial resources, human resources, management resources, information resources, technological resources, and policy resources because these resources all have direct positive effects on their performance.

In the Chinese apparel industry, resources can be considered from several aspects: capital, management, talent, technology, policy, information, relationships, etc. (Cao, Berkeley & Finlay, 2014). For example, Cao, Berkeley and Finlay (2014) pointed out that stable quality control is a common and essential requirement for the company to survive in the competitive market, and skilled workers in particular are required in the current apparel manufacturing sector because of the shortage of skilled workers combined with growing labor costs. Similarly, for

Chinese apparel new ventures, the proliferation of homogenous products with similar inputs required them to have unique products and differentiated brand positioning in order to succeed (Zhao & Ha-Brookshire, 2014). Human resources, information resources, and other resources are all considered important to companies for achieving competitive advantages (Yu, 2007).

### **New ventures' competitive advantages**

In order to investigate how these new ventures could be successful, the concept of sustainable competitive advantage has received much academic attention and has become well established in the literature (Barney, 1991; Porter & Millar, 1985). A firm has a competitive advantage when it has unique resources and capabilities that are rare, not able to for other competitors to be implemented, and it is can provide a competitive offer to the market to its customers than rival offers (Barney, 1991). According to the resource-based view of the firm (RBV), a competitive advantage is defined as the benefits a firm gains “when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors” (Barney, 1991, p.102). When the value-creating strategy is copied by other firms, the competitive advantage dies away. Otherwise, it can be considered as a sustained competitive advantage (Barney, 1991). Therefore, from the RBV perspective, whether a competitive advantage is sustained depends upon the possibility of competitive duplication.

In the apparel industry, a firm is also rewarded with a sustainable competitive advantage when it offers uniqueness or value. For example, Aharoni (1993) suggests that competitive advantage can be achieved if a firm is able to be “different” (p. 31), which means offering a unique product or branding strategy in the apparel industry context. Porter (1981) proposed that cost leadership is another type of competitive advantage that can be achieved by establishing the



position of being the low-cost producer, or producing a product unique enough to be valued by a significant portion of the target market in the apparel industry.

Similarly, as Hall (1993) emphasized, the consistent production of products and delivery systems that can match the key buying criteria of the majority of the target costumers leads to firms' competitive advantages. Small businesses, especially, which are the main portion of apparel companies, can take advantage of their smallness and adopt this strategy. Further, they can increase their chances of success by carefully and narrowly defining the target market that they are trying to serve. This statement was consistent with the main findings from Zhao and Ha-Brookshire's (2014) research of Chinese apparel new ventures.

The Chinese apparel industry is now facing big challenges from global competitors such as India, Turkey, Bangladesh, and Vietnam. Nowadays, due to the rising domestic labor costs and overproduction of homogenous products, Chinese apparel industry gradually lost competitive advantages in the labor-intensive and non-brand manufacturing sector (Cao, Berkeley & Finlay, 2014). In the Chinese apparel new venture context, achieving sustained competitive advantages in branding or technology leads to encourage diversity products with higher value-added and have own brand innovation (Gereffi, 1996; Bair & Gereffi, 2003). Zhao and Ha-Brookshire (2014) also found that Chinese apparel new ventures described unique products, differentiated brand positioning, founders' traits and leadership as important factors for their competitive advantages, in turn, yielding successful apparel new ventures.

### **New venture performance**

In new venture research, there have been several endeavors aimed at defining new venture performance. However, clearly defining new venture performance is still a challenging task. New ventures that obtain and sustain competitive advantages can enhance their business

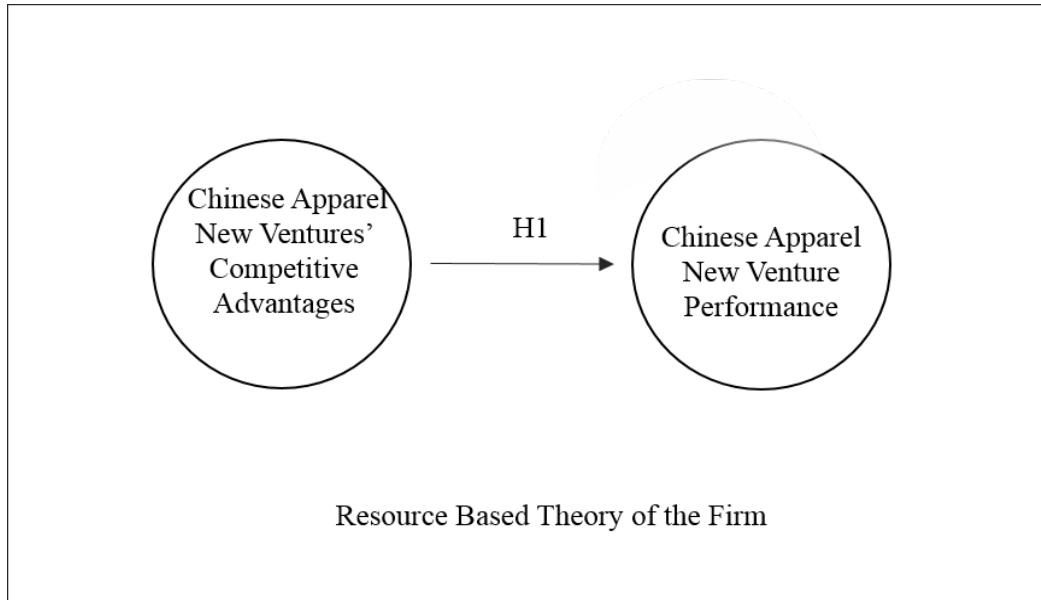
performance. A review of the literature shows that the purpose of strategic competitive planning activity in the firm is to achieve a sustainable competitive advantage and thereby enhance a business's performance (Porter & Millar, 1985; Coyne, 1986). A firm is rewarded with a sustainable competitive advantage when it offers uniqueness and/or value and, in turn, achieves better performance. Kunkel (1991) has adopted the evaluation of competitive advantages on new venture performance research. He states that new ventures would gain sustained competitive advantages through unique characteristics and positively affect new venture performance. More explanations and elaborations about factors influencing new venture performance are presented in the following sections in this chapter.

### **The relationships among new venture resources, competitive advantages and new venture performance**

As summarized above, it is important to investigate how firm resources help to achieve competitive advantages and, in turn, influence new venture performance.

A competitive advantage is defined as the benefits a firm gains "when it is implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors" (Barney, 1991, p. 99). For example, it is found that competitive advantages are direct antecedents of Chinese export firm performance (Zou, Fang, & Zhao, 2003). In the Chinese apparel industry, for example, industry clusters acted as a successful factor assisting Chinese textile and apparel companies obtain better performance (Zhang, To, & Cao, 2004). Similarly, Zhao and Ha-Brookshire (2014) found that various competitive advantages played the key role for Chinese apparel new venture success. Therefore, this relationship is expected to be present in Chinese apparel new ventures in this study (see Figure 2). It is hypothesized that:

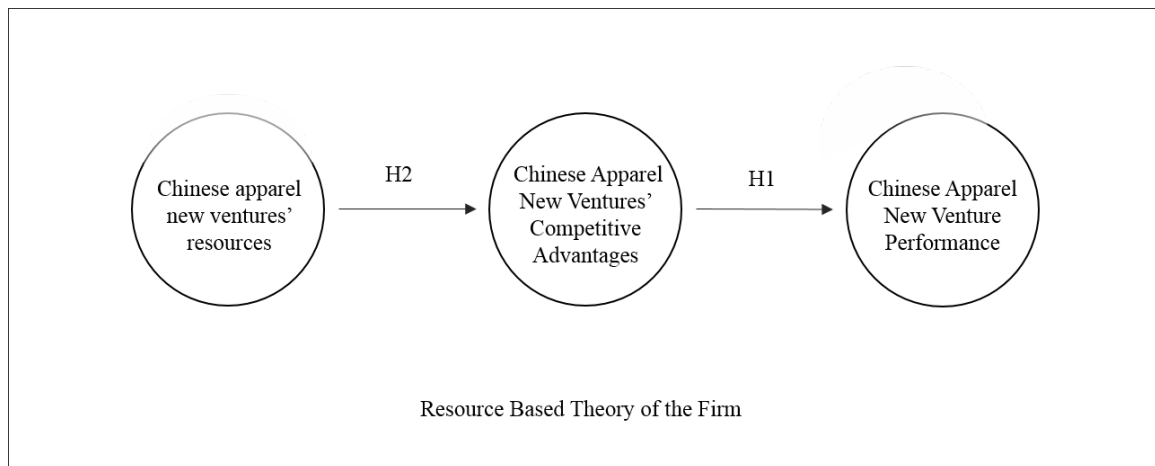
**Hypothesis 1:** Chinese apparel new ventures' competitive advantages positively affect Chinese apparel new venture performance.



*Figure 2:* The relationship between Chinese apparel new ventures' competitive advantages and Chinese apparel new venture performance

The resource-based theory of the firm by Barney (1991) explains that a firm is configured by various sets of unique, costly-to-copy, and rare resources that the firm possesses. These resources would help gain a competitive advantage, which would influence firm performance. This theory explains what the important sources of a firm's competitive advantage are. Competitive advantage occurs when a firm acquires or develops an attribute or combination of attributes that are valuable, rare among a firm's current and potential completion, and be imperfectly imitable, thus enhancing a business's performance. These attributes can include access to resources. In the Chinese apparel new venture context, unique products, differentiated brand positioning, intellectual designers, information of new trends, and the rest can help to achieve competitive advantages as firm resources (Zhao & Ha-Brookshire, 2014; Yu, 2007).

From a resource-based view, Figure 3 shows a conceptual model for the Chinese apparel new ventures' resources, Chinese apparel new ventures' competitive advantages, and Chinese apparel new venture performance. In the following sections, various resources that could influence new venture performance through achieving competitive advantages are discussed.



*Figure 3:* The relationships among Chinese apparel new ventures' resources, Chinese apparel new ventures' competitive advantages, and Chinese apparel new venture performance.

### **Measuring New Venture Performance**

Usually, the performance of organizations have measured through tangible assets that can be given a monetary value, such as fiscal outcomes (Day, 1994). However, there are more important factors to consider when assessing firm performance (Barney, 1991). Ambler and Kokkinaki (1997) also claimed that a firm's success could involve more than simple financial measures, as each firm may have different goals and objectives. Looking at it from different perspectives one may view new venture performance in different ways. Different time frames may have different dominant problems and different criteria for measuring performance.

Defining new venture performance is difficult and, therefore, it should be viewed as a multidimensional construct and measured by using multiple indicators (Lumpkin & Dess, 1996; Murphy, Trailer & Hill, 1996). As Lumpkin and Dess (1996) claimed, "research that only

considers a single dimension or a narrow range of the performance construct ... may result in misleading descriptive and normative theory building" (p. 153).

After investigating the resource-based view of theoretical perspectives on the determinants of new venture performance adopted in the literature, the factors that play important roles in new venture performance are discussed in the following sections.

### **Factors influencing new venture performance**

In the new venture research field, though research on new ventures is increasing, there is as yet no single dominant perspective in dealing with the determinants of new venture performance. Cooper (1993) argued that the diversity of performance determinants made for some difficulties in maintaining consistency across new venture studies. Moreover, many researchers were criticized for their conventional research practices of selecting factors for which information was easily collected (Wiklund, 1999). Hence, a useful starting point is to identify and classify the dominant perspectives in new venture studies. In this section, the existing new venture performance-related research is reviewed and summarized. By looking for the breakthrough point of the existing research, the main factors influencing new venture performance of this study were proposed.

In 1986, Sandberg proposed that the performance of a venture is a consequence of the combination of multiple factors that include (a) entrepreneurs, (b) venture strategy, and (c) industry structure. It means that entrepreneurs (founders), strategy (business domains), and structural positions within an industry are crucial determinants for venture performance. However, Chrisman, Bauerschmidt and Hofer (1998) argued that Sandberg's venture-performance model is incomplete because the model does not fully take into consideration the roles of resources and organizational structures/processes/systems, which should be considered

direct contributors to venture performance. In addition, Bamford (1997) summarized four research streams of venture performance by adopting Gartner's (1985) new venture creation framework: individual-process-environments-organization. These elements refer to (a) the entrepreneurs, (b) the structure of the external environments, (c) the strategy pursued, and (d) the resource employed. Also, Mcgrath, Venkataraman and MacMillan (1994) proposed another set of five different determinants for venture performance. They were (a) causal insights into the future, (b) founding-team capability, (c) resource combination, (d) distinctive competencies (resources and capabilities), and (e) competitive advantage.

Box, White and Barr (1993) conducted a survey of new manufacturing firms that yielded significant support for hypothesized relationships among psychological differences, background characteristics, and scanning behavior of the owner/founder and firm performance. Chandler and Hanks (1998) used a sample of 102 manufacturing and service firms between three and seven years of age and found that founders with strong background experience are tend to establish new businesses that survive and thrive with less financial capital than their less-experienced counterparts. In addition, large numbers of researchers have developed various studies from different perspectives: incubator organizations (Cooper, 1993), founding team, strategies, and environment (Eisenhardt & Schoonhoven, 1990), initial human resource and financial resource (Cooper, Gimeno-Gascon, & Woo., 1994), new venture networking (Coviello & Munro, 1995), incremental innovation (Banbury & Mitchell, 1995), cooperative strategy (McGee, Dowling, & Megginson., 1995), industrial structure (Robinson, 1999), the relationship between technology strategy and new venture performance moderated by competitive environment (Zahra & Bogner, 2000), entry strategy (Bamford, Dean, & McDougall, 2000), entry barriers (Robinson & McDougall, 2001), strategic alliances (Park, Chen, & Gallagher, 2002), geographical clusters

(Folta et al., 2006), and so on. It is clear that the majority of existing research focuses on the resources perspective including human resource, and founder's characteristics as human resource, financial resource, technology resource and external resource. Other perspectives are also involved such as strategy, industrial background, organizational structure and so on (Gilbert, McDougall, & Audretsch, 2006).

Meanwhile, in the Chinese new venture literature, the resource-based perspective is also considered an important viewpoint from which to analyze new venture performance (Yu, 2007; Liu & Wang, 2007; Meng, 2003). For example, based on RBV, Meng's (2013) research used the relationships among the leadership behavior of founders, organizational learning capabilities and competitive advantages of new ventures to explain Chinese new venture performance. Yu (2007) conducted an empirical analysis on the data from 276 Chinese high-technology new ventures and constructed a comprehensive framework with resource-based theory and social network theory to find the mechanism behind the influence of new venture performance. In the Chinese apparel new venture context, using resource-based theory, Zhao and Ha-Brookshire (2014) explored the secrets of Chinese apparel new ventures' success and proposed that, among tangible and intangible resources, founders and external relationships were the key resources impacting Chinese apparel new venture performance. Feng (2008) also emphasized that founders' capabilities and experience are strongly related to Chinese apparel new venture performance. In addition, researchers have done several studies to show external partners such as consumers, suppliers and distributors significantly affect Chinese apparel new venture performance (Zhao & Aram, 1995; Yu, 2007). Therefore, in this study, the founders and the firm networks are viewed as key determinants of Chinese apparel new ventures' high performance.

## **Firm network relationship and new ventures performance**

### ***Firm network as a key resource from the resource-based theory of the firm***

From resource-based theory, firms' external networks, especially for new ventures, are important resources for firms' success, as has been confirmed by many scholars (Bao, 2004; Dong, 2000; Coviello & Munro, 1995; Zhao & Aram, 1995; Hansen, 1995). When organizations face the uncertainty of resource exchange and an external competitive environment, in order to stabilize the input and output of the organizations they tend to establish various connections with key resource providers in the external network (Salancik & Pfeffer, 1978). Especially in the information and Internet age, or the era of the knowledge economy, firms obtain more external resources and achieve excellent performance under low levels of risk through the effective use of various strategic network relations, and this has become more and more important for the development of a modern business strategy (Bao, 2004). Successful firms take advantage of sharing their network resources and utilizing combined skills and tacit knowledge, creating "knowledge spillovers" (Ahuja, 2000). In addition, networks may be viewed as a gateway for exploring external opportunities or as an interface between firm-specific constraints and outside alternatives that may help relieve the constraints (Yu, 2012).

For new ventures, resources required during the startup process are scarce and embedded in the various kinds of internal and external networks of founders or found teams (Ostgaard & Birley, 1996). Baum, Calabrese, & Silverman. (2000) conducted an empirical study and showed that small and medium new venture performance can be increased by establishing strategic alliances with external networks, even including competitors. Moreover, new ventures can leverage existing internal resources to maximize external network resources. For example, Coviello and Munro (1997) found that new ventures in the high technology industry use external



networks to gain access to international markets. Park and Luo (2001) conducted a 400-company survey in China and found that new ventures are more inclined to use external network resources to conduct their businesses. They also found a positive relationship between a firm's capacity for using external networks and new venture performance. Therefore, external network resources were found to play an important role in new ventures' success (Park & Luo, 2001).

In addition, Yu (2007) pointed out that, in China, the objectives of firm network resources for new ventures are government administration offices, suppliers, research and training institutions, partner suppliers, competitors, advisors, and other organizations or individuals. He further explained a different member in the external network may create different values for new ventures. Government administrative offices might give new ventures political support. Partner suppliers could exchange tacit knowledge to solve common problems. Similarly, market advisors can provide new information about market demand and help address market acceptance problems (Yu, 2007).

### ***Defining a firm's external network***

A firm's external network is defined as its "set of relationships, both horizontal and vertical, with other organizations—be they suppliers, customers, competitors, or other entities" (Gulati, Nohria & Zaheer, 2000: p. 203). For example, Johanson and Mattson (1987) contend that underlying the building of a network relationship is the presence of a professional division of work among parties. Jarillo (1988) considers that underlying the building of a network relationship is the presence of common interests among parties. Uzzi (1997) believes that underlying the network relationship building is the trust among parties. In terms of motivation, most scholars have a consistent view that the establishment of a network of business

relationships is intended to achieve a firm's goals through information sharing and resource complementarity.

Focusing on external network analysis turns attention to relationships between new ventures and others that provide the resources that are important for establishing a new business (Johannisson, 1988; Larson, 1991). Through this network, partners could share information, share access to complementary resources and capabilities, sell products and services, and support the normal operation of the organization. Table 2 illustrates the main views regarding the definition of a firms' network.

Table 2:

*The Main Views on Firms' Network Definition*

Authors, year	Main views
Mitchell (1969)	The joint relationship among the group members.
Williamson (1979)	The presence of the establishments of market trade and organizational hierarchy such as contract, trust and authorization between two independent organizations.
Johanson and Mattson (1987)	Based on the professional division of labor, in order to better access resources, maintain a competitive and complementary relationship, and have stable development, the members of the group rely on each other and build a good and harmonious relationship.
Jarillo (1988)	To get competitive advantages compared with competitors, firms build planned, long-term and stable relationships with external organizations or individuals which are interest-related.
Uzzi (1997)	In order to achieve high quality information transfer and sharing effectively, relationships are built based on trust and the embeddedness of interaction.
Powell (1987)	Transaction relationships between firms and external networks are built based on common interests and the prestige as the guarantee, without formal organization constraints.

***Firms' networks in China***

In China, firms' external networks mainly refer to social networks, also called "guanxi," which are particularly important for any type of business success. Deeply embedded from the collectivist cultural background, "knowing the right people" is one of the keys for success (Zhuang, Xi, & Tsang, 2010). Guanxi, as a central idea in Chinese society, describes the basic dynamic in personalized influence on social network. It has a major influence on the management of businesses based in China (Zhuang, Xi, & Tsang, 2010). Guanxi relationships support high levels of personal trust and are associated with higher levels of firm performance in

China. New venture investors often rely on guanxi to reduce the many uncertainties they face in this business environment and to improve their business decisions (Zhuang, Xi, & Tsang, 2010).

In order to understand how guanxi facilitates new venture performance, it is important first to clarify the meaning of the term “guanxi” in China by referring to the concept of social networks in the West. The social network theory addresses a dynamic process by which a firm obtains, reaches, shares, or creates a bundle of valuable resources through its outside networks (Ahuja, 2000). In Western social network theory, relationships are viewed in terms of nodes and ties; the nodes refer to the individuals within a network, and ties refer to the relationships between the individuals (Granovetter, 1973, 1983, 2005). Social networks in the form of collaborations are used by businesses to gain access to up-to-date technology and market information (Wonglimpiyarat, 2007); they are also useful in knowledge transfer (Obstfeld, 2005; Reagans & McEvily, 2003).

By summarizing the Western and Chinese literature, in new venture context, personal networks and business networks refer to founders’ networks and new venture networks in this study, respectively. In this light, according to the turbulent and complex society context in China, the definition of a firm’s network is “expanded to include not only a firm’s but also the founder’s set of relationships, both horizontal and vertical, with other organizations—be they suppliers, customers, competitors, or other entities” (Gulati et al., 2000: p. 203).

Guanxi has already been used as an example of social networks in studies of Chinese managers and new ventures (Ko & Butler, 2007). It is loosely used to refer to social connections that provide information, and in a narrower sense, it can be used to refer to social exchanges that involve mutual obligation and reciprocity (that is, strong ties) (Woo, Wilson & Liu, 2001). With guanxi, individuals’ social resources are used to develop and maintain social connection

network, sustaining the relationship established between individuals in business transactions (Carlisle & Flynn, 2005). For insiders of such a network, guanxi can be an effective tool to enhance business performance or to achieve other aims (Szeto, Wright, & Cheng, 2006).

Therefore, from a resource-based view of the firm, guanxi acts as a source of competitive advantage for firms in China (Zou & Gao, 2007). It is the responsibility of top managers to develop their firm's capacity to build and maintain a guanxi network, which works at both the business level and the personal level to help the firm capitalize on opportunities and control risks (Xia, Qiu, & Zafar, 2007). A firm's response capability allows it to develop strategic processes by adapting its resources to a purpose. This ability can be obtained using an external guanxi network in tandem with internal resource integration (Liu & Yao, 2005). Guanxi networks can also increase a firm's ability to enhance resource allocation efficiency and help make strategic decisions (Sumelius, 2009). Transaction costs caused by environmental uncertainties are lower when the guanxi network is well developed than when it is less so (Standifird & Marshall, 2000). A well-developed guanxi network appears to be the key to making important market information available to a company.

In China's modern business settings, social network resources are considered extremely useful for better information sharing, better access to complementary resources and capabilities, increased sales of products and services, and so on. More specifically, establishing both formal and informal contracts, communicating with each other within the supply chain, building trust, and coordinating with external bodies are among the key examples of today's social network resources in China (Zhuang, Xi, & Tsang, 2010).

Moreover, social network resource is a critical factor to Chinese apparel new ventures. According to Ahlstrom and Bruton (2006), guanxi network connections among new ventures

may play a greater role in helping them navigate and respond to the external uncertainties and changes in emerging economies. Through *guanxi*, new ventures could have partially substitutes for relatively weak formal institutions, such as the market for corporate control and the rule of law (Butler, Brown, & Chamornmarn, 2003), and by offering some protection from government interference (Peng, 2003).

Two sets of networks were necessary for new business establishment in China (Peng, 2003). First, professional networks with supply chain members such as suppliers, buyers, retailers, major clients, or customers that help new ventures create stable and reliable outsourcing relationships, and reduce the risk of buyer switching (Peng, 2013). Second, maintaining a good relationship with government is more important for starting a new business in China. By establishing networks with governmental officials and regulators, new ventures will be able to get assistances in reducing uncertainties with market challenges (Peng, 2013). *Guanxi* is an efficient mechanism to facilitate economic exchanges and to overcome administrative interventions by the Chinese government (Zou & Gao, 2007).

For Chinese apparel new ventures, various external networks also influence their performance. For example, suppliers can provide high-quality and low-cost fabric. A consulting company can help train sales assistants. The Ministry of Commerce can give political support, such as tax immunity for the first three years. The shopping mall can provide a better store location with more traffic flow (Forza & Vinelli, 1997). It is necessary to pay attention to the relationships of networks in order to better achieve information sharing, access to complementary resources and capabilities, product sales goals and so on. Establishing the contract, communicating with each other, trust, and coordination with external bodies are very important for Chinese apparel new venture development (Forza & Vinelli, 1997). Therefore,

firms' network relationships, which also refers to guanxi in Chinese, is an important factor for new venture performance.

### **The quality of relationship as a key factor in a firm's network**

#### ***The definition of the quality of relationship***

In order to explain how firms' network relationships influence Chinese apparel new venture performance, the quality of firm network relationships was brought to this study. The definition of the quality of a relationship was first formally proposed by Crosby, Evans, and Cowles (1990). Thereafter, Morgan and Hunt (1994), Mohr and Spekman (1994), Lee and Kim (1999), and many other scholars have studied the quality of the relationship. In Crosby, Evans, and Cowles's (1990) study, they found that because of the complexity of insurance services, it always takes a long time to feel the effects of the service quality. Before accepting the service, insufficient information, high uncertainty, and perceived risk might lead customers to postpone or abandon their purchase decisions. At this point, if salespeople could establish a good relationship with customers through a series of activities, they may earn their trust and make customers feel they are worthy of their confidence. It can significantly reduce the customer's perceived uncertainty and risks and thereby contribute to the final purchase decision. In addition, a high quality of relationship could also increase the chance of repeat purchases. Therefore, Crosby, Evans, and Cowles (1990) first proposed that relationship quality is the indicator that best reflects the degree of trust and satisfaction in relationships among different parties. Their research shows that the quality of the relationship between the salesperson and the customer is an important factor in impacting sales effectiveness and anticipation of future interaction. The similarity, service domain expertise, and relational selling behavior are important factors affecting the quality of the relationship.

Morgan and Hunt (1994) conducted a survey to analyze the relationships among 204 automobile tire manufacturers and their dealers. Through the analysis and comparison of direct and indirect models, they explored the relationships among “relationship termination costs, relationship benefits, shared values, communication, opportunistic behavior, relationship commitment, and trust” in a total of seven independent variables, and “acquiescence, propensity to leave, cooperation, functional conflict, and uncertainty” in a total of five dependent variables. They found that relationship commitment and trust are mediating other independent variables and dependent variables. They proposed the commitment–trust theory and the key mediating variable (KMV) model. The relationship commitment and trust combination is called relationship quality, to reflect the nature of the relationship between buyers and suppliers.

Lee and Kim (1999) paid attention to how to build effective partnerships in information systems (IS) outsourcing. They found partnership quality is a strong predictor of outsourcing success. Based on a social perspective, they propose a theoretical framework for outsourcing partnerships. The impact of partnership quality on outsourcing success was investigated in their study. Hypotheses on partnership quality were tested for 74 outsourcing relationships between 36 service receivers and 54 service providers. It was found that participation, communication, information sharing, and top management support have positive influences on the quality of the relationship. Meanwhile, age of relationship and mutual dependency were confirmed to negatively influence on the quality of the relationship.

Mohr and Spekman (1994) distributed 124 surveys to understand characteristics associated with partnership success. They hypothesized that “partnership attributes, communication behavior, and conflict resolution techniques” are related to “indicators of partnership success (satisfaction and sales volume in the relationship)”. The hypotheses were



tested with “vertical partnerships between manufacturers and dealers”. Results indicated that the major characteristics of partnership success are: “partnership attributes of commitment, coordination, and trust; communication quality and participation; and the conflict resolution technique of joint problem solving”. The findings provide understanding on how these relationships could be better managed to access success. In their study, partnership attributes were used to describe relationship quality.

Many researchers have made reference to the Crosby, Evans, and Cowles (1990) point of view, combined with factors and developed their own type of relationships. For example, Crosby, Evans, and Cowles (1990) distinguished the single transaction from the long-term relationship. In their view, customer is tend to rely on the salesperson’s integrity and trust the salesperson if his or her past performance has been consistently satisfactory. Liljander and Strandvik (1995), based on customer perception characteristics, gave a detailed definition of relationship quality after comparing cognitive evaluation, customers perceived service and some internal or external quality standards. Thus, Liljander and Strandvik’s (1995) definition of relationship quality fully inherited Crosby, Evans, and Cowles (1990).’s definition. Their research framework provided the foundation for later research (Liu & Yao, 2005).

Based on the definitions given by these scholars, the relationship quality, in fact, reflects the evaluation of the interactions among all business partners (Crosby, Evans, & Cowles, 1990; Gemuenden, 1997), the resulting psychological feelings (Crosby, Evans, & Cowles, 1990; Liljander & Strandvik, 1995), and the subjective views regarding the future development of the relationship (Crosby, Evans, & Cowles, 1990; Gummesson, 1987). It thus has an important impact on the relationship effectiveness and performance (Levitt, 1986).

Given that this study looks at relationship quality in new ventures, it adopts the definition of quality of relationship from the organizational behavior literature. In this study, relationship quality refers to the common cognitive appraisal given by relationship subjects in the startup process (Yu, 2007). It also refers to the intangible benefits of enhancing trust and commitment, and maintaining long-term relationships (Liu & Yao, 2005). Relationship quality reflects the intensity of information sharing, communication quality, long-term orientation, and satisfaction with the relationship between new ventures and their supply chain partners.

### ***Dimensions of a quality relationship***

In research by Levitt (1987) and Dwyer, Schurr, & Oh (1987) about the evolution of relationships between suppliers and buyers, they pointed out that the mutual commitment, satisfaction, and minimum opportunistic tendencies impact the establishment, functioning, and sustainable development of the relationship. However, only analyzing how the single factors influence the quality of relationships was not sufficient. Instead, a comprehensive consideration should be carried out. Most scholars believe that relationship quality is a high order, including multi-dimensional variables (Crosby, Evans, & Cowles, 1990; Naudé & Buttle, 2000; Walter, Muller, Helfert, & Ritter, 2003). This study proposes a multi-dimensional assessment of relationship quality in a new venture context. Based on a study on export firms by Lages<sup>a</sup>, Lages<sup>b</sup>, and Lages<sup>c</sup> (2005) and Yu's (2007) study on Chinese new ventures, this research considers there are four dimensions that can be used in the Chinese apparel new venture context: (a) amount of information sharing in the relationship, (b) communication quality of the relationship, (c) long-term relationship orientation, and (d) satisfaction with the relationship.

### *Amount of information sharing*

Cannon and Homburg's (2001) study stated that the amount or frequency of information sharing, which refers to how long and how often the partners openly enter into contact with each other, is very important in a buyer-supplier context (Farace, Monge, & Russell, 1977). For new ventures, especially in the Chinese apparel industry, sharing confidential information, discussing strategic issues, or conducting frequent conversations with supply chain members can strengthen relationships (Cannon & Homburg, 2001). By receiving information, partners may more easily predict a new venture's future plans and adapt its own strategy to incur lower costs. It could help to reduce the risk of uncertainties and to make use of the information more effectively (Cannon & Homburg, 2001).

### *Communication quality of the relationship*

A major problem among relationship parties is communication difficulties (Mohr & Nevin, 1990). Communication is not only a process for people to exchange information, but for them to decipher each other's codes. The two-way process in communication help people to achieve shared understanding (Duncan & Moriarty, 1998). Especially in China, communication features vary in different provinces or areas. If the wrong channel was picked or codes were misunderstood in communication, the quality of the relationship would be negatively impacted (Yu, 2007).

Communication can be considered the most important element in successful inter-firm exchange, as "the most carefully designed relationship will crumble without good, frequent communication" (Bleeke & Ernst, 1993, p. 14). It was found that highly interactive firms usually invested both managerial and financial resources to maintain and develop communication networks with their supply chain partners. In order to have strong relationships and better

performance, firms might want to consider these communication networks as key and beneficial resources (Calantone & Schatzel, 2000). Conversely, ineffective communication may lead to conflict due to misinterpretation and reciprocal dissatisfaction (Etgar, 1979).

#### *Long-term relationship orientation*

Long-term relationships that indicate the potential for cooperation, goal sharing and risk sharing with supply chain members could offer important sustainable competitive advantages to firms (Ganesan, 1994). All parties will tend to expect that their own performance is dependent on the performance of the relationship, and thus, in addition to benefiting their own results, the relationship will result in joint benefits. Hence, Ganesan (1994) defines long-term relationship orientation as the perception of mutual dependence that joint relationship outcomes are towards future rewards. Relationships based on a long-term orientation allow new ventures to sacrifice short-term gains and develop a long-term relationship with partners, in terms of long-run profitability and maintenance of the relationship, long-term goals and long-run concessions. It's opposite pole, a short-term-oriented relationship, firms are concerned with achieving future goals and with both present and future outcomes instead of only current period opportunities and outcomes (Ganesan, 1994).

#### *Satisfaction with the relationship*

Satisfaction with the relationship is defined as the “cognitive and affective evaluation based on personal experience across all [...] episodes within the relationship” during past interactions with the firm (Roberts, Varki, & Brodie., 2003, p. 175). Satisfaction with the relationship is considered a key dimension of relationship quality because it has been confirmed that more satisfied buyers have higher quality relationships with suppliers. For example, the manufacturer's role performance has a positive impact on dealer satisfaction with manufacturer

(Frazier, 1983). If a channel member contributes largely to the other member's goals, the second member will consequently be more satisfied with the overall relationship with the first (Kumar, Stern, & Achrol, 1992). Chinese apparel new ventures were expected to have similar perceptions regarding supply chain partners—that they tend to be more knowledgeable about the roles of new ventures and more perceptive about the quality of the relationship.

In sum, information sharing, communication, long-term relationships, and satisfaction with the relationship are all important dimensions of relationship quality. In addition, there are strong interactions among these elements that can reinforce the effect of the quality of relationship. According to Monczka, Callahan, & Nichols's (1995) study, they appear all high performance or all low performance which means they are with high and low together. It is demonstrated that these dimensions can form a higher order variable indicates the quality of relationship (Anderson & Narus, 1). In this study, the four dimensions were combined to measure one construct, which is the quality of firm network relationships.

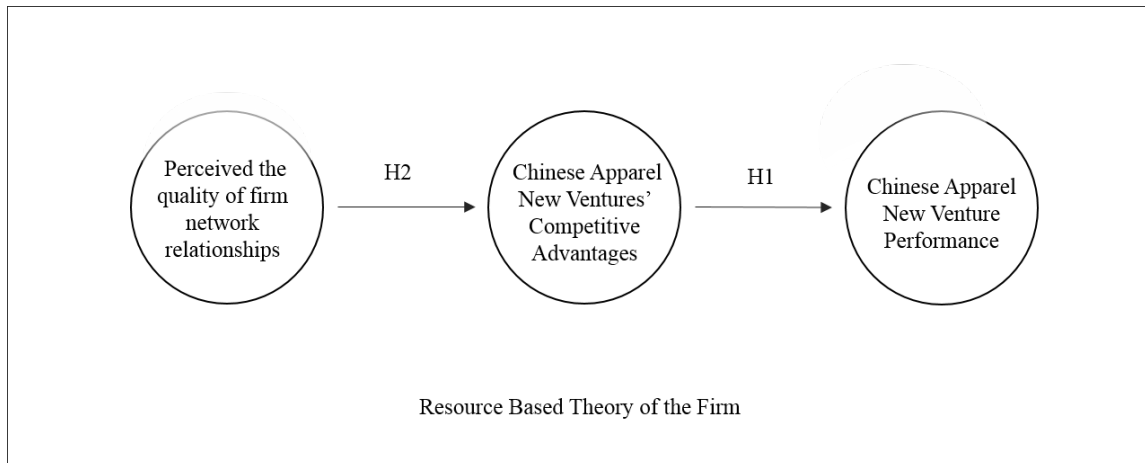
### **The relationship between Chinese apparel new venture network relationship quality and competitive advantages**

The resource-based theory of the firm by Barney (1991) explains that a firm is configured by various sets of unique, costly-to-copy, and rare resources that the firm possesses. These resources would help a firm gain a competitive advantage. This theory explains what the important sources of a firm's competitive advantage are. Competitive advantage occurs when an organization acquires or develops an attribute or combination of attributes that allows it to outperform its competitors. These attributes can include access to resources. In the new venture context, for example, access to highly trained and skilled personnel and high quality social network resources can be key to a firm's competitive advantages. This is consistent with social

network theory, which argues competitive advantage may be achieved by external social network resources.

