Examining the Interrelationships among Entrepreneurial Self-Efficacy, Perceived Accessibility of Resources, and Entrepreneurial Intentions in a Chinese Village Context: An Exploratory Study

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GLOSSARY OF SELECT TERMS

Term	Description
AGFI	Adjusted Goodness-of-Fit Index
CFI	Comparative Fit Index
EI	Entrepreneurial intention
Entrepreneurs	Individuals who currently own one or more businesses
ESE	Entrepreneurial self-efficacy
ESE_IF	Entrepreneurial self-efficacy: Implementing financial
ESE_IP	Entrepreneurial self-efficacy: Implementing people
ESE_M	Entrepreneurial self-efficacy: Marshalling
ESE_ P	Entrepreneurial self-efficacy: Planning
ESE_ S	Entrepreneurial self-efficacy: Searching
Non-entrepreneur	Individuals who currently do not own a business
PAFR	Perceived accessibility of family resources
PAPR	Perceived accessibility of public resources
RBV	Resource-based view
RMSEA	Root Mean-Square Error of Approximation
SEM	Structural Equation Modeling
SMEs	Small-and medium-sized enterprises
SRMR	Standardized Root Mean-square Residual
TLI	Tucker-Lewis Index

ABSTRACT

This study explores the inter-relationships among the entrepreneurial self-efficacy, entrepreneurial intentions and a newly developed concept: perceived accessibility of resources in a Chinese village context for both entrepreneurs and non-entrepreneurs. This is an important area of research because most research that focuses on these types of constructs occurs in a Western context. Yet, the importance of China in world economic affairs is growing exponentially and China would not be the economic power that it is without the entrepreneurial spirit engendered in village communities. Although entrepreneurship in Chinese cities contributes significantly to economic development, Chinese village entrepreneurship is the backbone of Chinese economic development.

From an entrepreneurship perspective, understanding the entrepreneurial mind of two groups is important for economic development. First, there are those who are not current entrepreneurs who want to start new businesses (referred to as ―nascent entrepreneurs"), and second, those who are already entrepreneurs who could potentially start other new businesses and become serial entrepreneurs. Within the Chinese village context, it is the individual entrepreneur who drives the entrepreneurial process. Thus, developing a better understanding of these two groups, the nascent and the potential serial entrepreneurs, is important for Chinese regional economic development.

This research involves a comprehensive literature review, interviews, and a survey with a group of Chinese village entrepreneurs in order to better understand their entrepreneurial cognitions. In the first stage of the research, a theoretical model is developed based on the literature review and interviews. This model informed the development of a questionnaire. The questionnaires were distributed to 950 villagers with 768 questionnaires being returned. Of the returned questionnaires, usable questionnaires were received from 296 non-entrepreneurs and 285 entrepreneurs.

The findings identify the important role played by the perceived accessibility of resources when examining entrepreneurial intentions in a Chinese village context. More specifically, what was highlighted was the importance of the perceived accessibility of *family resources* for non-entrepreneurs and the perceived accessibility of *public resources* for entrepreneurs in a Chinese village context. With both groups, the results confirmed the significant positive relationship of perceived accessibility of resources to entrepreneurial

intentions. In terms of the types of resources perceived to be important by Chinese village entrepreneurs: social capital, business advice, and technical support appear to be key. In contrast, non-entrepreneurs identified social capital, business advice, and business property as key resources for influencing entrepreneurial intentions.

This study also found that entrepreneurial self-efficacy has a positive relationship with perceived accessibility of resources and entrepreneurial intentions. However, there was a need to modify the Western-developed entrepreneurial self-efficacy measure when it was applied in a Chinese village context.

The research contributes to an improved theoretical understanding of (1) the importance of the perceived accessibility of resources in a Chinese village entrepreneurial intentions model from both family and public source perspectives, and (2) entrepreneurial self-efficacy when examined in a Chinese village context.

This study is significant since it builds upon underlying Western theory and then expands this theory to develop entrepreneurial cognition concepts that help to explain Chinese village entrepreneurship. The research makes a particular contribution to the field of entrepreneurship research through development of an instrument to measure perceived accessibility of resources – an element which is vital to the understanding of the entrepreneurial mind in a Chinese village context and which may have ramifications for entrepreneurship research conducted in village contexts in other developing countries.

DECLARATION

I, Ting XU, certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Ting XU

Date: 18/2/2013

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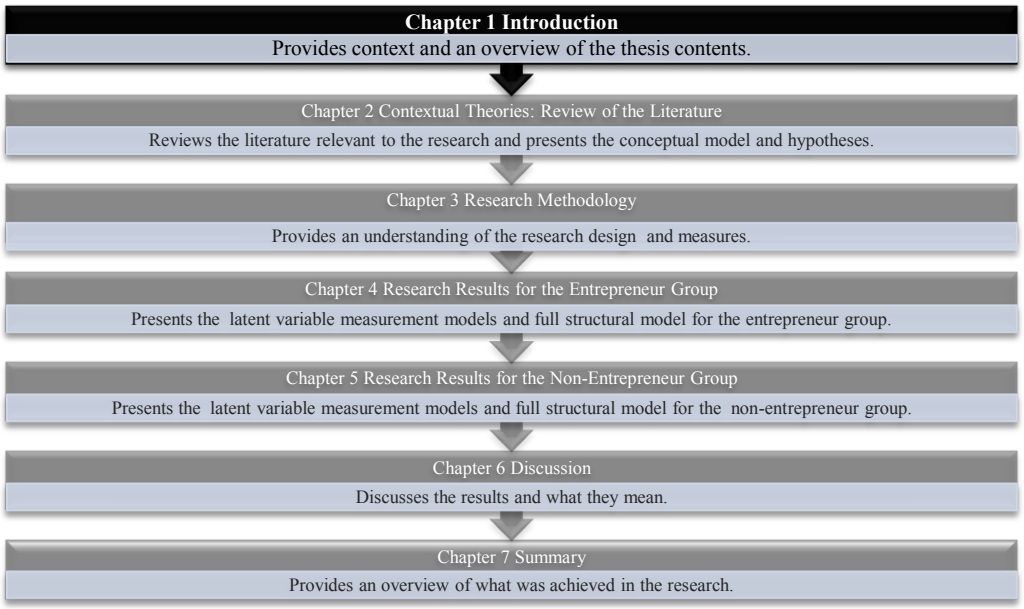
The PhD journey has contributed to my life and enabled me to develop courage to discover the world and respect science and humanity, and continue to be a thinker.

CHAPTER 1
Introduction



1.1 Introduction

Over the last 30 years, China has experienced significant entrepreneurial reforms that have had dramatic positive effects on the economy. These reforms include the emergence of state and/or collectivist city-based companies led by well-educated individuals. Prior to the 1980s, under Chairman Mao‘s regime, private companies were illegal. This had a negative effect on urban entrepreneurship; however, the entrepreneurial spirit persisted in Chinese villages because they were less subject to political influence and enforcement.

This research draws upon the work of Shane and Venkataraman (2000) who noted the importance of social science for explaining and predicting social phenomena. The Chinese village is the context for this research. The main focus of this thesis is to understand entrepreneurial cognition in a Chinese village context, and to identify the relationships among specific cognitive elements and their predictive power for entrepreneurial intention.

In recent times, entrepreneurship research has moved from concentrating on one domain (be that social, economic, or psychological) to a cross-disciplinary approach. For example, psychological-based research in the entrepreneurship domain has moved from research about differences between individual characteristics to research on entrepreneurial

perception of capability and the opportunity recognition process (Ardichvili, Cardozo & Ray 2003; Lumpkin & Lichtenstein 2005).

This is a change for the better, because it implies cross-discipline academic cooperation and it allows policy designers to develop a deeper understanding of entrepreneurial perception, specifically focusing on entrepreneurial intention (Bird 1988; Krueger, JNF & Carsrud 1993; Krueger 1993; KruegerJR, Reilly & Carsrud 2000; Souitaris, Zerbinati & Al-Laham 2007; Zhao, Seibert & Hills 2005).

Research into entrepreneurial cognition is under-explored in a rural regional context, both in Western and developing countries (Baker, Gedajlovic & Lubatkin 2005; Peredo et al. 2004). This is the underlying motivation for the current research. It is the individual entrepreneur who drives the entrepreneurial process in the village context – not a corporation. The fact that many village entrepreneurs become serial entrepreneurs is important to both economic development and wealth creation (Skorman & Guthrie 2007).

Thus, better understanding the Chinese villagers‘ entrepreneurial perceptions and/or entrepreneurial mind is important for understanding Chinese regional economic development and for expanding entrepreneurship theory. The current entrepreneurship literature recognizes that an entrepreneur‘s perception is influenced by experience and education through self-efficacy (Peterman & Kennedy 2003), and the external environment (Zahra 1993).

Research into entrepreneurial cognition has identified the elements that can influence individual intention: Entrepreneurial self-efficacy, entrepreneurial subjective norm, and entrepreneurial attitude (Carr & Sequeira 2007; Krueger & Carsrud 1993; Krueger & Brazeal 1994; Krueger, Reilly & Carsrud 2000). Entrepreneurial self-efficacy has been further developed to differentiate between entrepreneurs and managers (Chen, Greene & Crick 1998), and to test the relationship between self-efficacy and entrepreneurial actions (De Noble, Jung & Ehrlich 1999). McGee (2009) developed the self-efficacy construct to link it to entrepreneurial intention.

This research presents a conceptual model, and examines it in a Chinese village context using both entrepreneurs and non-entrepreneurs, to identify differences between group perceptions. Further research needs to be undertaken into entrepreneurial intention in the

Chinese village context because Chinese and Western cultures are very different and the theory that has been developed to date has been predominantly Western oriented.

By developing a clearer understanding of the Chinese village entrepreneur‘s mind, this research can extend fundamental theory, predict successful entrepreneurial behaviour in the early business start-up stages, and contribute to the development of more effective entrepreneurship training programs.

1.2 Research Background

Over the last three decades, the Chinese government has strongly supported entrepreneurial activity. As a result, small- and medium-sized enterprises (SMEs) in Chinese villages have become a driving force behind China's economic development (Wang & Jinchuan 2007). In the 21st century, it is obvious that the centre of the world‘s manufacturing economic activities have shifted eastward from the United States and Europe to China and its Asian neighbours (Dicken 2003). This situation presents new opportunities for entrepreneurial development. Since 2010, China has been the second largest economic nation (Chuang 2011) and is trending towards being the largest (Allen, Qian & Qian 2005). China‘s increasingly important position on the global stage has drawn research attention to the need to understand Chinese entrepreneurship, which is, after all, one of the key drivers of Chinese growth.

Western-oriented entrepreneurial self-efficacy theory has proven to have a predictive power for entrepreneurial intention, and it can help distinguish entrepreneurs from managers (Chen, Greene & Crick 1998; De Noble, Jung & Ehrlich 1999; KruegerJR, Reilly, M & Carsrud 2000; McGee, Jeffrey 2009; Wilson, Kickul & Marlino, D 2007; Zhao, Seibert & Hills 2005). Attitude and subjective norms also affect people‘s intentions, according to Ajzen‘s (1991) perceived planned behaviour theory. Ajzen (1991) suggests that exogenous factors influence attitude which then affect intentions and behaviour. Krueger (2000) and other researchers built upon Ajzen‘s (1991) model and developed intention-based models, which examine the importance of exogenous influences, such as perceptions of resource availability, on changes in intentions and, ultimately, venture creation (Ajzen 1991; Boyd & Vozikis, G 1994; KruegerJR, Reilly & Carsrud 2000). Entrepreneurial intention is important because it can predict entrepreneurial behaviour (KruegerJR, Reilly & Carsrud, A 2000).

Developing an entrepreneurial intention model in a developing economy context is crucial for entrepreneurship theory, since the economic impact of China is increasing. The success of Chinese economic performance has attracted wide interest from different research perspectives. The Chinese reality is that the country is managed at both a national level and a village level. Village-level entrepreneurship has helped boost China‘s economy ever since the Open Door policy gave individuals the freedom to run their own businesses. It took longer for the policy to influence business activity in Chinese cities. The entrepreneurial phenomenon was also more prominent in villages because city-based individuals with stable jobs had no desire to move to villages to start businesses (Phan, Venkataraman & Velamuri 2008).

Before the economic reforms of the late 1970s, almost all of the economically active population in rural China was exclusively engaged in farming and land was centrally controlled at a village or provincial government level (De Brauw et al. 2002). For historical reasons, especially changes that are related to land reforms, there has been a trend toward increased business ownership in rural China in the last 30 years. However, there is limited research to explain this social phenomenon. Literature about entrepreneurship theory focusing on individual perceptions of firm entrepreneurial management, and the external environment which influences individuals and firms is discussed in various contexts.