Mohr and Spekman (1994) stated that the formation of partnerships between firms is becoming an increasingly common way for firms to find and maintain a competitive advantage. In China, according to *guanxi*, external networks are suggested to be even more important for new ventures' competitive advantages than in any other cultures. Tsang (1998) discussed the economic value of *guanxi* and pointed out that *guanxi* is a source of sustained competitive advantage for doing business in China. The apparel industry has a low barrier of entry and lots of competitors with relatively similar design and production skills compared to other industries (Zhao, 2008). Therefore, high quality of external network relationships can be even more important for new ventures' performance in the apparel industry. Therefore, it is hypothesized that:

**Hypothesis 2:** The perceived quality of firms' network relationships positively affect Chinese apparel new ventures' competitive advantages (Figure 4).



*Figure 4:* The relationship between Chinese apparel new venture network relationship quality and competitive advantages

## **Founders and new venture performance**

Among many different factors that may affect new venture competitive advantages and performance, the role of the founders on firm success has been discussed extensively. Founders are involved in the creation and growth of the company and play an important role on new venture success (Wasserman, 2006). Founders' skills and efforts to run their own businesses could heavily affect changing conditions, innovation of products and services, creation of jobs, and sales growth (Erken, Donselaar, & Thurik, 2008; Van Praag & Versloot, 2007).

The relationship between personal characteristics and venture performance has also received substantial research attention (Begley & Boyd, 1987; Duchesneau & Gartner, 1990). Empirical studies on founders' personality traits have outnumbered studies of almost any other kind (Churchill & Lewis, 1986). Both practitioners and academic scholars seem to believe that founder played the most important role on new venture success than on any other factor (Lee & Tsang, 2001). Through 16 interviews with Chinese apparel new ventures, Zhao and Ha-Brookshire (2014) also give strong evidence that founders play an important role in new venture success.

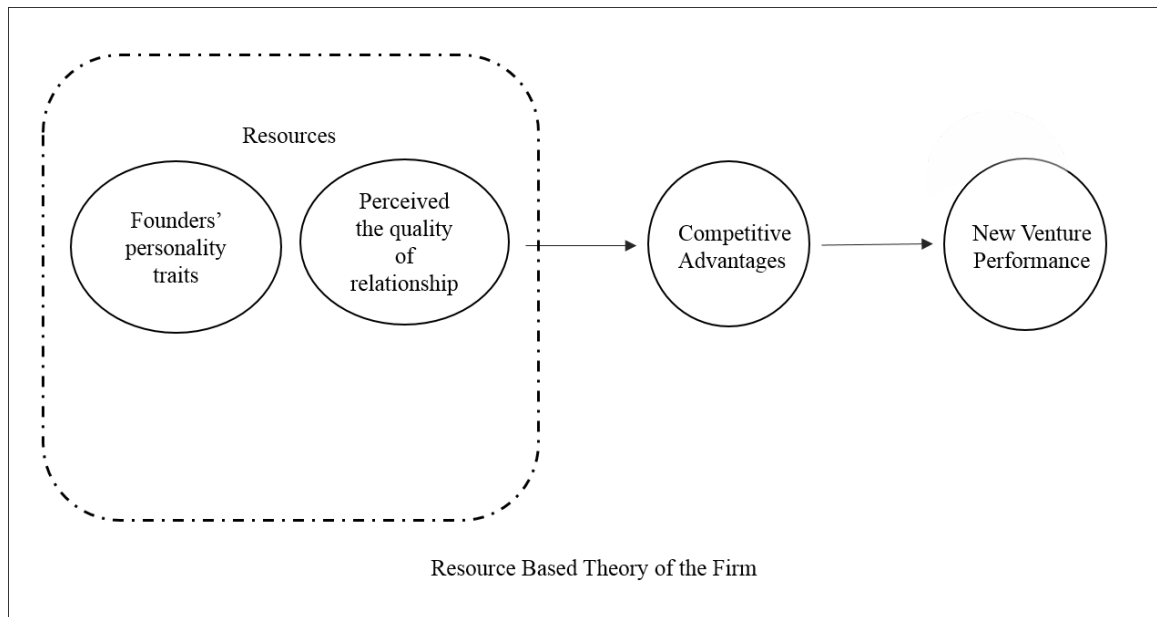
### ***Founder as a key resource in the resource-based theory of the firm***

From the resource-based view of the firm, a founder's contribution could be considered an important resource related to structure, strategy, and new venture performance (Nelson, 1998). Hall (1993) has investigated more behavioral aspects of a firm's resources, within the resource-based view, distinguishing between tangible and intangible resources. Sanchez et al. (1996) have distinguished assets, capabilities, and competencies—component types of resources that are theorized to be increasingly intangible and increasingly more likely to be processes rather than entities. Penrose (1959) categorizes human and physical assets while Barney (1991)

identifies capital, human, and organizational resources. Moreover, Mahoney and Pandian (1992) helpfully describe application of the framework in organizational economics, industrial organization analysis, and strategy.

In this light, as founders launch and grow their start-up companies, they can be treated as intangible resources. They make decisions that influence the types and amount of resources they will or will not be able to acquire for their startups (Romanelli, 1989). Founders who “take an aggressive posture toward resource acquisition” (Romanelli, 1989, p. 375) and succeed at attracting resources should be able to grow more valuable startups (Eisenhardt & Schoonhoven, 1990). Therefore, successful new venture firms require the founders to be able to acquire and manage special resources that competitors may not be able to access or possess easily. On this basis, the conceptual research model of this study can be revised as shown in Figure 5.

Figure 5: Revised research conceptual model for the founders’ personality traits, Chinese apparel



new ventures’ competitive advantages and new venture performance.

***Defining firm founders***



There are several research articles in the field of management pertaining specifically to founders' influence on firms. However, even though some of these research efforts paid attention to the importance of founders, they did not distinguish the role of founders in founding teams (Eisenhardt & Bourgeois, 1988; Eisenhardt, 1989; Roure & Maidique, 1986). There is also limited explanation for how the definition of firm founders was operationalized in empirical research. Without defining the term founder clearly, it is difficult to assume that researchers know who and what founders are. Furthermore, without a definition for founder, exploring the impact of founders on new ventures would be unclear (Eisenhardt, 1989).

Exploring founders' characteristics as an independent variable is the first step in defining the term "founder." Jo and Lee (1996) studied Korean venture founders and the value of education and experience. Cooper, Gimeno-Gascon, and Woo's 1994 study of initial human and financial capital for new ventures determined a relationship between founders' experience and education and firm success. Box, White and Barr (1993) presented a contingency model of performance and "owner/founder" characteristics. The latter found founder's age has a positive association in dynamic environments, and a negative association with the founder's age in stable environments.

In all these studies the term founder is used, but not clearly defined. Daily and Dalton's (1992) stated purpose is to compare "founder-managed" and "professionally managed" firms. They determine no disadvantage to the firm when founders remain as firm leaders over time. Their definition of founder is problematic for this research, however. "Founder-managed" firms, as used in the 1992 study, were young firms. The CEOs of these firms may or may not have been firm creators. Founders in the sense of firm creators can also be long-tenured members of management, but no empirical articles of this class of managers could be located. Case study

research by Mintzberg and Waters (1982) and Kimberly (1980) examined individual founder entrepreneurs such as Walton, Gates, Woolworth, Carnegie, etc. For this study, then, it was necessary to develop a definition of founder. In the context of this research, the working definition of the founder is the person or persons responsible for setting up/establishing and currently managing the new venture.

### **The founder characteristic-based perspective**

The founder characteristic-based perspective was widely discussed in the literature. Earlier research focused on determining the individual factors (e.g., psychological and personality) of the founders that have effects on new venture performance (Cooper & Bruno, 1977).

Though some of the influencing factors on new venture performance identified from various aspects have been adopted in new venture studies, the founder characteristic-based perspective has tended to examine the founders as the major resource of new venture development. For example, Langowitz and Allen (2010) empirically test the managerial differences between founders and non-founders as chief executive officers and found that founder CEOs were more likely to have a proactive disposition, which directly affects new venture performance. Duchesneau and Gartner (1990) compared founders from 13 successful and 13 less successful new firms in the United States. The results of both quantitative and qualitative analyses showed that successful founders were more likely to (a) have been raised by entrepreneurial parents, (b) have had a broader business background and more prior startup experience, (c) seek to reduce risk in their businesses, and (d) believe that they had less control over their success.

In line with most prior research (Cooper & Bruno, 1977; Duchesneau & Gartner, 1990; Van de Ven, Hudson, & Schroeder, 1984), in spite of the objections above, the characteristics of the founders do seem to matter. Inputs of the founders during the entrepreneurial process represent the resources for competence that increase productivity and profits of the firms. Higher productivity means that the founders are more efficient in organizing and managing the production process or are able to attract more customers and new capital from investors. The founders may also have greater knowledge of how to start a business successfully and be better able to get relevant information. Particularly in the early stages of new venture development, as Churchill and Muzyka (1994) observed, an individual is often the dominant leader and a management team often becomes a key part of the success as the venture grows.

The implication from previous studies is that the founders' characteristics are important but not enough to explain how founders affect new venture performance. These characteristics must be combined with other variables to model the determinants of new venture performance. Therefore, personal traits of founders are discussed next.

### **Personal traits of founders**

Personality traits may be conceived of as descriptions of individual's different characteristic in complex psychological functioning such as feeling, thinking, striving and behaving (Kazdin, 2000). To be simple defined, it is how people describe themselves. Correlating personality measures with entrepreneurial behavior (foundation decision) and behavior results (success of the enterprise) should be straightforward. For example, compared to people low on openness, it was found someone who has a higher level open to new experience tend to establish a private business or access and obtain new resources. In addition, it is expected that someone who has a higher score on conscientiousness will be more successful when

establish small business than people low on conscientiousness (Kazdin, 2000). . All these assumptions lead us to investigate how personal traits of founders influence new venture performance.

Personality traits may be conceptualized as complex, genetically co-determined psycho-physiological structures that create and regulate the individual ways of experience and action (Nicolaou & Shane, 2009). In this light, traits are viewed as causes of mental and behavioral processes (John, Naumann & Soto, 2008). Schumpeter (1961) regarded founders as bearers of “creative destruction” in the stream of economic life. This study sought individual differences or distinctiveness, in terms of psychological traits, with normative implications from founders (Bull & Willard, 1993; Van DeVan, 1993). The trait approach contributed to understanding of the entrepreneurial process to a great extent.

#### ***Five-factor model of personality traits (FFM)***

John, Angleitner and Ostendorf (1988) argued that personality psychology needs a descriptive model or taxonomy of its subject matter. Instead of examining separately the thousands of particular attributes that make human beings individual and unique, an appropriate taxonomy permits researchers to study specific domains of personality characteristics in personality psychology. A generally accepted taxonomy greatly facilitates the accumulation and communication of empirical findings by offering a standard vocabulary (John et al., 1988). Robertson and Callinan (1998) argued that although there are various different approaches have identified by psychologists, the trait factor-analytic theory is the only one approach which has had a significant impact on the field of industrial and organizational psychology. Through factor analysis, this approach built the fundamental blocks of personality.

A personality trait provides a person with a predisposition to behave a certain way, and collections of personality traits are organized in a structured hierarchy (Robertson & Callinan, 1998). Big Five model is known as a significant degree of convergence has taken place within trait factor-analytic psychology. In business-related research, Big Five factors of personality traits are used to explain several research views. For example, Zhai et al. (2013) examined the effect of the Big Five factors of personality traits on job satisfaction and subjective wellbeing in China and found a significant relationship among them. Tao (2013) tested relationships between employees' Big Five factors of personality traits and personal network performance. The research results reveal that conscientiousness and extraversion in Big Five factors are good predictors for personal network performance. Yan, Chen and Miao (2013) conducted research about the relationship of the Big Five factor model of personality traits and leadership effectiveness. Lau's (2002) research adopted the Big Five model for developing and validating the entrepreneurial career success scale and testing its antecedents and consequences in the context of Southeast Asian values. The Big Five model is widely used and is still very popular in current related research.

The five factors in the model are conscientiousness, extraversion, emotional stability, agreeableness, and openness to experience. The next section discusses each of these factors in more depth.

#### *Openness to experience*

Openness to experience characteristics of someone who is open to new experiences and ideas and who is a creative thinker and always looking for ways to do things better (Costa & McCrae, 1992; McCrae, 1987). People with high scores on open to experience are intellectually curious, open to emotion, sensitive to beauty and willing to try new things. Compared to closed

people, they are more creative and more aware of their feelings. In the opposite pole, closed people tend to be more conservative, traditional, and resistant to change (McCrae, 1987).

In addition, the personality trait of openness to experience has been found to be an important characteristic of successful founders (Schmitt-Rodermund, 2001). Empirical research also confirms the odds of being a founder tend to be associated with high openness to experience (Zhao & Seibert, 2006). For example, during the stage of business establishment, founders with high scores on openness to experience have a better performance on identifying market needs, designing innovative solutions, and learning about new industries (Ge & Liu, 2004). It was confirmed that openness to experience is always associated with problem-solving ability, resourcefulness, and decisiveness, which are believed to be important for entrepreneurial success in China (Ge & Liu, 2004).

#### *Emotional Stability*

Emotional Stability is also labeled neuroticism in the literature. Neuroticism represents individual differences in adjustment and emotional stability. Individuals who are low on emotional stability tend to experience a number of negative emotions including anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability (Costa & McCrae, 1992). People who score high on emotional stability can be characterized as self-confident, calm, even tempered, and relaxed. Lack of emotional stability is the tendency to experience negative emotions, such as anger, anxiety, or depression (Jeronimus et al., 2014).

According to Eysenck's (1967) theory of personality, low emotional stability is associated with low tolerance for stress or aversive stimuli (Norris, Larsen & Cacioppo, 2007). Moreover, people with low emotional reactions are often in a bad mood since the negative emotional reactions tend to persist for unusually long periods of time. Consequently, if founders lack

emotional stability, they might not use their managerial power effectively and fail to establish clear directions, expectations, or rewards for employees. Emotional stability is positively related to new venture performance (Hofmann & Jones, 2005).

In order to keep the positive meaning of all the big-five factor of personality traits consistent, the term emotional stability was used in the analysis part in this study.

### *Extraversion*

Extraversion describes the extent to which people are outgoing, talkative, energetic behavior, active, and enthusiastic (Costa & McCrae, 1992). People with high score on extraversion tend to be cheerful, like people and large groups, and seek excitement and stimulation, whereas people with low scores tend to spend more time alone and are characterized as reserved, quiet, and independent. For example, salespersons are often described as prototypical extraverts (Costa & McCrae, 1992). They enjoy interacting with people, engagement with the external world, and are often perceived as full of energy.

In new venture context, founders must interact with a diverse range of supply chain members, including venture capitalists, suppliers, government, customers, and so on. Sometimes, they are often in the role of a salesperson, whether they are persuading an investment banker or venture capitalist to back their idea or a client to buy their product or service. On the other hand, they are in the role of a buyer, whether they are selecting best suppliers and persuading them to offer best quality and low cost products. In addition to these external relations, the minimal structure of a new venture and the lack of a developed human resource function suggest that the entrepreneur can expect to spend considerable time in direct interpersonal interaction with their partners and employees (Hofstede, 1980).

Especially in the context of Chinese culture, Chinese people are considered to be naturally collectivists rather than individualists (Hofstede, 1980), tending to depend heavily on their social relationships. Therefore, if founders are more willing to engage to external social relationship with working partners, they may be more likely to succeed (Ang & Hong, 2000).

### *Agreeableness*

Agreeableness assesses one's interpersonal orientation, reflecting individual differences in cooperation and social harmony (Costa & McCrae, 1992). Individuals high on agreeableness can be characterized as trusting, forgiving, caring, altruistic, and gullible. People with high scores on agreeableness has cooperative values and a preference for positive interpersonal relationships (Costa & McCrae, 1992). Someone at the low end of the dimension are often less concerned with others' well-being and report having less empathy (Costa & McCrae, 1992). Although agreeableness may lead one to be seen as trustworthy and may help one form positive, cooperative working relationships, high levels of agreeableness may inhibit one's willingness to drive hard bargains, look out for one's own self-interest, and influence or manipulate others for one's own advantage (Costa & McCrae, 1992).

In leadership research, it was found that highly agreeable leaders are associated with highly cohesive teams, tend to establish mutual accountability and encourage team members to take initiative as a collective, actively engage in information processing, and jointly shape work activities (De Jong, Song, & Song, 2013). Especially for small businesses such as Chinese apparel new ventures, agreeable founders are often associated with less formalized and specialized structures, and tend to adjust to dynamic situations by delegating decision-making authority to team members (Miller & Toulouse, 1986).



### *Conscientiousness*

Conscientiousness indicates someone who has a high degree of organization, high level of discipline, persistence, hard work, and motivation in the pursuit of goal accomplishment (Costa & McCrae, 1992). It is marked as an indicator of volition or the ability to work hard since Conscientious people are efficient and organized (Barrick & Mount, 1991). It has been the most consistent personality predictor of job performance across all types of work and occupations (Barrick, Mount & Judge, 2001). People with higher scores on conscientiousness are achievements-oriented, such that the person displays thoroughness, perseverance, reliability, responsibility, and respect for established rules. They are viewed as diligent employees which means they likely organize and direct necessary behaviors to produce targeted outcomes to fulfill their job duties (De Jong, Song, & Song, 2013).

In the new venture context, McClelland (1967) proposed that a high need for achievement would drive individuals to become founders primarily. Much of the Chinese population has high achievement motivation since Chinese culture in general is highly achievement-orientated compared to western countries (Bond, 1996). Founders often rely on their own efforts rather than other factors, their own performance are crucial for new venture success. With both a high need for achievement and self-development based on hard working, founders who have higher scores on conscientiousness are more likely to be successful.

### *Debates of five-factor model*

Extensive evidence suggests that the Big Five model is consistent across various national groups (Robertson & Callinan, 1998). The Big Five model provides both a clear conceptual framework, based on a great deal of underlying research, and a correspondingly clear measurement framework. This has coincided with a resurgence of interest within

industrial/organizational psychology on the role that personality may play at work (Robertson & Callinan, 1998).

Although the Big Five model offers a structural organization of personality traits in terms of five broad factors (Costa & McCrae, 1995), there have been arguments on whether the Big Five model is really an appropriate taxonomy to serve in the Chinese apparel new venture context. During the last decade, the Big Five approach has begun to loom large in the field of personality psychology (Block, 1995). A number of arguments in the literature discussed the appropriateness of the prevailing Big Five measurements (Block, 1995; Costa & McCrae, 1992, 1995; Goldberg & Saucier, 1995).

For example, Block (1995) challenged that the Big Five model is rooted in the method of factor analysis, and is often not given sufficient recognition. Costa and McCrae (1995) replied to Block's (1995) views. They held that the Big Five model provides a common framework for systematic research and allows integration of the diversity of existing individual difference measures (Costa & McCrae, 1995). More research was needed to search for additional major factors other than the Big Five model. However, the five factors account for the bulk of the common variance (Costa & McCrae, 1995). Costa and McCrae (1995) emphasized that the Big Five model is not the final personality assessment. Instead, it is an adequately serviceable model.

Goldberg and Saucier (1995) also maintained that the Big Five model is not yet fully developed nor is the evidence for it perfect, and pointed out that Block's (1995) rejoinder was a legal brief that presented only one side of the issue at suit, while it ignored the large body of scientific evidence that had accrued over the years about the structure of phenotypic personality attributes. Goldberg and Saucier (1995) held that science proceeded by using the best tools and

models that are currently available, not by halting until ideal ones are developed. Also, scientific contests depend on the availability of a viable alternative model.

In sum, Costa and McCrae (1992) concluded that these five factors representing basic dimensions of personality are based on four lines of reasoning and evidence. First, longitudinal and cross-observer studies have demonstrated that all five factors are enduring dispositions that are manifest in patterns of behavior. Second, traits related to each of the factors have been found in a variety of personality systems and in the natural language of trait descriptions. Third, the factors have been found in different age, sex, race, and language groups, although they may be somewhat differently expressed in different cultures. Fourth, evidence of heritability has suggested that all factors have some biological basis. In this light, Goldberg and Saucier (1995) asked for continued evaluation and improvement of the model, including the exploration of its generality in diverse languages. The five-factor model is still widely used in various research areas now. It is still an effective tool to measure personality traits in recent research (Tang, 2012).

### ***Five-factor model in China***

This study is particularly interested in Chinese settings. Many Chinese scholars modified, translated and applied western psychological measurement instruments to both Chinese academic psychology research and industrial training and recruiting (Tang, Li, Shan, and Zhang, 2006). From the early 1990s, Chinese scholars began to study on the five-factor model (FFM) and nearly 7,000 papers can be found from the China National Knowledge Infrastructure Database about FFM since 1995. Among the studies, some empirical findings gave supports of the original constructs and predictive validity of FFM and provided further understanding as well (Zhang, 2006; Wang, 2005).

However, there are different views on the applicability of FFM in China. Cheung, Cheung, Leung, Ward, & Leong (2003) proposed a six-factor model an extra domain named interpersonal relatedness. Moreover, Wang, Cui and Zhou (2005) further proposed the Big Seven structure of the Chinese personality (QZPS) which include extraversion, kindness, behavior styles, talents, emotionality, human relations, and way of life, in total seven factors in the model. They then conducted a comparative study of Neuroticism-Extraversion-Openness Personality Inventory-Revised (NPR – PI - R), which is based on the five personality dimensions and designed by Costa and McCrae (1985; 1989; 1997). A total of 2,540 participants in mainland China took both the Chinese version of the NEO (Neuroticism-Extraversion-Openness) Personality Inventory - Revised (NEO-PI-R) and the QZPS, including university students' friends and family members, representing age groups between 15 and 60 years old. By comparing the total variance and correlations, they concluded that Big Five structure did not adequately explain all facets of Chinese personality compared to QZPS. In addition, among five factors of Big Five model, openness to new experience did not emerge at all due to the culture differences.

On the other hand, Apple (2011) provided evidence and argued that the Wang, Cui and Zhou (2005) study deleted over half of the items on the NEO-PI-R and almost 20% of the QZPS items due to lack of factor loading, as well as a lack of unidimensionality tests for either questionnaire. Apple (2011) pointed out that there are several problems in Wang, Cui and Zhou (2005)'s study. First, NEO-PI-R was simply assumed to have five factors, and while they presented four-, six-, and seven-factor solutions for the QZPS. Second, based on the total variance and factor extraction, the unidimensionality was not confirmed through the elimination

of questionnaire items. Without a measurement of the residuals after factor extraction, it was questionable how accurately the constructs were measured.

In addition, Tang (2012) adopted revised IPIP-BFAS (the Big Five Aspect Scales) in her study, which originated from the International Personality Item Pool and has a total of 100 items. The IPIP-BFAS Chinese version scale was eventually formed with 13 items deleted after two translations and two revisions. One thousand participants from Southern China were selected as a sample in the study. The overall coefficient of internal alpha consistency of the IPIP-BFAS Chinese version was 0.856. The coefficient of internal alpha consistency of five dimensions was in the range of 0.739 to 0.890. The test-retest reliability of five dimensions was in the range of 0.876 to 0.991. Five factors explained 82.773% of the total variance of the personality traits, and the facets contained in every factor were consistent with the structure of the original English scale; the results of congruent validity analysis with the BFI Chinese version showed the correlation coefficients of the five dimensions were in the range of 0.461 to 0.848. The correlation of the scale self-assessment and peer assessment showed the correlation of the five dimensions was in the range of 0.669 to 0.767, which is also very good.

Meanwhile, even Wang, Cui and Zhou (2004) argued the applicability of FFM. They also pointed out that, through exploratory factor analysis (EFA) and item selection, FFM could be used in testing Chinese personality traits. This finding may provide insights into how to use FFM in the Chinese context. One might conclude that the Big Five personality model still has higher variance explained, good validity and reliability, and the advantages of non-copyright restrictions, compared to Chinese personality six and seven models, even in Chinese research settings.

## **The relationships between individual personality traits of the founders and firm network relationship quality in Chinese apparel new ventures**

Social network theory addresses a dynamic process by which a firm obtains, reaches, shares, or creates a bundle of valuable resources through its outside networks (Ahuja, 2000). Social networks have several useful properties for new ventures. For example, new ventures can enlarge their networks to get crucial information and other resources from knowledgeable others. They can also position themselves within a social network to shorten the path to knowledgeable others to get what they need (Blau, 1977; Burt, 1992; Granovetter, 1973). Therefore, the quality of external network relationships is known to be one of the fundamental elements of the impact of external networks on the development and success of new ventures (Yu, 2012). Different personal networks lead to the use of different economic relations (Ostgaard & Birley, 1994; Human & Provan, 1997) and, in turn, to different firms' strategic options.

On the other hand, founders, acting in the role of resource coordinators and agents for a new venture (Bhide, 2000; Kirzner, 1973), often bring their personal external social networks to the firm as their most valuable asset to provide resources necessary for successful emergence (Aldrich, Rosen & Woodward, 1987; Hite, 1999; Larson & Starr, 1993). To establish a firm, founders look for relations on the basis of common interest or experience in building and running a business and obtaining resources such as information, property, capital, or credit (Nohria, 1992). Social network theory (Carsrud, Gaglio, & Olm 1986) provides a rationale for the important role of the founder for new venture performance. According to Carsrud, Gaglio, and Olm (1986), the basic assumption of social network theory is that the founder is embedded in a complex set of social networks that either facilitate or inhibit venture development by facilitating or inhibiting effective linkages between the founder and the required resources and available

economic opportunities. In social situations, these resources can be seen as being a variety of persons who have skills, information, or control over materials or capital funds that are necessary for the success of the new venture.

From this perspective, it seems that a determinant of new venture performance should be the density and breadth of the founder's personal network. Because a social network involves personal ties that can be transferred to business ties, an informal and dynamic view of social networks has emerged. Informal efforts have focused on highlighting specific mechanisms or examples of network dynamics. For instance, Barley (1990) focuses on the impact of introducing technology on firm structure and the changes in the firm network structure that occur when individual roles change. Frenzen and Nakamoto (1993) examine the impact of word-of-mouth information on the network structure of markets. These types of studies have explored the value and benefits of social networks at both the individual level and the firm level, including how they help individuals secure jobs (Granovetter, 2005) and optimize intra-organizational mobility (Burt, 1992).

At the firm level, the effects of networks were found to be greater survival rates, improved firm performance, and innovation (Ahuja, 2000; Baum & Oliver, 1991; Higgins & Gulati, 2003; Pfeffer, 1997; Shan, Walker & Kogut, 1994). At the individual level, perhaps the most studied benefit of social networks involves the ability of network members to access information (Baron & Tang, 2008).

Several empirical studies have supported this proposition. For example, Zhao and Aram (1995) extensively interviewed managers of six young technology-based firms in China and found that managers in high-growth firms reported greater range and intensity of business networking than did managers in low-growth firms. Based on a survey of 159 owner-managed

companies in England, Ostgaard and Birley (1996) found that the size of the founder's commercial network and time spent on developing the network were positively related to new venture performance. As a firm formalizes interpersonal network ties through routines and procedures, these ties may shift to become inter-organizational ties that can provide information and resource exchange relationships between organizational entities (Bhide, 1999; Larson & Starr, 1993). Thus, in new ventures, personal and firm networks often seem to converge (Zhao & Aram, 1995; Johannisson, 1998).

In new venture research, the Big Five factors were found positively associated with distinct aspects of contextual performance in accordance with meta-analytic research studies (Hogan & Holland, 2003). Drawing from the work of Penrose (1959) and Barney (1991), personality traits can be treated as one of the unique intangible resources critical for firms' competitive advantages. The founder is one who undertakes new venture creation, or the recombination of resources in the expectation of profit. Founders' personality traits affect decisions on picking resources and, in turn, affect the quality of resources, which in this study, refers to relationship quality (Phelan & Alder, 2006). From the Big Five factors' perspective, different dimensions of founders' personality traits may have different impacts on new venture performance through influencing the quality of external network relationships at the firm level (Brandstätter, 2011).

In this study, the Big Five factors of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness represent the dominant conceptualization of personality structure (McCrae & Costa, 1997). There are three approaches used to apply Big Five personality dimensions in current research. First, each of the Big Five personality factors resides at the highest level of the personality hierarchy (McCrae & Costa, 1997). For example, O'Connor and



Paunonen (2007) conducted research to investigate how each of the Big Five factors of personality traits independently predicts academic performance. Brandstätter (2011) also examined how each of the Big Five factors of personality traits independently predicts entrepreneurship.

Other researchers looked at Big Five factors of personality traits as more narrow personality traits by placing each of the Big Five factors at lower levels of the personality hierarchy. For example, DeYoung and Peterson (2007) proposed 10 lower-level personality traits within the Big Five factors of personality traits. They argued that each dimension of the Big Five factors of personality traits has two lower level facets. For example, enthusiasm and assertiveness can be viewed as two lower-level facets of extraversion. However, this proposal still requires strong empirical supports, and lower-level facets of the Big Five factors of personality traits have yet to be tested in the new venture or entrepreneurship contexts.

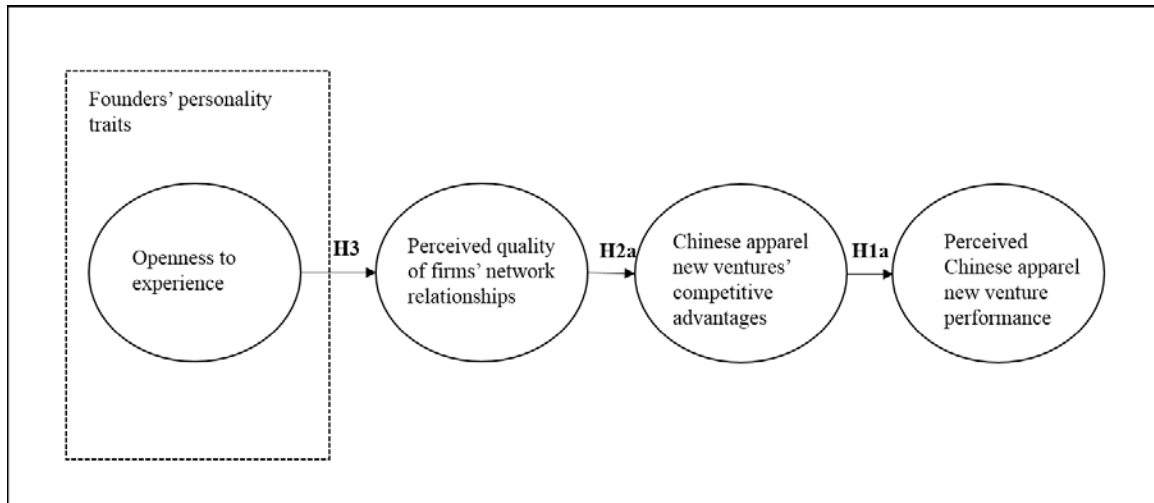
Third, there are also higher order solutions of Big Five factors of personality traits. In this case higher order solutions refer to combinations of Big Five factors, which are shown to combine into “meta-traits.” For example, Digman (1997) argued that the Big Five can be combined to form two higher-order factors, which are Stability (Emotional Stability, Agreeableness, and Conscientiousness) and Plasticity (Extraversion and Openness). However, this approach was viewed as suspect by several researchers. For example, Ashton, Lee, Goldberg, and DeVries (2009) conclude that correlations between personality factor scales do not necessarily imply the existence of higher-order factors.

Therefore, this research takes an approach that the each of the Big Five factors of personality traits resides at the highest level of the personality hierarchy. This approach is not only the most widely used one when it comes to assessing the role of the Big Five factors on

various firm performance measures (Barrick & Mount, 1991; Brandstätter, 2011), but also it has been successfully used to assess the role of entrepreneurship in firm performance. Therefore, reviewing the impact of each of the Big Five factors of personality traits on Chinese apparel new ventures was deemed to be effective for the purpose of the study.

First, openness to experience, describes the breadth, depth, originality, and complexity of an individual's mental and experiential life (John, Naumann, & Soto, 2008). According to Zhao and Seibert (2006), founders have substantially higher scores on openness to experience than general managers. People with higher level openness to experience are marked that can see some affinity to innovativeness which can positively influence business creation and business success (Rauch & Frese, 2007). Founders with high scores on openness to experience may be more likely to solve problems, which means if there is a problem influencing the relationship quality, they may have a better solution than other people (Yu, 2012). This relationship is expected to be present in Chinese apparel new ventures due to upcoming problems in the hyper-dynamic competitive environment. Therefore, it is hypothesized that:

**Hypothesis 3:** The founders' openness to experience positively affects the perceived quality of Chinese apparel new ventures' network relationships. (Figure 6).

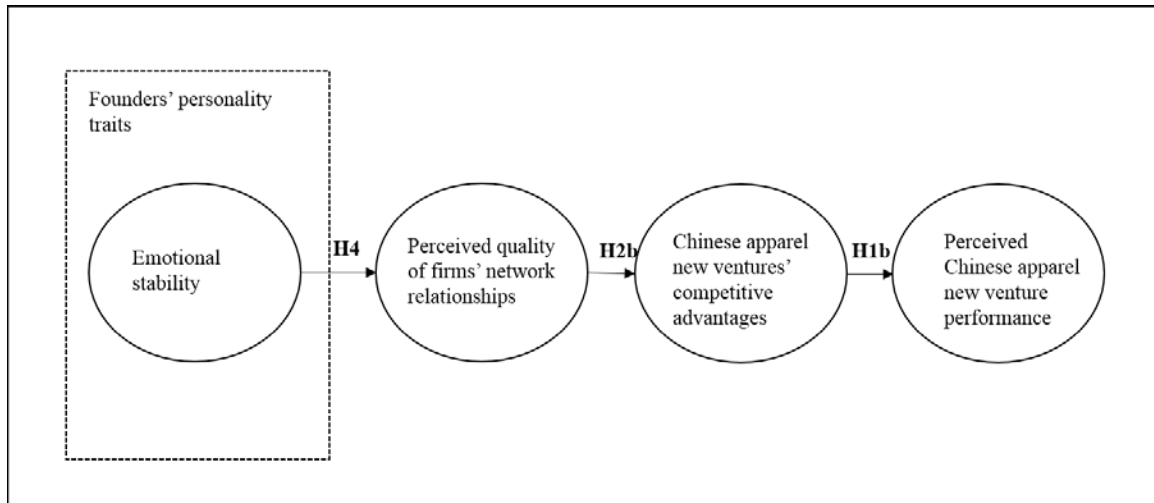


*Figure 6.* Model for the hypothesis that openness to experience affects perceived Chinese apparel new venture performance.