One approach to better understanding the individual entrepreneur is to understand the entrepreneurial mind (Carsrud & Brännback 2009) and one way of ascertaining whether an individual has the necessary entrepreneurial skills is to use an entrepreneurial self-efficacy (ESE) scale to measure these skills. Chen et al. (1998) developed such a scale and applied it to university students in the United States. This scale has also been applied to respondents who are already successful entrepreneurs. Lindsay (2007) suggested that some adjustments are required in order to utilize this scale in a developing country with necessity entrepreneurs (Lindsay, Lindsay, Jordaan & Mapunda 2007). However, the use of this scale has not been examined in a Chinese context. In fact, very little research has examined communist entrepreneurs in general and communist Chinese entrepreneurs in particular (Ageev, 2005), leading to a lack of understanding of the entrepreneur‘s mind in communist environments. Existing Western individual perception theory will not necessarily apply in China because of cultural, historical, and political differences between the West and China (Yang, MM 2002)
.

This research focuses on testing the relationship among perceived accessibility of resources and entrepreneurial self-efficacy and entrepreneurial intention for Chinese villagers in order to explain the variations in entrepreneurial activities between entrepreneurs and non-entrepreneurs. Developing an entrepreneurial intention model relevant to the Chinese village context will lead to a clearer understanding about the differences between experienced successful entrepreneurs and nascent entrepreneurs. It will also provide the basis for developing further entrepreneurship education programs aimed at developing nascent entrepreneurs.

1.3 Research Problem Statement

Psychological entrepreneurship studies focus on the individual entrepreneur or the nascent entrepreneur. Prior research has examined a variety of individual-level variables in an attempt to better understand entrepreneurial intentions and entrepreneurial behaviour. However, one important variable, the perceived accessibility of resources (necessary to start a business), has been ignored. This omission is understandable, given that resources are perceived as an objective phenomenon, while psychological research is concerned with issues that are perceived and subjective.

Prior research into entrepreneurial cognition has tended to focus on Western cultures and on educated individuals such as business students, high level managers, and entrepreneurs with business knowledge (McGee, Jeffrey E. et al. 2009). These individuals usually have access to formal and informal sources of financial and human resources. However, it is problematic to apply an entrepreneurial cognition model developed in a Western context to a Chinese village comprised of individuals who lack formal education, are comparatively poor, and who have limited access to financial resources. In such an environment, the key to starting and building a business is not intellectual resources, but blood ties and social networks (termed „Guanxi“ in China).

Perceived accessibility to resources is important for launching a business in any context, whether Western or Eastern. However, cultural issues must be considered because they impact on how business is done in a particular culture and they influence the process by which non-entrepreneurs transition into nascent entrepreneurs and subsequently into entrepreneurs.

Regarding extant research on entrepreneurship in China (Tan 2001b; Tan & Peng 2003; Tan & Tan 2005), important contributions have been made in several papers discussing state-owned, urban-based, or high tech cluster entrepreneurs (Tan 2001b; Tan & Peng 2003; Tan & Tan 2005). Holt (1997) describes how private Chinese firms contribute to economic and employment growth. However, until 1988, private companies were illegal and private entrepreneurial behaviour was limited to the village setting (Qian, Y. 2000). It is ironic that so little research has examined entrepreneurship in Chinese villages. The three premier journals of entrepreneurial research (Journal of Business Venturing, Entrepreneurship Theory and Practice, and Entrepreneurship Regional Development) emphasize Chinese urban and state-owned companies (Tan 2001a; Tan, J. 2002; Tan 2006). The paucity of village context research is due to the lack of data and the inaccessibility of the sample. However, exploring entrepreneurship in the Chinese village is particularly interesting since China is at a more advanced stage from that in other developing countries where rural and indigenous entrepreneurship are responses to economic disadvantage (Tzeng, Beamish & Chen 2011). Moreover ,Mohapatra (2007) has argued that entrepreneurship in the Chinese village is a driver of economic growth, rather than a response to economic distress.

Mohapatra, Rozelle, and Goodhue (2007) raised the importance of Chinese village entrepreneurship from an academic perspective and identify the benefits of this context for both researchers and policy-makers. If this context is important, we therefore need a better understanding of the dynamics that occur within this context. In this research, I commence this undertaking by examining the entrepreneurial intention concept which has proved to be a good predictor for potential successful entrepreneurs. Entrepreneurial intention is tested by using desirability and feasibility or attitude, subjective norm, and entrepreneurial self-efficacy. This kind of research was originally based on ideas from social psychological research. The general concept of self-efficacy is defined as an individual‘s ability to achieve his/her specific goal in a specific situation. The individual as ―agent" is the determining factor in this behaviour (Bandura, & Adams 1977). In this research, perceived accessibility of resources is introduced to test its linkage to entrepreneurial intention. In so doing, this research attempts to use social psychological research to explore entrepreneurial cognition concepts.

1.4 Research Aims

This research first aims to introduce an important context into entrepreneurship research: the Chinese village. Within this context, the research explores what factors influence a villager‘s intention to start a business and it examines differences between Western and Chinese village contextual entrepreneurial cognition models. The research aims to test how perceived accessibility of family and public resources influences entrepreneurial intentions for both entrepreneurs and non-entrepreneurs. This is achieved by testing the variable relationships between perceived accessibility of resources and entrepreneurial self-efficacy and entrepreneurial intentions. In order to achieve this broad aim, the following research objectives are addressed:

1. Better understand entrepreneurial cognition in a Chinese village context, and
2. Examine particularly the inter-relationships among perceived accessibility of family resources, perceived accessibility of public resources, entrepreneurial self-efficacy, and entrepreneurial intentions.

1.5 Research Questions

More particularly, this research seeks answers to the following research questions:

RQ1：To what extent does the perceived accessibility of family and public resources influence Chinese village entrepreneur intention to start a business?

RQ2: To what extent can a Western developed entrepreneurial self-efficacy instrument be applied in a Chinese village context and to what extent does this instrument need to be adapted to reflect Chinese village cultural, situational, and environmental influences?

RQ3: To what extent are entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions inter-related when examined in a Chinese village context among entrepreneurs?

RQ4: To what extent are entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions inter-related when examined in a Chinese village context among non-entrepreneurs?

1.6 Research Significance

This research contributes to theory and practice in three ways. First, it develops a new construct, perceived accessibility of family and public resources, which helps to develop the literature to be more cognizant of the Chinese cultural context. Second, the work introduces and examines the comparatively unexplored Chinese village context for entrepreneurship. In this context, the entrepreneurial self-efficacy instruments are tested and the relationships between those variables are examined for both entrepreneurs and non-entrepreneurs. This context provides a rich environment for research since it is where the majority of private, small- and medium-sized enterprises in China originate. It is also a context in which family, culture, and economic and educational backgrounds are dramatically different to urbanized Chinese environments and, more generally, to most Western research contexts. Third, the comparison of the entrepreneurial cognition for entrepreneurs and non-entrepreneurs helps to bridge the gap between experience and knowledge and provides the opportunity to transfer the experience of successful entrepreneurs to influence the perceptions of individual potential entrepreneurs. In this regard, the research develops an expanded conceptual entrepreneurial intention model that is Chinese village centric and that provides the basis for further research.

1.7 Organization of Thesis

This thesis comprises seven chapters. Chapter 1 describes the research background and research problems. It presents the research objectives, research questions, and the significance of the research. Chapter 2 introduces the research context, China, and offers cultural, economic, political, and educational perspectives on the country. It also introduces the literature, from a broad Chinese entrepreneurship perspective to the specific context of the Chinese village. The chapter also compares city, village, and state and/or collectivist owned companies versus privately owned companies. It provides insights into the theoretical foundations underpinning this research (the theory of planned behaviour (Ajzen 1991)). Based on this, a Chinese-oriented entrepreneurship cognition model is developed incorporating a new element: perceived accessibility of resources. The model is examined in terms of this variable‘s interrelationship with entrepreneurial self-efficacy. Research hypotheses are developed in Chapter 2 as possible answers to the research questions posed in this chapter.

Chapter 3 provides details of the research methodology employed in this research, including details on questionnaire development, participants, data collection, and data analysis techniques (structural equation modelling). Chapter 4 presents the results of the data analysis, including those at the measurement model level and full structural model, for the entrepreneur group. The results of reliability and validity tests are also provided. Chapter 5 similarly provides the data analysis results and tests for the non-entrepreneur group.

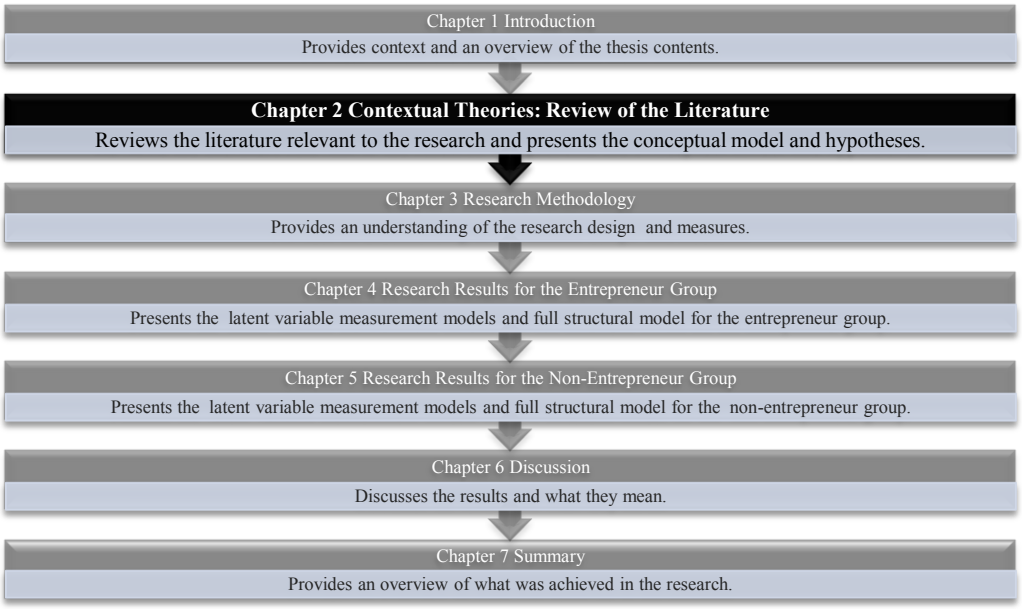
Chapter 6 discusses the results in terms of the entrepreneur and non-entrepreneur groups and confirms whether the hypotheses generated in this research were supported. Chapter 7 summarises the research and the thesis. It discusses the theoretical and practical contributions of the research, and its limitations. The chapter concludes with recommendations for future research directions.

1.8 Summary

In summary, this research adopts an entrepreneurial psychological perspective. Comparing the perceptions of entrepreneurs and non-entrepreneurs‘ provides an opportunity to transfer entrepreneurial experience into knowledge to assist potential entrepreneurs make rational decisions that will improve business success. This is done within an under-explored research context, the Chinese village. This context is introduced from an economic, political, cultural, and historical aspect. Relevant variables that appear to influence a villager‘s intention to start a business are examined. An important entrepreneurship variable, perceived accessibility of resources is assessed from both family and public perspectives. This variable‘s role in the Chinese village entrepreneurial cognition model is examined and its relationship with entrepreneurial self-efficacy and entrepreneurial intentions is tested.

CHAPTER 2
Contextual Theories: Review of the Literature

Purpose—what is the specific as well as larger purpose of the study? Theoretical Perspective—what is the theoretical perspective adopted? Focus—on what specific phenomena shall the investigation be focused? Level of analysis—what level or levels of analysis will be considered? Time frame—what length of timeframe will be considered? Methodology—what methodology will be adopted? (Low & MacMillan 1988,p.140).



2.1 Introduction

The broad goal of this thesis is twofold: First, to better understand to what extent the perceived accessibility of resources influences entrepreneurs‘ business start-up intentions in Chinese villages and how this is related to entrepreneurial self-efficacy, and second, to what extent a Western developed (and therefore Western-oriented) entrepreneurial self-efficacy (ESE) scale (developed by McGee et al., 2009) is relevant in a Chinese village context. This second issue is important given the different perspective on entrepreneurship that occurs in a Chinese village context versus entrepreneurship that occurs in a Western context. In so doing, we can better understand entrepreneurial cognition in the Chinese village context and to better identify the relationships among specific cognitive elements and their predictive power for entrepreneurial intention.

This Chapter reviews the contextual foundations for the research. Entrepreneurship is discussed initially from a broad (Western) theoretical perspective. The Chapter discusses the economic origins of the field and how research has progressed to identify and better understand the individual entrepreneur as the economic actor. It shows how early studies

examined the social context within which the entrepreneur is located in order to identify entrepreneurial behaviour influences. The foundations for this research arise from individual perceptions both of expected economic outcomes and the social environment.

The Chapter then analyses the meaning of entrepreneurship in a Chinese context and compares it to entrepreneurship in the West. Entrepreneurship research in China has mostly examined urban contexts –that which occurs in Chinese cities - and largely overlooks the Chinese village environment. This Chapter details the history of entrepreneurship in the Chinese village, describes the policies that have affected its development, and compares it to urban entrepreneurship. After a theoretical context is introduced, the Chapter then develops hypotheses for relevant underlying constructs (entrepreneurial self-efficacy and a new construct: perceived accessibility of resources) for the Chinese village context.

Finally, the Chapter provides an overview of the literature contributing to the psychological elements used in this research. First, the arguments that relate social norms, attitudes, and self-efficacy to entrepreneurial intentions are presented and the underlying constructs discussed. Second, the gaps in the literature are summarized and a new conceptual model is presented. Underpinning the conceptual model are the following constructs observed at the individual level: Entrepreneurial self-efficacy (ESE) and perceived accessibility of resources. The research examines the inter-relationships between these two constructs as antecedents to entrepreneurial intention (to start a business).

2.2 Entrepreneurship

In order to understand the phenomenon of entrepreneurship in a Chinese village context, a review of relevant theory is presented. In this regard, Low and MacMillan (1988) present six research dimensions for entrepreneurship researchers to consider and investigate which provides a framework for this research: Purpose, theoretical perspective, specific phenomena, level of analysis, time frame, and methodology. These dimensions underlie the discussion that follows.

Entrepreneurship contributes to society by increasing efficiency within an economy, creating and expanding new markets, and creating new jobs that increase the employment rate (Hitt et al. 2001; Shane & Venkataraman 2000). It is a key element for economic development (Gannon 1994; Persinger, Civi & Vostina 2011; Sanyang & Huang 2010; Stel, Carree & Thurik 2005). Entrepreneurship has been recognized as being important for

economic development for centuries; however, social scientists still find the term difficult to define and there is no universal definition of the term –entrepreneurship". This is because entrepreneurship is multi-faceted and it depends on which aspect of entrepreneurship one focuses on that provides insights and understanding to the term. Complicating the definitional problem is that entrepreneurship can be perceived from different perspectives/levels: individual, group, organisation, industry, and/or society (Low and MacMillan, 1988). Even at the individual level, entrepreneurship research questions can cover both the founding entrepreneur and/or the entrepreneurial manager (Berglann et al. 2011; Ireland, Covin & Kuratko 2009; Venkataraman 2009). For this reason, it is better to define entrepreneurship (certainly at the individual level) in terms of how entrepreneurs think and behave (Mitchell et al. 2002).

2.2.1 The Entrepreneur in Entrepreneurship: An Historical Review

A broad historical perspective is presented here as context for defining the entrepreneur in terms of how the term applies in this research. Over the many years that it has been used, the definition of entrepreneurship has been associated with several key words: opportunity, risk, innovation, entrepreneur, and new venture (Baum et al. 2007; Cohen & Winn 2007; Macko & Tyszka 2009; Shane & Venkataraman 2000; Wong, Ho & Autio 2005). Psychological research focuses on the individual entrepreneur and can reflect a focus on new venture creation initiated by the entrepreneur (Krueger, Reilly & Carsrud 2000). Ultimately, entrepreneurship has –involved organization creation, innovation, and the acquisition and integration of resources" (Gartner 1990); though Shane and Venkataraman (2000) note that entrepreneurship does not need to involve new venture creation. Richard Cantillon was the earliest researcher to pay attention to entrepreneurs. In 1755, Cantillon's posthumous publication described the entrepreneur as a contributor to economic value. Cantillon also mentioned the issue of entrepreneurial uncertainty, which he referred to as risk bearing. Cantillon focused on individual behaviour and spatial economics (Hébert 1981), but also described the entrepreneur as a merchant who bears risk. Say (1803, p.330) concentrated more on the nature of the entrepreneur, stating that an entrepreneur makes use of –the application of knowledge to the creation of a product for human consumption". From these early examples, it is clear that research about the unique features of entrepreneurs was an ongoing issue for which there was no agreement.

From a different perspective, in 1874, Leon Walras introduced the entrepreneur as the fourth factor of production; that is, the one who hires the other three factors of production – capital, land, and labour (Bowles, Gintis & Osborne 2001). It is the entrepreneur – the buyer of productive factors and the seller of goods in the market – who links different markets and moves the market toward equilibrium. This economic perspective focuses on entrepreneurs‘ contributions to economic development. Alfred Marshall, writing in 1890, recognized the entrepreneurs in Adam Smith's *undertaker*‘ as individuals who seek benefits (Marshall 1930).

Frank Knight‘s entrepreneur vastly increases the efficiency of economic production through uncertainty (Knight 1921). Knight develops the concept of risk when discussing entrepreneurship and puts it into perspective. According to Knight (1921), there is more to risk than what it conveys. He introduces the concept of uncertainty to elaborate the notion of risk. We may be able to calculate *risk* by returning to previous experience, but *uncertainty* cannot be calculated because it cannot be quantified.

Schumpeter (1936) acknowledged that uncertainty is always present for entrepreneurs, but rejects the notion that entrepreneurs take risks. For Schumpeter, disequilibrium is inherent to the entrepreneurs' role. Schumpter‘s entrepreneur disrupts the balance and moves the economy toward a new equilibrium (Schumpeter 1936). A force within the economy causes this disruption because without it there would not be any real development. Schumpeter (1936) characterizes this force as the entrepreneur–and–innovator who creates new combinations for development. This concept of new combinations appears in five forms: (1) new goods, (2) new production method, (3) new markets, (4) new raw materials, and (5) organizational innovation. Schumpeter's entrepreneurship is defined as an entrepreneur‘s involvement in innovative processes in production, market expanding material creation, and organization innovation to generate more value than the cost of the inputs.

These classic academics described the entrepreneurship of their times in which economic and scientific developments were creating new business and technical situations. Yet, while from previous eras, the situations they describe are relevant for today and provide important context for Chinese village entrepreneurship. However, while their discourses provide insights into the nature of entrepreneurs, their descriptions of entrepreneurship do not provide a clear universal definition of the term.

2.2.2 An Operational Definition of Entrepreneurship

This section seeks to provide an understanding of what the term –entrepreneurship" means for this research. Three fields of research (economic, psychological, and social) have contributed to the emergence of entrepreneurship as a distinct research domain (Aldrich & Zimmer 2009; Carree & Thurik 2010; Shapero & Sokol 2009; Wilson, Kickul, & Marlino, 2007; Zhao, H, Seibert, & Hills, 2005). Classical, economic entrepreneurship research mainly focused on the significant economic contributions made by individual entrepreneurs. Psychological and personal characteristic entrepreneurial research distinguishes entrepreneurs from the normal population. Sociological entrepreneurial research investigates the context in which entrepreneurs live and work. However, although the individual entrepreneur is key, the entrepreneurial firm is the important outcome of the entrepreneurial process. Thus, researchers also explore the firm level entrepreneurial phenomenon. Firm-level entrepreneurial research sometimes uses resource-based theory to explore and explain the entrepreneurship phenomenon (Alvarez & Barney 2002). This has contributed to the exploration of firm-level resource management and how it affects entrepreneurial performance. In recent times, scholars have introduced various combinations of, and approaches to, entrepreneurial research, converging insights from different disciplines. For example, some scholars have noted the relevance of the relationship between the accessibility of resources and entrepreneurship performance (Chandler & Hanks 1994a, 1994b; Haber & Reichel 2007). The most fundamental issue for entrepreneurship is how individual entrepreneurs use their own capability and accessible resources to achieve business goals (Bhide 1999; De Clercq et al. 2010; Evans & Volery 2001; Hinterhuber & Popp 1992; Miles, Miles & Snow 2005) to impact economic outcomes (Davidsson 2005).

All societies – capitalist, communist, and mixed – have entrepreneurs. However, in communist societies, entrepreneurship tends to be restricted by the government and its agencies (Rashid 1997). Entrepreneurs in capitalist societies are able to play an active role in the society‘s economic development compare to entrepreneurs in socialist (and communistic) societies (Malik 1997). Adam Smith‘s (1776) work is very much focused on the capitalist entrepreneur – one who uses capital to rent and pay wages for profits, Smith (1776) acknowledged that the profits must be exchanged for investment and the risk the investor bears.

Although it is difficult to clearly differentiate between the provider of capital and an entrepreneur (for what is a venture capitalist but an entrepreneurial person who uses other people‘s resources to invest in business opportunities), one can say, however, that the loan capital provider (as distinct from the private equity provider) survives on interest (calculated on the principal), whereas the entrepreneur survives on profit. Where there is profit, there is usually the possibility of loss. This potentially raises the importance of the entrepreneur‘s risk-bearing capability. It is often true that a capital provider is also an entrepreneur because a certain amount of capital is needed to venture into something new. However, it is also true that a person of talent who works hard may be able to borrow (or secure) money from a capital provider in exchange for interest (or ―an equity interest” in the venture). In China and other developing nations, the role of capital provider may be played by relatives and friends, and the concept of ―loan interest” might have a different meaning, such as a personal favour, which may be repayable at some time in the future – the ―favour” not necessarily any ―financial interest” as defined in economic terms.

Much scholarly attention has been paid to the economic contribution of entrepreneurs in the Western context (Ageev, Gratchev & Hisrich 1995; Van Praag & Versloot 2007). However, in non-Western contexts, other complex factors may affect entrepreneurship, including a family‘s obligation and contribution and community engagement and/or support.

Thus, there are different ways of looking at the entrepreneur when one considers entrepreneurship from Western versus Eastern perspectives. In previous centuries, social scientists found it difficult to distinguish between capital providers and entrepreneurs; however, this distinction has improved and become necessary as economics has advanced as a science. Entrepreneurs are now distinguished from the capital provider, who may be divorced from his/her business interests. The development of formal financial institutions has meant that entrepreneurs can now access capital from a variety of sources, consolidating the importance of the entrepreneur as the driving force of a business.

Low and MacMillan (1988) defined entrepreneurship as new business creation and the entrepreneur as the founder of a new enterprise (Gartner 1985). Gartner (1985) presented a conceptual framework for describing the phenomenon of new venture creation that integrated four major perspectives in entrepreneurship: individual characteristics, the organization, the external environment, and the process of creating a new business (Gartner, WB 1985). It is argued that the individual is the most important element, since he/she

perceives the external environment and engages the process to start a new organization. Social behaviour theory is relevant in this regard as it helps to better understand the role of individual perception in entrepreneurship (Mitchell et al. 2002).

2.2.3 Nascent Entrepreneurs

Nascent entrepreneurs are individuals who engage in some form of entrepreneurial activity but who currently do not own a business (Davidsson & Honig 2003; McGee et al. 2009). They are the potential entrepreneurs (Delmar & Davidsson 2000) – those who have the potential to contribute toward economic development in the community as well as facilitate the introduction of innovations into the market. Therefore, understanding what makes current non-entrepreneurs develop intentions to start businesses – that is, to become nascent entrepreneurs - is an important issue for researchers, educators, and policy makers. In this regard, entrepreneurial cognitive researchers have used entrepreneurial self-efficacy (De Noble, Jung & Ehrlich 1999; Jing & Yanfu 2007; McGee et al. 2009), entrepreneurial attitude (Krueger, Reilly & Carsrud 2000), subjective norms, and technical innovation career options (Jing & Yanfu 2007) to investigate the antecedents and/or influencing factors of entrepreneurial intentions. Thus, in order to better understand nascent entrepreneurs, a better understanding of the entrepreneurial mind and behaviour of those currently who are not entrepreneurs – as well as those who are - is necessary. Though, it needs to be acknowledged that not all current non-entrepreneurs will become nascent and/or non-entrepreneurs. In fact, Carter et al. (2003) found nascent and non-entrepreneurs to be different so it is important to distil what is and what motivates ―nascency" in non-entrepreneurs. In this regard, scholars have examined topics such as individual characteristics (Zhao, Seibert & Lumpkin 2010), environmental influencing factors (Krueger, Reilly & Carsrud 2000; Lee et al. 2011) , and/or behavioural processes and/or activities (Jones & Coviello 2005; Man, Lau & Chan 2002). The fact is that nascent entrepreneurs are individuals who want to start a new business (Delmar & Davidsson 2000). Mueller (2006) finds that they want to ―discover" the entrepreneurial environment in the process, while building upon their social capital and experiences. It is these factors that positively influence individual to be nascent entrepreneurs. Mueller (2006) found that financial capital is not as important as the other factors (entrepreneurial environment, social capital, and relevant experience).

Attitude toward risk also influences individual decision making processes of becoming an entrepreneur (Caliendo, Fossen & Kritikos 2009). Rotefoss and Kolvereid (2005) combined individual and environmental factors to predict individual cognition, behaviour, and organizational performance. External resources and human resources were found to be reliable predictors of business performance, and perceived resources also influenced individual entrepreneurial cognition. More importantly, their research found entrepreneurial experience to be the most important predictive factor for individual entrepreneurial intention and behaviour. Much still needs to be known about nascent entrepreneurs and so researchers need to explore further the entrepreneurial mind, entrepreneurial cognition, and entrepreneurial behaviour.