Second, emotional stability represents someone who tend to be calm, even-tempered, and less likely to feel tense or rattled (John, Naumann, & Soto, 2008). At the opposite end of the spectrum, individuals who are lacking in emotional stability tend to experience a number of negative emotions including anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability (Costa & McCrae, 1992). Founders always work within a relatively unstructured and dynamic environment where they have primary responsibility for all aspects of new venture operation. They cannot worry excessively, and need to be resilient in the face of setbacks when building a company (Zhao & Siebert, 2006). This suggests that people who are emotionally stable are more likely to start their own businesses and make businesses successful than are people who are neurotic, because founders need a high tolerance to cope with stress and with the hard work, significant risks, social isolation, pressure, insecurity, and personal economic difficulties that come from beginning their own businesses (Rauch & Frese, 2007). Accordingly, people who are emotionally stable are more likely to maintain a long-term interpersonal relationship (Cao, 2014). For example, founders who are emotionally stable are more likely to

have a sustained relationship with banks and partners in the industry, which could help companies have high quality external network resources (Yu, 2012). Therefore, in even the Chinese apparel new venture context, emotional stability is expected to influence the quality of founders' external networks and their job performance and, in turn, influence the quality of the firm's external network relationships. Therefore, it is hypothesized that:

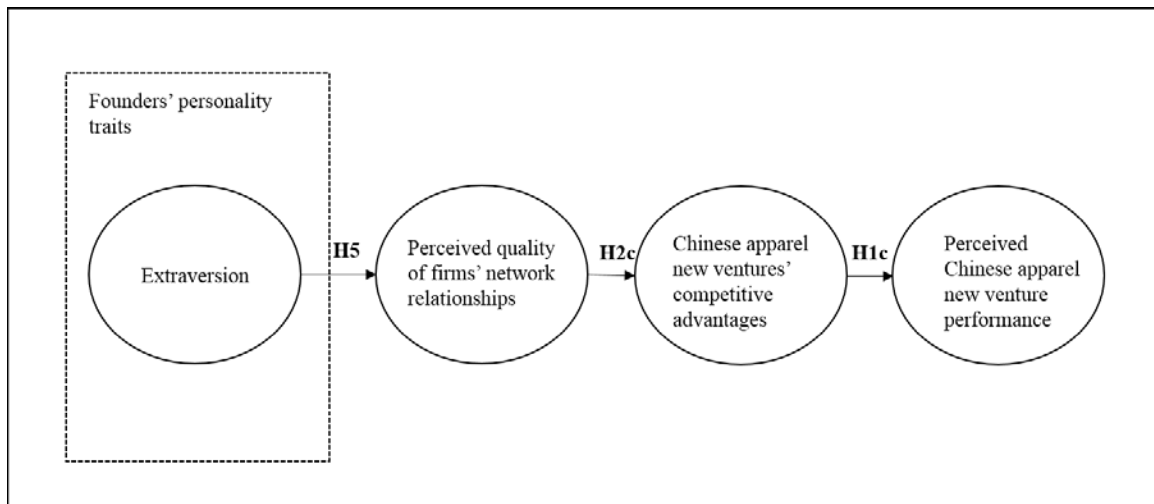
**Hypothesis 4:** The founders' emotional stability positively affects the perceived quality of Chinese apparel new ventures' network relationships (Figure 7).



*Figure 7.* Model for the hypothesis that emotional stability affects perceived Chinese apparel new venture performance.

Third, extraversion implies an energetic approach toward the social and material world and describes someone who is warm, assertive, dominant, energetic, active, talkative, and enthusiastic (John, Naumann, & Soto., 2008). It is a crucial trait for founders because they need to spend significant amounts of time on interaction with all supply chain members, and have to sell all of them on the value of the business (Shane, 2000). Thus, people who score high on extraversion are more likely than others to become successful founders since they are more engaged into external networks (Orhan & Scott, 2001; Shane, 2003). Cao (2014) conducted research on understanding the relationship between personality and interpersonal adaptability. She found that extraversion is significantly positively related to interpersonal adaptability. Founders with higher extraversion may be more likely to build new relationships and have more communications with their partners (Yu, 2012). This relationship is expected to be present in Chinese apparel new venture environments due to the requirements of building and expanding networks with apparel supply chain partners. Therefore, it is hypothesized that:

**Hypothesis 5:** The founders' extraversion positively affects the perceived quality of Chinese new apparel ventures' network relationships (Figure 8).



*Figure 8.* Model for the hypothesis that extraversion affects perceived Chinese apparel new venture performance.

Fourth, agreeableness characterizes someone who is cooperative, trusting, forgiving, tolerant, courteous and soft-hearted (Barrick & Mount, 1991). In western studies, agreeable people are considered less likely to succeed in businesses because people with this trait are less likely to pursue their own self-interest, drive difficult bargains, or use others to achieve their objectives (Zhao & Siebert, 2006). In addition, someone who are with lower agreeableness are more skeptical than others (Costa & McCrae, 1992), which makes them more likely to have a critical approach to assessing business information in the competitive business environment (Shane, 2003). However, as previously mentioned, there is an opposite opinion for managing business in China. Agreeableness may lead one to be seen as trustworthy and even may help one form positive, cooperative working relationships. Cao (2014) did research to explore the personal traits of Chinese CEOs. She found that agreeableness ranked as the first personal trait for those CEOs. In Chinese culture, righteousness and profits, credit and honesty, harmonious relations,

mutual benefits, to name a few, are all considered key factors in social relationships, which is different from Western culture (Cao, 2014). Hence, this relationship is expected to be present in Chinese apparel new ventures. Therefore, based on the literature review, it is hypothesized that:

**Hypothesis 6:** The founders’ agreeableness positively affects the perceived quality of Chinese apparel new ventures’ network relationships (Figure 9).

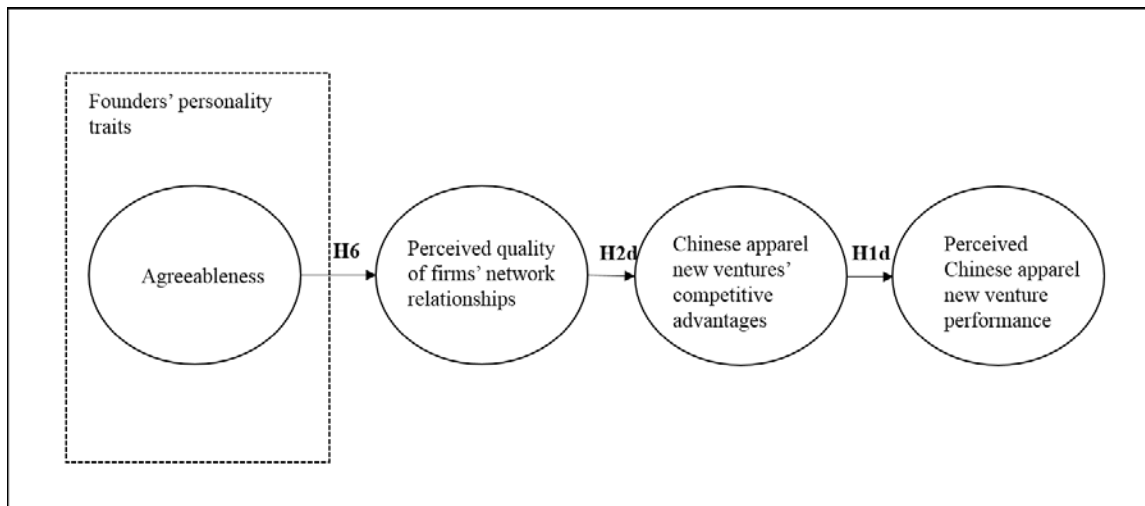


Figure 9. Model for the hypothesis that agreeableness affects perceived Chinese apparel new venture performance.

Finally, conscientiousness describes socially prescribed impulse control that facilitates task- and goal-directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks (John, Naumann, & Soto., 2008). Founders need to be high on conscientiousness since they need to be organized, responsible, and plan ahead to achieve their goals (Hisrich, 1990). Founders are often persistent and setting rules to overcome obstacles and decrease the risk such as financing or cost overruns during the business establishment (Locke & Baum, 2007; Timmons, 1989). There are several empirical research have confirmed that conscientiousness is positively associated with the

tendency to become a successful founder in the food industry (Schmitt-Rodermund, 2001; Zhao & Siebert, 2006). Yu (2012) stated that founders' dependability may increase the trust and commitment between supply chain partners and influence the relationship quality in the high-technology industry. This relationship is expected to be present in Chinese apparel new venture environments. Therefore, it is hypothesized that:

**Hypothesis 7:** The founders' conscientiousness positively affects the perceived quality of Chinese apparel new ventures' network relationships (Figure 10).



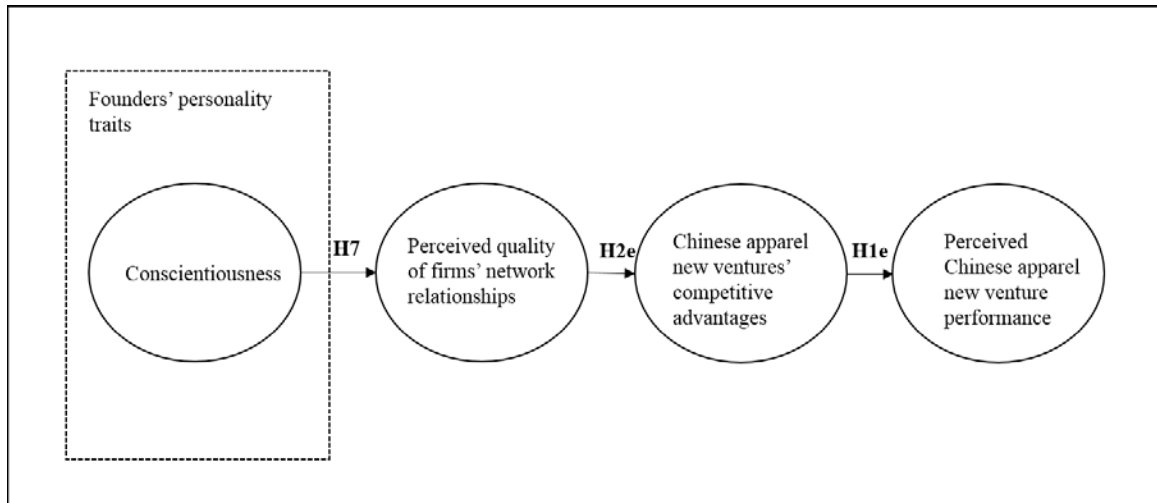


Figure 10. Model for the hypothesis that conscientiousness affects perceived Chinese apparel new venture performance.

### Summary of Study Hypotheses

Based on the review of the literature presented, this research employs the resource-based theory to understand how founders' personality traits and the quality of external network relationships impact Chinese apparel new venture performance. The research hypotheses are summarized as follows.

**Hypothesis 1:** Chinese apparel new ventures' competitive advantages positively affect new venture performance.

**Hypothesis 2:** The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

**Hypothesis 3:** The founders' openness to experience positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 4:** The founders' emotional stability positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 5:** The founders' extraversion positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 6:** The founders' agreeableness positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 7:** The founders' conscientiousness positively affects the perceived quality of Chinese apparel new ventures' network relationships.

## CHAPTER III: METHODS

This chapter describes the research methods applied to achieve the objectives of the study. The methods section includes the following: (a) research design, (b) research instruments, (c) translation test, (d) sample selection, (e) data collection, and (f) data analysis procedure.

### **Research Design**

In this research, the survey method was employed. As a systematic set of methods, survey research is used to collect information to generate knowledge, and to make conclusions (Lavrakas, 2008). The survey method is widely used by governments, businesses, academics, politicians, and numerous other decision makers.

According to the research objectives, specifically, an online survey was administrated. With the rapid development of the Internet, online surveys have become a useful contemporary tool for researchers collecting data from large populations of individuals (Couper & Miller, 2008). The increased number of persons who have access to the Internet allows for more potential respondents to be involved in research studies (Gaddis, 1998). The advantages of online surveys includes the ability to target specific populations at a time and place of the participants' convenience (Sax, Gilmartin & Bryant, 2003). Surveys posted on the Internet can be available 24 hours a day to participants and accessed from any location with an active Internet connection (Dillman, 2000). By using program surveys, respondents can review and verify their answers conveniently (Christian, Dillman & Smyth, 2007). In addition, online surveys allow for a great degree of anonymity, which may help to increase rates of valid responses, especially for questionnaires involving sensitive information (Lewis, Watson & White, 2009).

In sum, the considerable advantages of online surveys most commonly cited by researchers include cost, time, and labor. Cook, Heath and Thompson (2000) found that online surveys saved publishing, distribution, and subsequent survey collection costs, as well as data

entry, printing expenses, stamps and travel expenses (Schmidt, 1997). Online surveys have the ability to reach a large number of participants without the time-consuming effort of mailing survey instruments. Accordingly, response speed, or the time required for a survey to be returned, is also faster. Through online surveys, researchers gather data more efficiently and effectively (Dillman, 2000). Software programs allow for the automatic entry of all responses into databases, which saves labor and time (Schmidt, 1997).

The aim of this study was to measure founders' personality traits and firms' network relationships and to investigate the impact of founders' personality on perceived Chinese apparel new ventures' performance through influencing firm network relationships. For the conceptual model and hypotheses explored and developed in Chapter II, if there were suitable scales with good properties in the literature, they would be adopted. In some cases, existing scales were refined to ensure clarity of responses and reliability.

### **Research Instruments**

The surveys encompass five parts, measuring (a) founders' personality traits using the Goldberg (1999) 50-item five-factor domain scale from the International Personality Item Pool (IPIP), (b) the quality of firm network relationships, (c) perceived competitive advantages, (d) perceived Chinese apparel new venture performance, and (e) demographic variables.

#### **Personal Traits of Founders**

Personal traits of founders was measured through the scales developed from the Big Five factors of personality traits, which include neuroticism, conscientiousness, extraversion, openness to experience, and agreeableness. After reviewing numerous Big Five factors of personality trait scales, the 50-item IPIP inventory (Goldberg, 1999) was used in the current study.

A number of measures for Big Five factors of personality traits have been developed during the past decades, such as Saucier's (1994) mini-markers consisting of 40 single adjectives, Costa and McCrae's (1992) 240-item Neuroticism-Extraversion-Openness (NEO) Personality Inventory–Revised (NEO-PI-R), or Block's (1961) 104-item California Q-set.

Among various personality inventories from the Big Five factors of personality traits, IPIP could be freely used, either in its original forms or in some customized formats. This allows researchers to customize the items to fit particular research designs and contexts, further contributing to the scale of development and refinement. Additionally, personality inventories that are either too exhaustive or too simple might impose unnecessary detriments to the participation rates. For example, NEO PI-R, with 240-item inventories, requires 30 to 40 minutes for participants to finish. Even though it has been found to have high internal consistency, test-retest reliability, and strong convergent and discriminant validity (Botwin, 1995; Judge & Bono, 2000), the time requirement might discourage respondents from participating. Based on the 1,412-item IPIP test, Goldberg (1999) developed two shorter scales, one of 50 items and one of 100 items. These two scales with full sentences are more contextual than trait adjectives and more compact than many modern personality inventories (Goldberg, 1999).

In addition, from an original English version, many Chinese translated versions can be used in the current study. Lau (2002) translated IPIP into traditional Chinese. Goldberg's (1999) 50-item five-factor domain scale from IPIP was used in his study to explore the antecedents and consequences of entrepreneurial career success in the context of Southeast Asian values. Tang (2012) revised IPIP-BFAS (Big Five Aspect Scales) as a Chinese version. The results of these studies show both the reliability and validity of this scale are good in the Chinese context.

Consequently, the IPIP 50-item inventory (Goldberg, 2002) and the Chinese version (Lau, 2002) were chosen for measuring personal traits of founders in this study. The Cronbach alphas estimates of reliability are satisfactory (0.89 for emotional stability, 0.84 for conscientiousness, 0.85 for extraversion, 0.85 for openness to experience, and 0.84 for agreeableness). Chinese versions are also acceptable (0.87, 0.57, 0.78, 0.81, and 0.67, respectively).

Each of the five dimensions was measured by asking respondents to indicate their agreement with the accuracy of 50 items describing their behavior. They were instructed to describe themselves as they honestly saw themselves in relation to other people they knew of the same sex and roughly their same age. Participants responded on a 5-point scale ranging from 1 (very inaccurate, 非常不准确) to 5 (very accurate, 非常准确). After making adjustments for the reverse scores, all items were scored so that a higher score indicates the more positive end of the trait. Examples of items comprising each of the five factors include, "I talk to a lot of different people at parties" (extraversion), "I make people feel at ease" (agreeableness), "I am always prepared" (conscientiousness), "I seldom feel blue" (emotional stability), and "I have a vivid imagination" (openness to experience). See full scales in Table 3.

### **The Quality of Relationship**

The quality of firm network relationships was measured through the RELQUAL (relation quality) scale developed by Lages<sup>a</sup>, Lages<sup>b</sup>, and Lages<sup>c</sup>. (2005). Four dimensions including amount of information sharing, communication quality, long-term relationship orientation, and satisfaction with the relationship were used to demonstrate the quality of a firm's network relationships.

Several measures for the quality of relationship have been developed in previous studies. For example, Anderson and Witz (1992) designed a scale with 10 items to measure the commitment, expectation, intention, and behavior between the manufacturer and distributor. This assessment was shown to be highly reliable (Cronbach alpha 0.87, manufacturers as participants; Cronbach alpha 0.90, distributors as participants).

However, on the basis of strategy and relationship marketing literature, RELQUAL is proposed as a multidimensional scale to assess relationship quality. It is presented as a high-order concept and gives a comprehensive measurement of relationship quality that was more suitable to the current study. RELQUAL was first used to assess the degree of relationship quality between the exporting firm and the importer in an exporting context (Lages<sup>a</sup>, Lages<sup>b</sup>, and Lages<sup>c</sup>, 2005). Yu (2007) revised and translated this scale to Chinese, then he adopted this scale to the study of Chinese high-technology new ventures (Cronbach alpha 0.899). However, Yu (2007) grouped this scale to different categories such as government, financial partners, and suppliers to measure the quality of the relationship, which is different from the current study. In this study, the overall relationship quality was measured by including the relationships of all supply chain members.

Therefore, 14 RELQUAL items (Lages<sup>a</sup>, Lages<sup>b</sup>, and Lages<sup>c</sup>, 2005) were chosen for measuring the quality of firm network relationships in this study. Some items were modified to fit the objective of this study; this is explained in the following section. Measurements were made on a 5-point Likert scale ranging from 1 (strongly disagree, 非常不同意) to 5 (strongly agree, 非常同意). The items were scored so that a higher score indicated higher quality of their firm network relationships.

There are four dimensions of this scale. The scale for amount of information sharing is adapted from Cannon and Homburg (2001) and includes three items (the Cronbach alpha is 0.75). An example is "My company's partners frequently discuss strategic issues with us." The scale for communication quality of the relationship is adapted from Menon, Bharadwaj, Adidam, & Edison (1999), Menon, Bharadwaj, & Howell, (1996) and includes four items (the Cronbach alpha is 0.86). A sample item is "The objectives and goals of business strategies are clearly communicated to all of my company's partners." The scale for long-term relationship orientation is adapted from Ganesan (1994) and includes four items (the Cronbach alpha is 0.81). A sample item is "I believe that over the long run, the relationship with my company's partners will be profitable." The scale for satisfaction with the relationship is adapted from Kumar et al. (1992) and includes three items (the Cronbach alpha is 0.83). One example is "Overall, the results of our relationship with my company's partners are far short of expectations." Additionally, since this scale is adopted for the first time in the apparel context, in order to be suitable in precisely the way the study demands, some items were modified by following DeVellis's (1991) principle. For example, "This importer frequently discussed strategic issues with us" was modified to "My company's partners frequently discuss strategic issues with us." The full list of items is available in Table 3.

### **Perceived Competitive Advantages**

Evaluating a firm's competitive advantage implies collecting information about customers' perceptions of the firm's products and services, or investigating the explanatory factors (resources and capabilities) of each firm's position in the market compared to its competitors (Navarro et al., 2010). Ling-yee and Ogunmokun's (2001) subjective measures of competitive advantages compared to rivals are valid, reliable, and externally oriented. The



perceived competitive advantages were measured by following the work of Katsikeas et al. (1996), Ling-yee and Ogunmokun (2001) and Albaum et al. (2003). By using the perception that the founders responsible for companies have about their firm's position compared to its main rivals, six items are included in this study (the Cronbach alpha is 0.91). Examples include "Compared to main competitors, my company's distribution is competitive," and "Compared to main competitors, my company's costs are controlled well," and so on. The full list of items is available in Table 3.

### **Perceived Chinese Apparel New Venture Success**

The measurement of performance is a critical topic in the strategic management field, including new venture research, because performance implications are implicitly strategic (Venkatraman & Ramanujam, 1986).

Traditionally, organizations have measured performance through tangible assets that can be given a monetary value, such as fiscal outcomes (Day, 1994). However, researchers argue that there are other important factors to consider when assessing an organization's performance (Ambler & Kokkinaki, 1997; Barney, 1991; Day, 1994) as each firm may have different goals and objectives.

For new ventures, performance measurement has been well-recognized as a challenging task. It is very difficult to collect data on new venture performance due to a lack of historical information and accessibility (Brush & VanderWerf, 1992; Murphy, Trailer & Hill, 1996). In order to determine the best way to measure the performance of new ventures, Brush and VanderWerf (1992) examined a sample of 34 articles published in 1987 and 1988 in leading entrepreneurship journals. While they concluded that there are no generally accepted guidelines for measuring new venture performance, five measures of operational performance emerged as

the most frequently used. These include annual sales, number of employees, return on sales, growth in sales, and growth in number of employees. These frequently used variables are consistent with those provided by Brush and VanderWerf (1992), including sales growth, employment growth, return on sales, return on investment, market share, profitability, and survival.

Murphy, Trailer and Hill (1996) surveyed the entrepreneurship literature from 1987 to 1993 and evaluated the dimensions and measures of performance used. They found that there was little consistency in performance measurement across studies and 60% of the studies used only one or two dimensions of performance. However, mainly relying on one or two performance measures is problematic because each variable has its strengths and weaknesses. For example, researchers have argued that traditional accounting measures of profitability such as return on assets (ROA) or return on investment (ROI) are questionable because some new ventures take many years to reach profitability (Biggadike, 1976; Shane & Kolvereid 1995; Tsai, MacMillan & Low 1991). New ventures have short histories and are usually not expected to show much profit during the initial years of existence due to large initial capital investments (McDougall, Robinson & DeNisi, 1992; Mosakowski, 1991). Moreover, accounting measures tapped only the economic dimensions of performance, neglecting other important goals of new ventures.

Much new venture research has focused on ROI and market share as measures of performance. When these measures are simultaneously adopted, the possible tradeoff between achieving growth and profitability has to be taken into consideration (McDougall, Robinson & DeNisi, 1992). It may be that seeking a market share increase could have a negative impact on

ROI because of capital investment. Thus, it is necessary to distinguish the determinants of different performance dimensions.

In brief, it is suggested that, to make the measurement of new venture performance reliable and valid, multiple dimensions of performance should be considered. Venture performance in this study was assessed using self-reported measures of performance from four determinants that have proved reliable in past research on entrepreneurship (the Cronbach alpha is 0.77) (Brush & Vanderwerf, 1992). Respondents were asked to honestly answer a set of questions that compared the performance of their venture to an industry average in the previous calendar year on a five-point, Likert-type scale ranging from 1 = “Clearly below average 明显低于平均水平” to 5 = “Clearly above average 明显高于平均水平” for the following indicators: profitability, sales volume, market share, and productivity.

### **Demographic information**

Lastly, demographic information was collected from founders, such as their business sector, number of employees, years of experience, gender, age, and education background. These demographic variables help to provide a more contextual description of the founders.

Table 3 shows all the initial scale items developed or adopted in this study.

Table 3

*Survey constructs, Item sources, and Cronbach's Alphas*

<b>Construct: Personality Traits</b>		
<b>Dimensions</b>	<b>Source Cronbach's Alpha</b>	<b>Scale Items</b>
<b>Emotional Stability</b>	Goldberg (1999) .89 (Chinese Version .87)	I get stressed out easily.(R) I am relaxed most of the time. I worry about things.--R I seldom feel blue. I am easily disturbed.(R) I get upset easily.(R) I change my mood a lot.(R) I have frequent mood swings.(R) I get irritated easily.(R) I often feel depressed.(R)
<b>Conscientiousness</b>	Goldberg (1999) .84 (Chinese Version .57)	I am always prepared. I leave my belongings around.(R) I pay attention to details. I make a mess of things.(R) I get chores done right away. I often forget to put things back in their proper place.(R) I like order. I avoid my duties.(R) I follow a schedule. I am exacting in my work.

Table 3 (Continued)

Dimensions	Source Cronbach's Alpha	Scale Items
<b>Extraversion</b>	Goldberg (1999) .85 (Chinese Version .78)	I am the life of the party. I don't talk a lot.-(R) I feel comfortable around people. I stay in the background.(R) I start conversations. I have little to say.(R) I talk to a lot of different people at parties. I don't like to draw attention to myself.(R) I don't mind being the center of attention. I am quiet around strangers.(R)
<b>Openness to Experience</b>	Goldberg (1999) .85 (Chinese Version .81)	I have a rich vocabulary. I have difficulty understanding abstract ideas.(R) I have a vivid imagination. I am not interested in abstract ideas.(R) I have excellent ideas. I do not have a good imagination.(R) I am quick to understand things. I use difficult words. I spend time reflecting on things. I am full of ideas.
<b>Agreeableness</b>	Goldberg (1999) .84 (Chinese Version .67)	I feel little concern for others.(R) I am interested in people. I tend to insult people.(R) I sympathize with others' feelings. I am not interested in other people's problems.(R) I have a soft heart. I am not really interested in others.(R) I take time out for others. I feel others' emotions. I make people feel at ease.

Table 3 (Continued)

<b>Construct: Perceived Quality of the Firm Network Relationship</b>		
<b>Dimensions</b>	<b>Source Cronbach's Alpha</b>	<b>Scale Items</b>
<b>Amount of information sharing in the relationship</b>	Cannon and Homburg (2001) .75	My company's partners frequently discuss strategic issues with us. My company's partners openly share confidential information with us. My company's partners rarely talked with us about their business strategy.(R)
<b>Communication quality of the relationship</b>	Menon et al. (1996, 1999) .86	My company's partners have continuous interactions with us during implementation of any strategies. The objectives and goals of business strategies are clearly communicated to all of my company's partners. My company's partners openly communicate while implementing the strategy. My company's partners have extensive formal and informal communications during implementation.
<b>Long-term relationship orientation</b>	Ganesan (1994) .81	I believe that over the long run, the relationship with my company's partners will be profitable. We are willing to make sacrifices to help my company's partners from time to time. Maintaining a long-term relationship with my company's partners is important to my company. My company focuses on long-term goals in the relationship with my company's partners.
<b>Satisfaction with the relationship</b>	Kumar et al. (1992) .83	The association with my company's partners has been highly successful. From an overall performance standpoint, my company's partners have a lot to be desired.(R) Overall, the results of the relationships with my company's partners are far short of expectations.(R)

Table 3 (Continued)

Construct	Source Cronbach's Alpha	Scale Items
<b>Competitive Advantages</b>	Ling-ye and Ogunmokun (2001) .91	Compared to main competitors, my company's products are unique and differentiated. Compared to main competitors, my company offers competitive prices. Compared to main competitors, my company's distribution is competitive. Compared to main competitors, my company's promotion is competitive. Compared to main competitors, my company has competitive human resources. Compared to main competitors, my company's costs are controlled well.
<b>New Venture Performance</b>	Brush & Vanderwerf (1992) .77	My company's profitability is... My company's sales volume is... My company's market share is... My company's productivity is...

## Translation Test

All the scales and questions reported in Table 3, with the exception of Goldberg's IPIP, were translated to Chinese first, and then translated back from Chinese to English by a professional translator who was not given any reference about the original English version. The Chinese version of Goldberg's IPIP, which was translated by Lau (2005) in traditional Chinese, was used in this study directly with a slight change. There is a small difference in means of expression between traditional Chinese and simplified Chinese. For example: “我甚少感到悲伤” was changed to “我很少感到悲伤.”

The quality of relationship scale, competitive advantages scale, and new venture performance scale had never been translated into Chinese, and therefore the appropriateness of the Chinese translation was examined. If deviations in meanings are found between the two English versions, verification will be then take place to assure the precision of the Chinese translation (Brislin, Lonner, & Thorndike, 1973).

Once translations and back translations were complete and correct, the survey instruments were pre-tested to refine and modify before finalizing. There were two approaches to implementing this process.

First, an expert advice approach was used. Two professors in the United States and two professors in China in the areas of textile and apparel business reviewed the survey instruments. By this initial review, items and introductions were revised to ensure face and content validity.

Second, the questionnaires were reviewed and completed by 20 graduate and undergraduate students in apparel-related majors at a Chinese university. This translation test checked the clarity of the content of individual items, clarity of instructions, and response format.



## **Sample Selection**

After approval by the university's Institutional Review Board, participants were selected from the panel pool of "So Jump"—a professional survey company in China. Claiming to be the biggest source of sampling in China, So Jump has more than two million sample resources and extensive coverage of various industries. Due to the difficult-to-reach population of the sample subjects and lacking an adequate sampling frame, the purposive sampling technique was used (Jupp, 2006). Purposive sampling techniques are based on the knowledge of a population and the purpose of the study. In this study, only Chinese apparel new ventures that had been established for five years or less were selected as the target sample frame. In this light, the sample was chosen when the research question that is being address is specific to the characteristics of the particular group of interest, which is subsequently examined in detail (Jupp, 2006).

However, a limitation with this sampling technique may be its representativeness to a population, which may affect external validity (Jupp, 2006). Because of this, the process was strictly controlled for the total completion time and for participant selection to ensure whether the participant is a founder or a member of a found team who is currently operating a business in the apparel industry in China five years or less. Two screening questions were asked. The first was "Are you a founder or a member of a found team who is currently operating a business in the apparel industry in China for less than 5 years?" which was placed at the beginning of the survey. If the participants choose "yes," they were asked to complete the following questions: "Your company is \_\_\_ years old (please specify the year)."

## **Data collection**

The online survey was administrated. It is a useful research technique for researchers collecting data from large populations of individuals (Couper & Miller, 2008). According to

Dillman's (2000) guidelines for Internet surveys, the website included a cover page, which provided participants with basic information about the study and instructions on how to navigate the webpage. So Jump Survey Company was responsible for data capturing and storage. Participants were recruited through search engines, blogs/BBS (Bulletin Board System)/SNS (Social Network Sites), and participant referrals. A link was sent via social media or email to participants to ask them to complete the survey. The study surveys were sent to 810 participants who were deemed to be employed in Chinese apparel new ventures, according to the So Jump database, in mid-February 2015. The online survey included an instruction, human subject consent form and questionnaire.

One week after the initial link was sent, the researcher sent follow-up reminders to increase the response rate. A total of 320 responses were collected by So Jump. Despite the screening question of company age (five years or younger), 110 responses were not qualified for the study as the respondents' companies were in operation for longer than five years. Consequently, 210 responses were usable. The rules-of-thumb of the sample size of SEM method suggested that 5 or 10 observations per estimated parameter (Bentler & Chou, 1987), and 10 cases per variable (Nunnally, Bernstein, & Berge, 1967). However, Boomsma (1982) recommended a minimum sample size of 100, thus 210 as an acceptable number for SEM analysis. In addition, in the research of Sideridis, Sinoms, Papanicolaou, & Fletcher(2014), it was found that a sample size of 50 to 70 would be enough for a model of functional brain connectivity involving four latent variables. Similarly, in this study, four latent variables were included in the model. Therefore, 210 was deemed appropriate for this study. The total response rate was 39.5%, which is higher than the average effective response rate for email and online surveys of around 25%. This higher response rate was due to the rewards system and customer

service of So jump, and it was consistent with normal response rates in similar research So Jump has conducted.

### **Data Analysis Procedure**

This research involved a quantitative approach to investigating the impact of founders' personality traits on Chinese apparel new venture performance. The following section discusses the data screening techniques for this study. Then a discussion on the assessment of the basic assumption is highlighted. Finally a discussion is presented on the hypothesis testing procedures used in this research.

#### **Data Screening**

Once the survey results were collected, each survey response was tracked by finish time. All responses were transferred into a SPSS data file, then cleaned and organized for initial descriptive data analysis.

*Missing Data.* There were no missing data within the 210 usable responses.

*Outliers.* Outliers were assessed by looking for cases where particular responses were beyond three standard deviations of the mean (Tabachnick & Fidell, 2013). Also, the Squared Mahalanobis distances of items were observed to indicate if potential outliers exist by SPSS. No outliers were found during the data screening process.

*Multicollinearity.* Multicollinearity was assessed in a multiple regression model by observing the correlation matrix for high-correlation coefficients between predictor variables ( $>0.9$ ; Hair, Black, Babin, Anderson, & Tatham, 2006). Also, the Variance Inflation Factor (VIF) and tolerance measures were used to make multicollinearity assessments. After carefully checking, multicollinearity was not considered a problem in this research.

*Normality.* Through SPSS and AMOS, normality assessments were made by measuring skewness, kurtosis and the Shapiro-Wilk test for univariate normality. Values for asymmetry and

kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010). Kurtosis was detected in a few survey items. Those survey items were considered for removal during the modeling fit process as Hu and Bentler (1995) advised. Overall, non-normality was not a hindrance to this data analysis and was determined for the measured variables in the model.

Next, the core components of statistical analysis were carried out. Anderson and Gerbing (1988) highlighted a two-step approach to conducting empirical data analysis using structural equation modeling. This two-step approach involves: 1) establishing psychometric properties, which includes developing the confirmatory factor analysis (CFA) measurement model and assessing construct validity; and 2) measuring the structural relationships that exist among latent variables in the measurement model. Anderson and Gerbing's (1988) two-step approach was utilized in the analysis of this work and is discussed in detail below.

### **Assessing the Measurement Model**

The first step of the Anderson and Gerbing's (1988) approach involves assessing the measurement model and assessing construct validity. In order to develop the measurement model each latent construct must be associated with its *a priori* respective measurement items. The measurement model must then be assessed for model fit. This assessment involves observing fit statistics associated with the measurement model of the latent constructs and their respective measurement items. Goodness of fit exists when the p-value associated with the  $\chi^2$  (Chi-squared) statistic is  $> 0.10$ ; when the Incremental Fit Index (IFI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI) and Tucker-Lewis Index (TLI) are all  $> 0.90$ ; and, when the RMSEA Index is  $< 0.06$  (Hu & Bentler, 1995). Among these, the CFI and RMSEA are frequently reported fit indices (Tabachnick & Fidell, 2013) and were used in this study. If fit statistics indicate poor fit

of the measurement model, it may be necessary to delete certain items. It is important to note that item deletion, unless the research is mainly exploratory, should be done with some theoretical justification (Hu & Bentler, 1995). A point of reference in item deletion is the Modification Indices or the Standardized Residuals, which can provide an indication as to the improvement of fit a particular item deletion will result in. The development and assessment of the measurement model associated with this research are discussed in Chapter 4.

Once good fit of the measurement model is achieved through model pruning and reassessment, the next component of first step involves assessing reliability. Reliability deals with the extent to which a measure is repeatable or stable. Essentially reliability refers to the consistency of a measure (Nunnally, Bernstein, & Berge, 1967). A reliable measure would return the same results from time to time, assuming the underlying phenomenon being measured has not changed. Reliability is of particular importance because it establishes a ceiling for validity. The approach to assessing reliability is Cronbach's Alpha. Cronbach's Alpha can be obtained via SPSS. Regardless of approach, the suggested threshold value of 0.70 (Nunnally, Bernstein, & Berge, 1967) is considered indicative of acceptable reliability. Cronbach's Alpha was used to assess reliability in this research. Convergent validity, along with discriminant validity, is a subtype of construct validity. The approach involves manually calculating the Average Variance Extracted (AVE) measure, which indicates the amount of shared variance between latent construct measurement items. However, AVE is a strict measure of convergent validity. Malhotra and Dash (2011) note that "AVE is a more conservative measure than Composite Reliability (CR). On the basis of CR alone, the researcher may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error"

(Malhotra & Dash, 2011, p.702). In this study, CR was used for validity testing. The results of CR assessment are discussed in Chapter 4.

### **Assessing the Structural Model**

Once the measurement model is developed and the constructs are considered valid, the second step of the Anderson and Gerbing (1988) approach involves measuring the structural relationships that exist among latent variables in the measurement model.

As Anderson and Gerbing (1988) stated, measuring the structural relationships between latent variables involves developing the *a priori* theoretically justified hypothesized causal model and assessing the model for goodness of fit. If goodness of fit is not achieved, it is necessary to explore whether adding or deleting certain paths (theoretically justified) will enhance model fit. Once good fit is established, it is necessary to investigate the path coefficients to conduct the actual hypothesis testing of the research. In assessing if hypothesized paths were supported, it is important to investigate the significance of the path coefficients (*t* statistic, and associated *p*-value). Also, the magnitude of the path coefficient should be explored to determine if the influential relationship was strong or negligible.

Additionally, the direction of the path coefficient will also indicate if hypothesized relationships were supported. Another focus should be the direct, indirect, and total effects. It is conceivable that some relationships may involve both a direct and indirect effect on an endogenous (dependent) variable. Thus, it is necessary to segment effects to highlight all necessary influences. Results of the structural model assessment associated with this research are highlighted in detail in Chapter 4.

## **Post-Hoc Analysis**

The post-hoc analysis was conducted in this study to determine which factors of personality traits were the significant predictor and were driving the higher impact on the quality of firm network relationship. Simple linear regression analysis was used in this post-hoc analysis. The  $R^2$ , F value ( $F$ ), degrees of freedom, and significance level ( $p$ ),  $\beta$  were reported to explain the significant predictors in the regression (Cronk, 2012). Results of the post-hoc analysis are discussed in Chapter 4.

## **CHAPTER IV: RESULTS AND ANALYSIS**

The purpose of this chapter is to present the analysis procedures conducted in this study, and their subsequent results. The chapter is divided into two major sections: (a) descriptions of the study sample and (b) results analysis and hypothesis testing.

### **Descriptions of the Study Sample**

#### **Demographic Descriptions**

Of the entire sample, gender of the participants was 80 (38.1%) male, 130 (61.9%) female. The sector of business was 68 out of 210 (32.5%) retail, 81 out of 210 (38.4%) wholesale, 133 out of 210 (63.3%) manufacturing. Educational background was 1 (.5%) less than high school, 6 (2.9%) high school diploma, 189 (90%) college degree or bachelor's degree, 14 (6.7%) graduate degree. Table 4 shows categorical demographic information in detail.



Table 4  
*Demographic Characteristics of Participants (n=210).*

Variable	<i>n</i>	Percent
<b>Gender</b>		
Male	80	38.1%
Female	130	61.9%
Total	210	100%
<b>The sector of business<sup>1</sup></b>		
Retail	68/210	32.5%
Wholesale	81/210	38.4%
Manufacturing	133/210	63.3%
<b>Educational Background</b>		
Less than high school	1	.5%
High school diploma	6	2.9%
College degree or bachelor's degree	189	90%
Graduate degree	14	6.6%
Total	210	100%

*Note:* Participants were asked to choose more than one option if appropriate.

Descriptive means and standard deviations were analyzed for the continuous demographic characteristic variables. Age of participants ranged from 24 to 46 with the mean age between 33 and 34 years old. The length in years since company establishment was from 1 to 5, with a mean of 3.87 years. The number of employees ranged from 2 to 2000, with a mean number of 184 to 185. Years of work experience ranged from 1 to 21, with a mean of 9.81 years. Specifically, years of experience in the Chinese apparel industry ranged from 1 to 21, with a mean of 7.96 years. Table 5 shows demographic information in detail.

Table 5  
*Demographic Characteristics of Participants and their Companies (n=210).*

Variable	<i>M</i>	<i>SD</i>
<b>Participants</b>		
Age	33.60	4.75
Years of work experience	9.81	4.02
Years of experience in the Chinese apparel industry	7.96	4.20
<b>Companies</b>		
Years since company establishment	3.87	1.06
Number of employees	184	226.71

The demographic characteristics in this study sample were expected, when comparing with the Chinese apparel industry's general demographic profiles. Women play a significant role in the Chinese apparel industry. Educational background data showed that most participants had a higher education degree, which was not surprising. According to the entrepreneurship report of the National Development and Reform Commission (Huang, 2011), educational background of founders presented a trend that more and more of them hold a higher education degree. In addition, this survey was distributed online. In China, people with higher education degrees would be more likely to search business information through the Internet, and even develop their e-commercial business (Huang, 2011).

## **Results Analysis and Hypothesis Testing**

To test hypotheses, as previously mentioned, five personality trait dimensions were separated to assess individual model fits.

The results of the measurement and the structural models of the five individual personality traits are discussed in three parts. First, the original *a priori* measurement model of variables in the hypothesized structural model was pruned and respecified over several iterations to reduce standardized residuals and obtain acceptable model fit (Anderson & Gerbing, 1988). In reviewing modification indices, covariance suggestions were added to the model. Additionally, factor loadings were reviewed and insignificant loadings were deleted (Anderson & Gerbing, 1988). The addition of a covariance and deletion of items were executed one by one. Calculation and analysis of model fit was completed each time until model fit was satisfactory (Anderson & Gerbing, 1988). The next step of the analysis involved establishing the psychometric properties of the measures (Nunnally, Bernstein, & Berge, 1967). Cronbach's alpha was used to show reliability. Finally, the theoretical framework was subjected to an analysis using structural equations modeling. The final structural model's standardized path estimates, *t*-values, and *p*-values, along with the goodness of model fit indices were discussed.

### **Personality Trait 1: Openness to Experience**

The following hypotheses were tested in this part:

Hypothesis 1a: Chinese apparel new ventures' competitive advantages positively affect new venture performance.

Hypothesis 2a: The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

Hypothesis 3: The founders' openness to experience positively affects the perceived quality of Chinese apparel new ventures' network relationships.

## **The measurement model**

The measurement modeling suggested deleting three items from the openness to experience, four items from the relationship quality, and two from the competitive advantage scales. The deletion of the items as a result of developing the measurement model was theoretically justified, as they were items that were potentially captured in other items associated with different latent variables in the model (Anderson & Gerbing, 1988). The measurement model of all latent variables in the hypothesized structural model had a  $\chi^2$  value of 333.065 ( $d.f. = 267$ ;  $p$ -value  $< .001$ ), a corresponding CFI of 0.956 and RMSEA of 0.034 at acceptable levels of model fit. The loadings for all the factors were high, and corresponding  $t$ -values are statistically significant. These results indicate unidimensionality of the latent variables of the proposed structural model.

Overall, the scales included in this model were considered to exhibit acceptable reliability. Hair, Black, Babin, Anderson, and Tatham, (2006) highlight that the generally agreed upon lower limit for Cronbach's  $\alpha$  is 0.70, and that the limit may decrease to 0.60 in the case of exploratory research. The  $\alpha$  levels of the openness to experience (.815), perceived quality of firms' network relationships (.759), Chinese apparel new ventures' competitive advantages (.725), and perceived Chinese apparel new venture performance (.714) scales are all above the .7 lower limit, indicating strong internal consistency of the respective items. In addition, the composite reliability measure for each construct, which is perceived as a measure of validity and a stronger reliability assessment when compared to *Cronbach's  $\alpha$*  is above than the suggested threshold value of .7 (Table 6).

Table 6

*Confirmatory Factor Analysis, Measurement Model, and Scale Reliabilities (n=210).*

Constructs	Item	Standardized Parameter Estimates	t-value	p-value
Openness to Experience  <i>Cronbach's Alpha</i> =.815 <i>Composite Reliability</i> =.827	O1	.589	7.95	.001
	O3	.627	8.46	.001
	O4	.456	6.14	.001
	O5	.723	9.73	.001
	O7	.672	9.07	.001
	O9	.636	8.58	.001
	O10	.736	--	.001
Perceived quality of firms' network relationships  <i>Cronbach's Alpha</i> =.759 <i>Composite Reliability</i> =.774	RQ4	.479	4.78	.001
	RQ5	.584	5.29	.001
	RQ6	.540	5.09	.001
	RQ7	.575	5.26	.001
	RQ8	.511	4.96	
	RQ9	.374	4.10	
	RQ10	.493	4.86	.001
	RQ11	.646	5.54	.001
	RQ13	.433	7.08	.001
	RQ14	.439	--	.001

Table 6 (Continued)

	CA3	.627	6.77	.001
--	-----	------	------	------

Chinese apparel new ventures' competitive advantages	CA4	.620	6.72	.001
	CA5	.704	7.28	.001
	CA6	.569	--	.001
<i>Cronbach's Alpha</i> = .725				
<i>Composite Reliability</i> = .725				
Perceived Chinese apparel new venture performance	P1	.578	--	.001
	P2	.665	6.79	.001
	P3	.696	6.96	.001
<i>Cronbach's Alpha</i> = .714				
<i>Composite Reliability</i> = .720				
$\chi^2 = 333.065$ , d.f. = 267, <i>p-value</i> = .004, CMIN/DF = 1.247; CFI = .956; RMSEA = .034				

*Note:* Item numbers with their corresponding survey questionnaire number can be found in Appendix D.

## Hypothesis testing

As highlighted in Chapter 3, this analysis involved assessing the goodness of fit of the hypothesized model, and investigating the significance and direction of the parameter coefficients to conduct the tests of the hypotheses. Figure 11 is a visual portrayal of the results of this structural model analysis. Table 7 details the final structural model's standardized path estimates, *t*-values, and *p*-values, along with the goodness of model fit indices.

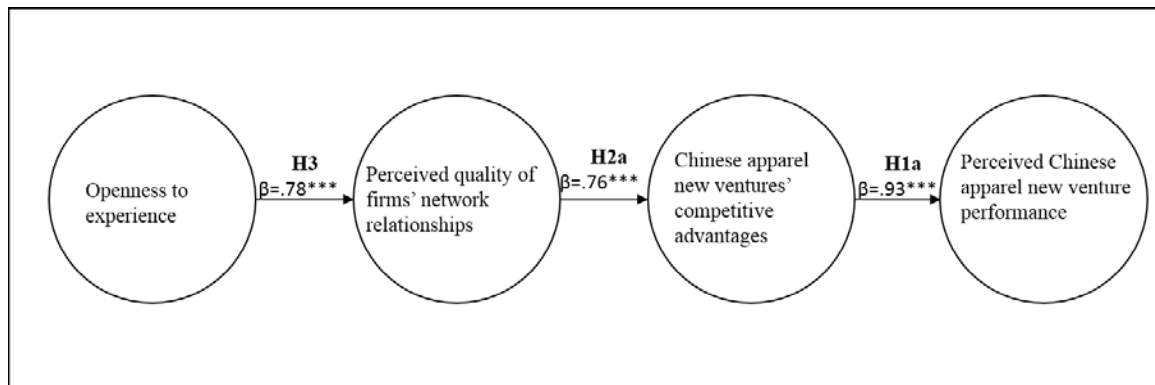


Figure 11. Visual portrayal of the results of the structural model analysis with openness to experience; \*\*\*is significant at  $p < .001$ .

Table 7

*Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (n=210).*

Paths in the Model	Standardized Parameter Estimates	t-value	p-value
Structural Model			
Openness to experience (O)→ Perceived quality of firms' network relationships (RQ)	.776	5.392	.001
Perceived quality of firms' network relationships (RQ)→ Chinese apparel new ventures' competitive advantages (CA)	.761	3.628	.001
Chinese apparel new ventures' competitive advantages (CA) → Perceived Chinese apparel new venture performance (P)	.930	4.108	.001
			Goodness-of-Fit Indices
			$\chi^2 = 333.065$ , DF = 267 ,P-value = .004 CMIN/DF= 1.247
			CFI= .956
			RMSEA= .034

Based on the results of the structural model of openness to experience, the study's research hypotheses were supported. In this model, openness to experience as one dimension of personality traits was included. Hypothesis 1a addressed the relationship between Chinese apparel new ventures' competitive advantages and new venture performance. It was hypothesized that Chinese apparel new ventures' competitive advantages would have a positive influence on Chinese apparel new venture performance. Results indicate that Hypothesis 1a is supported, as revealed in Table 7 (standardized *parameter estimate* = .93; *p*-value <.001).

Hypothesis 2a focused on the relationship between the perceived quality of firms' network relationships and Chinese apparel new ventures' competitive advantages. In particular, it is suggested that the perceived quality of firms' network relationships would positively influence Chinese apparel new ventures' competitive advantages. According to analysis results,



Hypothesis 2a is supported (standardized *parameter estimate* =.761, *p*-value <.001). Hypothesis 3 suggested that founders' openness to experience would positively affect the perceived quality of relationships. Analysis results indicated that there is a significant influence between them, which means Hypothesis 3 was supported (standardized *parameter estimate* =.776, *p*-value <.001).

No other path was suggested in the model. The results suggested that the perceived quality of firms' network relationships and competitive advantages mediated the relationships between founders' openness to experience and new venture performance. These results were expected and aligned with previous literature from Barney's (1991) firm resource-based theory. Founders' personality traits and firm networks are very important resources for new ventures to establish competitive advantages and, in turn, achieve better performance. Particularly, founders' openness to experience does not directly influence new venture performance in this model. Hence, it is proposed that founders who have higher scores in openness to experience would have better relationships with supply chain partners, which would help Chinese apparel new ventures create competitive advantages, and achieve better performance.

### **Personality Trait 2: Emotional Stability**

The following hypotheses were tested in this part:

Hypothesis 1b: Chinese apparel new ventures' competitive advantages positively affect new venture performance.

Hypothesis 2b: The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

Hypothesis 4: The founders' emotional stability positively affects the perceived quality of Chinese apparel new ventures' network relationships.

## **The measurement model**

This resulted in item deletion consisting of two items being deleted from the emotional stability scale; four items being deleted from the relationship quality scale; and two of the competitive advantage items being deleted.

The measurement model of all latent variables in the hypothesized structural model had a  $\chi^2$  value of 405.745 (d.f. = 288,  $p$ -value < .000), a corresponding CFI of 0.939 and RMSEA of 0.044 at acceptable levels of model fit. The loadings for all the factors are high, and corresponding  $t$ -values (C. R.) are statistically significant. These results indicate unidimensionality of the latent variables of the proposed structural model.

Overall, according to the previous discussion, the scales used in this research were considered to exhibit acceptable reliability. The  $\alpha$  levels of the emotional stability (.876), perceived quality of firms' network relationships (.759), Chinese apparel new ventures' competitive advantages (.725), and perceived Chinese apparel new venture performance (.714) scales are all above the 0.7 lower limit, indicating strong internal consistency of the respective items. In addition, the composite reliability measure for each construct, which is perceived as a stronger reliability assessment when compared to *Cronbach's*  $\alpha$  is above than .7 suggested threshold value (Table 8).

Table 8

*Confirmatory Factor Analysis Measurement Model and Scale Reliabilities (n=210).*

Constructs	Item	Standardized Parameter Estimates	<i>t</i> -value	<i>p</i> -value
Emotional stability	ES1	.712	8.62	.001
<i>Cronbach's Alpha</i> =.876	ES3	.793	9.08	.001
<i>Composite Reliability</i> =.879	ES5	.834	9.66	.001
	ES6	.710	11.72	.001
	ES7	.486	6.31	.001
	ES8	.541	6.91	.001
	ES9	.784	9.01	.001
	ES10	.621	--	.001
Perceived quality of firms' network relationships	RQ4	.450	--	.001
	RQ5	.570	5.23	.001
<i>Cronbach's Alpha</i> =.759	RQ6	.550	5.14	.001
<i>Composite Reliability</i> =.774	RQ7	.594	5.35	.001
	RQ8	.496	4.88	
	RQ9	.372	4.07	.001
	RQ10	.478	4.77	.001
	RQ11	.649	5.56	.001
	RQ13	.466	4.70	.001
	RQ14	.463	4.68	.001

Table 8 (Continued)

Chinese apparel new ventures' competitive advantages	CA3	.629	6.57	.001
	CA4	.623	6.53	.001
<i>Cronbach's Alpha</i>	CA5	.713	7.06	.001
<i>=.725</i>	CA6	.550	--	.001
<i>Composite Reliability</i>				
<i>=.725</i>				
Perceived Chinese apparel new venture performance	P1	.584	--	.001
	P2	.670	6.86	.001
<i>Cronbach's Alpha</i>	P3	.683	6.93	.001
<i>=.714</i>	P4	.562	6.13	.001
<i>Composite Reliability</i>				
<i>=.720</i>				

$\chi^2 = 405.745$ ,  $DF = 288$ ,  $P\text{-value} < .001$ ,  $CMIN/DF = 1.409$ ;  $CFI = .939$ ,  
 $RMSEA = .044$

*Note:* Item numbers with their corresponding survey questionnaire number can be found in Appendix D.

## Hypothesis testing

In the same way, Figure 12 is a visual portrayal of the results of this structural model analysis. Table 9 details the final structural model's standardized path estimates, *t*-values, and *p*-values, along with the goodness of model fit indices.

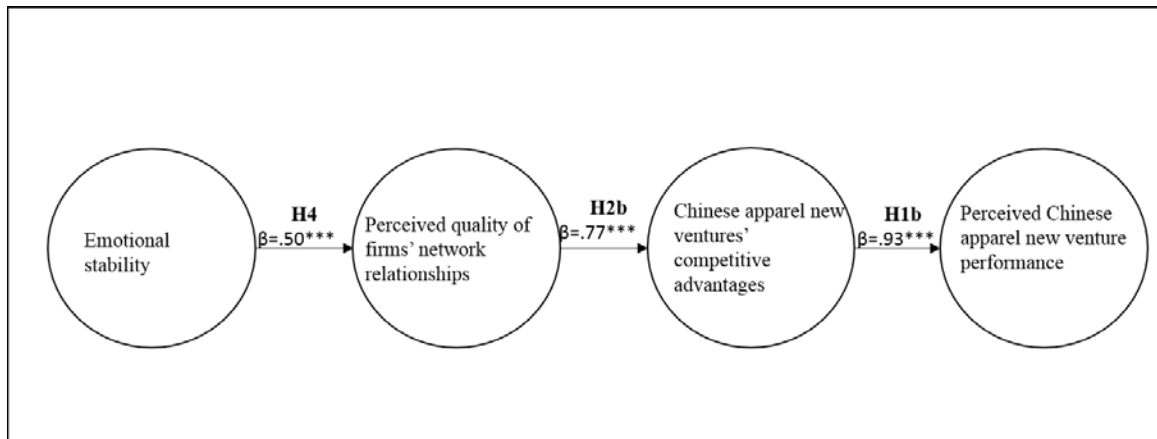


Figure 12. Visual portrayal of the results of the structural model analysis with emotional stability;

\*\*\*is significant at  $p < .001$ .

Table 9

*Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (n=210)*

Paths in the Model	Standardized Parameter Estimates	t-value	p-value
Structural Model			
Emotional stability (ES) → Perceived quality of firms' network relationships (RQ)	.498	4.441	.001
Perceived quality of firms' network relationships (RQ) → Chinese apparel new ventures' competitive advantages (CA)	.767	4.596	.001
Chinese apparel new ventures' competitive advantages (CA) → Perceived Chinese apparel new venture performance (P)	.926	4.024	.001
			Goodness-of-Fit Indices
			$\chi^2 = 405.745$ , DF = 288, <i>p-value</i> < .001, CMIN/DF=1.409
			CFI= .939
			RMSEA= .044

Based on the results of the structural model of emotional stability, the study's research hypotheses were supported. In this model, emotional stability as one dimension of personality traits was included. Hypothesis 1b addressed the relationship between Chinese apparel new ventures' competitive advantages and new venture performance. It was hypothesized that Chinese apparel new ventures' competitive advantages would have a positive influence on Chinese apparel new venture performance. Results indicate that Hypothesis 1a is supported, as revealed in Table 9 (standardized *parameter estimate* =.926; *p-value* < .001).

Hypothesis 2b focused on the relationship between the perceived quality of firms' network relationships and Chinese apparel new ventures' competitive advantages. In particular, it is suggested that the perceived quality of firms' network relationships would positively influence Chinese apparel new ventures' competitive advantages. According to analysis results,

Hypothesis 2b is supported (standardized *parameter estimate* = .767, *p*-value < .001). Hypothesis 4 suggested that founders' emotional stability would positively affect the perceived quality of relationships. Analysis results also indicated that there is a significant influence between them, which means Hypothesis 4 is supported (standardized *parameter estimate* = .498, *p*-value < .001).

In addition, no other path was suggested in the model. Mediation was observed in this model. The quality of firms' networks and new venture competitive advantages were confirmed as playing mediators in the relationship between emotional stability and Chinese apparel new venture performance.

These results were expected and aligned with previous literature from Barney's (1991) firm resource-based theory. Founders' personality traits and firm networks are very important resources for new ventures to establish competitive advantages and, in turn, achieve better performance. Particularly, founders' emotional stability did not directly influence new venture performance in this model. Hence, it is proposed that founders who have higher scores in emotional stability would have better relationships with supply chain partners, which would help Chinese apparel new ventures create competitive advantages, and thus to achieve better performance.

### **Personality Trait 3: Extraversion**

The following hypotheses were tested in this part:

Hypothesis 1c: Chinese apparel new ventures' competitive advantages positively affect new venture performance.

Hypothesis 2c: The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

Hypothesis 5: The founders' extraversion positively affects the perceived quality of Chinese apparel new ventures' network relationships.

### **The measurement model**

This resulted in item deletion consisting of three items being deleted from the extraversion scale, four items being deleted from the relationship quality scale, and one of the competitive advantage items being deleted. As Table 10 indicates, the measurement model of all latent variables in the hypothesized structural model had a  $\chi^2$  value of 396.587 (d.f. = 289, *p*-value < .000), a corresponding CFI of 0.936 and RMSEA of 0.042 at acceptable levels of model fit. The loadings for all the factors were high, and corresponding *t*-values (C.R.) were statistically significant.

Overall, according to the previous discussion, the scales used in this research were considered to exhibit acceptable reliability. The  $\alpha$  levels of the extraversion (.846), perceived quality of firms' network relationships (.759), Chinese apparel new ventures' competitive advantages (.754), and perceived Chinese apparel new venture performance (.714) scales are all above the 0.7 lower limit, indicating strong internal consistency of the respective items. In addition, the composite reliability measure for each construct, which is perceived as a stronger reliability assessment when compared to *Cronbach's*  $\alpha$  is above than .7 suggested threshold value (Table 10).



Table 10  
*Confirmatory Factor Analysis Measurement Model and Scale Reliabilities (n=210).*

Constructs	Item	Standardized Parameter Estimates	<i>t</i> -value	<i>p</i> -value	
Extraversion  <i>Cronbach's Alpha</i> =.846 <i>Composite Reliability</i> =.849	E1	.705	--	.001	
	E2	.590	7.70	.001	
	E3	.669	8.70	.001	
	E5	.724	9.34	.001	
	E7	.669	8.70	.001	
	E8	.616	8.03	.001	
	E9	.696	9.02	.001	
	Perceived quality of firms' network relationships  <i>Cronbach's Alpha</i> =.759 <i>Composite Reliability</i> =.774	RQ4	.482	5.74	.001
		RQ5	.599	--	.001
RQ6		.535	7.50	.001	
RQ7		.590	6.72	.001	
RQ8		.463	5.55	.001	
RQ9		.388	4.78	.001	
RQ10		.475	5.68	.001	
RQ11		.639	7.12	.001	
RQ13		.441	5.33	.001	
RQ14		.425	5.16	.001	

Table 10 (Continued)

Chinese apparel new ventures' competitive advantages	CA1	.582	6.51	.001
	CA3	.619	6.80	.001
<i>Cronbach's Alpha</i> =.754	CA4	.612	6.74	.001
<i>Composite Reliability</i> =.725	CA5	.697	7.34	.001
	CA6	.570	--	.001
Perceived Chinese apparel new venture performance	P1	.586	--	.001
	P2	.673	6.92	.001
<i>Cronbach's Alpha</i> =.714	P3	.684	6.98	.001
<i>Composite Reliability</i> =.720	P4	.556	6.11	.001
$\chi^2 = 396.587$ , $DF = 289$ , $P\text{-value} < .001$ , $CMIN/DF = 1.372$ ; $CFI = .936$ ; $RMSEA = .042$				

*Note:* Item numbers with their corresponding survey questionnaire number can be found in Appendix D.

## Hypothesis testing

Likewise, Figure 13 is a visual portrayal of the results of this structural model analysis. Table 11 details the final structural model's standardized path estimates,  $t$ -values, and  $p$ -values, along with the goodness of model fit indices.

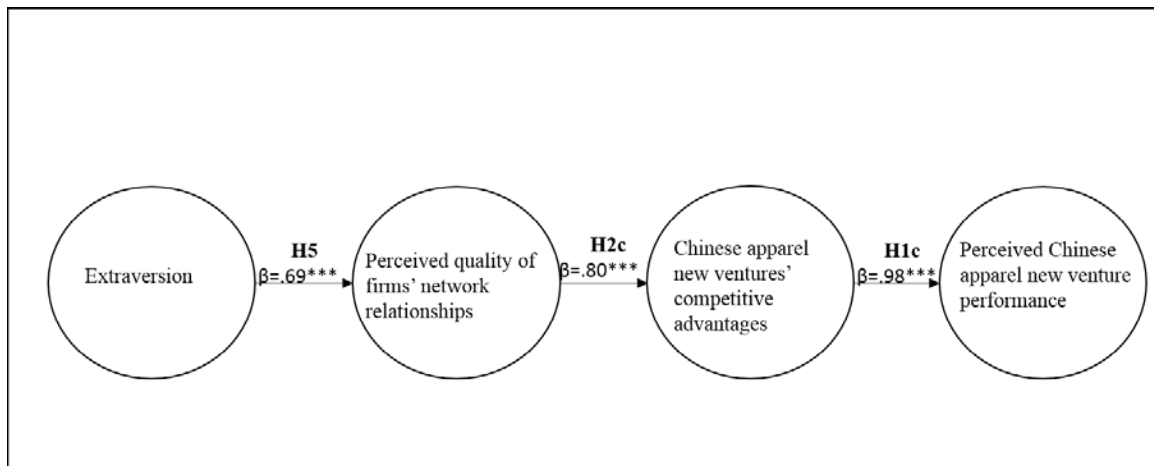


Figure 13: Visual portrayal of the results of the structural model analysis with extraversion; \*\*\*is significant at  $p < .001$ .

Table 11  
*Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (n=210).*

Paths in the Model	Standardized Parameter Estimates	t-value	p-value
Structural Model			
Extraversion (E) → Perceived quality of firms' network relationships (RQ)	.688	6.313	.001
Perceived quality of firms' network relationships (RQ) → Chinese apparel new ventures' competitive advantages (CA)	.804	4.812	.001
Chinese apparel new ventures' competitive advantages (CA) → Perceived Chinese apparel new venture performance (P)	.984	4.084	.001
			Goodness-of-Fit Indices
			$\chi^2 = 396.587$ , DF = 289, <i>P-value</i> = .001, CMIN/DF= 1.372
			CFI= .936
			RMSEA= .042

Based on the results of the structural model of extraversion, the study's research hypotheses were supported. In this model, extraversion as one dimension of personality traits was included. Hypothesis 1c addressed the relationship between Chinese apparel new ventures' competitive advantages and new venture performance. It was hypothesized that Chinese apparel new ventures' competitive advantages would have a positive influence on Chinese apparel new venture performance. Results indicate that Hypothesis 1c is supported, as revealed in Table 11 (*standardized parameter estimate* = .984; *p-value* < .001).

Hypothesis 2c focused on the relationship between the perceived quality of firms' network relationships and Chinese apparel new ventures' competitive advantages. In particular, it is suggested that the perceived quality of firms' network relationships would positively influence Chinese apparel new ventures' competitive advantages. According to analysis results, Hypothesis 2c is supported (*standardized parameter estimate* = .804, *p-value* < .001). Hypothesis

5 suggested that founders' extraversion would positively affect the perceived quality of relationships. Analysis results also indicated that there is a significant influence between them, which means Hypothesis 5 is supported (*standardized parameter estimate* = .688, *p-value* < .001).

This result was expected. In addition, the results suggested that the perceived quality of firms' network relationships and competitive advantages mediated the relationships between founders' extraversion and new venture performance. Following the previous literature, founders with high scores in extraversion would be more likely to build new relationships and have more communications with supply chain members. Therefore, the better quality of firms' network relationships was expected.

#### **Personality Trait 4: Agreeableness**

The following hypotheses were tested in this part:

Hypothesis 1d: Chinese apparel new ventures' competitive advantages positively affect new venture performance.

Hypothesis 2d: The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

Hypothesis 6: The founders' agreeableness positively affects the perceived quality of Chinese apparel new ventures' network relationships.

#### **The measurement model**

This resulted in item deletion consisting of only one item being deleted from the agreeableness scale, four items being deleted from the relationship quality scale, and two of the competitive advantage items being deleted. As Table 12 indicates, the measurement model of all latent variables in the hypothesized structural model had a  $\chi^2$  value of 446.584 (d.f. = 308, *p-*

*value* < .000), a corresponding CFI of 0.914 and RMSEA of 0.046 at acceptable levels of model fit.

Overall, the scales included in this model were considered to exhibit acceptable reliability. Hair, Black, Babin, Anderson, and Tatham (2006) highlight that the generally agreed upon lower limit for Cronbach's  $\alpha$  is 0.70, and that the limit may decrease to 0.60 in the case of exploratory research. The  $\alpha$  levels of agreeableness (.784), perceived quality of firms' network relationships (.759), Chinese apparel new ventures' competitive advantages (.725), and perceived Chinese apparel new venture performance (.714) scales are all above the 0.7 lower limit, indicating strong internal consistency of the respective items. In addition, the composite reliability measure for each construct, which is perceived as a stronger reliability assessment when compared to *Cronbach's*  $\alpha$  is above than .7 suggested threshold value (Table 6).

Table 12  
 Confirmatory Factor Analysis Measurement Model and Scale Reliabilities (n=210).

Constructs	Item	Standardized Parameter Estimates	t-value	p-value
Agreeableness  <i>Cronbach's Alpha</i> =.784 <i>Composite Reliability</i> =.751	A1	.456	4.954	.001
	A2	.464	5.050	.001
	A4	.581	5.776	.001
	A5	.429	4.729	.001
	A6	.366	4.234	.001
	A7	.577	5.808	.001
	A8	.490	5.231	.001
	A9	.599	5.949	.001
	A10	.531	--	.001
	Perceived quality of firms' network relationships  <i>Cronbach's Alpha</i> =.759 <i>Composite Reliability</i> =.774	RQ4	.496	--
RQ5		.596	5.842	.001
RQ6		.525	5.398	.001
RQ7		.590	5.814	.001
RQ8		.462	4.993	.001
RQ9		.385	4.390	.001
RQ10		.479	5.126	.001
RQ11		.640	6.072	.001
RQ13		.430	4.755	.001
RQ14		.431	4.763	.001

Table 12 (Continued)

Chinese apparel new ventures' competitive advantages	CA3	.617	6.655	.001
	CA4	.623	6.695	.001
<i>Cronbach's Alpha</i> =.725	CA5	.716	7.285	.001
<i>Composite Reliability</i> =.725	CA6	.561	--	.001
Perceived Chinese apparel new venture performance	P1	.584	--	.001
	P2	.669	6.857	.001
<i>Cronbach's Alpha</i> =.714	P3	.683	6.934	.001
<i>Composite Reliability</i> =.720	P4	.563	6.132	.001
$\chi^2 = 446.584$ , DF = 308, <i>P-value</i> < .001, CMIN/DF = 1.450; CFI = .914; RMSEA = .046				

*Note:* Item numbers with their corresponding survey questionnaire number can be found in Appendix D.



## Hypothesis testing

Similarly, Figure 14 is a visual portrayal of the results of this structural model analysis. Table 13 details the final structural model's standardized path estimates,  $t$ -values, and  $p$ -values, along with the goodness of model fit indices.

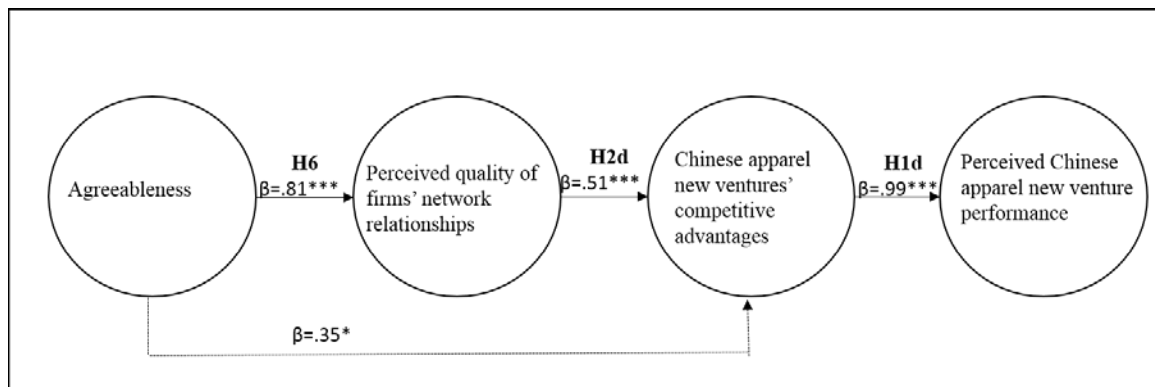


Figure 14: Visual portrayal of the results of the structural model analysis with agreeableness;

\*\*\*is significant at  $p < .001$ , \* is significant at  $p < .1$ .

Table 13

*Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (n=210).*

Paths in the Model	Standardized Parameter Estimates	t-value	p-value
Structural Model			
Agreeableness (A) → Perceived quality of firms' network relationships (RQ)	.818	4.771	.001
Perceived quality of firms' network relationships (RQ) → Chinese apparel new ventures' competitive advantages (CA)	.511	2.468	.001
Chinese apparel new ventures' competitive advantages (CA) → Perceived Chinese apparel new venture performance (P)	.997	4.004	.001
Goodness-of-Fit Indices			
$\chi^2 = 446.584$ , DF = 308, <i>P-value</i> <.001			CMIN/DF= 1.450
			CFI= .914
			RMSEA= .046

Based on the results of the structural model of agreeableness, the study's research hypotheses were supported. In this model, the agreeableness as one dimension of personality traits was included. Hypothesis 1d addressed the relationship between Chinese apparel new ventures' competitive advantages and new venture performance. It was hypothesized that Chinese apparel new ventures' competitive advantages would have a positive influence on Chinese apparel new venture performance. Results indicate that Hypothesis 1d is supported, as revealed in Table 13 (*standardized parameter estimate* = .818; *p-value* < .001).

Hypothesis 2d focused on the relationship between the perceived quality of firms' network relationships and Chinese apparel new ventures' competitive advantages. In particular, it is suggested that the perceived quality of firms' network relationships would positively influence Chinese apparel new ventures' competitive advantages. According to analysis results,

Hypothesis 2c is supported (*standardized parameter estimate* = .511, *p*-value < .001). Hypothesis 6 suggested that founders' agreeableness would positively affect the perceived quality of relationships. Analysis results also indicated that there is a significant influence between them, which means Hypothesis 6 is supported (*standardized parameter estimate* = .997, *p*-value < .001).