2.2.4 Serial Entrepreneurs

Wright, Robbie and Ennew (1997) define serial entrepreneurs as individuals who started up more than one business. The business experience gained from starting more than one business contributes toward serial entrepreneurs more likely operating more successful businesses (Pasanen 2003). Therefore, understanding their cognition and behaviour has attracted continuing attention. Why and what makes serial entrepreneurs more likely to start up other new businesses is an important entrepreneurship research topic. Entrepreneurs with strong entrepreneurial intention become serial entrepreneurs.

Westhead, Ucbasaran and Wright (2005) examine novice and serial entrepreneur similarities and differences regarding their intentions, behaviour, and performance. Those individuals with greater entrepreneurial experience tended to use resources more effectively and/or perceived the necessary resources they needed from more sources compared to unexperienced individuals. In addition, the experienced entrepreneurs had specific entrepreneurial cognitive mindsets during the business opportunity assessment process. How to understand their differences within entrepreneurial mindsets becomes important for both an economic development perspective and in the development of entrepreneurial learning material for non-entrepreneurs.

2.3 Level of Analysis: The Individual *versus* the Firm or Community

With Low and MacMillan‘s (1988) foundation classification of there being five levels of entrepreneurship research analysis (individual, group, organization, industry, and society), Davidsson and Wiklund (2001) refined the taxonomy and identified individual and

team, firm, industry/population, regional, and national levels. However, both groups of scholars identify the need for further research that applies a multi-level analysis approach – entrepreneurship research does not necessarily need to be restricted to one level and the dynamics of the interplays between and across levels can be insightful.

For example, the following studies provide insights into inter-level interplays that provided meaningful results. Shane and Venkataraman (2000) raised the role of individuals in discovering and exploiting opportunities, and noted the transfer process from individual to organization. Davidsson, Low, and Wright (2001) argued the importance of individual research and called for multi-level research. Busenitz et al (2003) highlighted the need to explore individuals within their specific environments. Korunka et al (2003) argued that the process of creating a new business is the interaction process of individual and environment though complex and dynamic behaviours and decisions.

However, although individual psychological research is necessary (and which needs to be cognisant of the perceived external environment and the resources that are expected to be required to ensure firm success), there has been criticism of some streams of individual level entrepreneurship research. For example, there were decades of unsuccessful *entrepreneurial personality* studies (Mitchell et al. 2002) and so it remains that we need a better understanding of the entrepreneurial mind that can be transferred into knowledge and theory. An important unanswered question is why some individuals engage in the business start-up process. The current research focuses on individual perceptions by considering the external expectancy of what a firm needs and the perceptions of external resource accessibility. Attitude, subjective norms, and self-efficacy influence individual intentions and, eventually, impact outcomes. One hope for entrepreneurship research is that by better understanding the entrepreneurial mind, we can foster more successful entrepreneurs and more successful businesses. We can motivate more individuals to start their first business and we can encourage experienced entrepreneurs to start other new businesses. Individual-level research is therefore appropriate for the Chinese village context because most Chinese village businesses are SMEs (many micro) operated by individual entrepreneurs where it is hard to differentiate the entrepreneur from the firm.

In terms of considering entrepreneurship from a Chinese village perspective, Mitchell et al (2000) identified the importance of conducting cross-cultural research in entrepreneurship. Shaw (1990), for example, found that individual or collectivist

perceptions are affected by cultural values. Whereas most Western societies are individualistic in nature, Chinese village society is collectivist. Other researchers similarly have found that culture influences individual entrepreneurial perceptions (Busenitz & Lau 1996). Thus, individual psychological research needs to be conducted in different cultures to better understand the nature of entrepreneurship and develop entrepreneurship theory as ―one size does not fit all societies". This assumption is particularly misplaced in the Chinese village context because Chinese villagers have different economic situations, educational levels, entrepreneurial experiences, and social networks compared to Western individuals. Chinese village entrepreneur perceptions of the availability of resources are likely to be disparate and the Western term ―use of other people's resources" in a Chinese village context can imply use of family resources and indeed access to family (as well as public) resources play an important role in determining Chinese village nascent entrepreneur intentions. Thus, the focus of this study is on *perceived* resources in the Chinese village context and how an entrepreneur's perception of resource accessibility affects entrepreneurial intentions.

2.4 Why the Chinese Village Context Differs from the Western Context

Much has been written about entrepreneurship from a Western perspective, especially in the US context (McDougall & Oviatt 2000); however, few studies have empirically examined entrepreneurship in China, particularly within a Chinese village context. Cultural differences mean that current management theories may need to be modified before they can be applied to contexts such as in a Chinese village (Steensma et al. 2000). Kreiser, Marino, and Weaver (2002) state the need to test the universality of constructs developed in one specific context.

This section examines the foundations for entrepreneurship in China and explains why we need empirical entrepreneurship research on the Chinese village. The insights gained from studies in China may help other developing countries train individuals to enhance entrepreneurial perceptions, encourage more entrepreneurial cultures, and facilitate policies to better encourage entrepreneurship.

Although it is important to understand entrepreneurship from different cultural perspectives, the fact is that much of the behavioural theory that is published in leading

international journals is founded upon the use of WEIRD subjects – subjects from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies (Henrich, Heine, and Norenzayan, 2010). In addition, 96% of psychological samples come from countries with only 12% of the world's population (Henrich, Heine, and Norenzayan, 2010). Thus, examining how entrepreneurship is undertaken in China is worthy of consideration since its population – much of which can be found in rural areas – is significant and China's economic presence is growing globally.

2.4.1 Entrepreneurship Research in Western Contexts

Considerable attention has been devoted to examining entrepreneurship in Western, Educated, Industrialized, Rich, and Developed (WEIRD) countries from the perspective of ~~–o~~pportunity" entrepreneurs – those who look to establish businesses because they see an opportunity (Bhave 1994; Brown, TE, Davidsson & Wiklund 2001; Hitt, MA et al. 2001; Shane, S. & Venkataraman, S. 2000), technopreneurship to explain the relationship between technology and entrepreneurship (Markman et al. 2005; McDougall 1989; Miner, Smith & Bracker 1992; Powers & McDougall 2005; Shane, SA 1992), cooperative entrepreneurship to explore new entrepreneurial styles (McGee, J.E., Dowling & Megginson 1995), psychological entrepreneurship to understand the entrepreneurial mind (Baron 1998; Fitzsimmons & Douglas 2011; Krueger, NF 2005; Krueger, NF, Reilly & Carsrud 2000; Kuckertz & Wagner 2010; Zhao, H, Seibert, SE & Hills, GE 2005), entrepreneurial strategy(Murray 1984; Russell & Russell 1992), organizational entrepreneurship (Covin & Slevin 2009), economic and ethical entrepreneurship (Harris, Sapienza & Bowie 2009; Wempe 2005), entrepreneurship education (Katz 2003; Kuratko 2005; Peterman & Kennedy 2003; Vesper & Gartner 1997), and entrepreneurship policy (Collins 2003; Gilbert, Audretsch & McDougall 2004; Hart 2003). Although some studies have been conducted in developing countries examining, for example, necessity entrepreneurship (Naudé 2010), rural or indigenous entrepreneurship (Huang 2008), entrepreneurship in transitional contexts (Busenitz & Lau 2001), there are significant gaps in better understanding how entrepreneurship is conducted in ~~–n~~on-WEIRD" environments such as China. This research aims to contribute toward developing entrepreneurial theory for such Chinese village non-WEIRD environmental contexts.

2.4.2 Entrepreneurship in China

To understand entrepreneurship in a Chinese context, one needs to understand some of the history relating to China and the differences between Chinese city and village contexts. In China, urban workers in the cities have a much higher income than rural workers. For example, in 2008, the average income of urban residents in Shaanxi Province was 12,858 Yuan (US$2,024) per annum, compared to 3,136 Yuan (US$494) for rural residents (National Bureau of Statistics of China 2008). Rural workers in the non-agricultural sector have a higher income than those in the agricultural sector. The 2006 Hundred Counties Survey showed that Chinese internal migration workers (~~in~~ternal migration" is defined as migrating from one Province to another) who ran their own businesses had an average annual income of 71,987 RMB (US$11,337) (Han, 2009), while the majority of Chinese villagers had a significantly lower income of 3,587 RMB (US$565) (National Bureau of Statistics of China 2008). One reason that the Chinese economy has shifted to a market orientation that encourages rural business development could be that non-agricultural business ownership and entrepreneurship has improved incomes in Chinese villages. However, questions concerning who are the potential Chinese village entrepreneurs and what drives individuals to create and run a successful business in a Chinese village are still relatively unexplored. This is a motivating factor for this research.

Also motivating this research is a broad acknowledgement that entrepreneur behaviours and business environments are vastly different; thus, there is a need for research about different contexts and groups (Ucbasaran, Westhead, & Wright 2001) to expand the entrepreneurship theoretical knowledge base. This study focuses on both the practical and theoretical Chinese entrepreneurship situation. Recent research on entrepreneurship has mainly focused on Western contexts (Fitzsimmons & Douglas 2011; Parker & Van Praag 2010; Townsend, Busenitz & Arthurs 2010) and there is little research on developing countries in the top entrepreneurship research journals. Despite China being the world's largest developing country for both economic, population, and land, only 68 articles on the development of entrepreneurship in China were published in the top 11 entrepreneurship academic journals between 1980 and 2005 (Yang, J & Li 2008).

The Western developed context is characterized by a mature market system, comparatively better business knowledge, and a more individualistic culture. These factors may cause Western entrepreneurs to think and behave differently from Chinese village

entrepreneurs. China‘s economy has performed well during the past three decades; a key reason is that new businesses keep on being created and continue to grow. How this happened, and who will be China‘s next generation of entrepreneurs? These are still largely unexplored questions. Roy, Walters and Luk (2001) identified the problems associated with applying (Western) ―business relative research" in a Chinese context. They also recommending when applying entrepreneurial cognition research in a Chinese village context, the Western context based constructs may need modification due to the large difference in culture, educational background, industry, and economic situation between developed context and developing countries‘ village context.

Chinese villagers differ dramatically from the students, managers, and/or entrepreneurs who typically make up the samples of Western entrepreneurial cognition research. The focus of Western ESE research has been perceived in terms of personal capability (Chen et al., 1998, Bandura, 1978) with respect to starting a business. Nisbett (2003) draws our attention to the differences between Western and Chinese cultural subjective norms in terms of individualism and collectivism. In China, a collectivist culture emphasizes the importance of family endorsement and inclusion in the decision to start a business. Chinese individuals assess themselves in the collective context. Harrison refers to the entrepreneurial power of Confucian values and practice (Harrison, 1992). Since culture is cultivated by a human being‘s beliefs and behaviours, and potentially affects people‘s values and attitudes, entrepreneurship cannot be fully explained just by using a business model for entrepreneurship.

In collectivist contexts, there is a need for research to focus on the individual level of entrepreneurship and on issues such as locus of control and entrepreneurial self-efficacy. Why? The reason is because in collective cultures, the accessibility of support from family and the community is vital and this affects individual entrepreneurial perceptions. The immediate and extended family will exchange economic information in their close-knit communities and will share their capabilities and money based on trust. Within this context, entrepreneurial cognition research has to include the strong external influence of the entrepreneurs‘ social networks. Likewise, entrepreneurial self-efficacy theory may not necessarily be a good predictor of potential successful entrepreneurs in a collectivism context since it does not consider the perceived impact of social networks on individuals. Western researchers may use the analogy of athletes running a race to explain

entrepreneurial success. An individual‘s capability, skills, and self-efficacy will win the race. In a Chinese village context, a more appropriate analogy would be that of a car race. The driver may have the capability and skills to drive a car, and believe that he/she can drive well, but if the individual does not have the car (resources) or perceives that he/she cannot access it, his/her intentions to drive will be impaired. Likewise, Chinese village entrepreneurs require their social networks to provide resources and they need to perceive that they have access to these critical resources in order to become successful entrepreneurs

It should be noted that from a definitional perspective, the terms *rural* and *peasant* entrepreneurs are often used interchangeably to represent Chinese village entrepreneurs. Lu (1994) interviewed 10 meritorious entrepreneurs and noted that self-improvement is perhaps the biggest challenge faced by peasant entrepreneurs (Lu, 1994). Such *self-improvement* could involve a shift in entrepreneurial orientation from necessity entrepreneurship to opportunity entrepreneurship, as suggested in the Western literature (Djankov et al. 2008). Successful entrepreneurial experience could also lead to self-improvement (Chao, 1998). However, it is difficult to generalize about the cognition of Chinese peasant entrepreneurs as there are no published studies on the subject, perhaps because it is notoriously difficult to conduct empirical research in China (Shenkar 1994). Even if data were available, it is still a huge challenge to interpret this data in a Western framework. This seems to be a gap that can be explored by adopting mature Western theory-based surveys to evaluate how they apply in China.

2.5 Theoretical Foundations: Theory of Planned Behaviour

Entrepreneurial behaviour is linked to many factors, including entrepreneurial motivation, emotion, self-efficacy, passion, locus of control, attributions, and intention (Carsrud & Brännback 2009). The current research project acknowledges the theoretical contribution of studies in these areas and uses these studies as a backdrop for asking the research questions addressed in this research that focus on perceived behavioural control (self-efficacy), perceived resource accessibility, and entrepreneurial intentions to explore the entrepreneurial cognition phenomenon within the Chinese village context.

Cognitive psychology, a sub-discipline of psychological research, contributes to entrepreneurship cognition research. However, research in entrepreneurial cognition is still under-developed (Mitchell et al. 2004). Perceived planned behaviour theory is a form of

social behaviour research, based on self-efficacy theory, that also contributes to entrepreneurship research (Krueger & Carsrud 1993). Figure 2.1 presents the Entrepreneurial Intentions Model as interpreted by Krueger, Reilly, & Carsrud (2000) which was based upon Ajzen's (1991) model of theory of planned behaviour. This model explains the factors that inflence intention.

Figure 2.1 Entrepreneurial Intention Model

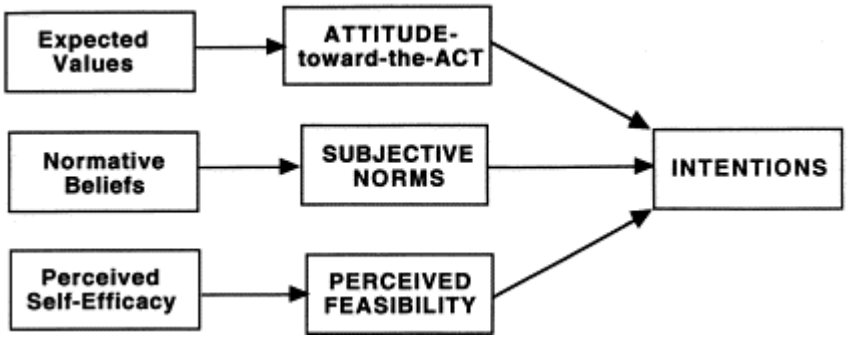


Diagram from (KruegerJR, N, Reilly, M & Carsrud, A 2000), originally adapted from Ajzen (1986)

Azjen's (1991) theory of perceived behaviour control is based on Bandura's self-efficacy theory, but focuses more on social activities than medical experiments (Ajzen, 2002). Perceived behavioural control affects both intentions and behaviour. The actual control of behaviour is self-evident; therefore, researchers have identified other elements which affect performance; namely, facilitating factors (Triandis 1977), resources (Liska 1984), and opportunities within the context (Sarver 1983).

Psychological entrepreneurial research tends to concentrate on individual internal perceptions, ignoring the external environment. This is particularly the case for perceived external accessibility of resources. However, it is important to understand the role of perceptions about the accessibility of necessary resources. The current research examines how this specific cognitive element affects entrepreneurial intention, and investigates its relationship with ESE. In entrepreneurial cognitive research, entrepreneurial intention is the connection between cognitive elements and actual behaviour.

2.6 Entrepreneurship Intention

Entrepreneurship researchers have examined entrepreneurial intention by examining and applying a number of social psychological theories including the *theory of planned behaviour* (Krueger, JNF & Carsrud 1993; KruegerJR, N, Reilly, MD & Carsrud, AL 2000). Entrepreneurial intention has been examined within a range of different perspectives and contexts including entrepreneurial group social cognition (Shepherd & Krueger 2002), multi-national application of instruments to measure entrepreneurial intention (Liñán & Chen 2009), family self-efficacy with resource perspectives (DeNoble, Ehrlich & Singh 2007), how perceived barriers influence entrepreneurial intention within different country contexts (Shinnar, Giacomin & Janssen 2012), self-efficacy (Zhao, H, Seibert, SE & Hills, GE 2005), individual situations (Dimov 2007), feasibility and desirability (Fitzsimmons & Douglas 2011), and refining the measurement instrument of entrepreneurial self-efficacy (McGee, Jeffrey E. et al. 2009). Many of these studies use the theory of planned behaviour in examining entrepreneurial intention.

An important component of the intention model is *entrepreneurial self-efficacy* (as influenced by perceived behavioural control, perceived feasibility) and two influencing factors: *entrepreneurial attitude* and *entrepreneurial subjective norm*. This section introduces these elements of the cognition model for completeness and links them to the entrepreneurship research context.

2.6.1 Entrepreneurial Intention Linked to Other Entrepreneurial Perceptions

Social psychological entrepreneurial research views entrepreneurial intention as important because it is a predictor of behaviour and a precursor to entrepreneurial performance. This study borrows from general social psychological intention theory to contribute to research on entrepreneurial intention.

The current study involves explorative research to understand the cognitive elements that predict entrepreneurial intention in a Chinese village context. Western entrepreneurial self-efficacy theory has demonstrated a relationship with entrepreneurial intention (Chen, Greene & Crick 1998; De Noble, Jung & Ehrlich 1999; KruegerJR, N, Reilly, M & Carsrud, A 2000; McGee, Jeffrey E. et al. 2009; Wilson, F, Kickul, J & Marlino, D 2007; Zhao, H, Seibert, S & Hills, G 2005), although attitude and subjective norms also affect people‘s intentions, according to Azjen‘s (1991) theory of planned behaviour. Ajzen (1991) suggests

that exogenous influences usually only indirectly affect intentions and behaviour through attitude changes (Ajzen, I. 1991). Krueger (2000) and other researchers built upon Ajzen‘s model to develop intention-based models that consider how exogenous influences, such as perceived availability of resources, influence intentions and, ultimately, impact venture creation (Ajzen, I. 1991; Boyd, N & Vozikis, G 1994; KruegerJR, N, Reilly, M & Carsrud, A 2000). The current research argues that entrepreneurial cognition is strongly linked to an individual‘s specific context – a Chinese village context in this instance. Where resources originate and what resources are necessary play crucial roles in an individual‘s cognition for entrepreneurship (KruegerJR, N, Reilly, M & Carsrud, A 2000). This exploratory research examines the relationships among the internal entrepreneurial cognitive elements of entrepreneurial self-efficacy and perceptions about the external entrepreneurial environment in terms of the family and public resources available to support venture creation. It is hypothesised that these constructs affect an individual‘s entrepreneurial intentions.

2.6.2 Entrepreneurial Self-Efficacy

Before discussing entrepreneurial self-efficacy, a brief introduction to the general concept of self-efficacy is needed. Self-efficacy theory was developed from learning theory by Bandura (1977) and has been applied to a wide range of areas including entrepreneurship. Self-efficacy is defined as an individual‘s perceived ability to achieve his/her specific goal in a specific situation. The individual as agent is the determining factor in this behaviour. Individuals with higher self-efficacy for certain tasks are more likely to pursue, and then persist, in those tasks compared with individuals who possess low self-efficacy (Bandura, A. 1977). Western theoretical cognitive models show that individual values and attitudes affect individual behaviours, and that intention is one important predictor of performance (Abelson 1982; Ajzen, I 2002; Ajzen, I & Madden, T 1986; Bandura, A & Adams 1977).

Self-efficacy is of great benefit to entrepreneurs (Chen, Greene & Crick 1998; De Noble, Jung & Ehrlich 1999; McGee, Jeffrey E. et al. 2009). Where the entrepreneurial goal is to start a business, self-efficacy helps explain the entrepreneur‘s choices, effort levels, and perseverance (Chen, Greene & Crick 1998). Entrepreneurial self-efficacy (ESE) is one of the key components of individual entrepreneurship research, and has been shown to have a predicative power for entrepreneurial intention (Chen, Greene & Crick 1998). Exploratory research has also shown a positive relationship between ESE and new business performance (Forbes 2005).

ESE in Western contexts mainly focuses on an individual‘s perception of their own capabilities to run a business (Boyd & Vozikis 1994; Chen, Greene & Crick 1998; De Noble, Jung & Ehrlich 1999; Jing & Yanfu 2007; McGee, Jeffrey E. et al. 2009; Naktiyok, Nur Karabey & Caglar Gulluce 2009; Zhao, Seibert & Hills, G 2005). The Chinese village is more isolated from the global community than Chinese cities like Shanghai or Beijing. Traditional culture is more significant in the Chinese village, so village entrepreneurship may be different to urban entrepreneurship in China, and the West.

Nisbert (2003) draws our attention to the differences between Western and Chinese cultural subjective norms in terms of individualism and collectivism. Western-based ESE theory is associated with the individualistic subjective norm. Therefore, ESE in the Chinese context needs to be re-evaluated to consider the effects of collectivism.

Bandura‘s (1977) original work on self-efficacy includes two elements: efficacy and outcome expectation. However, developments in entrepreneurship research have tended to focus on efficacy and ignore the outcome expectation element. The latter is an estimate of the external or social responsiveness of an action (Mauer, Neergaard & Linstad 2009). In this research, it is argued that the perceived positive responsiveness of the environment can be transferred to the perceived accessibility of resources from family or public, which could be viewed as a response to the request from significant others to participate or support a new venture.

This research argues that Western ESE theory grounded on an individual‘s belief in his/her own capability does not necessarily reflect the collectivist values of Chinese culture. The Chinese collectivist culture emphasizes family endorsement and inclusion in the decision to start a business. Chinese individuals will compare themselves to the collective context. This assessment will be an important component of their self-belief to successfully start a business. They need confidence in their ability to persuade their family and community to participate.

Most items in the ESE instrument address an individual‘s capability but ignore the elements of confidence necessary for an individual to start a business in a collective culture. Western ESE scales do not reflect collective extended family influences, village and family subjective norms, and the importance of family resources accumulated over generations. It is proposed that these factors significantly impact the development of entrepreneurial

confidence levels and entrepreneurial abilities to start a business in the Chinese village context.

Entrepreneurial cognitive research, drawing from psychological research, links the perception of feasibility to perceived behavioural control and self-efficacy (Bird 1988; Krueger, & Carsrud 1993; Krueger, 1993; Krueger, Reilly, MD & Carsrud, 2000). Begley, Wee-Liang, and Schoch's (2005) South Asian study found that perceived feasibility to start a new business is linked to market opportunity and the supply of skilled labour. This suggests a connection between perceived external support or availability of resources and the intentions model of entrepreneurship.

Self-efficacy has emerged from the psychology and medical research fields and a successful outcome is measured by an internally controlled behavioural change at an individual level; for instance, strengthening confidence, abandoning a drug habit, or learning more effectively. In entrepreneurship, psychological theories need to be adopted to explain success in comparatively more dynamic and complex social settings than the medical setting. This means that while ESE is a part of an entrepreneurial intention, it may be insufficient to determine success, given particular social dynamics. That is, in entrepreneurship, the measure of success is, to some extent, reliant upon factors external to the individual.

ESE has previously been described as a person's belief in his/her capabilities to successfully achieve entrepreneurial tasks (Chen, Greene & Crick 1998; De Noble, Jung & Ehrlich 1999). The ESE construct has been examined by various researchers such as Chen (1998), De Noble (1999), and McGee (2009). However, prior studies have predominantly examined or developed ESE constructs in Western contexts; that is, in nations with developed markets and/or economies. Ajzen (1991) mentioned (in his widely cited perceived behavioural control paper) that some intentions and behaviours depend at least to some degree on non-motivational factors such as availability of requisite opportunities and resources. These resources include time, money, skills, and cooperation of others. Ajzen (1991) argued that beliefs about resources and opportunities underpin perceived behavioural control, and that entrepreneurship occurs in a dynamic and complex context. In this context, key terms such as opportunity, resource, and risk remind the entrepreneurial cognition researcher to consider perceived external factors; specifically, perceived accessibility of resources can be a dependent variable for predicting entrepreneurial intention. Azjen's

(1991) perceived behaviour control model, which is focused on social activities, is therefore more appropriate for the current research.

Entrepreneurial self-efficacy is an important cognitive element of entrepreneurial cognition research as it has been identified as a predictor of behaviour and performance (Hmieleski & Corbett 2008). In the traditional theory of planned behaviour, the behaviour is comparatively simple with the main purpose being to increase intention; thus attitude is important. Behaviour such as "take a dose of prescribed medicine" or "go to the doctor to have a medical examination", leads to positive expected behaviour outcomes. However, entrepreneurship is not only about simple behaviours. Entrepreneurial behaviours can be complex and though entrepreneurs strive for entrepreneurial success, outcomes are not always positive. Some businesses fail. Many entrepreneurs can be overconfident. Thus the perception of an entrepreneur's ability to achieve certain outcomes (for example, being able to access the necessary resources) is important. McGee et al. (2009) argue that to better understand entrepreneurial intention, you need to understand its relationship with entrepreneurial self-efficacy and, in turn, entrepreneurial self-efficacy's relationship with behaviour and performance. They also argue that to better understand entrepreneurial self-efficacy, it needs to be more systematically examined within different contexts.