This result was expected. However, it was found that agreeableness has a slightly significant influence on new venture competitive advantages ( $\beta = .354^*$ ). The perceived quality of firms' network relationships partially mediated the relationships between founders' agreeableness and new venture competitive advantages. At the same time, the perceived quality of firms' network relationships and competitive advantages together mediated the relationships between founders' agreeableness and new venture performance. Following the previous literature, founders with high scores in agreeableness would be more likely to build new relationships and have more communications with supply chain members. Therefore, the better quality of firms' network relationships was expected.

### **Personality Trait 5: Conscientiousness**

The following hypotheses were tested in this part:

Hypothesis 1e: Chinese apparel new ventures' competitive advantages positively affect new venture performance.

Hypothesis 2e: The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

Hypothesis 7: The founders' conscientiousness positively affects the perceived quality of Chinese apparel new ventures' network relationships.

## **The measurement model**

This resulted in item deletion consisting of four items being deleted from the conscientiousness scale, four items being deleted from the relationship quality scale, and one of the competitive advantage items being deleted.

As Table 14 indicates, the measurement model of all latent variables in the hypothesized structural model had a  $\chi^2$  value of 323.628 (d.f. = 263, *p-value* < .000), a corresponding CFI of 0.956 and RMSEA of 0.033 at acceptable levels of model fit.

Overall, according to the previous discussion, the scales used in this research were considered to exhibit acceptable reliability. The  $\alpha$  levels of emotional stability (.743), perceived quality of firms' network relationships (.759), Chinese apparel new ventures' competitive advantages (.754), and perceived Chinese apparel new venture performance (.714) scales are all above the 0.7 lower limit, indicating strong internal consistency of the respective items. In addition, the composite reliability measure for each construct, which is perceived as a stronger reliability assessment when compared to *Cronbach's*  $\alpha$  is above than .7 suggested threshold value (Table 14).

Table 14  
*Confirmatory Factor Analysis Measurement Model and Scale Reliabilities (n=210).*

Constructs	Item	Standardized Parameter Estimates	<i>t</i> -value	<i>p</i> -value
Conscientiousness  <i>Cronbach's Alpha</i> =.743 <i>Composite Reliability</i> =.672	C1	.559	--	.001
	C2	.386	4.111	.001
	C3	.535	6.065	.001
	C4	.466	4.734	.001
	C6	.388	4.124	.001
	C9	.678	5.719	.001
	Perceived quality of firms' network relationships  <i>Cronbach's Alpha</i> =.759 <i>Composite Reliability</i> =.774	RQ4	.467	--
RQ5		.570	5.418	.001
RQ6		.558	5.357	.001
RQ7		.604	5.593	.001
RQ8		.496	5.03	.001
RQ9		.363	4.082	.001
RQ10		.487	4.971	.001
RQ11		.653	5.803	.001
RQ13		.436	4.637	.001
RQ14		.429	4.587	.001

Table 14 (Continued)

Chinese apparel new ventures' competitive advantages	CA1	.575	6.347	.001
	CA3	.626	6.711	.001
<i>Cronbach's Alpha</i> =.754	CA4	.621	6.673	.001
	CA5	.699	7.177	.001
<i>Composite Reliability</i> =.725	CA6	.557	--	.001
Perceived Chinese apparel new venture performance	P1	.587	--	.001
	P2	.674	6.932	.001
<i>Cronbach's Alpha</i> =.714	P3	.679	6.963	.001
<i>Composite Reliability</i> =.720	P4	.559	6.137	.001
$\chi^2 = 323.628$ , DF = 263, <i>P-value</i> < .001, CMIN/DF = 1.231; CFI = .956; RMSEA = .033				

*Note:* Item numbers with their corresponding survey questionnaire number can be found in Appendix D.

## Hypothesis testing

Similarly, Figure 15 is a visual portrayal of the results of this structural model analysis. Table 15 details the final structural model's standardized path estimates,  $t$ -values, and  $p$ -values, along with the goodness of model fit indices.

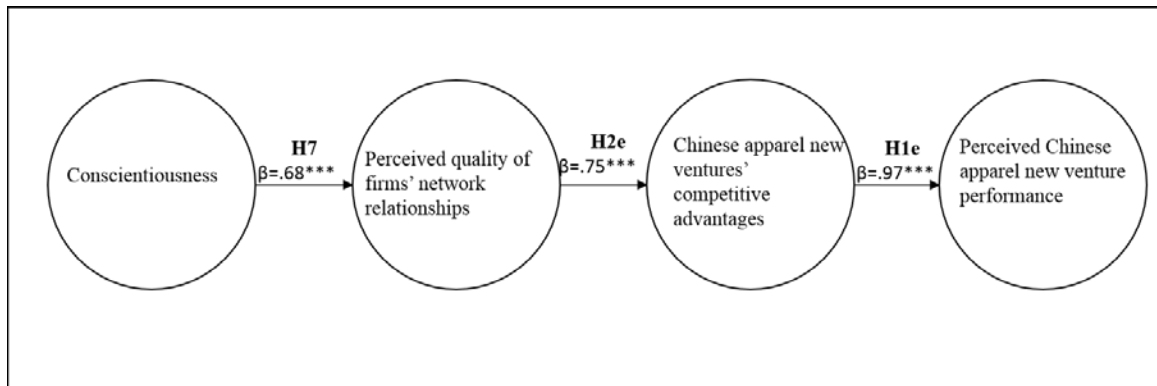


Figure 15: Visual portrayal of the results of the structural model analysis with conscientiousness;

\*\*\*is significant at  $p < .001$ .

Table 15  
*Final Structural Model's Parameter Estimates, t-Values, and Significance Levels (n=210).*

Paths in the Model	Standardized Parameter Estimates	t-value	p-value
Structural Model			
Conscientiousness (C) → Perceived quality of firms' network relationships (RQ)	.683	4.156	.001
Perceived quality of firms' network relationships (RQ) → Chinese apparel new ventures' competitive advantages (CA)	.746	3.928	.001
Chinese apparel new ventures' competitive advantages (CA) → Perceived Chinese apparel new venture performance (P)	.974	4.149	.001
Goodness-of-Fit Indices			
$\chi^2 = 323.628$ , DF = 263, <i>p-value</i> < .001, CMIN/DF= 1.231			
CFI= .956			
RMSEA= .033			

By the same token, the study's research hypotheses were supported. In this model, conscientiousness as one dimension of personality traits was included. Hypothesis 1e addressed the relationship between Chinese apparel new ventures' competitive advantages and new venture performance. It was hypothesized that Chinese apparel new ventures' competitive advantages would have a positive influence on Chinese apparel new venture performance. Results indicate that Hypothesis 1d is supported, as revealed in Table 15 (*standardized parameter estimate* = .683; *p-value* < .001).

Hypothesis 2e focused on the relationship between the perceived quality of firms' network relationships and Chinese apparel new ventures' competitive advantages. In particular, it is suggested that the perceived quality of firms' network relationships would positively influence Chinese apparel new ventures' competitive advantages. According to analysis results, Hypothesis 2c is supported (*standardized parameter estimate* = .746, *p-value* < .001). Hypothesis



7 suggested that founders' conscientiousness would positively affect the perceived quality of relationships. Analysis results also indicated that there is a significant influence between them, which means Hypothesis 7 is supported (*standardized parameter estimate* = .974, *p-value* < .001).

At the same time, the perceived quality of firms' network relationships and competitive advantages together mediated the relationships between founders' conscientiousness and new venture performance. Following the previous literature, founders with high scores in conscientiousness would be more likely to build new relationships and have more communications with supply chain members. Therefore, the better quality of firms' network relationships was expected.

### **Post-Hoc Analysis**

Although the study hypothesis testing showed interesting results, it was impossible to see the unique contribution of each of the Big Five factors of personality traits to the overall perceived firm network relationship quality. Therefore, the post-hoc analysis was conducted to further investigate the predictors of the quality of firm network relationships. To do so, the selected items, which were included in the measurement model for all of the Big Five personality factors (openness to experience, emotional stability, extraversion, agreeableness, and conscientiousness), and perceived relationship quality, were entered into the regression model as independent variables. At the same time, the quality of firm network relationships was entered into the regression model as the dependent variable. The variables were examined by calculating the  $R^2$ , F value (F), degrees of freedom, significance level ( $p$ ), and coefficients ( $\beta$ ) (Cronk, 2012).

The results of the simple regression analysis, with quality as the dependent variables, are highlighted in Table 16. As the results indicate, a significant regression equation was found (F

(5, 204) = 36.558,  $p$ -value < .000), with an  $R^2$  of .473. The five predictors explained 47.3% of the variance. It was found that emotional stability significantly predicted the quality of firm network relationship (*unstandardized*  $\beta$  = .098,  $p$ -value = .037), as well as agreeableness (*unstandardized*  $\beta$  = .197,  $p$ -value = .018) and openness to experience (*unstandardized*  $\beta$  = .235,  $p$ -value = .004). That is, the quality of firm network relationships increased by 0.098 units for each unit change in emotional stability, 0.197 units for each unit change in agreeableness, and 0.235 units for each unit change in openness to experience.

To compare the relative weights of each of the five personality factors, standardized coefficients are typically reviewed in social science research (Tabachnick & Fidell, 2013). The results showed that the quality of firm openness to experience had the largest impact on perceived network relationships. Agreeableness is the second strongest predictor, followed by emotional stability, after accounting for other personality factors. These findings further supported part of the results of the hypothesis testing.

Interestingly, however, extraversion and conscientiousness did not show the statistical significance necessary to predict the quality of firm network relationships when other personality factors are present in the model. According to Meyers, Gamset, and Guarino (2006), the reason for this non-significance is that their predictive work is being accomplished by one or more of the other variables in the analysis. That these two variables are not contributing a statistically significant degree of prediction in the regression model is not a reason to presume that they themselves are poor predictors. Further research is required to investigate the unique contribution of these two variables.

Table 16

*The results of simple regression analysis.*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.355	.215		6.309	.000		
Emotional Stability	.098	.047	.148	2.100	.037	.518	1.932
Extraversion	.094	.061	.130	1.531	.127	.361	2.773
Agreeableness	.197	.083	.197	2.375	.018	.375	2.664
Conscientiousness	.057	.059	.072	.968	.334	.463	2.160
Openness to Experience	.235	.081	.273	2.890	.004	.289	3.461

### **Summary of Hypotheses Tests**

Table 17 shows the summary of the research hypotheses tests. All hypotheses tests were statistically supported both in terms of significance and the direction of the relationship.

Hypotheses 1a to 1e addressed the relationship between Chinese apparel new ventures' competitive advantages and new venture performance, and were supported by the results. Hypotheses 2a to 2e focused on the relationship between the perceived quality of firms' network relationships and Chinese apparel new ventures' competitive advantages; these were also supported by the results. Analysis results were consistent with Barney's (1991) RBV theory. A new venture possesses a competitive advantage when it has certain resources, such as better relationships with supply chain members in this case, which are unique and difficult to imitate and can help achieve better performance.

Additionally, all five personality traits were suggested to significantly influence the quality of firms' relationships with supply chain members, which is consistent with the literature. Openness to experience was the best predictor among the five factors, followed by agreeableness and emotional stability. In all five personality trait models, the perceived quality of firms' network relationships and competitive advantages together mediated the relationships between founders' personality traits and new venture performance. Interestingly, the results also suggested that only agreeableness has a slightly significant influence on new venture competitive advantages, which was not included in the hypotheses. According to Li, Pang, Huang, & Tao's (2014) research, even though Chinese personality traits can be explained by the Big Five model, agreeableness was found more important to new venture performance compared to Western studies. Chinese culture treasures harmony and face giving, which is different from Western culture (Lau, 2002). At this point, agreeableness can be considered an asset for founders. In the

Chinese apparel new venture context, agreeableness might also contribute differently from other personality traits.

Table 17

*Summary of Hypotheses Tests.*

Hypotheses	Results
<p><b>H1:</b> Chinese Apparel New Ventures' Competitive Advantages → New Venture Performance</p>	Supported
<p><b>H2:</b> The Perceived Quality Of Firms' Network Relationships → Chinese Apparel New Ventures' Competitive Advantages</p>	Supported
<p><b>H3:</b> The Founders' Openness To Experience → The Perceived Quality Of Firms' Network Relationships</p>	Supported
<p><b>H4:</b> The Founders' Emotional Stability → The Perceived Quality Of Firms' Network Relationships</p>	Supported

Table 17 (Continued)

---

**H5:**

The Founders' Extraversion → The Perceived Quality Of Firms' Network Relationships Supported

**H6:**

The Founders' Agreeableness → The Perceived Quality Of Firms' Network Relationships Supported

**H7:**

The Founders' Conscientiousness → The Perceived Quality Of Firms' Network Relationships Supported

---

## CHAPTER V. CONCLUSIONS

Chapter 5 contains the following sections: (a) overview of the study, (b) contributions and implications, and (c) study limitations and future research opportunities.

### Overview of the Study

The significant role of new ventures in economic and social development has led practitioners and researchers to search for the factors that affect new venture performance (Feng, 2008). Especially in the Chinese apparel industry, which is in a rapid growth phase, research is needed on analyzing factors impacting apparel new venture performance during the initial stage of business establishment. In the Chinese apparel industry context, founders' unique personality traits and their firms' network relationships were found to be keys to success (Zhao & Ha-Brookshire, 2014). In particular, relationship ("guanxi") as a central idea in Chinese society deeply influences all kinds of business (Zhuang & Xi, 2003). Additionally, for new ventures, founders are critical for forming, building and maintaining the network relationships of firms (Ostgaard & Birley, 1994). High quality relationships with supply chain partners, as a key resource, would help new ventures create competitive advantages and, in turn, influence new venture performance.

This research was designed to investigate the relationships among founders' personality traits, firm network relationships, and new venture performance in the Chinese apparel industry. Based on the resource-based view (Barney, 1991), social network theory (Ahuja, 2000), and Big Five factors of personality (McCrae & Costa, 1997), this research specifically investigated the different impacts of five dimensions on Chinese apparel new ventures through their influence on the quality of external network relationships at the firm level, which are critical to the success of Chinese apparel new ventures during the initial stage of business.

Toward that end, this study proposed the following hypotheses:

**Hypothesis 1:** Chinese apparel new ventures' competitive advantages positively affect new venture performance.

**Hypothesis 2:** The perceived quality of firms' network relationships positively affects Chinese apparel new ventures' competitive advantages.

**Hypothesis 3:** The founders' openness to experience positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 4:** The founders' emotional stability positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 5:** The founders' extraversion positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 6:** The founders' agreeableness positively affects the perceived quality of Chinese apparel new ventures' network relationships.

**Hypothesis 7:** The founders' conscientiousness positively affects the perceived quality of Chinese apparel new ventures' network relationships.

To test these hypotheses, an online survey was conducted using founders' personality traits, the quality of firm network relationships, perceived competitive advantages, and perceived Chinese apparel new venture performance scales. Employing the purposive sampling technique, and targeting Chinese apparel new ventures that had been established for five years or less, 210 usable survey responses were collected through the So Jump Survey Company.

According to Anderson and Gerbing's (1988) two-step approach, data was analyzed and discussed. Additionally, post-hoc analysis was conducted to determine which factors of



personality traits were significant predictors. There were several major findings that are highlighted below.

First, the relationship between Chinese apparel new ventures' competitive advantages and new venture performance was supported by the results. The positive influence of Chinese apparel new ventures' competitive advantages on performance was found to be significant. This finding is consistent with Barney's (1991) RBV theory. Achieving a sustainable competitive advantage would help enhance business performance (Porter, 1985; Coyne, 1986).

Second, the relationship between Chinese apparel new venture network relationship quality and competitive advantages was supported. Chinese apparel new venture network relationship quality has a positive impact on new ventures' competitive advantages. This result is consistent with social network theory and revealed that competitive advantage may be achieved by external social network resources. In particular, for Chinese apparel new ventures, *guanxi* is an important resource of sustained competitive advantage for established businesses in China.

Third, all five personality traits were suggested significantly influence in a positive way the quality of firms' relationships with supply chain partners. This result showed that the founder is embedded in new venture firms' networks by building and facilitating the venture development by effectively linking and organizing the relationship of supply chain partners (Carsrud et al., 1987). Founders' personality traits affect decisions on picking resources and building networks (Phelan & Alder, 2006). Among the five factors, openness to experience has the strongest impact on the quality of firm network relationships. Agreeableness is the second strongest predictor, followed by emotional stability.

Fourth, the perceived quality of firms' network relationships and competitive advantages together were found to be the mediating variables between the relationships between founders'

personality traits and new venture performance. This was a new finding that revealed the influencing mechanism of how founders' personality traits affect Chinese apparel new venture performance.

Finally, results showed only agreeableness has a direct, significant influence on new venture competitive advantages, which was not supposed by the hypotheses. This finding may suggest that agreeableness contributes differently from other personality traits to Chinese apparel new venture performance. This is an area that requires further exploration.

### **Contributions and Implications**

This study provides several important contributions to the new venture study field, particularly with regard to Chinese apparel new ventures. This section discusses the study's contributions and implications from the perspective of theory development, industry, and education.

#### **Theoretical Contributions and Implications**

First, the findings showed that founders' personality traits and firms' network resources are critical firm resources for Chinese apparel venture success, supporting Barney's (1991) resource-based theory of the firm. In addition, drawing from the recent literature in psychology, culture, and business, the study was able to make the linkage between founders' personality traits and firms' network relationships. Therefore, this is one of the few studies that evaluates simultaneously the impact of founders' personality traits and firms' network resources on new venture performance. Given that previous literature has shown the importance of these factors on firm performance separately, by looking at these two factors simultaneously, the study offers new insights into how the personality of new-venture founders could shape the overall quality of

a firm's network. This study also provides the quantitative research to support how founders' personalities and the quality of firms' networks influence Chinese apparel new venture success.

Second, social network theory was found to be an important complementary theory for the resource-based theory of the firm in Chinese apparel new venture research. From the perspective of Chinese society, social network theory in Western culture was revisited as a Chinese version of "guanxi," which extends social networks to both firms and the founder's set of relationships. Additionally, the study findings showed three critical dimensions of the quality of firm networks for Chinese apparel ventures. Communication quality, maintaining a long-term relationship, and satisfaction with the relationship were found to be key dimensions of the study participants' firm network, while information sharing through the network was found invalid in the study model and deleted in the analysis. Despite the fact that in the information and Internet age, information sharing may be useful to partner relationships, in this study, this dimension was not shown to contribute to the model. Further study is required to explore how information sharing may influence new venture performance in the context of the Chinese apparel industry.

Third, this research provided the empirical support for adopting the Big Five Personality model for developing and validating the new venture success scale in the context of Chinese apparel new ventures. Chinese apparel new venture founders' individual characteristics can be described and explained by the Big Five personalities. In particular, with item modifications and deletions, the IPIP 50-item inventory (Goldberg, 2002) was found to be applicable in measuring Chinese apparel new venture founders' personality traits in this study.

More specifically, each of the Big Five factors of personality traits was found to have significant impact on new venture performance through firm network relationships and competitive advantages. This supports the notion that the Big Five factors of personality traits

reside at the highest level of the personality hierarchy, supporting each personality trait individually contributes to new venture performance.

In addition, through post-hoc analysis, three of the five factors showed direct positive relationships with the quality of firm network relationships. Openness to experience showed the highest weight in the regression model to predict the quality of firm network relationships in this study. This was consistent with Lau (2002) who illustrated that openness to experience had a strong impact on founders' achievement. Although Lau (2002) did not discuss the size of the effect, this study showed the strongest effect of openness to experience contributing to the literature with the unique importance of openness in Chinese apparel new venture settings.

Agreeableness and emotional stability were also found to be important predictors for the quality of the firm's network resources. What is noteworthy here is that previous literature based on Western culture showed agreeableness as a negative factor on firm performance. According to the literature, agreeable people are less likely to succeed in businesses because people with this trait are less likely to pursue their own self-interest, drive difficult bargains, or use others to achieve their objectives (Zhao & Siebert, 2006). Less agreeable people also are more skeptical than others (Costa & McCrae, 1992), which makes them more likely to take a critical approach to assessing business information (Shane, 2003). However, in China, which has a strong collectivist culture, agreeableness is as important as openness to experience. Righteousness and profits, credit and honesty, harmonious relations, and mutual benefits are all considered key factors in social relationships, which is different from Western culture (Cao, 2014). In this light, the study findings showed agreeableness is one of the key factors influencing firm network relationships in the Chinese apparel new venture setting.

In addition, emotional stability was also found to be important for firm network relationships in the Chinese apparel new venture setting, consistent with Lau (2002) who found emotional stability to be positively associated with founders' achievement.

### **Contributions and Implications for the Industry**

First, for the success of Chinese apparel new ventures, founders play an important role as critical firm resources (Lau, 2002). This research provides empirical evidence for founders and potential entrepreneurs about the influences of personality traits as one of the success factors of Chinese apparel new ventures. As Wooten et al. (1999) stated, it is becoming more important for vocational professionals to understand personal characteristics associated with new business start-up and new business success. In the highly dynamic environment of the Chinese apparel industry, the findings are useful for founders in understanding and improving each factor of the Big Five factors of personalities, which will, in turn, help their firms achieve better performance.

Second, according to the different culture and specific type of the industry, the necessity and importance of firms' networks could vary. Yum (1988) noted that Western societies emphasize short-term, symmetrical reciprocation in exchange relationships, while people in China consider long-term relationships and social networks into the unpredictable future. At the same time, Yu (2002) stated that those industries needed too much outside collaboration, and with simple distribution channels are less dependent on their external networks. On the other hand, some industries have complex distribution channels and need highly collaborative networks, such as the apparel industry or advertising agencies. New ventures in these industries are more likely to be influenced by the quality of firm network relationships (Yu, 2002). This study provides the empirical support for Chinese apparel new ventures to recognize the importance of the quality of firm external network relationships. In particular, Chinese apparel

new ventures may want to pay more attention to maintaining long-term relationships, increasing communication quality within the network, and satisfaction of the relationship. For example, by providing higher quality product, showing mutual respect, building trust, showing fairness and honesty, Chinese apparel new ventures could develop good relationships with partners continuously.

Third, for Chinese apparel new ventures, openness to experience, agreeableness, and emotional stability were strong predictors of the quality of firm network relationships. Apparel industry founders require an open and creative mind; such openness should be a facilitator for establishing higher quality network relationships and achieving further apparel new venture success. Mental and cognitive training on improving openness would be suggested to Chinese apparel new venture founders. Similarly, for improving agreeableness, founders could be trained to be more polite, trusting, and cooperative in order to meet expectations of coworkers and supply chain partners, improving the quality of the firm's relationships (Bernstein, 2014). Anxiety, stress, and depression often diminish over time as founders learn to regulate their emotions, distract themselves, and avoid unpleasant situations (Bernstein, 2014). By doing these, the higher quality of firm network relationships would be predictable, benefiting businesses.

Fourth, both Chinese and Western supply chain partners could have a better understanding from this research of the personalities of Chinese apparel new venture founders and how these founders' personalities influence firm network relationships. When coping with the critical business challenges of globalization and cross-cultural collaboration, the findings of this study are very useful for partners formulating and implementing appropriate strategies for working with Chinese apparel new ventures. Perhaps, when forming new firm network relationships with Chinese apparel new ventures, supply chain partners may want to focus on

certain personality traits of the founders, as they would have a significant impact on the overall long-term firm relationship and, in turn, on competitive advantage and firm performance. For example, agreeableness in China is a desirable trait for the long-term relationship while it is not so in Western culture.

### **Education Contributions and Implications**

First, this study's results show that founders' personality traits and firms' networks are important aspects of Chinese apparel new venture success. It is suggested that educators need to incorporate related content into their curricula. The typical entrepreneurship class does not provide enough knowledge about personality structure and how to build networks. Besides marketing, management, and finance, the understanding of personality structure and knowledge of guanxi will help students identify and regulate their own individual ways of experience and action. They will be better prepared for creating their own business and decreasing the risk in the hyper-dynamic competitive environment.

Second, since guanxi is very important for business success in China, it will be helpful to give students more chances to build their own network or at least have some practice with it. By using group study and role-play games, their communication and collaboration capability would be improved and they could gain a better understanding of guanxi and how guanxi and firm network relationships influence new venture success.

Third, because of the one-child policy (OCP), students from one-child families are less likely to be imaginative, trusting, and unselfish (Cameron, Gangadharan & Meng, 2013). This has led to widespread concern within China about the social skills of this generation and the observation that these children tend to be more self-centered and less cooperative (Cameron, Gangadharan & Meng, 2013). Some training programs could be designed for OCP young people

to improve certain aspects of their personality that might help them better understand what is required in building high quality firm network relationships. Consequently, they might be more likely to be successful founders.

### **Limitations and Scope of Future Research**

Several limitations are identified in this study, accordingly leading to future research opportunities. First, the samples were focused on founders of Chinese apparel new ventures. Comparisons to apparel new ventures in Western or other Asian cultures (e.g., Singapore, Korea, Japan or India) were not done. Thus, further research is suggested to expand the scope of this cross-cultural study to explore the different influences of founders' personality traits and relationship quality on apparel new ventures between different countries.

Second, self-reporting by founders was used in this study, which may lead to bias. However, employees of Chinese apparel new ventures may have different perceptions regarding founders' personality and evaluating the quality of firm network relationships. Further research may be considered to explore the inconsistency between the founders self-reported data and employees' ratings and could provide more suggestions on identifying how founders' personality traits and the quality of a firm's network relationships would influence new venture success.

Third, certain limitations existed due to the research design. The study's sample relied on purposive sampling, which may not be representative of the Chinese new venture founders' population. Future research could aim to gather a larger number of participants, in addition to utilizing a randomized sampling technique.

Fourth, in analyzing data through SEM, the quality of firm network relation items was analyzed and it was found that not all dimensions were captured. Although this study used Lages et al.'s (2005) scale that had previously tested as highly reliable, the "amount of information



sharing” factor was deleted due to the low factor loading in the model. Further research could examine the Lages et al. (2005) scale and potentially revise the “amount of information sharing” items in the Chinese apparel new venture context.

Fifth, in the post-hoc analysis, extraversion and conscientiousness are not contributing a statistically significant degree of prediction in the quality of firm network relationships. As mentioned, it cannot be presumed that they are themselves poor predictors. Further research may want to examine the unique contribution of these two personality traits and explore how these two variables can predict the relationship quality of Chinese apparel new ventures.

Finally, despite the fact that all Big Five factors of personality traits were found to have significant influence on relationship quality of Chinese apparel new ventures, the interactions among these five factors are unclear in this study. Further research may be considered to examine whether any of the Big Five factors of traits interacted to predict perceived new venture success.

## REFERENCES

- Aharoni, Y. (1993). In search for the unique: can firm-specific advantages be evaluated? *Journal of Management Studies*, 30(1), 31-44.
- Ahlstrom, D., & Bruton, G. D. (2006). Venture capital in emerging economies: Networks and institutional change. *Entrepreneurship Theory and Practice*, 30(2), 299-320.
- Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly*, 45(3), 425-455.
- Aldrich, H., Rosen, B., & Woodward, W. (1987). The impact of social networks on business foundings and profit: a longitudinal study. *Frontiers of Entrepreneurship Research*, 7(154), 68.
- Ambler, T., & Kokkinaki, F. (1997). Measures of marketing success. *Journal of Marketing Management*, 13(7): 665-678.
- Amorós, J. E., & Bosma, N. (n.d.). Global Entrepreneurship Monitor report. Retrieved December 16, 2014, from <http://www.gemconsortium.org/docs/download/3106>.
- Anderson, E., & Weitz, B. (1992). The use of pledges to build and sustain commitment in distribution channels, 29(1). *Journal of Marketing Research*, 18-34.
- Anderson, E., Lodish, L. M., & Weitz, B. A. (1987). Resource allocation behavior in conventional channels, 24(1). *Journal of Marketing Research*, 85-97.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Ang, S. H., & Hong, D. G. (2000). Entrepreneurial spirit among east Asian Chinese. *Thunderbird International Business Review*, 42(3), 285-309.
- Apple, M. T. (2011). The Big Five personality traits and foreign language speaking confidence among Japanese EFL students. Temple University.
- Ashton, M. C., Lee, K., Goldberg, L. R., & de Vries, R. E. (2009). Higher order factors of personality: Do they exist? *Personality and Social Psychology Review*, 79-91
- Bair, J., & Gereffi, G. (2003). Upgrading, uneven development, and jobs in the North American apparel industry. *Global Networks*, 3(2), 143-169.
- Bamford, C. E. 1997. Strategic choice and new venture: A longitudinal examination of the performance implication of initial strategic decision and changes in strategic decisions. PhD dissertation, University of Tennessee–Knoxville.
- Bamford, C. E., Dean, T. J., & McDougall, P. P. (2000). Entry strategies and the growth of bank start-ups in the US: A critical examination of the niche prescription for new ventures. In *ICSB World Conference, Brisbane, Australia, June*.

- Banbury, C. M., & Mitchell, W. (1995). The effect of introducing important incremental innovations on market share and business survival. *Strategic Management Journal*, 16(S1), 161-182.
- Bao, H. M. (2004). *Firm growth and competitive strategy management*. Shanxi People press.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-120.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10), 1231-1241.
- Baron, R. A., & Tang, J. (2008). Entrepreneurs' Social Skills and New Venture Performance: Mediating Mechanisms and Cultural Generality. *Journal of Management*.1-25
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta-analysis. *Personnel Psychology*, 44(1), 1-26.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9(1-2), 9-30.
- Baum, J. A., & Oliver, C. (1991). Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 187-218.
- Baum, J. A., Calabrese, T., & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 21(3), 267-294.
- Begley, T. M., & Boyd, D. P. (1987). A comparison of entrepreneurs and managers of small business firms. *Journal of Management*, 13(1), 99-108.
- Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, 16(1), 78-117.
- Bernstein, E. (n.d.). Look on the bright side: How to improve your personality. Retrieved May 12, 2015, from <http://www.advisory.com/daily-briefing/2014/04/23/look-on-the-bright-side-how-to-improve-your-personality>.
- Bhave, M. P. (1994). A process model of entrepreneurial venture creation. *Journal of Business Venturing*, 9(3), 223-242.
- Bhide, A. (2000). *The origin and evolution of new businesses*. Oxford University Press.
- Biggadike, E. R. (1979). *Corporate diversification: Entry, strategy, and performance*. Division of Research, Graduate School of Business Administration, Harvard University, Cambridge, MA.
- Birch, D. G.W. (1979). The job generation process. MIT Program on Neighborhood and Regional Change, 302,1979. Available at SSRN: <http://ssrn.com/abstract=1510007>

- Blau, P. M. (1977). *Inequality and heterogeneity: A primitive theory of social structure* (Vol. 7). New York: Free Press.
- Bleeke, J., & Ernst, D. (Eds.). (1993). *Collaborating to compete: Using strategic alliances and acquisitions in the global marketplace*. New York: Wiley.
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, *117*(2), 187.
- Bond, M. H. E. (1996). *The handbook of Chinese psychology*. Oxford University Press.
- Boomsma, A. (1982). The robustness of LISREL against small sample sizes in factor analysis models. *Systems under indirect observation: Causality, structure, prediction*, *1*, 149-173.
- Box, T. M., White, M. A., & Barr, S. H. (1993). A contingency model of new manufacturing firm performance. *Entrepreneurship Theory and Practice*, *18*, 31-31.
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, *51*(3), 222-230.
- Brislin, R. W., Lonner, W. J., & Thorndike, R. M. (1973). *Cross-cultural research methods* (pp. 32-58). New York, NY: J. Wiley.
- Brush, C. G., & Vanderwerf, P. A. (1992). A comparison of methods and sources for obtaining estimates of new venture performance. *Journal of Business Venturing*, *7*(2), 157-170.
- Bull, I., & Willard, G. E. (1993). Towards a theory of entrepreneurship. *Journal of Business Venturing*, *8*(3), 183-195.
- Burt, R. S. (1992). *Structural hole*. Harvard Business School Press, Cambridge, MA.
- Burt, R. S. (2001). Structural holes versus network closure as social capital. *Social Capital: Theory and Research*, 31-56.
- Butler, J. E., Brown, B., & Chamornmarn, W. (2003). Informational networks, entrepreneurial action and performance. *Asia Pacific Journal of Management*, *20*(2), 151-174.
- Calantone, R. J., & Schatzel, K. E. (2000). Strategic foretelling: communication-based antecedents of a firm's propensity to preannounce. *Journal of Marketing*, *64*(1), 17-30.
- Cameron, L., Erkal, N., Gangadharan, L., & Meng, X. (2013). Little emperors: behavioral impacts of China's one-child policy. *Science*, *339*(6122), 953-957.
- Cannon, J. P., & Homburg, C. (2001). Buyer-supplier relationships and customer firm costs. *Journal of Marketing*, *65*(1), 29-43.
- Cao, D., Berkeley, N., & Finlay, D. (2014). Measuring Sustained Competitive Advantage From Resource-based View: Survey of Chinese Clothing Industry. *Journal of Sustainable Development*, *7*(2), 89.

- Carlisle, E., & Flynn, D. (2005). Small business survival in China: Guanxi, legitimacy, and social capital. *Journal of Developmental Entrepreneurship*, 10(01), 79-96.
- Carsrud, A. L., Gaglio, C. M., & Olm, K. W. (1986). *Entrepreneurs: Mentors, Networks, and Successful New Venture Development: An Exploratory Study*. Department of Management, College of Business Administration and Graduate School of Business, University of Texas at Austin.
- Cattell, R. B., & Kline, P. E. (1977). *The scientific analysis of personality and motivation*. London: Academic Press.
- Caves, R. E. (1980). Industrial organization, corporate strategy, and structure. *Journal of Economic Literature*, 58, 64-92.
- Chandler, G. N., & Hanks, S. H. (1998). An examination of the substitutability of founders' human and financial capital in emerging business ventures. *Journal of Business Venturing*, 13(5), 353-369.
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295-316.
- Chen, C. H., & Shih, H. T. (2004). The impact of WTO accession on the Chinese garment industry. *Journal of Fashion Marketing and Management*, 8(2), 221-229.
- Cheung, F. M., Cheung, S. F., Leung, K., Ward, C., & Leong, F. (2003). The English version of the Chinese personality assessment inventory. *Journal of Cross-Cultural Psychology*, 34(4), 433-452.
- Chinatown Connection (2006). *Overview of China Fashion Industry*. Available at: <http://www.chinatownconnection.com/china-fashion-industry.htm>.
- Chrisman, J. J., Bauerschmidt, A., & Hofer, C. W. (1998). The determinants of new venture performance: An extended model. *Entrepreneurship Theory and Practice*, 23, 5-30.
- Christian, L. M., Dillman, D. A., & Smyth, J. D. (2007). Helping respondents get it right the first time: the influence of words, symbols, and graphics in web surveys. *Public Opinion Quarterly*, 71(1), 113-125.
- Churchill, N. C., & Lewis, V. L. (1986). Bank lending to new and growing enterprises. *Journal of Business Venturing*, 1(2), 193-206.
- Churchill, N. C., & Muzyka, D. F. (1994). Defining and conceptualizing entrepreneurship: a process approach. *Marketing and Entrepreneurship*, 11-24.
- Cochran, A. B. (1981). Small business mortality rates: A review of the literature. *American Journal of Small Business*, 6(3), 50-59.
- Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web-or internet-based surveys. *Educational and Psychological Measurement*, 60(6), 821-836.