2.6.3 Entrepreneurial Attitude

Douglas and Shepherd (2002) investigated the relationship between entrepreneurial intention and attitudes towards four dimensions: income, independence, risk, and work effort. Several frameworks have been developed to explain the link between entrepreneurial attitudes and starting or expanding an enterprise (Ajzen 1991; Ajzen & Madden 1986). However, research built on expectancy-value theory assumes that individuals are rational economic individuals (Liu & Walker 1998) – but we know that attitude is strongly linked to emotion (Nabi 1999).

Attitude determines behaviour when attitude is specifically linked to specific social phenomena (Wiklund, Davidsson & Delmar 2003). One's attitude to career is linked to job satisfaction (Staw & Ross 1985). These researchers have identified the importance of attitude; however, attitude is comparatively unstable when it interacts with the external environment (Eagly & Chaiken 2003). Attitude predicts behaviour only under certain conditions (Bagozzi & Warshaw 1992; Kim & Hunter 1993); however, the entrepreneurship

process is risky and uncertain. Attitude is connected to specific behaviour and linked to individual perceived accessibility of resources. For instance, people with a positive attitude may believe a family member or financial institution is likely to provide the necessary resources to start a new business. However, attitude is not a good tool for predicting start-up behaviour when the expected outcome is a long-term goal and the business environment is dynamic and complex.

Attitude has been found to be an important predictor of intention (Ajzen, 1991; Ajzen, 2002; Ajzen & Fishbein 1977; Ajzen & Madden 1986) particularly where the intended behaviour is linked to certain positive expected outcomes (such as, go to the doctor). Entrepreneurship behaviour, however, is a more dynamic process and the expected outcomes are uncertain and complex. Thus, the extent to which attitude influences intention and behaviour in an entrepreneurial context will be more complex. In this research, it is argued that, in a Chinese village context, although attitude is important, the perceived availability of resources will also be important.

2.6.4 Entrepreneurial Subjective Norm

Fishbein and Ajzen defined subjective norm as a ~~"p~~erson's perception that most people who are important to (that person) think he should or should not perform the behaviour in question" (1975, p. 302). For measurement purposes, two elements have to be included: (1) the individual's expectation of the opinion of an individual perceived to be important, known as normative belief; and (2) an individual's likelihood of agreeing with the perceived important person's opinion (De Vries, Dijkstra & Kuhlman 1988). Entrepreneurship-related researchers have tested the opinions of family, close friends, and important others about whether an individual should or should not pursue a self-employment position (Souitaris, Zerbinati & Al-Laham 2007). They found that it is linked to other concepts of perception: attitude, behaviour, and control. Their research revealed that resource utilisation has no relationship to attitude, subjective norms, perceived behavioural control, and intentions. However, the research only tested one part of subjective norms – normative belief – and ignored another important factor which is an individual's likelihood of agreeing with the opinion of the important other. Therefore, Souitaris, Zerbinati and Al-Laham (2007) leave open the question of the importance of resources in entrepreneurial psychological research. The subjective norm for the entrepreneurial cognition process can be translated to an individual's belief about how likely they are to access resources from perceived important

individuals. In entrepreneurship research, subjective norms are highly linked to resource availability and an individual‘s perceived accessibility to resources (Wiklund & Shepherd 2003). However, entrepreneurial cognition research focuses on perceived accessibility of resources as a new element for predicting intention, rather than directly using the subjective norm instrument which has limited predictive power for intention and behaviour (Shinnar, Giacomin & Janssen 2012).

2.6.5 Perceived Accessibility of Resources

Little research has been conducted on the individual‘s perceived access to external resources in circumstances where there are few or no formal financial institutions. Individual-level and firm-level research can be connected by shifting individually accessed resources into firm-level resources (Brush et al. 2001). Resources are important for the survival and growth of new firms (Lichtenstein & Brush 2001). Brown and Kirchhoff (1997) noted that it is important for newly established small businesses to gain external resources through individual entrepreneurs or managers, rather than from large corporations who will influence how the resources are allocated and which may not be in the best interests of the firm. These authors discuss links to the enterprise‘s future success and they introduce a new concept: *resource acquisition - self-efficacy*.

Individual human resources and accessible resources contribute to the firm (Brush et al. 2001) and are vital for future business success. However, there has been a paucity of research on how these resources influence an individual‘s entrepreneurial cognition prior to business start-up. Individual entrepreneurs are hypothesized to be rational economic decision makers (McCarthy, Schoorman & Cooper 1993), thus, the availability of accessible resources are important influences on the intentions to start new businesses.

Individual capability and availability of resources both play an important role in business success (Karimi, Somers & Bhattacherjee 2007). Both subjective and objective factors influence business operations. However, as Murphy (2011) points out, economic and managerial inspired entrepreneurial research is difficult to combine with psychological research which explores factors such as entrepreneurial attitude and individual perception. Similarly, entrepreneurial social psychological researchers have experienced difficulties transferring objective resources to their domain (Murphy 2011). Another potential barrier to combining objective and subjective research is that they can be located at different levels of

analysis (for example, the firm-level versus the individual-level) (Davidsson, Low & Wright 2001). Firm-level resource-based researchers raise the importance of access to and effective allocation of necessary resources (Alvarez & Barney 2004). Researchers interested in the individual examine perception, attitude, self-efficacy, and subjective norms. Firm-level researchers transfer psychological individual perceptions into human resources to explore firm-level attributes such as entrepreneurial orientation (Lumpkin, & Dess 2001). Individual-level researchers have not yet found an effective way of transferring perceived ~~–o~~bjective concept resources" to entrepreneurial psychological research. Edelman and Yli-Renko (2010) suggested that perceived availability of resources may influence venture start-up; however, their findings showed no significant relationship between the two variables. Their research measured individual perceptions about general public resource availability for an individual community member (and in a non-Chinese context). However, perceived availability of resources is both an individual perception and is linked to other psychological attributes. The current study argues that prior research associated with the perception of resource availability has failed to predict venture start-up by pursuing the right concept but the wrong question. Although resources are independent of individual perceptions (Murphy 2011), their objective existence influences an individual's subjective perception of these. Rather than pose a general question of munificence for all community members, the question needs to be specific to individual respondents and their perception about the availability of resources for their own purpose. In contrast to prior studies, this research introduces the concept of perception of accessibility of objective resources. This notion combines the availability of resources with individual capability to access the resources, and examines the relationship between these and entrepreneurial intention.

The availability of resources is an environmental factor which may/may not be within an entrepreneur's control. Bruno and Tyebjee (1982) noted that the entrepreneurial environment contributes to entrepreneurs starting successful businesses. They listed several environmental factors including the availability and accessibility of venture capital, experienced entrepreneurs, labour, land, suppliers, and markets.

Whether resources are actually available to entrepreneurs when they are contemplating starting businesses is academic. What is important is their perception of the availability and accessibility of those resources. Perceptions are an important aspect of general social psychological theory on intention. Perceptions are usually related to norms, attitudes, and

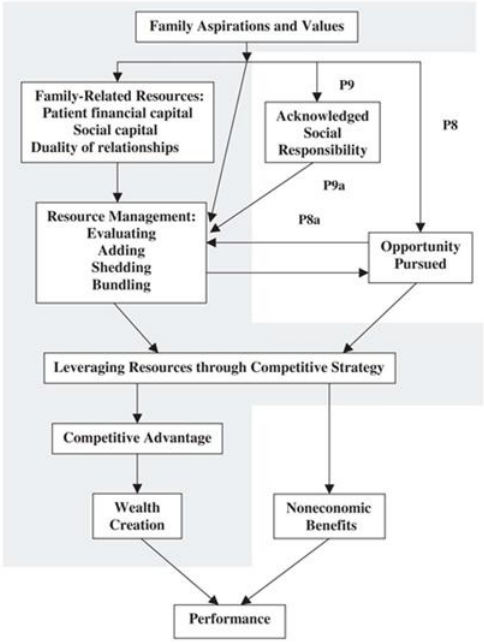
behavioural control. In entrepreneurial research, perceptions are usually discussed at the individual level. In contrast, resources are usually discussed at the firm level; however, an individual perception of the accessibility of resources needs to be focused at both the individual and firm levels. Thus, a firm-level concept (resources) is transferred into a perceived resource to explore its position at an individual level. Anecdotal evidence suggest that in a Chinese village context, resource availability and accessibility from family and/or the public (including the community and/or the government) are crucial factors that will be considered by Chinese village entrepreneurs. Yet, little research into this phenomenon has been undertaken. This research attempts to fill the gap in the literature by examining perceived resources from family and public sources as important predictors of individual entrepreneurial intention.

In considering perceptions, one needs to consider the subjective interpretation of resource availability versus their objective existence and accessibility. McMullan, Chrisman, and Vesper (2001) argued that subjective evaluation of activities may not truly influence objective venture performance. Clark, Davis, and Harnish (1984) identified a significant relationship between entrepreneurship training and entrepreneurial outcomes using objective measures (Clark, Davis & Harnish 1984). Subjective perception research is intended to predict objective performance with entrepreneurs being the key resource (Westhead 1995) because the entrepreneurs are the ones who gain the resources and subsequently shift these into organizations. For existing firms, resources primarily contribute basic materials that are strategically utilized. The perceived accessibility of resources contributes to an individual‘s psychological entrepreneurial cognition.

2.6.5.1 Perceived Accessibility of Family Resources

Family engagement affects every phase of an entrepreneur‘s network development (Greve & Salaff 2003). Thus, it is important not only to identify how and why family businesses behave and perform differently to non-family businesses (Chua, Chrisman & Steier 2003), but also to consider why there are so many family businesses. Sirmon and Hitt (2003) apply the resource-based view (RBV) to study resource management in family businesses. However, there has been limited research on how the family contribution develops the competitive strength of resources, *before* a family business is established. Figure 2.2 provides insights into family influence on resource management, strategy, and performance

Figure 2.2 Family Influence on Resource Management, Strategy, and Performance



From (Chrisman, Chua & Zahra 2003)

This model depicts how the family influences business performance through resource management and strategies. Family business has become a sub-field of entrepreneurship and management research, particularly family business management, generational succession (Miller, Steier & Le Breton-Miller 2003; Morris et al. 1997), and comparisons with non-family business (Chrisman, Chua & Litz 2004; Corbetta & Salvato 2004; Zahra, Hayton & Salvato 2004). Family businesses are a special type of firm in which potential shareholder rights do not depend on a contract, but on family members‘ perceptions about their contributions (Gomez-Mejia, Larraza-Kintana & Makri 2003). This is especially true of rural regions in China. Family members contribute their financial savings, house and land, labour, and social networks (*guanxi*). During China‘s economic liberalization period, each Chinese village family was provided with *zhaijidi* land on which they could build a house; *ziyoudi* land which surrounds the *zhaijidi*, but cannot be used for formal housing; and *zerentian* land for farming. Businesses in rural China are usually started in *zhaijidi* (formal houses) and *ziyoudi* (informal outbuildings).

Entrepreneurship research in China tends to focus on *guanxi,* the country‘s strong social networks (Tsang 1998). *Guanxi* is recognized as an important concept affecting

business development in China (Tang et al. 2008); however, there has been little research on how *guanxi* benefits the process of starting a family business.

Family members can be an abundant source of capital for individuals who want to start a business (Stewart 2003). The current research identifies the family as an important source of resources for individuals preparing to start businesses.

2.6.5.2 Perceived Accessibility of Public Resources

Small and medium sized enterprises (SMEs) are challenged by limited internal resources. External support can help the new business develop its competitive advantage (Klaas 2003). In a Chinese village context, existing firms tend to be SMEs with a high proportion of micro and small businesses. Thus, external public resources play a critical role in addition to the availability of family resources – particularly where family resources are not available. In a Chinese village, public resources are comparatively less than in large urban city environments. However, public resources still factor highly in any decision by potential entrepreneurs to go into business. Thus the perceived accessibility of public resources is important in entrepreneurial cognition research when examining Chinese village contexts.

2.6.6 Hypotheses

After reviewing the literature, the following hypotheses were developed as possible answers to the research questions.

H1: A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

H2: A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

H3: A higher level of entrepreneurial self-efficacy will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

H4: Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of family resources for the entrepreneur group.

H5: Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of public resources for the entrepreneur group.

H6: A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.

H7: A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.

H8: A higher level of entrepreneurial self-efficacy leads to higher entrepreneurial intentions for the non-entrepreneur group.

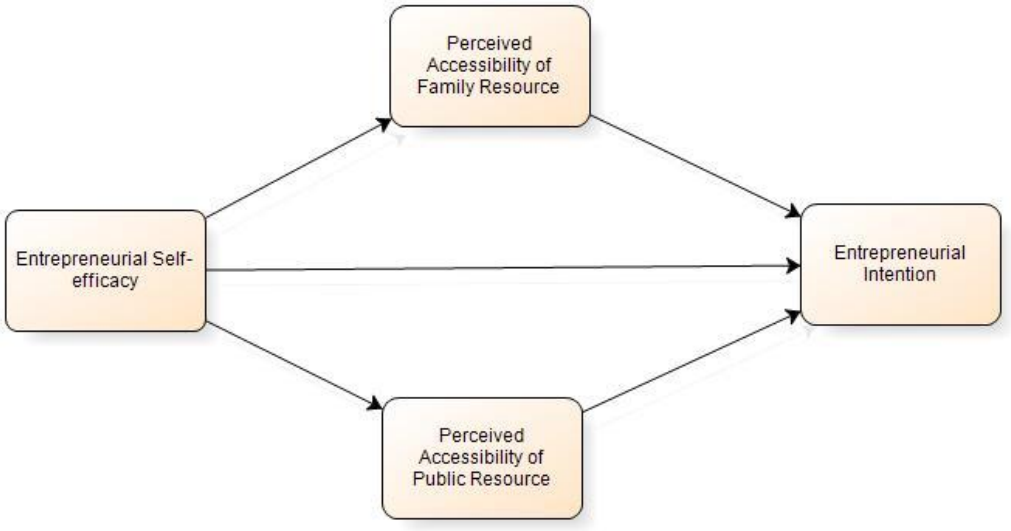
H9: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of family resources for the non-entrepreneur group.

H10: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of public resources for the non-entrepreneur group.

2.7 Conceptual Model

With the previous discussion and hypotheses providing context for this research, Figure 2.3 provides the conceptual model developed and examined in this research that reflects entrepreneurial self-efficacy (an existing construct previously developed within a Western context), perceived accessibility of family resources (a newly developed construct within this research), perceived accessibility of public resources (a newly developed construct within this research), and entrepreneurial intentions (an existing construct).

Figure 2.3 Conceptual Model



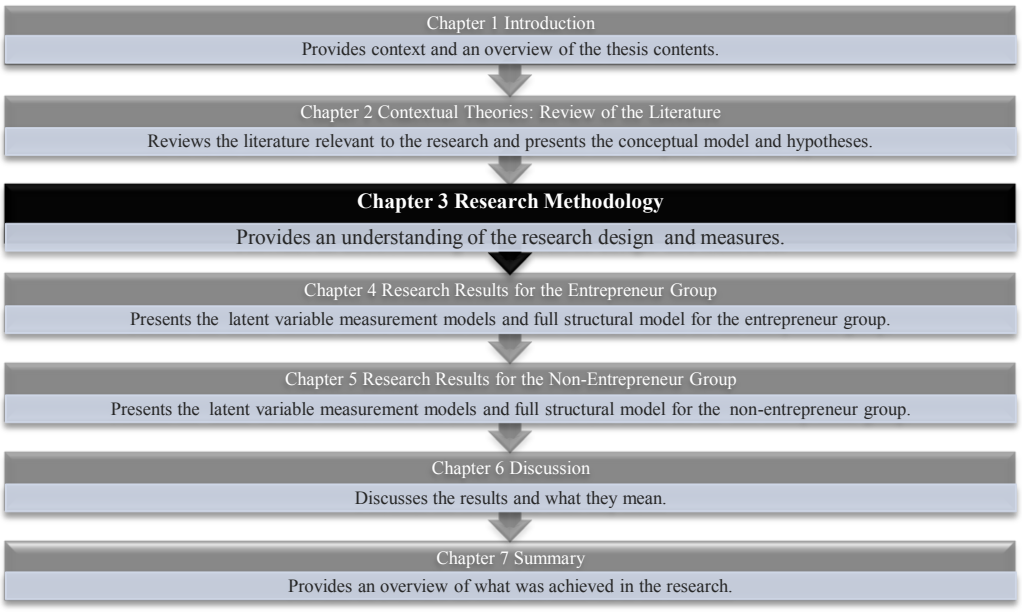
This model explains the possible relationship between entrepreneurial self-efficacy (ESE), perceived accessibility of family resources (PAFR), perceived accessibility of public resources (PAPR), and entrepreneurial intention (EI). The major contributions gained from examining this model are twofold. First, the model constructs are examined within an Eastern (Chinese) context. As Dana (2000) explains, when investigating non-Western environments (for example Indigenous environments), though the same principles apply to any non-Western environment, Western entrepreneurship theories may

need to be modified. This is because Western theories, while being relevant for the West, may not necessarily be relevant when applied in non-Western contexts. Second, the perceived accessibility of resources constructs are newly developed constructs emanating from this research. These constructs appear to be critical for Chinese village nascent entrepreneurs. Initial data from the first pilot study conducted as part of this research suggests that if perceived resource access is not present, then entrepreneurial intention to start a business will be weak. This research examines this proposition. To do so, the research uses a survey instrument that targets both existing entrepreneurs and non-entrepreneurs to gain insights into their responses to the questions asked. Entrepreneurial intention is the ultimate dependent variable in the model. The model identifies entrepreneurial self-efficacy and perceived accessibility of family and public resources as antecedents of entrepreneurial intention.

2.8 Conclusion

This Chapter examined aspects of the literature of Western entrepreneurship in order to explain the entrepreneurship phenomenon in a Chinese village context. This Chapter reveals a gap in the literature in terms of how entrepreneurial self-efficacy applies in a Chinese village context and to what extent perceived accessibility of resources are relevant to Chinese village entrepreneur entrepreneurial intentions. Entrepreneurial attitudes and subjective norms are briefly discussed in terms of Ajzen‘s (1991) theory of planned behaviour but are not tested in this research because they are not within the scope of this research (they are not necessarily relevant to the research questions asked). The focus of the research occurs in a Chinese village context to exemplify the phenomenon of resource accessibility for nascent Chinese village entrepreneurs. The Chinese village context differs from a Western context because of clear comparative deficiencies in resource accessibility in Chinese villages.

CHAPTER 3
Research Methodology



3.1 Introduction

Chapter 3 describes the methodology development process adopted in this research including questionnaire development, sample collection, and analysis methodology. It demonstrates how the conceptual model and related hypotheses discussed in Chapter 2 are tested including the demographics of the sample. The Chapter consists of the following sections:

- Introduction
- Research approach
- Research design
- Instrument development
- Justification of the measures used, and
- Sample and sampling method.

3.2 Research Approach

Quantitative research as employed in the entrepreneurship field can range from presenting simple descriptive information, such as means and frequencies, to more systematic and sophisticated methodologies using valid and reliable instruments to test

underlying entrepreneurship theory (Chandler, Gaylen & Lyon 2001). As with any field of research, entrepreneurship requires researchers to extend existing systematic research methodologies and theories to grow the knowledge base (Blalock 1982). Examining the contexts within which research occurs and the effectiveness of instruments developed within these contexts provides a means for growing the knowledge base (Chandler, Gaylen & Lyon 2001). Thus, establishing a contextual framework is important for theory development (Michael 1985). A major contribution of this research lies in examining to what extent existing theory applies in a Chinese village entrepreneurship context. Thus, this research is important for at least three reasons.

First, this study of Chinese village entrepreneurs involves exploratory and explanatory research at the individual level of analysis that previously has been dominated by researchers examining Western contexts (De Noble, Jung & Ehrlich 1999; Pihie & Akmaliah 2009; Wilson, F, Kickul, & Marlino, D 2007). For example, many psychology-related studies have used sample populations that are drawn from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies with many of these studies using students (Henrich, Heine & Norenzayan 2010). Some entrepreneurship-related studies fall into this category (see, for example, Boyd & Vozikis 1994; Douglas & Shepherd 2002; Krueger & Carsrud 1993; Krueger, Reilly & Carsrud 2000; Krueger,Reilly & Carsrud 2000; Souitaris, Zerbinati & Al-Laham 2007; Zhao, Seibert & Hills, GE 2005). Most of the studies reviewed by Henrich, Heine, and Norenzayen (2010) were dominated by the USA (representing 68% of all studies investigated), Europe, Australia, and Israel. As Henrich, Heine, and Norenzayen (2010) point out, ―96% of psychological samples come from countries with only 12% of the world‘s population" (p. 21). Thus, undertaking research within a Chinese context is important. Although Henrich, Heine, and Norenzayen (2010) did not examine entrepreneurship studies specifically, there are parallels between what they say about psychology-related studies and the development of significant portions of entrepreneurship-related theory.

Second, with China‘s population estimated to be in the vicinity of 18.5% (1.3 billion people) of the world‘s population (around seven billion people), examining how entrepreneurship is conducted in China is important. China plays a significant role in world affairs and so cannot be ignored. This research builds upon existing Western-oriented theory and extends it into an Eastern (Chinese) context.

Third, since the majority of the Chinese population live outside Chinese cities, gaining insights into entrepreneurship in a Chinese village context is even more important since many large Chinese cities such as Shanghai and Beijing have been influenced by the West. Thus, this research extends existing theory to a Chinese village context where Western culture is least pervasive and traditional Chinese culture is influential in the way business is undertaken.

Thus, the conceptual model that is core to this research explores the entrepreneurial self-efficacy, perceived resource accessibility, and entrepreneurial intention constructs and their inter-relationships as they exist within a non-Western context … a Chinese village context. The research uses predominantly quantitative methods to analyse the research hypotheses flowing from the model; however, a qualitative method was employed to explore the different factors affecting entrepreneurs and non-entrepreneurs in a Chinese village context prior to engaging in the quantitative approach. Based on the insights gained from the interviews with both Chinese village entrepreneurs and non-entrepreneurs, a questionnaire was designed for application in a Chinese village context. The conceptual model adapted existing theoretical constructs developed within Western contexts - entrepreneurial self-efficacy and entrepreneurial intentions - but also employed a new construct developed within this research (the perceived accessibility of family and public resources by nascent entrepreneurs) since, no matter how entrepreneurial an individual is, if they cannot perceive that they have access to resources to establish and develop their businesses, they will not be able to proceed. In a traditional Chinese village context, perceived availability of, and access to, resources are crucial. This is somewhat in contrast to Stevenson and Jarillo‘s (1990) definition of entrepreneurship as the process of creating or seizing opportunities without regard to the resources controlled. It seems that, based on preliminary interviews undertaken, Chinese village nascent entrepreneurs need to have some certainty about whether the necessary resources will be available if they proceed and this will play a significant part in their decision to proceed or not.

3.3 Research Design

The research objectives include the following:

1. At a broad level, to gain insights into the drivers of village entrepreneurship in China, and

2. At a more specific level, to examine the inter-relationships among perceived accessibility of family resources, perceived accessibility of public resources, entrepreneurial self-efficacy, and entrepreneurial intentions.

The research questions examined in this research are restated here:

RQ1： To what extent does the perceived accessibility of family and public resources influence Chinese village entrepreneur intention to start a business?

RQ2: To what extent can a Western developed entrepreneurial self-efficacy instrument be applied in a Chinese village context and to what extent does this instrument need to be adapted to reflect Chinese village cultural, situational, and environmental influences?

RQ3: To what extent are entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions inter-related when examined in a Chinese village context among entrepreneurs?

RQ4: To what extent are entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions inter-related when examined in a Chinese village context among non-entrepreneurs?

In order to achieve the research objectives and explore these research questions, test the hypotheses relating to them, and examine the validity of the hypothesized structural model, an extensive literature review was conducted. Validated Western measurement scales for each of the main psychological entrepreneurship constructs were identified during this process. These were piloted in a Chinese context to determine whether the participants drawn from the target Chinese population would be able to understand the questions developed within a Western context.

Commencing the research process with two of three Western validated scales helped to enhance the reliability and validity of the results for this study - though, these scales were slightly modified based on feedback from participants to reflect Chinese village contextual issues. A third scale was developed - perceived availability of (family and public) resources - based on interviews conducted with entrepreneurs and non-entrepreneurs within a Chinese village context. After the questionnaire was developed and refined, the survey part of the research was conducted following Neuman‘s (2000) survey research guide.

The research development process involved four stages as the following:

- Stage 1: Research instrument development
- Stage 2: Target sample identification
- Stage 3: Survey distribution

- Stage 4: Data entry, analysis and Interpretation

An overview of this process, as it pertains to this research, is reflected in Table 3.1.