- Cooper, A. C. (1993). Challenges in predicting new firm performance. *Journal of Business Venturing*, 8(3), 241-253.
- Cooper, A. C., & Bruno, A. V. (1977). Success among high-technology firms. *Business Horizons*, 20(2), 16-22.
- Cooper, A. C., Dunkelberg, W., Woo, C. and Dennis, W. (1990). *New Business in America: The firms and their owners*. Washington, DC: NFIB Foundation.
- Cooper, A. C., Gimeno-Gascon, F. J., & Woo, C. Y. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing*, 9(5), 371-395.
- Costa, Jr., P. T., & McCrae, R. R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO Personality Inventory. *Journal of Personality Assessment*, 64(1), 21-50.
- Costa, P. T., & MacCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO FFI): Professional Manual*. Psychological Assessment Resources.
- Costa, P. T., McCrae, R. R., & Holland, J. L. (1984). Personality and vocational interests in an adult sample. *Journal of Applied Psychology*, 69(3), 390.
- Couper, M. P., & Miller, P. V. (2008). Web survey methods introduction. *Public Opinion Quarterly*, 72(5), 831-835.
- Coviello, N. E., & Munro, H. J. (1995). Growing the entrepreneurial firm: networking for international market development. *European Journal of Marketing*, 29(7), 49-61.
- Coviello, N., & Munro, H. (1997). Network relationships and the internationalisation process of small software firms. *International Business Review*, 6(4), 361-386.
- Coyne, K. P. (1986). Sustainable competitive advantage—What it is, what it isn't. *Business Horizons*, 29(1), 54-61.
- Crant, J. M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42-50.
- Cronk, B. C. (2012). *How to use SPSS statistics: A step-by-step guide to analysis and interpretation*. Glendale, CA: Pyrczak Publishing.
- Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: an interpersonal influence perspective. *The Journal of Marketing*, 68-81.
- Daily, C. M., & Dalton, D. R. (1992). The relationship between governance structure and corporate performance in entrepreneurial firms. *Journal of Business Venturing*, 7(5), 375-386.

- Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal*, 19(3), 269-290.
- Day, G. S. (1994). The capabilities of market-driven organizations. *The Journal of Marketing*, 37-52.
- De Jong, A., Song, M., & Song, L. Z. (2013). How Lead Founder Personality Affects New Venture Performance The Mediating Role of Team Conflict. *Journal of Management*, 39(7), 1825-1854.
- DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology*, 93(5), 880.
- Digman, J. M. (1997). Higher-order factors of the Big Five. *Journal of Personality and Social Psychology*, 73(6), 1246.
- Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method* (Vol. 2). New York: Wiley.
- Dong, F. Y. (2000). *Super Speed mode: The main mode of 21st century enterprises*. Enterprise management press.
- Duchesneau, D. A., & Gartner, W. B. (1990). A profile of new venture success and failure in an emerging industry. *Journal of Business Venturing*, 5(5), 297-312.
- Duncan, T., & Moriarty, S. E. (1998). A communication-based marketing model for managing relationships. *The Journal of Marketing*, 1-13.
- Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. *The Journal of Marketing*, 11-27.
- Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32(3), 543-576.
- Eisenhardt, K. M., & Bourgeois, L. J. (1988). Politics of strategic decision making in high-velocity environments: Toward a midrange theory. *Academy of Management Journal*, 31(4), 737-770.
- Eisenhardt, K. M., & Schoonhoven, C. B. (1990). Organizational growth: Linking founding team, strategy, environment, and growth among US semiconductor ventures, 1978-1988. *Administrative Science Quarterly*, 504-529.
- Erken, H., Donselaar, P., & Thurik, R. (2009). Total factor productivity and the role of entrepreneurship. Tinbergen Institute Discussion Paper 09-034/4. Available at SSRN: <http://ssrn.com/abstract=1398767> or <http://dx.doi.org/10.2139/ssrn.1398767>
- Etgar, M. (1979). Sources and types of intra-channel conflict. *Journal of Retailing*, 55(1), 61-78.

- Eysenck, H. J. (1967). *The biological basis of personality* (Vol. 689). Livingston, NJ: Transaction publishers.
- Farace, R. M., & Monge, P. R. P. and Russell, H. 1977. *Communicating and Organizing*. Reading, MA.
- Farh, J. L., Zhong, C. B., & Organ, D. W. (2004). Organizational citizenship behavior in the People's Republic of China. *Organization Science*, 15(2), 241-253.
- Feng, W. (2008). Research on development of china's small and medium garment enterprises. Master's Thesis. Shanghai Jiaotong University
- Fleeson, W. (2001). Toward a structure-and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology*, 80(6), 1011.
- Fleeson, W. (2004). Moving personality beyond the person-situation debate: the challenge and the opportunity of within-person variability. *Current Directions in Psychological Science*, 13(2), 83-87.
- Folta, T. B., Cooper, A. C., & Baik, Y. S. (2006). Geographic cluster size and firm performance. *Journal of Business Venturing*, 21(2), 217-242.
- Forza, C., & Vinelli, A. (1997). Quick response in the textile-apparel industry and the support of information technologies. *Integrated Manufacturing Systems*, 8(3), 125-136.
- Frazier, G. L. (1983). Interorganizational exchange behavior in marketing channels: A broadened perspective. *The Journal of Marketing*, 68-78.
- Frenzen, J., & Nakamoto, K. (1993). Structure, cooperation, and the flow of market information. *Journal of Consumer Research*, 360-375.
- Fu, Y. (2008). The development history of Chinese apparel industry. Available at: [http://fashion.ce.cn/main/yjxw/200810/09/t20081009\\_17016593\\_6.shtml](http://fashion.ce.cn/main/yjxw/200810/09/t20081009_17016593_6.shtml).
- Gaddis, S. E. (1998). How to Design Online Surveys. *Training and Development*, 52(6), 67-71.
- Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*, 1-19.
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696-706.
- Ge, J., Zhou, W., Fu, X. (2004). *The entrepreneurial study*. Beijing: Tsinghua University Press.
- George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update (10th ed.)* Boston: Pearson.
- Gereffi, G. (1996). Commodity chains and regional divisions of labor in East Asia. *Journal of Asian Business*, 12, 75-112.



- Geyskens, I., Steenkamp, J. B. E., & Kumar, N. (1999). A meta-analysis of satisfaction in marketing channel relationships. *Journal of Marketing Research*, 223-238.
- Gilbert, B. A., McDougall, P. P., & Audretsch, D. B. (2006). New venture growth: A review and extension. *Journal of Management*, 32(6), 926-950.
- Goldberg, L. R. (1990). An alternative" description of personality": the big-five factor structure. *Journal of Personality and Social Psychology*, 59(6), 1216.
- Goldberg, L. R. (1999). International Personality Item Pool: A scientific collaboratory for the development of advanced measures of personality and other individual differences. Retrieved: August 14, 2002.
- Goldberg, L. R., & Saucier, G. (1995). So what do you propose we use instead? A reply to Block. *Gerard Psychological Bulletin*, 117(2), 221-225
- Grande, J., Madsen, E. L., & Borch, O. J. (2011). The relationship between resources, entrepreneurial orientation and performance in farm-based ventures. *Entrepreneurship and Regional Development*, 23(3-4): 89-111.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, 1(1), 201-233.
- Granovetter, M. (1995). *Getting a job: A study of contacts and careers*. Chicago: University of Chicago Press.
- Granovetter, M. (2005). The impact of social structure on economic outcomes. *Journal of Economic Perspectives*, 33-50.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 1360-1380.
- Gruber, M. (2004). Marketing in new ventures: theory and empirical evidence. *Schmalenbach Business Review*, 56, 164-199.
- Gu, Q. (2002). SMEs and Chinese apparel industry development. *Journal of Zhejiang Textile & Fashion College*, (1): 23-25.
- Gulati, R., Nohria, N., & Zaheer, A. (2000). Guest editors' introduction to the special issue: strategic networks. *Strategic Management Journal*, 21(3), 199-201.
- Gummesson, E. (1987). The new marketing—developing long-term interactive relationships. *Long Range Planning*, 20(4), 10-20.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (Vol. 6). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal*, 14(8): 607-618.

- Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 149-164.
- Hansen, E. L. (1995). Entrepreneurial networks and new organization growth. *Entrepreneurship Theory and Practice*, 19, 7-20.
- Higgins, M. C., & Gulati, R. (2003). Getting off to a good start: The effects of upper echelon affiliations on underwriter prestige. *Organization Science*, 14(3), 244-263.
- Hisrich, R. D. (1990). Entrepreneurship/intrapreneurship. *American Psychologist*, 45(2), 209.
- Hite, J. M. (1999). *Embedded network ties in emerging entrepreneurial firms: patterns, processes and paths*. Salt Lake City, UT: University of Utah.
- Hofmann, D. A., & Jones, L. M. (2005). Leadership, collective personality, and performance. *Journal of Applied Psychology*, 90(3), 509.
- Hofstede, G. (1984). The cultural relativity of the quality of life concept. *Academy of Management Review*, 9(3), 389-398.
- Hu, L. T., & Bentler, P. M. (1995). Evaluating model fit. Structural equation modeling: Concepts, issues, and applications. , 76-99. Thousand Oaks, CA, US: Sage Publications
- Huang, J. L. (2011). Research on Entrepreneurial Factors of Highly Educated Talents (Master thesis). Retrieved from CNKI.
- Human, S. E., & Provan, K. G. (2000). Legitimacy building in the evolution of small-firm multilateral networks: A comparative study of success and demise. *Administrative Science Quarterly*, 45(2), 327-365.
- Jaccard, J., & Jacoby, J. (2010). *Theory construction and model-building skills: A practical guide for social scientists*. New York: Guilford Press.
- Jarillo, J. C. (1988). On strategic networks. *Strategic Management Journal*, 9(1), 31-41.
- Jeronimus, B. F., Riese, H., Sanderman, R., & Ormel, J. (2014). Mutual reinforcement between neuroticism and life experiences: A five-wave, 16-year study to test reciprocal causation. *Journal of Personality and Social Psychology*, 107(4), 751.
- Jo, H., & Lee, J. (1996). The relationship between an entrepreneur's background and performance in a new venture. *Technovation*, 16(4), 161-211.
- Johannisson, B. (1998). Personal networks in emerging knowledge-based firms: spatial and functional patterns. *Entrepreneurship & Regional Development*, 10(4), 297-312.
- Johanson, J., & Mattsson, L. G. (1987). Interorganizational relations in industrial systems: a network approach compared with the transaction-cost approach. *International Studies of Management & Organization*, 34-48.

- John, O. P., Angleitner, A., & Ostendorf, F. (1988). The lexical approach to personality: A historical review of trait taxonomic research. *European Journal of Personality*, 2(3), 171-203.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy. *Handbook of personality: Theory and research*, 3, 114-158.
- Jupp, V. (2006). *The Sage dictionary of social research methods*. London: Sage Publications.
- Katsikeas, C. S., Piercy, N. F., & Ioannidis, C. (1996). Determinants of export performance in a European context. *European Journal of Marketing*, 30(6), 6-35.
- Kazdin, Alan E. *Encyclopedia of psychology*. Vol. 8. Washington, DC: American Psychological Association, 2000. Kimberly, J. R., (1980) *The organizational life cycle: issues in the creation, transformation, and decline of organizations*. San Francisco, CA: Jossey-Bass Publishers.
- Kirchhoff, B. A., & Phillips, B. D. (1988). The effect of firm formation and growth on job creation in the United States. *Journal of Business Venturing*, 3(4), 261-272.
- Kirzner, I. M. (1985). *Discovery and the capitalist process*. Chicago: University of Chicago Press.
- Ko, S., & Butler, J. E. (2007). Creativity: A key link to entrepreneurial behavior. *Business Horizons*, 50(5), 365-372.
- Kumar, N., Stern, L. W., & Achrol, R. S. (1992). Assessing reseller performance from the perspective of the supplier. *Journal of Marketing Research*, 238-253.
- Kunkel, S. W. (1991). *The impact of strategy and industry structure on new venture performance* (Doctoral dissertation, University of Georgia).
- Kwan, C. Y., Yeung, K. W., & Au, K. F. (2003). A statistical investigation of the changing apparel retailing environment in China. *Journal of Fashion Marketing and Management: An International Journal*, 7(1), 87-100.
- Lages, C., Lages, C. R., & Lages, L. F. (2005). The RELQUAL scale: a measure of relationship quality in export market ventures. *Journal of Business Research*, 58(8), 1040-1048.
- Langowitz, N. S., & Allen, I. E. (2010). Small Business Leadership: Does Being the Founder Matter? *Journal of Small Business & Entrepreneurship*, 23(1), 53-63.
- Larson, A. (1991). Partner networks: Leveraging external ties to improve entrepreneurial performance. *Journal of Business Venturing*, 6(3), 173-188.
- Larson, A., & Starr, J. A. (1993). A network model of organization formation. *Entrepreneurship Theory and Practice*, 17, 5-5.

- Lau, V. P. (2002). Developing and Validating the Entrepreneurial Career Success Scale and Testing its Antecedents and Consequences in the Context of Southeast Asian Values. Retrieved from ProQuest Digital Dissertations.
- Lavrakas, P. J. (2008). *Encyclopedia of Survey Research Methods: AM* (Vol. 1). London: Sage Publications.
- Lee, D. Y., & Tsang, E. W. (2001). The effects of entrepreneurial personality, background and network activities on venture growth. *Journal of Management Studies*, 38(4), 583-602.
- Lee, J. N., & Kim, Y. G. (1999). Effect of partnership quality on IS outsourcing success: conceptual framework and empirical validation. *Journal of Management Information Systems*, 29-61.
- Levitt, T. (1986). *Marketing Imagination: New Edition*. New York: Simon and Schuster.
- Lewis, I., Watson, B., & White, K. M. (2009). Internet versus paper-and-pencil survey methods in psychological experiments: Equivalence testing of participant responses to health-related messages. *Australian Journal of Psychology*, 61(2), 107-116.
- Li, Y. (2014). The analysis of Chinese apparel brand development. *Tianjin Textile Technology*, 1, 6-7
- Li, Z., Pang, X., Huang, Y., & Tao, Z. (2014). Paper from Chinese Science and Technology Management Academic Annual Meeting: The entrepreneur personality, partner types and firm performance: an empirical study of Zhejiang based on small and medium sized enterprises. Beijing, China
- Liljander, V., & Strandvik, T. (1995). The nature of customer relationships in services. *Advances in Services Marketing and Management*, 4(141), 67.
- Ling-ye, L., & Ogunmokun, G. O. (2001). The influence of interfirm relational capabilities on export advantage and performance: an empirical analysis. *International Business Review*, 10(4), 399-420.
- Liu, C. (2004) *The entrepreneurial ability psychology*. Xi'an: Shanxi Normal University Press.
- Liu, R., & Yao, Z. (2005). Review of the quality of relationship research. *Foreign Economies & Management*, 27(1), 27-33.
- Liu, Y. F., The first quarter of 2014 trends of Chinese apparel industry. Available at: <http://www.cnga.org.cn/news/View.asp?NewsID=44845>.
- Locke, E. A., & Baum, J. R. (2007). Entrepreneurial motivation. *The Psychology of Entrepreneurship*, 93-112.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.

- Lussier, R. N. (1995). A nonfinancial business success versus failure prediction model for young firms. *Journal of Small Business Management*, 33(1), 8.
- Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 13(5), 363-380.
- Malhotra N. K., Dash S. (2011). *Marketing Research: An Applied Orientation* (Paperback). London: Pearson Publishing.
- McClelland, D. C. (1967). *Achieving society*. New York: Simon and Schuster.
- McCrae, R. R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6), 1258.
- McDougall, P. P., Robinson, R. B., & DeNisi, A. S. (1992). Modeling new venture performance: An analysis of new venture strategy, industry structure, and venture origin. *Journal of Business Venturing*, 7(4), 267-289.
- McGee, J. E., Dowling, M. J., & Megginson, W. L. (1995). Cooperative strategy and new venture performance: The role of business strategy and management experience. *Strategic Management Journal*, 16(7), 565-580.
- McGrath, R. G., Venkataraman, S., & MacMillan, I. C. (1994). The advantage chain: Antecedents to rents from internal corporate ventures. *Journal of Business Venturing*, 9(5), 351-369.
- Meng, X. L. (2003). *Risk investment and high-tech enterprise growth*. Shanghai, South Finance University Press.
- Meng, X. Y. (2013). Research on the relationship among leadership behavior of entrepreneurs, organizational learning capability and competitive advantage of new venture. Retrieved from CNKI Dissertations.
- Menon, A., Bharadwaj, S. G., & Howell, R. (1996). The quality and effectiveness of marketing strategy: Effects of functional and dysfunctional conflict in intraorganizational relationships. *Journal of the Academy of Marketing Science*, 24(4), 299-313.
- Menon, A., Bharadwaj, S. G., Adidam, P. T., & Edison, S. W. (1999). Antecedents and consequences of marketing strategy making: a model and a test. *The Journal of Marketing*, 18-40.
- Meyer, G. D. (2001). Major unresolved issues and opportunities in entrepreneurship education. *Coleman White Paper*.
- Meyers, L. S., Gamset, G., & Guarino, A. J. (2006). *Applied multivariate research: Design and interpretation*. London: Sage Publications.
- Miller, D., & Toulouse, J. M. (1986). Chief executive personality and corporate strategy and structure in small firms. *Management science*, 32(11), 1389-1409.

- Min, L., Jiali, L., Qingyao, M., & Yan, G. (2013). An Analysis of Timmons Model of The Self-Employed Factors For University Students—Based on the Graduates of Beijing Institute of Fashion Technology. *Journal of Shandong Youth University of Political Science*, 3, 011.
- Mintzberg, H., & Waters, J. A. (1982). Tracking strategy in an entrepreneurial firm. *Academy of Management Journal*, 25(3), 465-499.
- Mitchell, J. C. (1969). *The Concept and Use of Social Structure*. Manchester, UK: University of Manchester Press.
- Mohr, J., & Nevin, J. R. (1990). Communication strategies in marketing channels: A theoretical perspective. *The Journal of Marketing*, 36-51.
- Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15(2), 135-152.
- Monczka, R. M., Callahan, T. J., & Nichols, E. L. (1995). Predictors of relationships among buying and supplying firms. *International Journal of Physical Distribution & Logistics Management*, 25(10), 45-59.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 20-38.
- Mosakowski, E. (1991). Organizational boundaries and economic performance: An empirical study of entrepreneurial computer firms. *Strategic Management Journal*, 12(2), 115-133.
- Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. *Journal of Business Research*, 36(1), 15-23.
- Naudé, P., & Buttle, F. (2000). Assessing relationship quality. *Industrial Marketing Management*, 29(4), 351-361.
- Navarro, A., Losada, F., Ruzo, E., & Díez, J. A. (2010). Implications of perceived competitive advantages, adaptation of marketing tactics and export commitment on export performance. *Journal of World Business*, 45(1), 49-58.
- Nelson, T. E. (1998). Evidence of entrepreneurial resources: firm founder effects on the performance, governance, and product level of the firm at initial public offering, Retrieved from ProQuest Digital Dissertations.
- Nicolaou, N., & Shane, S. (2010). Entrepreneurship and occupational choice: Genetic and environmental influences. *Journal of Economic Behavior & Organization*, 76(1), 3-14.
- Nohria, N. (1992). Introduction: Is a network perspective a useful way of studying organizations. *Networks and organizations: Structure, form, and action*, 1, 22.

- Norris, C. J., Larsen, J. T., & Cacioppo, J. T. (2007). Neuroticism is associated with larger and more prolonged electrodermal responses to emotionally evocative pictures. *Psychophysiology*, *44*(5), 823-826.
- Nunnally, J. C., Bernstein, I. H., & Berge, J. M. T. (1967). *Psychometric Theory* (Vol. 226). New York: McGraw-Hill.
- O'Connor, M. C., & Paunonen, S. V. (2007). Big Five personality predictors of post-secondary academic performance. *Personality and Individual Differences*, *43*(5), 971-990.
- Obstfeld, D. (2005). Social networks, the tertius iungens orientation, and involvement in innovation. *Administrative Science Quarterly*, *50*(1), 100-130.
- Orhan, M., & Scott, D. (2001). Why women enter into entrepreneurship: An exploratory model. *Women in Management Review* *16*(5/6): 232-244.
- Osborne, A. Definition of Tangible Resources. Available at: [http://www.ehow.com/info\\_8127118\\_definition-tangible-resources.html](http://www.ehow.com/info_8127118_definition-tangible-resources.html)
- Ostgaard, T. A., & Birley, S. (1994). Personal networks and firm competitive strategy—a strategic or coincidental match? *Journal of Business Venturing*, *9*(4), 281-305.
- Ostgaard, T. A., & Birley, S. (1996). New venture growth and personal networks. *Journal of Business Research*, *36*(1), 37-50.
- Ouyang, P., & Fu, S. (2012). Economic growth, local industrial development and inter-regional spillovers from foreign direct investment: Evidence from China. *China Economic Review*, *23*(2), 445-460.
- Park, S. H., & Luo, Y. (2001). Guanxi and organizational dynamics: Organizational networking in Chinese firms. *Strategic Management Journal*, *22*(5), 455-477.
- Park, S. H., Chen, R. R., & Gallagher, S. (2002). Firm resources as moderators of the relationship between market growth and strategic alliances in semiconductor start-ups. *Academy of Management Journal*, *45*(3), 527-545.
- Peng, M. W. (2003). Institutional transitions and strategic choices. *Academy of Management Review*, *28*(2), 275-296.
- Penrose, E. T. (1995). *The Theory of the Growth of the Firm*. Oxford University Press.
- Pfeffer, J. (1997). *New directions for organization theory: Problems and prospects*. New York: Oxford University Press.
- Phelan, S. E., & Alder, G. S. (2006). The effects of personality and experience on resource acquisition performance: an experimental study. *Journal of Entrepreneurship Education*, *9*.
- Porter, M. E. (1981). The contributions of industrial organization to strategic management. *Academy of Management Review*, *6*(4), 609-620.

- Porter, M. E., & Millar, V. E. (1985). How information gives you competitive advantage. *Harvard Business Review*, 149-152
- Powell, W. W. (1987). Hybrid organizational arrangements: new form or transitional development? *California Management Review*, 30, 67-87.
- Qiu, H. Z. & Lin, B. F. (2009). *The principle and application of structural equation model*. Beijing: China Light Industry Press
- Rasmussen, E., Mosey, S., & Wright, M. (2011). The evolution of entrepreneurial competencies: A longitudinal study of university spin-off venture emergence. *Journal of Management Studies*, 48(6), 1314-1345.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, 16(4), 353-385.
- Reagans, R., & McEvily, B. (2003). Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly*, 48(2), 240-267.
- Robert F. DeVellis. (2012). *Scale development: Theory and applications* (Vol. 26). London: Sage Publications.
- Roberts, K., Varki, S., & Brodie, R. (2003). Measuring the quality of relationships in consumer services: an empirical study. *European Journal of Marketing*, 37(1/2), 169-196.
- Robertson, I., & Callinan, M. (1998). Personality and work behaviour. *European Journal of Work and Organizational Psychology*, 7(3), 321-340.
- Robinson, K. C. (1999). An examination of the influence of industry structure on eight alternative measures of new venture performance for high potential independent new ventures. *Journal of Business Venturing*, 14(2), 165-187.
- Robinson, K. C., & Phillips McDougall, P. (2001). Entry barriers and new venture performance: a comparison of universal and contingency approaches. *Strategic Management Journal*, 22(6-7), 659-685.
- Romanelli, E. (1989). Environments and strategies of organization start-up: Effects on early survival. *Administrative Science Quarterly*, 369-387.
- Roure, J. B., & Maidique, M. A. (1986). Linking prefunding factors and high-technology venture success: An exploratory study. *Journal of Business Venturing*, 1(3), 295-306.
- Ruekert, R. W., & Walker Jr, O. C. (1987). Marketing's interaction with other functional units: a conceptual framework and empirical evidence. *The Journal of Marketing*, 1-19.
- Salancik, G. R., & Pfeffer, J. (1978). Who gets power—and how they hold on to it: A strategic-contingency model of power. *Organizational Dynamics*, 5(3), 3-21.



- Sanchez, R., Heene, A., & Thomas, H. (Eds.). (1996). *Dynamics of competence-based competition: theory and practice in the new strategic management*. Oxford, UK: Pergamon Press.
- Sandberg, W. R. (1986). *New venture performance: The role of strategy and industry structure*. Lexington, MA: Lexington Books.
- Saridakis, G., Mole, K., & Storey, D. J. (2008). New small firm survival in England. *Empirica*, 35(1), 25-39.
- Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and nonresponse bias in web and paper surveys. *Research in Higher Education*, 44(4), 409-432.
- Schilpzand, M. C., Herold, D. M., & Shalley, C. E. (2010). Members' openness to experience and teams' creative performance. *Small Group Research*.
- Schmidt, W. C. (1997). World-Wide Web survey research made easy with WWW Survey Assistant. *Behavior Research Methods*, 29(2), 303-304.
- Schmitt-Rodermund, E., & Steiger, A. (2001). Psychological predictors of entrepreneurial success. Retrieved January 1, 2015.
- Schumpeter, J. (1942). *Capitalism, Socialism and Democracy*. New York: Harper.
- Schumpeter, J. A. (1961). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Translated by Redvers Opie. Oxford University Press.
- Shane, S. A. (2000). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing.
- Shane, S., & Kolvereid, L. (1995). National environment, strategy, and new venture performance: A three country study. *Journal of Small Business Management*, 33(2), 37.
- Shaver, K. G. (1995). The entrepreneurial personality myth. *Business and Economic Review*, 41(3), 20-23.
- Shirokova, G., & Shatalov, A. (2010). Factors of new venture performance in Russia. *Management Research Review*, 33(5): 484-498.
- Sideridis, G., Simos, P., Papanicolaou, A., & Fletcher, J. (2014). Using Structural Equation Modeling to Assess Functional Connectivity in the Brain Power and Sample Size Considerations. *Educational and Psychological Measurement*, 74(5), 733-758.
- Simon, M., Houghton, S. M., & Aquino, K. (2000). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing*, 15(2), 113-134.
- Sina News. (2008) Textile & apparel industry profits became polarization. Available at: <http://finance.sina.com.cn/chanjing/b/20080130/11114471823.shtml>.

- Snyder, M., & Ickes, W. (1985). Personality and social behavior. *Handbook of Social Psychology*, 2, 883-947.
- Song, M., Podoyntsyna, K., Van Der Bij, H., & Halman, J. I. (2008). Success Factors in New Ventures: A Meta-analysis. *Journal of Product Innovation Management*, 25(1), 7-27.
- Standifird, S. S., & Marshall, R. S. (2000). The transaction cost advantage of guanxi-based business practices. *Journal of World Business*, 35(1), 21-42.
- Stevenson, H. H. (2000). Why entrepreneurship has won. *Coleman White Paper*, 1-8.
- Stinchcombe, A. L. (1965). Social structure and organizations. *Handbook of Organizations*, 142-193.
- Stopford, J. M. & Badenfuller, C. W. F. (1994). Creating corporate entrepreneurship, *Strategic Management Journal*, 15(7), 521-536.
- Sumelius, J. (2009). Social networks and subsidiary HRM capabilities: The case of Nordic MNC subsidiaries in China. *Personnel Review*, 38(4), 380-397.
- Sun, H. (2014). *China Textile Industry Development Report*. Beijing: Chinese National Textile and Apparel Council.
- Szeto, R., Wright, P. C., & Cheng, E. (2006). Business networking in the Chinese context: Its role in the formation of guanxi, social capital and ethical foundations. *Management Research News*, 29(7), 425-438.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Allyn & Bacon.
- Tang, J. (2012) Revision of IPIP—BFAS, Retrieved from CNKI Dissertations.
- Tang, N.Y., Li, X.Y., Shan, M.H. and Zhang, Z.Y. (2006), *Personnel Assessment: Theories and Methods*, North-East Finance and Economy University Press, Dalian.
- Tao, S. P. (2013). Personality, motivation, and behavioral intentions in the experiential consumption of artworks. *Social Behavior and Personality: An International Journal*, 41(9), 1533-1546.
- Timmons, J. A. (1989). *The Entrepreneurial Mind*. Acton, MA: Brick House Publishing Co.
- Tsai, W. M. H., MacMillan, I. C., & Low, M. B. (1991). Effects of strategy and environment on corporate venture success in industrial markets. *Journal of Business Venturing*, 6(1), 9-28.
- Tsai-Lung, L. (2005). Impacts on Improvement of Organizational Synthetic Value Caused by Social Network Relationship. *Journal of American Academy of Business*, 6, 102-109.
- Tsang, E. W. (1998). Can guanxi be a source of sustained competitive advantage for doing business in China? *Academy of Management Executive*, 12(2), 64-73.

- Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 35-67.
- Van de Ven, A. H., Hudson, R., & Schroeder, D. M. (1984). Designing new business startups: Entrepreneurial, organizational, and ecological considerations. *Journal of Management*, 10(1): 87-108.
- Van de Ven, H. (1993). The development of an infrastructure for entrepreneurship. *Journal of Business Venturing*, 8(3), 211-230.
- Van Praag, C. M., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29(4), 351-382.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review*, 11(4), 801-814.
- Walker, G., Kogut, B., & Shan, W. (1997). Social capital, structural holes and the formation of an industry network. *Organization Science*, 8(2), 109-125.
- Walter, A., Müller, T. A., Helfert, G., & Ritter, T. (2003). Functions of industrial supplier relationships and their impact on relationship quality. *Industrial Marketing Management*, 32(2), 159-169.
- Wang, C. L., Siu, N. Y., & Hui, A. S. (2004). Consumer decision-making styles on domestic and imported brand clothing. *European Journal of Marketing*, 38(1/2), 239-252.
- Wang, D., Cui, H., & Zhou, F. (2005). Measuring the personality of Chinese: QZPS versus NEO PI-R. *Asian Journal of Social Psychology*, 8(1), 97-122.
- Wang, G.X. (2005), "On relationship between managers' personality traits and job performance in organization situation," unpublished doctoral dissertation, Ji Lin University.
- Wang, X. F. (2001) Research on Zhejiang province high technology start-ups' growing mode and entrepreneurship environment. Master's thesis. Zhejiang University
- Wasserman, N. (2006). Stewards, agents, and the founder discount: Executive compensation in new ventures. *Academy of Management Journal*, 49(5), 960-976.
- Watson, J., & Everett, J. E. (1996). Do Small Businesses Have High Failure Rates? Evidence from Australian Retailers. *Journal of Small Business Management*, 36, 45-62.
- Wiklund, J. (1999). The sustainability of the entrepreneurial orientation-performance relationship. *Entrepreneurship Theory and Practice*, (24), 37-48.
- Williamson, O. E. (1979). Transaction-cost economics: the governance of contractual relations. *Journal of Law and Economics*, 233-261.
- Wilpert, B., & Scharpf, S. Y. (1990). Intercultural Management—Joint Ventures in the People's Republic of China. *International Journal of Psychology*, 25(3-6), 643-656.

- Wonglimpiyarat, J. (2007). Management and governance of venture capital: A challenge for commercial banks. *Technovation*, 27(12), 721-731.
- Woo, Seng, H., Wilson, D., & Liu, J. (2001). Gender impact on Chinese negotiation: “some key issues for Western negotiators.” *Women in Management Review*, 16(7), 349-356.
- Wooten, K. C., Timmerman, T. A., & Folger, R. (1999). The use of personality and the five-factor model to predict new business ventures: From outplacement to start-up. *Journal of Vocational Behavior*, 54(1), 82-101.
- Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*, 18(2), 295-320.
- Xia, Y., Qiu, Y., & Zafar, A. U. (2007). The impact of firm resources on subsidiary's competitiveness in emerging markets: an empirical study of Singaporean SMEs' performance in China. *Multinational Business Review*, 15(2), 13-40.
- Yao, R. S., Chen H. J., & Miao, Q. Y. (2013). Research on correlations between employees' big five personality and contextual performance. *Psychological Exploration*, 33(4), 347-379.
- Yao, R., Chen, H., & Miao, Q. (2013). A research on correlations between employees' big five personality and contextual performance. *Psychological Exploration*, 4(33), 374-379.
- Yli-Renko, H., Autio, E., & Sapienza, H. J. (2001). Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic Management Journal*, 22(6-7), 587-613.
- Yu, H. J. (2007). The research on the quality of external network relationships, internal capabilities, and new venture growth performance. Retrieved from CNKI Dissertations.
- Yu, S. Z. (2012). The Effect of Entrepreneurial Resource and Entrepreneurial Strategy on Entrepreneurial Performance—Based on Moderating Mechanism of Environment and Organization Structure. Master's thesis. Zhejiang Univeristy
- Yuan, Z. (2009). The 30 years of development of Chinese garment industry after open door policy launched. Retrieved November 18, 2014.
- Yum, J. O. (1988). The impact of Confucianism on interpersonal relationships and communication patterns in East Asia. *Communications Monographs*, 55(4), 374-388.
- Zaheer, A., Gulati, R., & Nohria, N. (2000). Strategic networks. *Strategic Management Journal*, 21(3), 203.
- Zahra, S. A., & Bogner, W. C. (2000). Technology strategy and software new ventures' performance: Exploring the moderating effect of the competitive environment. *Journal of Business Mentoring*, 15(2), 135-173.
- Zhai, Q., Willis, M., O'Shea, B., Zhai, Y., & Yang, Y. (2013). Big Five personality traits, job satisfaction and subjective wellbeing in China. *International Journal of Psychology*, 48(6), 1099-1108.

- Zhang, L. F., & Huang, J. (2001). Thinking styles and the five-factor model of personality. *European Journal of Personality, 15*(6), 465-476.
- Zhang, Z. F. (2006). "A study of big-five personalities affecting team performance under team process." Unpublished master's degree dissertation, Nei Meng Gu Industrial University.
- Zhang, Z., To, C., & Cao, N. (2004). How do industry clusters success: a case study in China's textiles and apparel industries. *Journal of Textile and Apparel, Technology and Management, 4*(2), 1-10.
- Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: a meta-analytical review. *Journal of Applied Psychology, 91*(2), 259.
- Zhao, J. (2013). *The Chinese Fashion Industry: An Ethnographic Approach*. London, A&C Black.
- Zhao, L., & Aram, J. D. (1995). Networking and growth of young technology-intensive ventures in China. *Journal of Business Venturing, 10*(5), 349-370.
- Zhao, L., & Ha-Brookshire, J. (2014). How Did You Survive in the First Five Years? Secrets to Success Described by Apparel New Ventures in China. *Journal of Enterprising Culture, 22*(04), 485-503.
- Zhuang, G., Xi, Y., & Tsang, A. S. (2010). Power, conflict, and cooperation: The impact of guanxi in Chinese marketing channels. *Industrial Marketing Management, 39*(1), 137-149.
- Zou, F., & Gao, Y. (2007). Guanxi with government as a source of competitive advantage in mainland China. *Journal of American Academy of Business, 10*(2), 158-162.
- Zou, S., Fang, E., & Zhao, S. (2003). The effect of export marketing capabilities on export performance: an investigation of Chinese exporters. *Journal of International Marketing, 11*(4), 32-55.

**APPENDIX A.**

**Survey Instrument  
(English Version)**

## Questionnaire

This questionnaire is used only for academic research. Your responses will be kept strictly confidential and anonymous. By completing the surveys, you agree that you understand the procedures and any risks and benefits involved in this research. You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice; your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project. Your privacy will be protected, as all the information is strictly confidential. If you have any questions concerning your rights as a participant, you may contact Campus Institutional Review Board at 573-882-9585. If you have any questions regarding the research itself, you may contact Li Zhao at [lzq6c@mail.missouri.edu](mailto:lzq6c@mail.missouri.edu). Please answer all the questions.

Thank you for your time and your honest responses.

### **Screening Questions:**

Are you a founder or a member of a found team who is currently operating a business in the apparel industry in China for less than 5 years?

Yes\_\_\_

No\_\_\_

### **First Part:**

The phrases below describe various personality traits we may have. Please circle the number indicating how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself. Your responses will be kept in absolute confidence. Please read each statement carefully, and then circle the most appropriate number on the scale.

		<b>Very Inaccurate</b>	<b>Moderately Inaccurate</b>	<b>Neither</b>	<b>Moderately Accurate</b>	<b>Very Accurate</b>
1	I am the life of the party.	1	2	3	4	5
2	I feel little concern for others.	1	2	3	4	5
3	I am always prepared.	1	2	3	4	5
4	I get stressed out easily.	1	2	3	4	5
5	I have a rich vocabulary.	1	2	3	4	5
6	I don't talk a lot.	1	2	3	4	5
7	I am interested in people.	1	2	3	4	5
8	I leave my belongings around.	1	2	3	4	5
9	I am relaxed most of the time.	1	2	3	4	5
10	I have difficulty understanding abstract ideas.	1	2	3	4	5
11	I feel comfortable around people.	1	2	3	4	5
12	I tend to insult people.	1	2	3	4	5
13	I pay attention to details.	1	2	3	4	5
14	I worry about things.	1	2	3	4	5
15	I have a vivid imagination.	1	2	3	4	5
16	I stay in the background.	1	2	3	4	5
17	I sympathize with others' feelings.	1	2	3	4	5
18	I make a mess of things.	1	2	3	4	5
19	I seldom feel blue.	1	2	3	4	5
20	I am not interested in abstract ideas.	1	2	3	4	5
21	I start conversations.	1	2	3	4	5
22	I am not interested in other people's problems.	1	2	3	4	5
23	I get chores done right away.	1	2	3	4	5
24	I am easily disturbed.	1	2	3	4	5
25	I have excellent ideas.	1	2	3	4	5
26	I have little to say.	1	2	3	4	5



---

27	I have a soft heart.	1	2	3	4	5
28	I often forget to put things back in their proper place.	1	2	3	4	5
29	I get upset easily.	1	2	3	4	5
30	I do not have a good imagination.	1	2	3	4	5
31	I talk to a lot of different people at parties.	1	2	3	4	5
32	I am not really interested in others.	1	2	3	4	5
33	I like order.	1	2	3	4	5
34	I change my mood a lot.	1	2	3	4	5
35	I am quick to understand things.	1	2	3	4	5
36	I don't like to draw attention to myself.	1	2	3	4	5
37	I take time out for others.	1	2	3	4	5
38	I avoid my duties.	1	2	3	4	5
39	I have frequent mood swings.	1	2	3	4	5
40	I use difficult words.	1	2	3	4	5
41	I don't mind being the center of attention.	1	2	3	4	5
42	I feel others' emotions.	1	2	3	4	5
43	I follow a schedule.	1	2	3	4	5
44	I get irritated easily.	1	2	3	4	5
45	I spend time reflecting on things.	1	2	3	4	5
46	I am quiet around strangers.	1	2	3	4	5
47	I make people feel at ease.	1	2	3	4	5
48	I am exacting in my work.	1	2	3	4	5
49	I often feel depressed.	1	2	3	4	5
50	I am full of ideas.	1	2	3	4	5

---

## **Second Part:**

The phrases below describe the quality of network relationships that you have with your supply chain partners as perceived by you. In this study, supply chain partners refers to all external network partners your company has, including government departments, financial institutions, upstream and downstream companies such as suppliers and buyers, research institutions, customers, and so on. Your responses will be kept in absolute confidence. Please read each statement carefully, and then circle the most appropriate number on the scale.

		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	My company's partners frequently discuss strategic issues with us.	1	2	3	4	5
2	My company's partners have continuous interactions with us during implementation of any strategies.	1	2	3	4	5
3	I believe that over the long run, the relationship with my company's partners will be profitable.	1	2	3	4	5
4	My company's partners rarely talked with us about their business strategy.	1	2	3	4	5
5	The association with my company's partners has been highly successful.	1	2	3	4	5
6	My company's partners openly share confidential information with us.	1	2	3	4	5
7	The objectives and goals of business strategies are clearly communicated to all of my company's partners.	1	2	3	4	5
8	We are willing to make sacrifices to help my company's partners from time to time.	1	2	3	4	5
9	Maintaining a long-term relationship with my company's partners is important to my company.	1	2	3	4	5
10	My company's partners openly communicate while implementing the strategy.	1	2	3	4	5
11	My company focuses on long-term goals in the relationship with my company's partners.	1	2	3	4	5
12	My company's partners have extensive formal and informal communications during implementation.	1	2	3	4	5

---

13	From an overall performance standpoint, my company's partners have a lot to be desired.	1	2	3	4	5
14	Overall, the results of the relationships with my company's partners are far short of expectations.	1	2	3	4	5

---

### **Third Part:**

The phrases below describe the competitive advantages that your company enjoys as they are perceived by you. Indicate generally your company's competitive position compared to its main rivals in your market, in relation to the following concepts. Please read each statement carefully, and then circle the most appropriate number on the scale.

		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
1	Compared to main competitors, my company's products are unique and differentiated.	1	2	3	4	5
2	Compared to main competitors, my company offers competitive prices.	1	2	3	4	5
3	Compared to main competitors, my company's distribution is competitive.	1	2	3	4	5
4	Compared to main competitors, my company's promotion is competitive.	1	2	3	4	5
5	Compared to main competitors, my company has competitive human resources.	1	2	3	4	5
6	Compared to main competitors, my company's costs are controlled well.	1	2	3	4	5

### **Fourth Part:**

The phrases below describe the current market performance of your company as perceived by you. Your responses will be kept in absolute confidence. Please read each statement carefully, and then circle the most appropriate number on the scale.

		<b>Clearly Below the Average</b>	<b>Below the Average</b>	<b>Neutral</b>	<b>Above the Average</b>	<b>Clearly Above the Average</b>
1	My company's profitability is...	1	2	3	4	5
2	My company's sales volume is...	1	2	3	4	5
3	My company's market share is...	1	2	3	4	5
4	My company's productivity is...	1	2	3	4	5

## **Demographics**

**Please tick or fill in the appropriate answers.**

1: The sector of your own business is:

- a. Retail
- b. Wholesale
- c. Manufacturers
- d. Other, Please specify \_\_\_\_\_

2: No. of employees: around \_\_\_\_\_

3: Years of experiences in the industry: \_\_\_\_\_

Years of experiences in the **Chinese apparel** industry: \_\_\_\_\_

4. Your company is \_ years old \_\_\_\_\_ (please specify the year).

5. Your company is located in \_\_\_\_\_ (please specify city).

6: The level of education you have completed: (Please pick one)

- a. less than high school
- b. high school diploma
- c. College degree or Bachelor's degree
- d. Graduate degree

7. You are \_\_\_\_\_ male or female

8. Age: \_\_\_\_\_

**APPENDIX B.**

**Survey Instrument  
(Chinese Version)**

## 中文版问卷

您好，这份问卷仅用于学术研究。您的回答将循序匿名原则并严格保密。您填写问卷的行为将视为您认可此项研究的进程，并了解可能存在的风险和获得的收益。您有权利拒绝参与此项研究并随时可以撤销您的回答。如果您有任何问题，请联系密苏里大学相关审查机构 573-882-9585.。

如果您对此项研究本身有了解兴趣，请联系研究者赵莉，邮箱 [lzq6c@mail.missouri.edu](mailto:lzq6c@mail.missouri.edu)。

请您务必回答全部的题项。

感谢您的时间和倾力参与。

### 筛选题目

您是创业者或者创业团队中的成员吗？（要求您所经营的服装企业从成立到现在的年限少于五年。）

是

否

### 第一部分

以下语句用来描述个人性格。请根据语句描述您个性的准确度圈出一个数字。

		非常不准确	比较不准确	没有意见	比较准确	非常准确
1	我令聚会充满活力	1	2	3	4	5
2	我对别人很少关心	1	2	3	4	5
3	我做事永远做好准备	1	2	3	4	5
4	我容易有精神压力	1	2	3	4	5
5	我有丰富的词汇表达意思	1	2	3	4	5
6	我不会说太多	1	2	3	4	5
7	我对别人感兴趣	1	2	3	4	5
8	我把物件随处摆放	1	2	3	4	5

9	我大部分时间都轻松自在	1	2	3	4	5
10	我对抽象概念理解有困难	1	2	3	4	5
11	我在人群中感觉自在	1	2	3	4	5
12	我侮辱别人	1	2	3	4	5
13	我留心每个细节	1	2	3	4	5
14	我对事情感到忧虑	1	2	3	4	5
15	我有生动活泼的想象力	1	2	3	4	5
16	我让自己做背景人物	1	2	3	4	5
17	我对别人感同身受	1	2	3	4	5
18	我把物件弄得一团糟	1	2	3	4	5
19	我甚少感到悲伤	1	2	3	4	5
20	我对抽象概念不感兴趣	1	2	3	4	5
21	我常打开话题	1	2	3	4	5
22	我对别人的困难不感兴趣	1	2	3	4	5
23	我把家务打理的井井有条	1	2	3	4	5
24	我容易受困扰	1	2	3	4	5
25	我有极其出色的意念	1	2	3	4	5
26	我没什么话说	1	2	3	4	5
27	我有一颗温柔的心	1	2	3	4	5
28	我常忘记把物件放回原处	1	2	3	4	5
29	我容易沮丧	1	2	3	4	5
30	我没有好的想象力	1	2	3	4	5
31	我在聚会中与很多不同的人交谈	1	2	3	4	5
32	我不会对别人真正感到兴趣	1	2	3	4	5
33	我喜欢有条理	1	2	3	4	5
34	我经常转变情绪	1	2	3	4	5
35	我很快的理解事物	1	2	3	4	5
36	我不喜欢引人注目	1	2	3	4	5
37	我为别人付出时间	1	2	3	4	5



38	我逃避自己的责任	1	2	3	4	5
39	我的情绪经常变化	1	2	3	4	5
40	我可以用艰深的字句	1	2	3	4	5
41	我不介意成为注意的焦点	1	2	3	4	5
42	我感受到别人的内心	1	2	3	4	5
43	我按照时间表做事	1	2	3	4	5
44	我容易被惹怒	1	2	3	4	5
45	我付出时间仔细思考事情	1	2	3	4	5
46	我在陌生人当中很静	1	2	3	4	5
47	我令别人感到自在	1	2	3	4	5
48	我对工作要求极为严格	1	2	3	4	5
49	我经常感到沮丧	1	2	3	4	5
50	我充满念头	1	2	3	4	5

## 第二部分

以下语句用来描述您公司与合作伙伴之间的关系质量。合作伙伴包括政府、金融机构、供应商、代理商等等，请根据语句描述的准确度圈出一个数字。

		非常不同意	不同意	没有意见	同意	非常同意
1	我公司的合作伙伴很频繁的和我讨论公司战略层面的问题。	1	2	3	4	5
2	我公司的合作伙伴在战略实施时会和我进行持续性的互动沟通。	1	2	3	4	5
3	我相信经过长时间的经营，和公司合作伙伴的关系将对我们的生意有益	1	2	3	4	5
4	我公司合作伙伴很少和我们讨论他们的商业战略	1	2	3	4	5
5	我公司和公司合作伙伴的合作取得了高度成功	1	2	3	4	5
6	我公司合作伙伴会和我们分享一些保密信息	1	2	3	4	5

7	我公司的合作伙伴会非常清晰的和我们沟通他们商业战略的目的和目标	1	2	3	4	5
8	有些时候，我们很愿意做出一些牺牲来帮助我公司的合作伙伴	1	2	3	4	5
9	和公司合作伙伴们维系长期合作关系对我们公司来说很重要	1	2	3	4	5
10	我公司的合作伙伴在实施策略时会公开的和我们沟通	1	2	3	4	5
11	我公司专注于和公司合作伙的长期合作	1	2	3	4	5
12	我公司合作伙在合作时会广泛的进行正式和非正式的交流沟通	1	2	3	4	5
13	从整体来看，我公司合作伙给予大量我公司所需要的	1	2	3	4	5
14	总的来说，我公司和合作伙之间的关系比预期的要差一些	1	2	3	4	5

### 第三部分

以下语句用来描述相对于竞争对手，您公司的竞争优势。请根据语句描述的准确度圈出一个数字。

		非常不同意	不同意	没有意见	同意	非常同意
1	比较起主要竞争对手，我公司产品独特且有区分度。	1	2	3	4	5
2	比较起主要竞争对手，我公司有价格优势	1	2	3	4	5
3	比较起主要竞争对手，我公司的渠道更有竞争力	1	2	3	4	5
4	比较起主要竞争对手，我公司的推广更有竞争力	1	2	3	4	5
5	比较起主要竞争对手，我公司的人力资源更有竞争力	1	2	3	4	5
6	比较起主要竞争对手，我公司的成本控制更佳	1	2	3	4	5

## 第四部分

以下语句用来描述相对于同行业平均值，您公司的绩效表现。请根据语句描述的准确度圈出一个数字

		明显低于平均值	低于平均值	中等表现	高于平均值	明显高于平均值
1	我公司的利润率	1	2	3	4	5
2	我公司的销量	1	2	3	4	5
3	我公司的市场份额	1	2	3	4	5
4	我公司的生产效率	1	2	3	4	5

## 个人信息

1: 您公司的经营类型属于:

- a. 零售
- b. 批发
- c. 生产制造
- d. 其他 \_\_\_\_\_

2: 您公司的雇员数: 大约 \_\_\_\_\_

3: 您在行业内经验是: \_\_\_\_\_年

4. 您公司的经营年限\_\_\_\_\_ (具体年数).

5. 您公司位于 \_\_\_\_\_ (具体城市).

6: 您的受教育程度: (请选择)

- a. 低于高中
- b. 高中中专技校毕业
- c. 大专或者本科
- d. 研究生及以上

7. 您的性别是: \_\_\_\_\_

8. 年龄： \_\_\_\_\_

**APPENDIX C.**

**Institutional Review Board Approval, Consent Form**



**Institutional Review Board**  
University of Missouri-Columbia

190 Galena Hall; Dc074.00  
Columbia, MO 65212  
573-882-3181  
irb@missouri.edu

February 23, 2015

Principal Investigator: Li Zhao  
Department: Textile and Apparel Mgmt

Your Exempt Application to project entitled The Impact of Founders' Personality Traits on the Performance of Chinese Apparel New Ventures was reviewed and approved by the MU Institutional Review Board according to terms and conditions described below:

IRB Project Number	2001681
IRB Review Number	201970
Approval Date of this Review	February 23, 2015
IRB Expiration Date	February 23, 2016
Level of Review	Exempt
Project Status	Active - Open to Enrollment
Exempt Categories	45 CFR 46.101b(2)
Risk Level	Minimal Risk
Internal Funding	Personal funds

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the approval:

1. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date.
2. All unanticipated problems, adverse events, and deviations must be reported to the IRB within 5 days.
3. All changes must be IRB approved prior to implementation unless they are intended to reduce immediate risk.
4. All recruitment materials and methods must be approved by the IRB prior to being used.
5. The Annual Exempt Form must be submitted to the IRB for review and approval at least 30 days prior to the project expiration date. If the study is complete, the Completion/Withdrawal Form may be submitted in lieu of the Annual Exempt Form
6. Maintain all research records for a period of seven years from the project completion date.
7. Utilize all approved research documents located within the attached files section of eCompliance. These documents are highlighted green.

If you have any questions, please contact the IRB at 573-882-3181 or irb@missouri.edu.

## CONSENT TO ACT AS A HUMAN PARTICIPANT

**University of Missouri, Department of Textile and Apparel Management**

### **PROJECT TITLE:**

The Impact of Founders' Personality Traits on the Performance of Chinese Apparel New Ventures

### **PRINCIPAL INVESTIGATOR:**

Li Zhao Ph.D. Candidate & Jung, Ha-Brookshire, Ph.D.

### **DESCRIPTION AND EXPLANATION OF PROCEDURES:**

The aim of study is to investigate how founders' personality traits and firm network relationships affect new venture performance in the Chinese apparel context. Due to the highly competitive and hyper-dynamic development paths of the Chinese apparel industry and Chinese apparel consumption behavior, it is important to understand what aspects of founders' personality traits might be more important to start up and maintain a successful apparel business in China. Also, with the unique cultural background of Chinese society, how firm network relationships could affect new venture performance is an important question to ask.

To address this goal, online survey will be conducted. The surveys will encompass five parts, measuring (a) founders' personality traits using the Goldberg (1999) 50-item five-factor domain scale from the International Personality Item Pool (IPIP), (b) the quality of firm network relationships, (c) perceived competitive advantages, (d) perceived Chinese apparel new venture performance, and (e) demographic variables.

### **CONFIDENTIALITY:**

Data will be saved anonymously and kept strictly confidential. Any electronic files will be saved with numeric codes, with no personal identifiers. Throughout the procedures, if you feel

uncomfortable with any questions or experiences, you may stop participation at any time. Finally, only the researcher will have access to the data and the aggregated data will be analyzed and shared for publication to protect your confidentiality. The data will be kept for seven years after the study has been completed.

### **RISKS AND DISCOMFORTS:**

There are minimal physical, psychological or sociological risks involved in participating in this study.

### **BENEFITS TO SOCIETY:**

The results of this study will benefit society and industry by identifying the major factors that have a positive effect on entrepreneurial performance for Chinese apparel new ventures and providing adequate business suggestions to help new ventures set up the first step of business longevity in China.

### **CONSENT:**

You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice; your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project. Your privacy will be protected as all the information in journals will be kept strictly confidential. If you have any questions concerning your rights as a participant, you may contact Campus Institutional Review Board at 001-573-882-9585. If you have any questions regarding the research itself, you may contact me at 001-573-999-2130 or by e-mail at [lzq6c@mail.missouri.edu](mailto:lzq6c@mail.missouri.edu).



## **APPENDIX D.**

### **Code book**

Questionnaire Number	Code Number in Data Analysis Procedure	
<b>First Part: Personality Traits</b>		
E(Extraversion), ES (Emotional Stability), O (Openness to experience), A(Agreeableness), C (Conscientiousness)		
1	I am the life of the party.	E1
2	I feel little concern for others.	A1
3	I am always prepared.	C1
4	I get stressed out easily.	ES1
5	I have a rich vocabulary.	O1
6	I don't talk a lot.	E2
7	I am interested in people.	A2
8	I leave my belongings around.	C2
9	I am relaxed most of the time.	ES2
10	I have difficulty understanding abstract ideas.	O2
11	I feel comfortable around people.	E3
12	I tend to insult people.	A3
13	I pay attention to details.	C3
14	I worry about things.	ES3
15	I have a vivid imagination.	O3
16	I stay in the background.	E4
17	I sympathize with others' feelings.	A4
18	I make a mess of things.	C4
19	I seldom feel blue.	ES4
20	I am not interested in abstract ideas.	O4
21	I start conversations.	E5
22	I am not interested in other people's problems.	A5
23	I get chores done right away.	C5
24	I am easily disturbed.	ES5
25	I have excellent ideas.	O5
26	I have little to say.	E6

---

27	I have a soft heart.	A6
28	I often forget to put things back in their proper place.	C6
29	I get upset easily.	ES6
30	I do not have a good imagination.	O6
31	I talk to a lot of different people at parties.	E7
32	I am not really interested in others.	A7
33	I like order.	C7
34	I change my mood a lot.	ES7
35	I am quick to understand things.	O7
36	I don't like to draw attention to myself.	E8
37	I take time out for others.	A8
38	I avoid my duties.	C8
39	I have frequent mood swings.	ES8
40	I use difficult words.	O8
41	I don't mind being the center of attention.	E9
42	I feel others' emotions.	A9
43	I follow a schedule.	C9
44	I get irritated easily.	ES9
45	I spend time reflecting on things.	O9
46	I am quiet around strangers.	E10
47	I make people feel at ease.	A10
48	I am exacting in my work.	C10
49	I often feel depressed.	ES10
50	I am full of ideas.	O10

---

**Second Part: The Quality of Firm Network Relationships (RQ)**

---

1	My company's partners frequently discuss strategic issues with us.	RQ1
2	My company's partners have continuous interactions with us during implementation of any strategies.	RQ2
3	I believe that over the long run, the relationship with my company's partners will be profitable.	RQ3

---

---

4	My company's partners rarely talked with us about their business strategy.	RQ4
5	The association with my company's partners has been highly successful.	RQ5
6	My company's partners openly share confidential information with us.	RQ6
7	The objectives and goals of business strategies are clearly communicated to all of my company's partners.	RQ7
8	We are willing to make sacrifices to help my company's partners from time to time.	RQ8
9	Maintaining a long-term relationship with my company's partners is important to my company.	RQ9
10	My company's partners openly communicate while implementing the strategy.	RQ10
11	My company focuses on long-term goals in the relationship with my company's partners.	RQ11
12	My company's partners have extensive formal and informal communications during implementation.	RQ12
13	From an overall performance standpoint, my company's partners have a lot to be desired.	RQ13
14	Overall, the results of the relationships with my company's partners are far short of expectations.	RQ14

---

**Third Part: Perceived Chinese Apparel New Venture Competitive Advantages (CA)**

---

1	Compared to main competitors, my company's products are unique and differentiated.	CA1
2	Compared to main competitors, my company offers competitive prices.	CA2
3	Compared to main competitors, my company's distribution is competitive.	CA3
4	Compared to main competitors, my company's promotion is competitive.	CA4
5	Compared to main competitors, my company has competitive human resources.	CA5
6	Compared to main competitors, my company's costs are controlled well.	CA6

---

**Fourth Part: Perceived Chinese Apparel New Venture Performance (P)**

---

1	My company's profitability is...	P1
2	My company's sales volume is...	P2

---

---

3	My company's market share is...	P3
4	My company's productivity is...	P4

---

## **APPENDIX E.**

### **SEM Analysis AMOS Output**

## Personality Trait 1: Openness to Experience

### Measurement Model

#### Model Fit Summary

##### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	58	333.065	267	.004	1.247
Saturated model	325	.000	0		
Independence model	25	1804.562	300	.000	6.015

##### RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.034	.892	.868	.733
Saturated model	.000	1.000		
Independence model	.166	.355	.302	.328

##### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.815	.793	.957	.951	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

##### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.890	.726	.851
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

##### NCP

Model	NCP	LO 90	HI 90
Default model	66.065	23.640	116.657
Saturated model	.000	.000	.000
Independence model	1504.562	1374.433	1642.148

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.594	.316	.113	.558
Saturated model	.000	.000	.000	.000
Independence model	8.634	7.199	6.576	7.857

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.034	.021	.046	.990
Independence model	.155	.148	.162	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	449.065	465.546	643.198	701.198
Saturated model	650.000	742.350	1737.810	2062.810
Independence model	1854.562	1861.666	1938.240	1963.240

ECVI

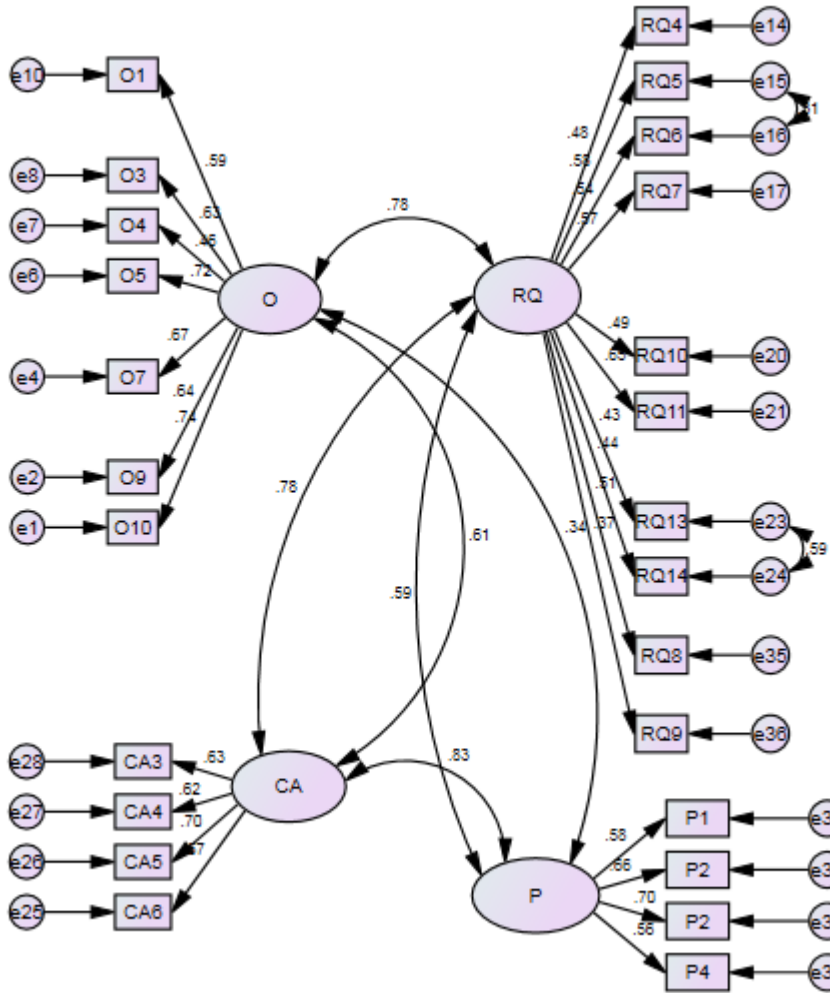
Model	ECVI	LO 90	HI 90	MECVI
Default model	2.149	1.946	2.391	2.227
Saturated model	3.110	3.110	3.110	3.552
Independence model	8.874	8.251	9.532	8.907

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	193	204
Independence model	40	42



Final Measurement Model with Model Fit Output



## Structural Regression Model

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	58	333.065	267	.004	1.247
Saturated model	325	.000	0		
Independence model	25	1804.562	300	.000	6.015

#### RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.034	.892	.868	.733
Saturated model	.000	1.000		
Independence model	.166	.355	.302	.328

#### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.815	.793	.957	.951	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

#### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.890	.726	.851
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

#### NCP

Model	NCP	LO 90	HI 90
Default model	66.065	23.640	116.657
Saturated model	.000	.000	.000
Independence model	1504.562	1374.433	1642.148

#### FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.594	.316	.113	.558

Model	FMIN	F0	LO 90	HI 90
Saturated model	.000	.000	.000	.000
Independence model	8.634	7.199	6.576	7.857

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.034	.021	.046	.990
Independence model	.155	.148	.162	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	449.065	465.546	643.198	701.198
Saturated model	650.000	742.350	1737.810	2062.810
Independence model	1854.562	1861.666	1938.240	1963.240

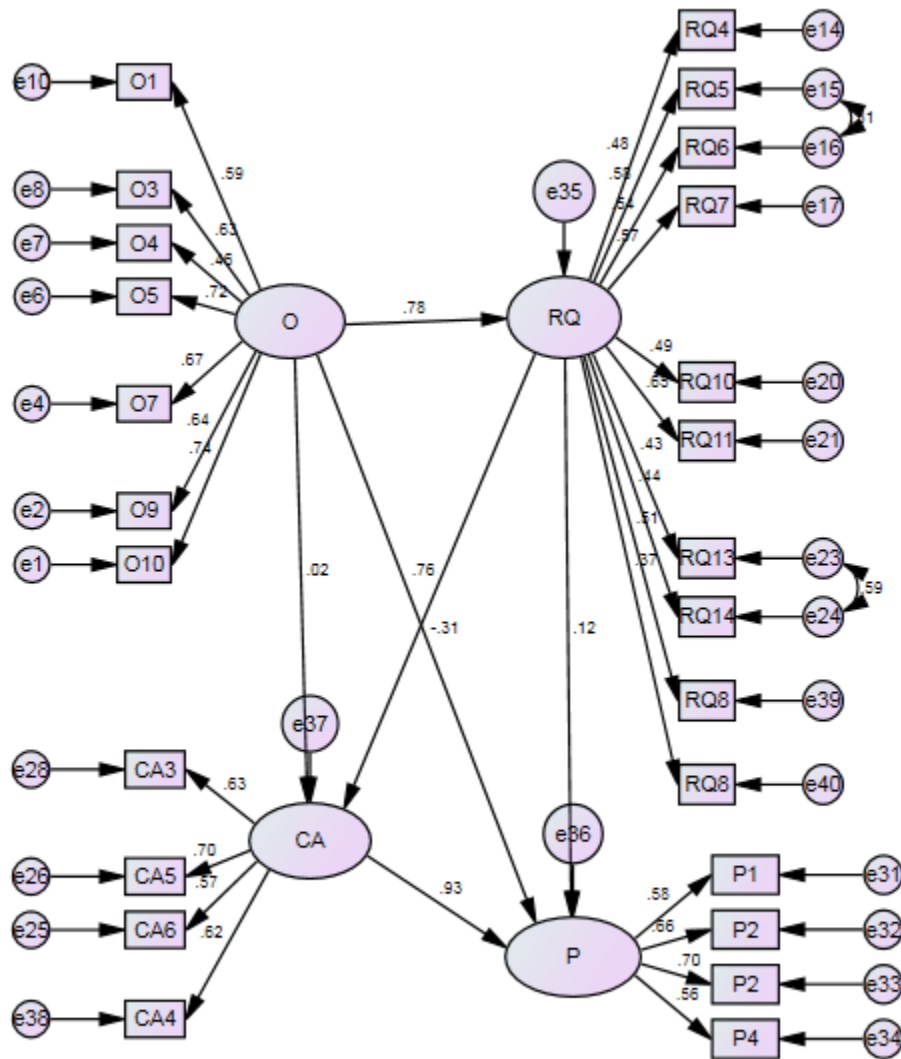
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.149	1.946	2.391	2.227
Saturated model	3.110	3.110	3.110	3.552
Independence model	8.874	8.251	9.532	8.907

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	193	204
Independence model	40	42

Final Structural Regression Model with Model Fit Output



**Personality Trait 2: Emotional Stability**

**Measurement Model**

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	63	405.745	288	.000	1.409
Saturated model	351	.000	0		
Independence model	26	2259.240	325	.000	6.952

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.056	.873	.845	.716
Saturated model	.000	1.000		
Independence model	.205	.347	.295	.321

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.820	.797	.940	.931	.939
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.886	.727	.832
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	117.745	68.502	175.019
Saturated model	.000	.000	.000
Independence model	1934.240	1787.270	2088.638

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.941	.563	.328	.837
Saturated model	.000	.000	.000	.000
Independence model	10.810	9.255	8.552	9.993

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.044	.034	.054	.830
Independence model	.169	.162	.175	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	531.745	550.438	742.613	805.613
Saturated model	702.000	806.143	1876.835	2227.835
Independence model	2311.240	2318.955	2398.265	2424.265

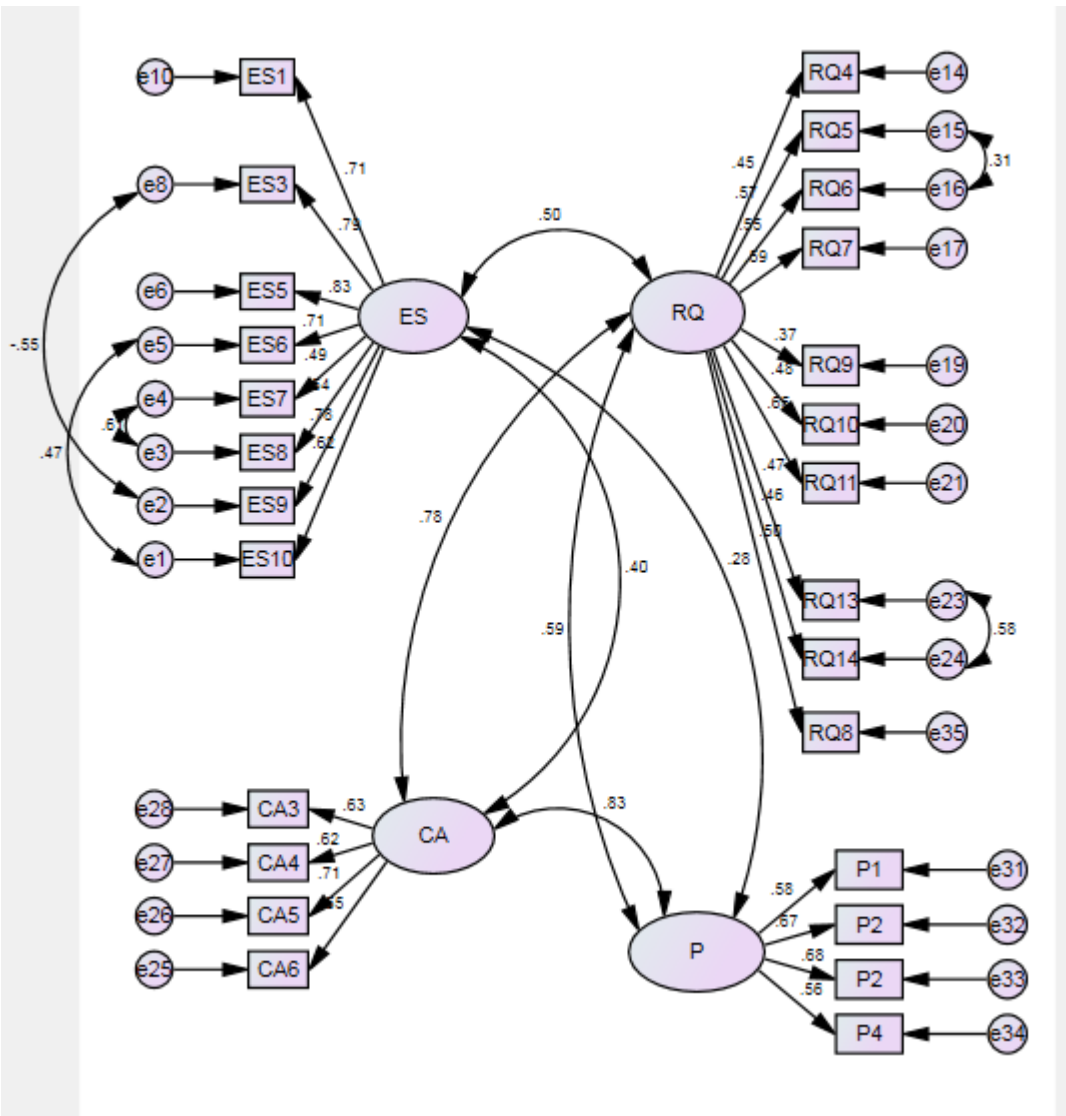
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.544	2.309	2.818	2.634
Saturated model	3.359	3.359	3.359	3.857
Independence model	11.059	10.355	11.797	11.095

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	170	179
Independence model	35	36

Final Measurement Model with Model Fit Output



## Structural Regression Model

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	63	405.745	288	.000	1.409
Saturated model	351	.000	0		
Independence model	26	2259.240	325	.000	6.952

#### RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.056	.873	.845	.716
Saturated model	.000	1.000		
Independence model	.205	.347	.295	.321

#### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.820	.797	.940	.931	.939
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

#### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.886	.727	.832
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

#### NCP

Model	NCP	LO 90	HI 90
Default model	117.745	68.502	175.019
Saturated model	.000	.000	.000
Independence model	1934.240	1787.270	2088.638

#### FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.941	.563	.328	.837



Model	FMIN	F0	LO 90	HI 90
Saturated model	.000	.000	.000	.000
Independence model	10.810	9.255	8.552	9.993

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.044	.034	.054	.830
Independence model	.169	.162	.175	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	531.745	550.438	742.613	805.613
Saturated model	702.000	806.143	1876.835	2227.835
Independence model	2311.240	2318.955	2398.265	2424.265

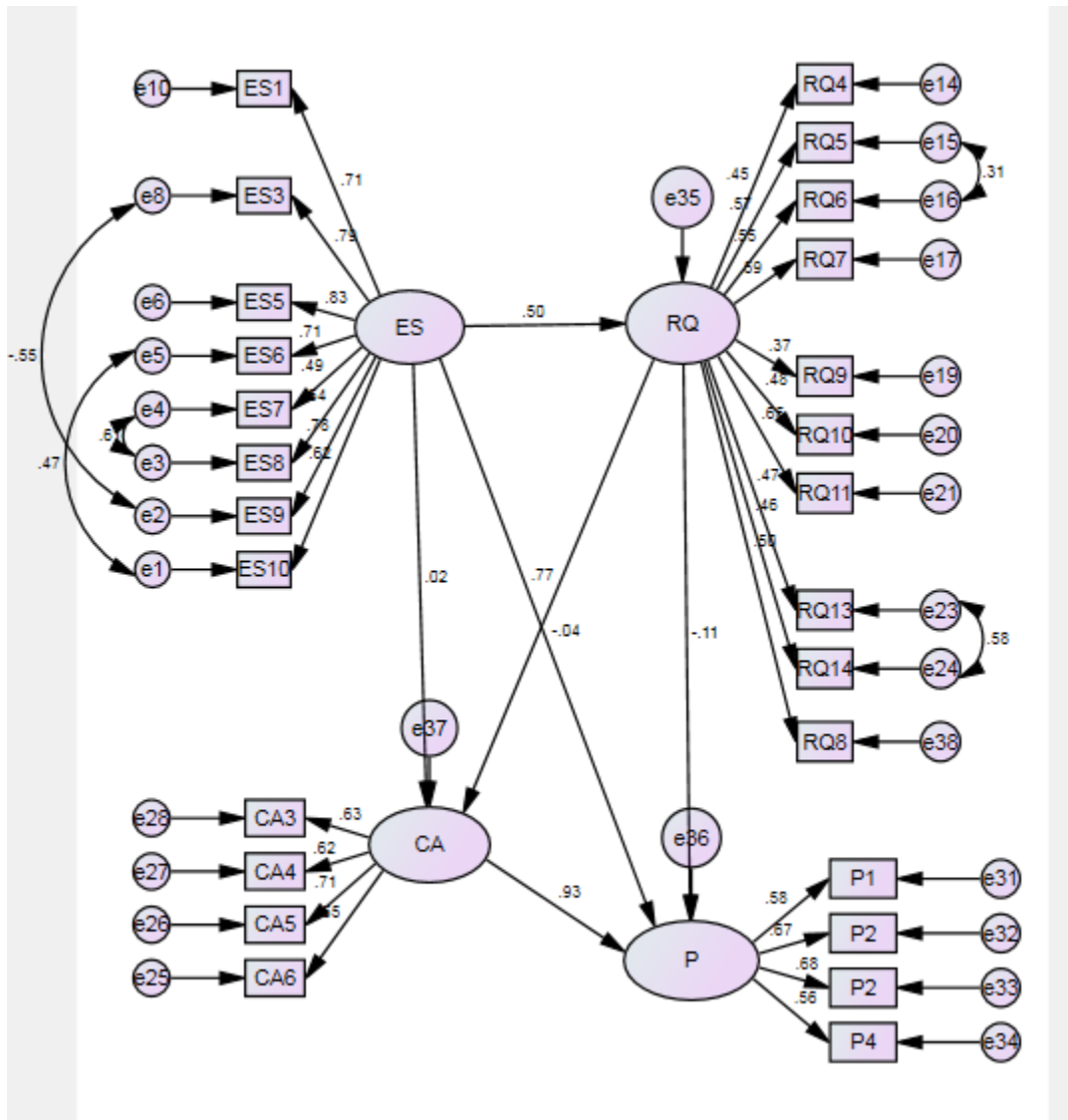
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.544	2.309	2.818	2.634
Saturated model	3.359	3.359	3.359	3.857
Independence model	11.059	10.355	11.797	11.095

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	170	179
Independence model	35	36

Final Structural Regression Model with Model Fit Output



**Personality Trait 3: Extraversion**

**Measurement Model**

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	62	396.587	289	.000	1.372
Saturated model	351	.000	0		
Independence model	26	1994.832	325	.000	6.138

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.040	.881	.855	.725
Saturated model	.000	1.000		
Independence model	.181	.345	.292	.319

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.801	.776	.937	.928	.936
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.889	.712	.832
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	107.587	59.349	163.883
Saturated model	.000	.000	.000
Independence model	1669.832	1532.695	1814.420

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.898	.515	.284	.784
Saturated model	.000	.000	.000	.000
Independence model	9.545	7.990	7.333	8.681

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.042	.031	.052	.900
Independence model	.157	.150	.163	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	520.587	538.983	728.108	790.108
Saturated model	702.000	806.143	1876.835	2227.835
Independence model	2046.832	2054.546	2133.857	2159.857

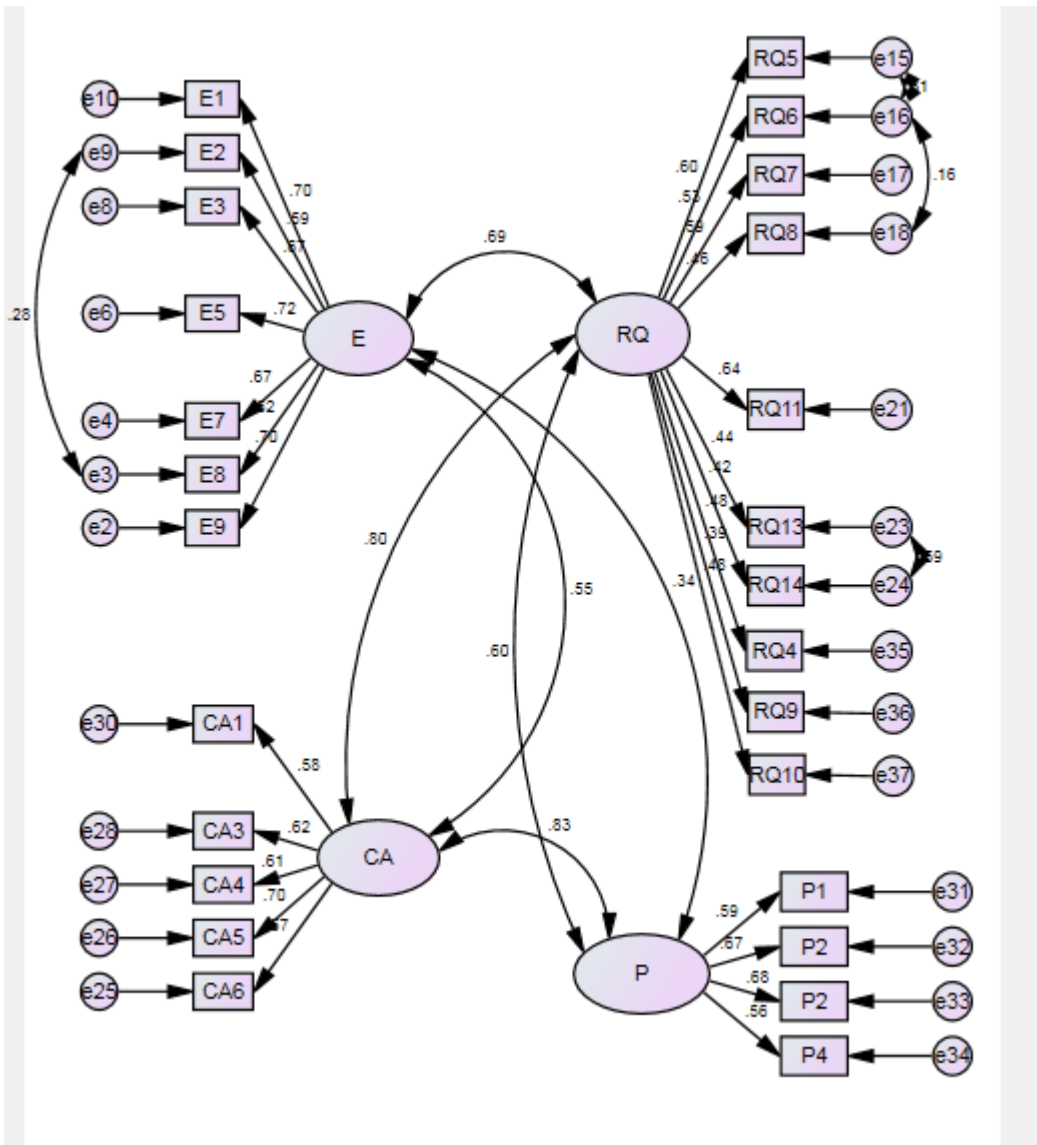
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.491	2.260	2.760	2.579
Saturated model	3.359	3.359	3.359	3.857
Independence model	9.793	9.137	10.485	9.830

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	174	184
Independence model	39	41

Final Measurement Model with Model Fit Output



## Structural Regression Model

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	62	396.587	289	.000	1.372
Saturated model	351	.000	0		
Independence model	26	1994.832	325	.000	6.138

#### RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.040	.881	.855	.725
Saturated model	.000	1.000		
Independence model	.181	.345	.292	.319

#### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.801	.776	.937	.928	.936
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

#### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.889	.712	.832
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

#### NCP

Model	NCP	LO 90	HI 90
Default model	107.587	59.349	163.883
Saturated model	.000	.000	.000
Independence model	1669.832	1532.695	1814.420

#### FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.898	.515	.284	.784

Model	FMIN	F0	LO 90	HI 90
Saturated model	.000	.000	.000	.000
Independence model	9.545	7.990	7.333	8.681

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.042	.031	.052	.900
Independence model	.157	.150	.163	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	520.587	538.983	728.108	790.108
Saturated model	702.000	806.143	1876.835	2227.835
Independence model	2046.832	2054.546	2133.857	2159.857

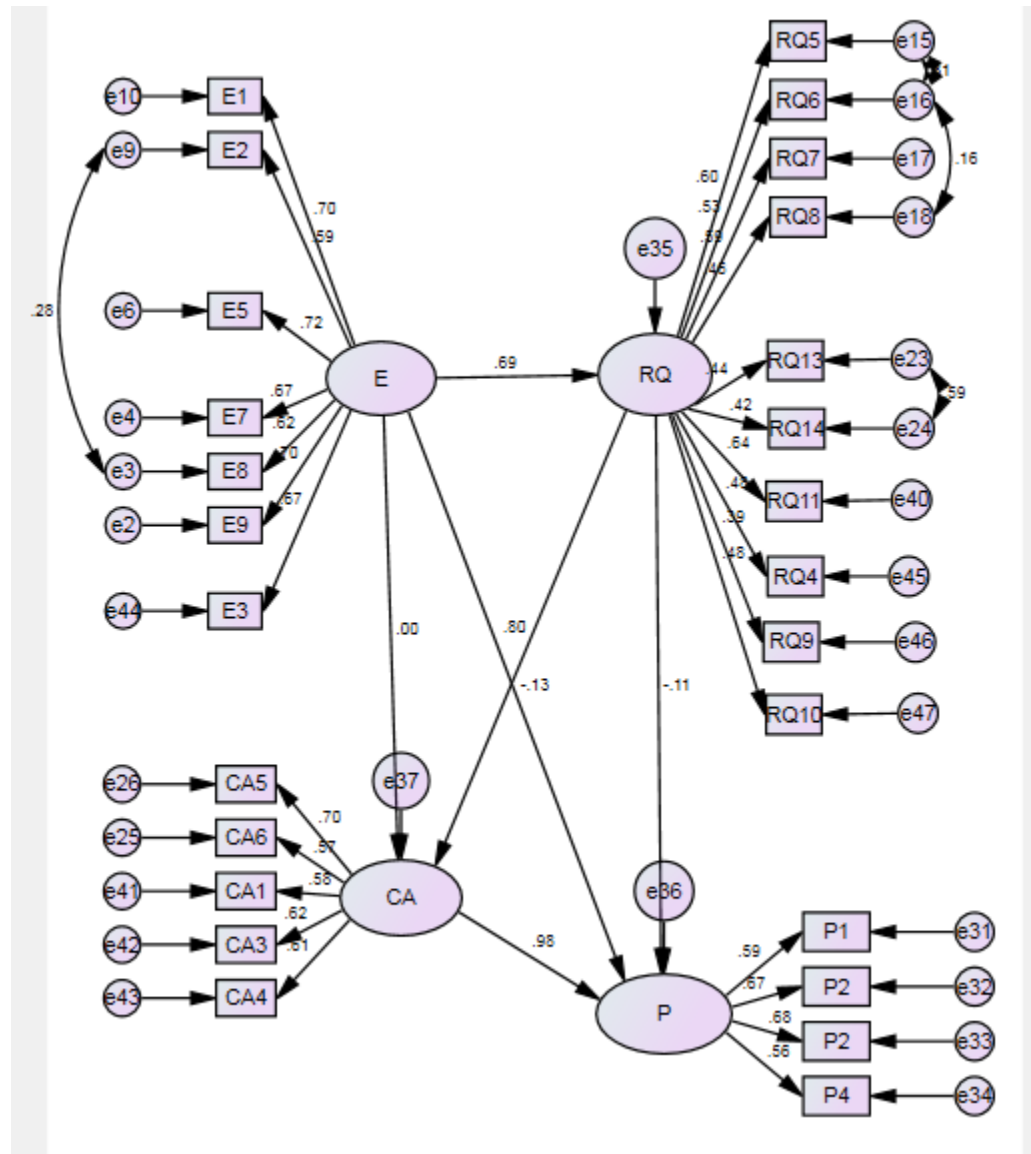
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.491	2.260	2.760	2.579
Saturated model	3.359	3.359	3.359	3.857
Independence model	9.793	9.137	10.485	9.830

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	174	184
Independence model	39	41

Final Structural Regression Model with Model Fit Output





**Personality Trait 4: Agreeableness**

**Measurement Model**

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	70	446.584	308	.000	1.450
Saturated model	378	.000	0		
Independence model	27	1955.202	351	.000	5.570

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.040	.868	.838	.707
Saturated model	.000	1.000		
Independence model	.156	.371	.323	.345

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.772	.740	.916	.902	.914
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.877	.677	.802
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	138.584	86.280	198.891
Saturated model	.000	.000	.000
Independence model	1604.202	1469.110	1746.759

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	2.137	.663	.413	.952
Saturated model	.000	.000	.000	.000
Independence model	9.355	7.676	7.029	8.358

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.046	.037	.056	.731
Independence model	.148	.142	.154	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	586.584	608.241	820.881	890.881
Saturated model	756.000	872.950	2021.207	2399.207
Independence model	2009.202	2017.556	2099.574	2126.574

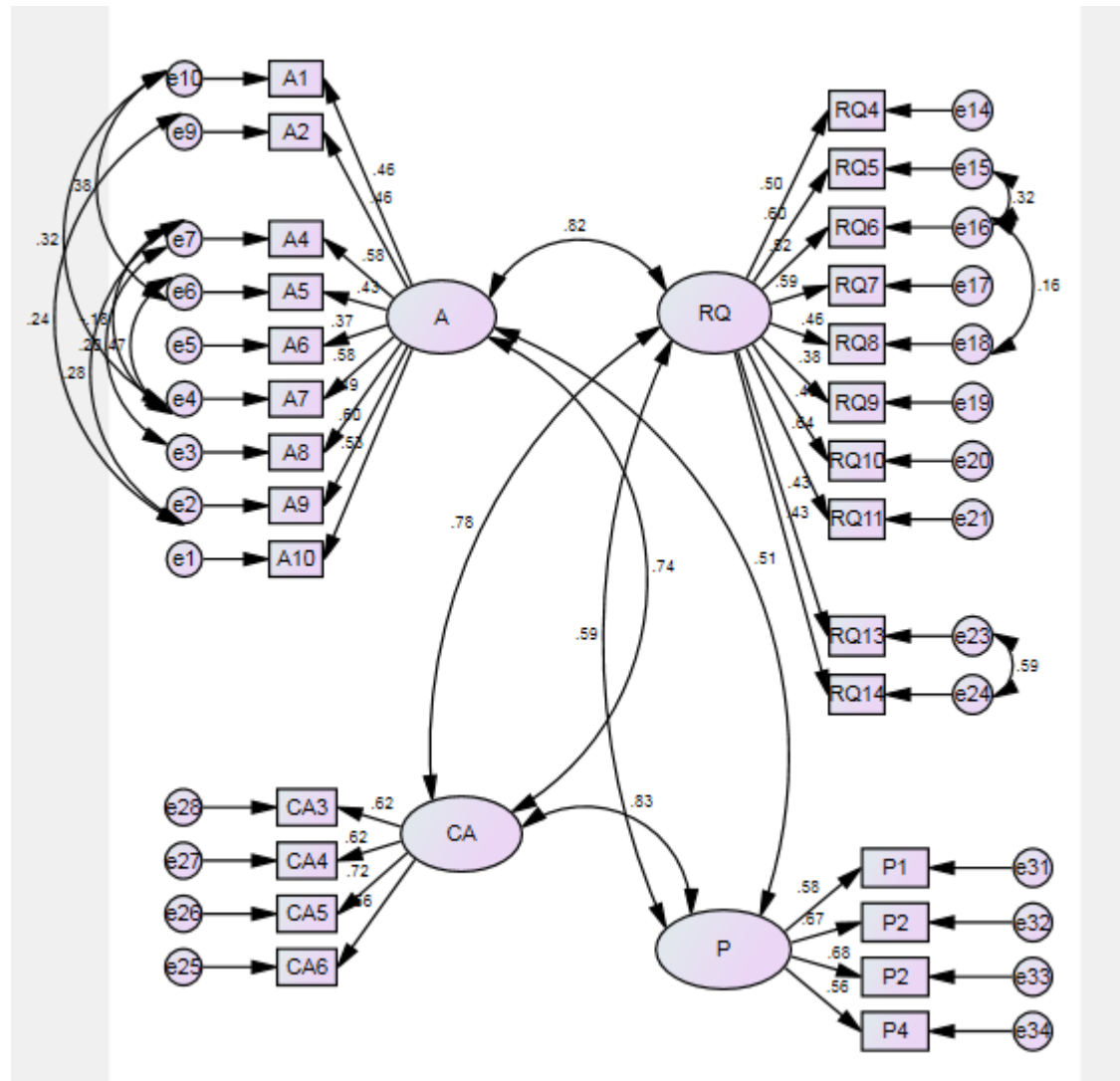
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.807	2.556	3.095	2.910
Saturated model	3.617	3.617	3.617	4.177
Independence model	9.613	8.967	10.295	9.653

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	164	173
Independence model	43	45

Final Measurement Model with Model Fit Output



## Structural Regression Model

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	70	446.584	308	.000	1.450
Saturated model	378	.000	0		
Independence model	27	1955.202	351	.000	5.570

#### RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.040	.868	.838	.707
Saturated model	.000	1.000		
Independence model	.156	.371	.323	.345

#### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.772	.740	.916	.902	.914
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

#### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.877	.677	.802
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

#### NCP

Model	NCP	LO 90	HI 90
Default model	138.584	86.280	198.891
Saturated model	.000	.000	.000
Independence model	1604.202	1469.110	1746.759

#### FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	2.137	.663	.413	.952

Model	FMIN	F0	LO 90	HI 90
Saturated model	.000	.000	.000	.000
Independence model	9.355	7.676	7.029	8.358

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.046	.037	.056	.731
Independence model	.148	.142	.154	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	586.584	608.241	820.881	890.881
Saturated model	756.000	872.950	2021.207	2399.207
Independence model	2009.202	2017.556	2099.574	2126.574

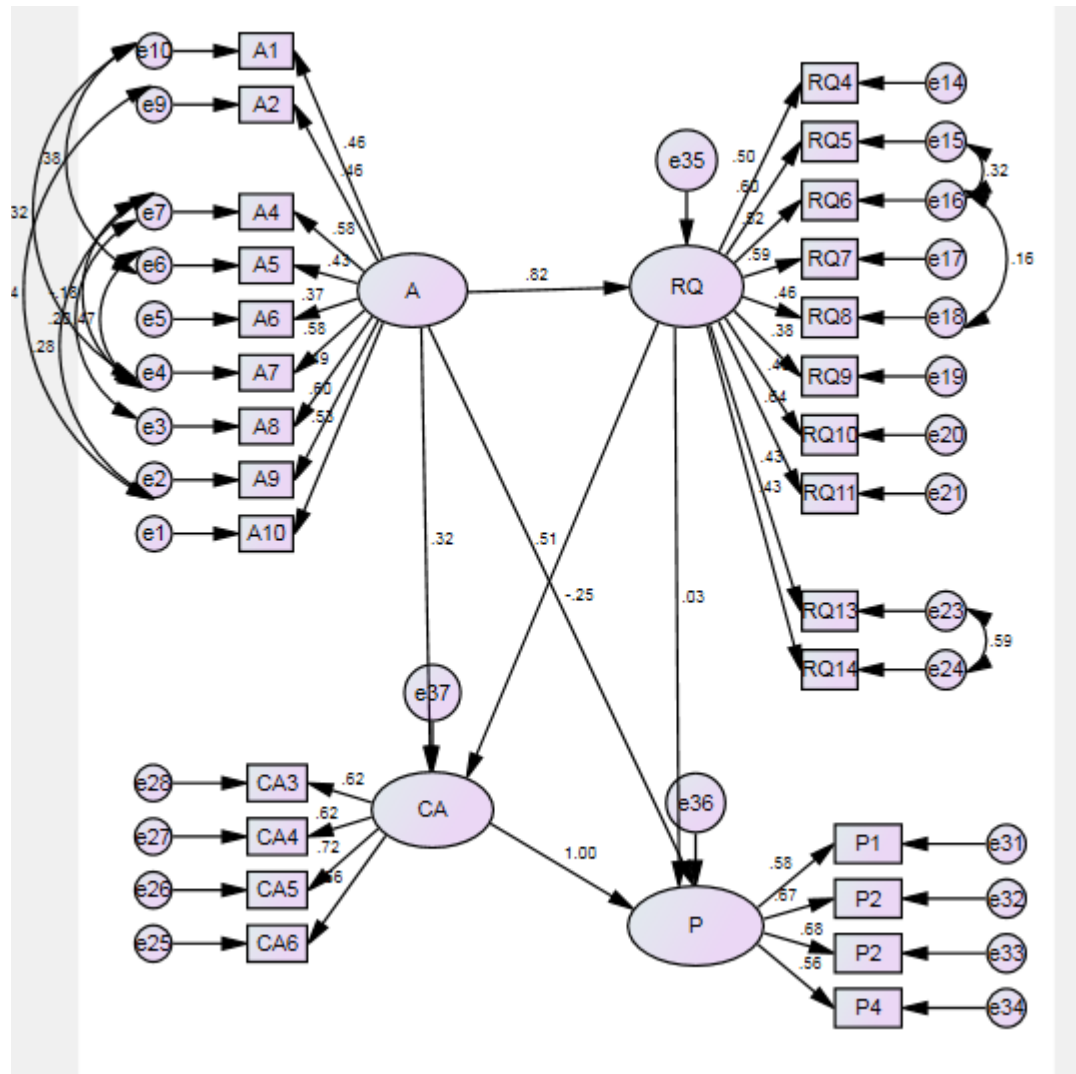
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.807	2.556	3.095	2.910
Saturated model	3.617	3.617	3.617	4.177
Independence model	9.613	8.967	10.295	9.653

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	164	173
Independence model	43	45

Final Structural Regression Model with Model Fit Output



**Personality Trait 5: Conscientiousness**

**Measurement Model**

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	62	323.628	263	.006	1.231
Saturated model	325	.000	0		
Independence model	25	1689.891	300	.000	5.633

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.042	.893	.868	.723
Saturated model	.000	1.000		
Independence model	.164	.396	.346	.366

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.808	.782	.958	.950	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.877	.709	.838
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	60.628	19.086	110.354
Saturated model	.000	.000	.000
Independence model	1389.891	1264.492	1522.761

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.548	.290	.091	.528
Saturated model	.000	.000	.000	.000
Independence model	8.086	6.650	6.050	7.286

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.033	.019	.045	.993
Independence model	.149	.142	.156	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	447.628	465.245	655.148	717.148
Saturated model	650.000	742.350	1737.810	2062.810
Independence model	1739.891	1746.995	1823.569	1848.569

ECVI

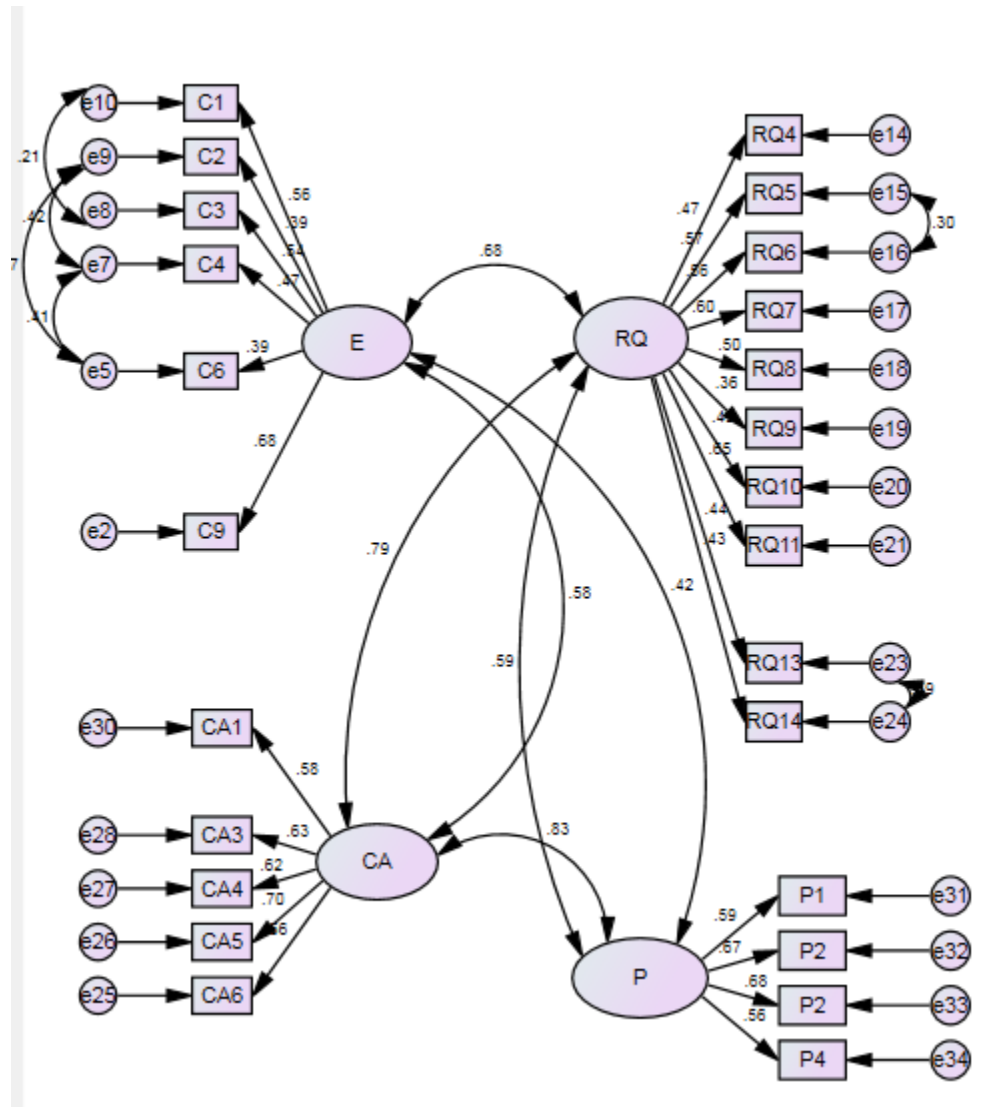
Model	ECVI	LO 90	HI 90	MECVI
Default model	2.142	1.943	2.380	2.226
Saturated model	3.110	3.110	3.110	3.552
Independence model	8.325	7.725	8.961	8.359

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	195	207
Independence model	43	45



Final Measurement Model with Model Fit Output



## Structural Regression Model

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	62	323.628	263	.006	1.231
Saturated model	325	.000	0		
Independence model	25	1689.891	300	.000	5.633

#### RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.042	.893	.868	.723
Saturated model	.000	1.000		
Independence model	.164	.396	.346	.366

#### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.808	.782	.958	.950	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

#### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.877	.709	.838
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

#### NCP

Model	NCP	LO 90	HI 90
Default model	60.628	19.086	110.354
Saturated model	.000	.000	.000
Independence model	1389.891	1264.492	1522.761

#### FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.548	.290	.091	.528

Model	FMIN	F0	LO 90	HI 90
Saturated model	.000	.000	.000	.000
Independence model	8.086	6.650	6.050	7.286

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.033	.019	.045	.993
Independence model	.149	.142	.156	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	447.628	465.245	655.148	717.148
Saturated model	650.000	742.350	1737.810	2062.810
Independence model	1739.891	1746.995	1823.569	1848.569

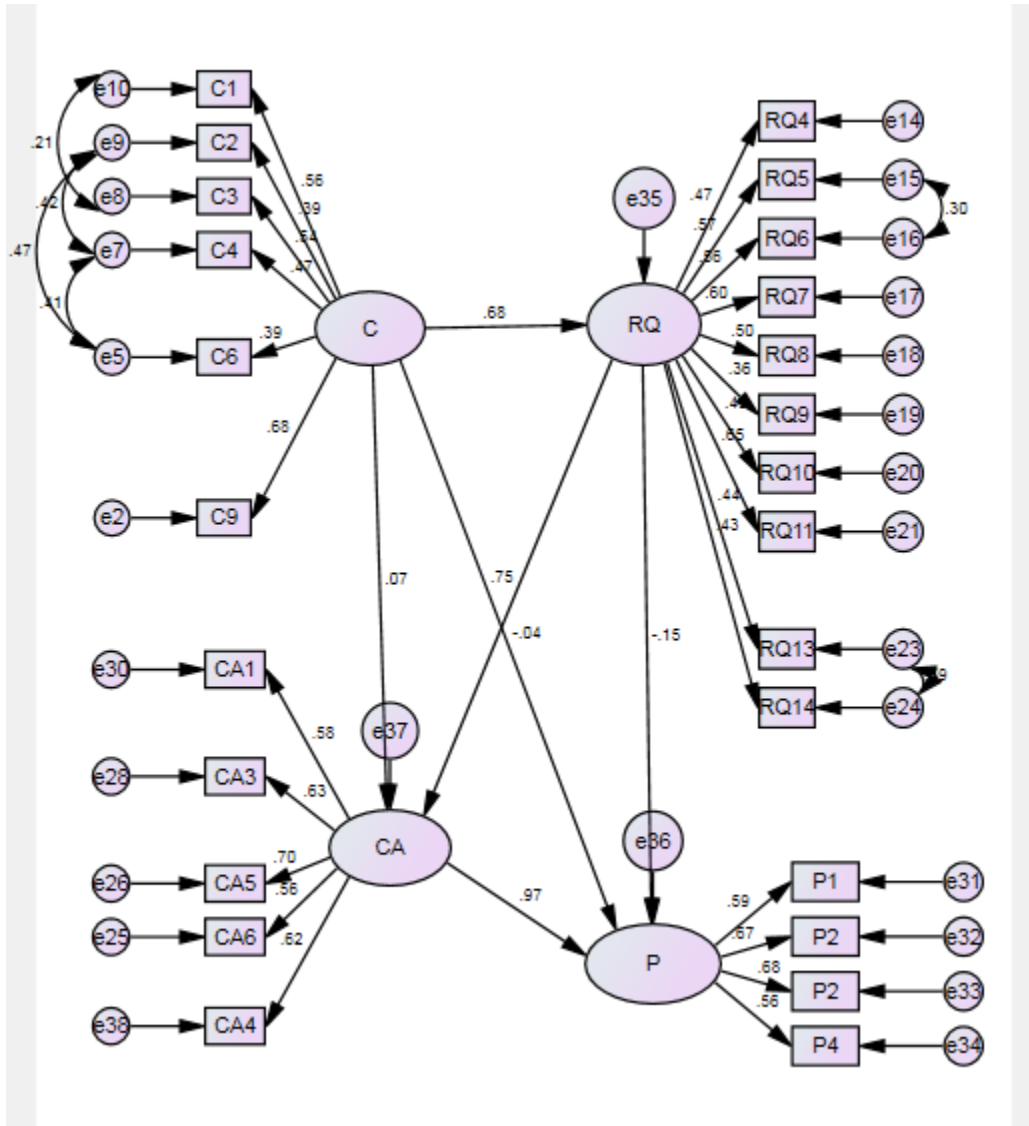
ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.142	1.943	2.380	2.226
Saturated model	3.110	3.110	3.110	3.552
Independence model	8.325	7.725	8.961	8.359

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	195	207
Independence model	43	45

Final Structural Regression Model with Model Fit Output



### Correlation / Covariance Matrix (Post-Hoc Analysis)

#### Correlations

		O_mean_use	ES_mean_use	E_mean_use	A_mean_use	C_mean_use	RQ_mean_use
O_mean_use	Pearson Correlation	1	.461**	.789**	.744**	.512**	.628**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	61.310	36.740	57.246	39.261	34.410	33.059
	Covariance	.293	.176	.274	.188	.165	.158
	N	210	210	210	210	210	210
ES_mean_use	Pearson Correlation	.461**	1	.439**	.516**	.675**	.482**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	Sum of Squares and Cross-products	36.740	103.768	41.385	35.454	58.985	33.011
	Covariance	.176	.496	.198	.170	.282	.158
	N	210	210	210	210	210	210
E_mean_use	Pearson Correlation	.789**	.439**	1	.664**	.469**	.575**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	Sum of Squares and Cross-products	57.246	41.385	85.775	41.483	37.247	35.844
	Covariance	.274	.198	.410	.198	.178	.172
	N	210	210	210	210	210	210
A_mean_use	Pearson Correlation	.744**	.516**	.664**	1	.588**	.606**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	Sum of Squares and Cross-products	39.261	35.454	41.483	45.450	34.019	27.467
	Covariance	.188	.170	.198	.217	.163	.131
	N	210	210	210	210	210	210
C_mean_use	Pearson Correlation	.512**	.675**	.469**	.588**	1	.489**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	Sum of Squares and Cross-products	34.410	58.985	37.247	34.019	73.577	28.231
	Covariance	.165	.282	.178	.163	.352	.135
	N	210	210	210	210	210	210
RQ_mean_use	Pearson Correlation	.628**	.482**	.575**	.606**	.489**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	Sum of Squares and Cross-products	33.059	33.011	35.844	27.467	28.231	45.231
	Covariance	.158	.158	.172	.131	.135	.216
	N	210	210	210	210	210	210

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

## VITA

Li Zhao. Her research interests fall within the area of founders' leadership on apparel new venture performance in the global context, firm longevity in hyper-dynamic market environment of textiles and apparel. She also studies the brand credibility and brand image related to sustainability efforts. She completed her masters and bachelors from Beijing Institute of Fashion Technology, China. She has been working for Dior, Wilkinson group as a marketing assistant, sales manager in China for two years. She is currently a lecturer at Indiana University Bloomington.