Table 3.1 Research Development Process

Stage 1	Stage 2	Stage 3	Stage 4
Step 1: A draft survey instrument to measure entrepreneurial self-efficacy, based on literature review along with interview questions for Chinese village entrepreneurs were developed.	*Step 1*: The sample demographics were identified	*Step 1*: Key connectors in the village communities were identified.	*Step 1*: The different demographic groups completing the survey and possible survey questions were coded.
Step 2: Ethics approval from the University of Adelaide Human Research Ethics Committee was obtained.	*Step 2*: The data collection methods were developed	*Step 2*: Elementary school leaders in the village were contacted to spread the questionnaire to the parents through the students.	*Step 2*: The data was entered into Excel by a research assistant in China.
Step 3: 10 village entrepreneurs in a Chinese village context were interviewed.		*Step 3*: The researcher‘s personal social connections were contacted.	*Step 3*: The data was transferred from the Excel document into SPSS by the researcher.
Step 4: A questionnaire draft was developed.		*Step 4*: The questionnaires were circulated in the industrial zone in regional centres and entrepreneurs, managers and workers were asked to complete the questionnaire.	*Step 4*: The researcher analysed the data using SPSS v.18 and AMOS18.
Step 5: The questionnaire was revised and demographic variables and research sample group identification questions were included.			
Step 6: A preliminary translation into Chinese was made by the researcher.			
Step 7: A pilot study was conducted using the survey instrument.			
Step 8: A final version of the survey instrument was established			

3.4 Constructs

This research involved (1) reviewing and adapting an existing entrepreneurial self-efficacy construct scale and (2) developing a new construct and scale for the Perceived Accessibility Resources (Family and Public) for application in a Chinese village context.

The construct development process was divided into four stages: (1) gaining insights into a Chinese village context; (2) choosing the scales which are appropriate for a Chinese village context; (3) undertaking the pilot study; and, (4) engaging in the main study. The pilot study used face-to-face interviews to collect information about village entrepreneur perceptions of their businesses and non-entrepreneur perceptions about starting new businesses. This information informed development of the questionnaire used in the main study which was administered to both entrepreneurs and non-entrepreneurs within the Chinese villages of Shengshantou, Dawan, and Zhenqian near Cixi. Demographic data was collected about individual participants along with participant responses associated with questions that related to entrepreneurial self-efficacy, perceived availability of resources to an entrepreneur, and entrepreneurial intentions (dependent variable). In the following section, the construct development process is discussed together with the reasons for choosing the respective scales.

3.5 Gaining insight into the Chinese Village Context: Qualitative Phase

In order to develop a broad understanding of village entrepreneurs and non-entrepreneurs, a Chinese village context interview framework was developed. This was based on a review of the literature as well as discussions with five entrepreneurship researchers. The framework and questions appear in Appendix A.

Pilot Sample: 10 village entrepreneurs were selected for interview to gain insights into how business is conducted in a Chinese village context and how their personal and business behaviour is linked to entrepreneurship. These 10 entrepreneurs were selected on the basis of the following criteria: they represented a cross section of the community, they had considerable village-related entrepreneurial experience, and they were regarded as role models/leaders in the community. A profile of the villagers interviewed appears in Table 3.2.

Table 3.2 Profile of the 10 Village Entrepreneurs Interviewed

Interviewee	Gender	Age	Background Experience	Entrepreneurial Experience
1	Male	45	12 employees; 1,200,000Yuan (US$188,976)	Started two cloth manufacturers/ companies
2	Male	28	26employees; 2,500,000Yuan (US$393,700)	Started one bicycle company
3	Male	56	3 employees; 320,000 Yuan (US$: 50,394)	Started a cloth company
4	Male	32	30 employees; 5,000,000Yuan(US$787,401)	Started a fan company
5	Male	33	8 employees; 800,000 Yuan (US$125,984)	Started a transportation business
6	Male	56	12 employees; 800,000 Yuan (US$125,984)	Started a cloth company
7	Male	43	26 employees; 2,500,000Yuan(US$: 393,700)	Started a paper company
8	Female	33	8 employees; 720,000Yuan (US$113,386)	Started a cloth company
9	Female	45	80employees; 20,500,000Yuan(US$3,228,346)	Started a bicycle company
10	Female	53	3 employees; 250,000Yuan (US$39,370)	Started a cloth company

Findings from the interviews with the 10 villager entrepreneurs demonstrated that most businesses in the village were involved in the manufacturing industry and were regarded as

small businesses.[1] The feedback also highlighted that resource and family support play an important role in Chinese village entrepreneurial activity. In order of importance, resource support from the family is most valued. Public institution resources, however, are also important. The types of resources that were identified as being crucial to business sustainability – whether family or public provided - included: finance, labour, business property (land and/or premises), social capital, business expertise, and technical (non business) expertise. Of those interviewed, financial support to start a business was provided by the family for seven of the 10 interviewees and in six of the 10 cases, businesses were located on family owned/family provided land.

Based on the feedback from the interviewees, a construct was developed to reflect the perceived accessibility of resources. Most interviewees stated that if they did not think that they could have accessed family and/or public resources to start their businesses, that they would not have proceeded since they regarded having resource support as being crucial to business sustainability.

3.5.1 Selecting an Entrepreneurial Self-efficacy Scale

Entrepreneurial self-efficacy has been described as a person‘s belief in his/her capabilities to successfully achieve an entrepreneurial task (Chen, Greene & Crick 1998; De Noble, Jung & Ehrlich 1999). The ESE construct has been explored and examined by various researchers including Chen et al. (1998), De Noble et al. (1999), Peterman and Kennedy, (2003), and McGee et al. (2009). Krueger (2000) states that ESE is a multidimensional construct and that it should measure perceived entrepreneurial feasibility, this study likewise takes the multidimensionality of ESE into account.

[1] A *Chinese small business* that is involved in industry (as distinct from being involved in construction, wholesale, retail, transport, post, and hotel and restaurant) is defined by the National Development and Reform Commission as business that has less than 300 employees, has total assets with a value of less than Yuan 40 million, and that generates business revenue of less than Yuan 30 million (SME Promotion Law of China, 2003). However, most small businesses (70%) have five employees or less and are run by self-employed individuals (Kushnir).

Prior studies, however, have predominantly examined or developed scales underpinning the ESE construct in Western contexts that is, in nations with developed markets and economies and the sample are mainly students or business related students.

Various multidimensional ESE instruments have been used in the past. Chen‘s et al.‘s (1998) scale is primarily associated with identifying managers and entrepreneurs. It compares students with specific entrepreneurship knowledge to students enrolled in a psychology subject. Their scale includes five subscales encompassing 22 item questions which cover:

- Marketing (six items)
- Innovation (four items)
- Management (five items)
- Risk taking (four items), and
- Financial control (two items).

Chen et al.‘s (1998) scale asks respondents to indicate their perception levels in performing various specific task or roles in the entrepreneurial related process. It uses a 5-point Likert scale ranging from 1 = Completely Unsure to 5 = Completely Sure.

De Noble et al. (1999) developed an entrepreneurial self-efficacy scale founded upon the ESE relationship with entrepreneurial intention and entrepreneurial action. Only three of the dimensions (developing new product and market opportunities; building an innovative environment, and coping with the unexpected) demonstrated a statistically significant relationship with entrepreneurial intention. The other dimensions (initiating investor relationships; defining core purpose, and developing critical human resources) did not show a significant relationship with entrepreneurial intention.

De Noble et al.‘s (1999) scale consists of 23 items and is measured on a Likert-type scale ranging from *Strongly Disagree* to *Strongly Agree*, whereas Chen et al.‘s (1998) ESE scale was mainly used to identify the differences between entrepreneurs and managers (using students from entrepreneurship and other areas), De Noble et al.‘s (1999) scale was developed based on the business knowledge of experienced individuals and was linked to entrepreneurial intention and action. Table 3.3 provides details of the underlying construct dimensions of De Noble et al.‘s (1999) ESE scale which was found to be reliable in a Western context. Since De Noble et al. (1999) used university students to develop their scale; it was considered that the underlying foundations for developing this scale may not be

particularly relevant for Chinese village entrepreneurs. As such, De Noble et al.'s (1999) scale was not used in this research.

Table 3.3 Six-Factor Entrepreneurial Self-Efficacy Scale

Developing New Product and Market Opportunities
1) I can identify market opportunities for new products and services.
2) I can discover new ways to improve existing products.
3) I can identify new areas for potential growth.
4) I can design products that solve current problems.
5) I can create products that fulfil customers' unmet needs.
6) I can introduce product concepts to the market in a timely manner.
7) I can determine what the business will look like in the future.
Building an Innovative Environment
8) I can create a working environment that lets people be their own boss.
9) I can develop a working environment that encourages people to try new things.
10) I can encourage people to take initiatives and responsibilities for their ideas and decisions, regardless of outcome.
11) I can form partner or alliance relationships with others.
Initiating Investor Relationships
12) I can develop and maintain favourable relationships with potential investors.
13) I can develop relationships with key people who have access to financial resources.
14) I can identify potential sources of funding for investment.
Defining Core Purposes
15) I can articulate the vision and values of my business.
16) I can inspire others to embrace the vision and values of my business.
17) I can formulate a set of actions in pursuit of opportunities.
Coping With Unexpected Challenges
18) I can work productively under continuous stress, pressure and conflict.
19) I can tolerate unexpected changes in business conditions.

20) I can persist in the face of adversity.
Developing Critical Human Resources
21) I can recruit and train key employees.
22) I can develop contingency plans to backfill key technical staff.
23) I can identify and build management teams.

Scale developed by DeNoble et al. (1999)

Peterman and Kennedy‘s (2003) instrument was simple and measured perceived feasibility: Table 3.4 provides details of Peterman and Kennedy‘s (2003) instrument.

Table 3.4 Details of Peterman and Kennedy’s (2003) Instrument

Developing New Product and Market Opportunities
1) How hard do you think it would be? Very hard = 1; Very easy = 7
2) How certain of success are you? Very certain of success = 1; very certain of failing = 7
3) How overworked would you be? Very overworked = 1; Not overworked at all = 7
4) Do you know enough to start a business? Know everything = 1; Know nothing = 7
5) How sure of yourself are you? Very sure of myself = 1; Very unsure of myself = 7

Peterman and Kennedy‘s (2003) scale was short and parsimonious, but their research focused primarily on evaluating a training course rather than in developing a mature entrepreneurial self-efficacy instrument. Thus, this scale was not considered relevant to this research.

More recently, a comprehensive entrepreneurial self-efficacy instrument was developed by McGee et al. (2009). In developing the instrument, a sample from the wider community was used rather than using students and/or managers with a formal business education (Chen, Greene & Crick 1998; KruegerJR, N, Reilly, M & Carsrud, A 2000; Li & Chen 2009; Zhao, H, Seibert, S & Hills, G 2005).

The current study uses McGee et al.‘s (2009) scale to examine the relationship between entrepreneurial self-efficacy and entrepreneurial intention for both entrepreneurs and non-entrepreneurs in a Chinese village context. This five-point Likert scale asks individuals

to respond to questions in terms of their confidence regarding their capabilities to start a new business. Table 3.5 provides details of the McGee et al.'s (2009) ESE scale.

Table 3.5 Five Dimensions of Entrepreneurial Self-efficacy

Searching
1) Brainstorm (come up with) a new idea for a product or service
2) Identify the need for a new product or service
3) Design a product or service that will satisfy customer needs and wants
Planning
4) Estimate customer demand for a new product or service
5) Determine a competitive price for a new product or service
6) Estimate the amount of start-up funds and working capital necessary to start my business
7) Design an effective marketing/advertising campaign for a new product or service
Marshalling
8) Get others to identify with and believe in my vision and plans for a new business
9) Network—i.e., make contact with and exchange information with others
10) Clearly and concisely explain verbally/in writing my business idea in everyday terms
Implementing People
11) Supervise employees
12) Recruit and hire employees
13) Delegate tasks and responsibilities to employees in my business
14) Deal effectively with day-to-day problem and crises
15) Inspire, encourage, and motivate my employees
16) Train employees
Implementing Finance
17) Organize and maintain the financial records of my business
18) Manage the financial assets of my business
19) Read and interpret financial statements

Scale developed by McGee et al. (2009)

McGee et al.'s entrepreneurial self-efficacy (ESE) scale was developed using nascent entrepreneurs from a broad population rather than managers and students as used in developing Chen et al's (1998) or De Noble et al.'s (1999) instruments. Thus, McGee et al.'s (2009) scale, though developed in a Western context, is more likely to be relevant in a village context.

3.5.2 Perceived Accessibility of Resources

In a Chinese village context, it appears that perceived entrepreneurial capability and one's perception of whether one can establish a sustainable business influence the perceived accessibility to the necessary relevant resources. In a Chinese village context, entrepreneurs appear to have a different orientation to that reflected by Western students, managers, and/or entrepreneurs; yet, these are the typical source of participants for developing entrepreneurship-related Western scales.

Ajzen (1991), for example, notes that some specific intentions and behaviours are dependent, at least to some degree, on such non-motivational factors as availability of requisite opportunities and resources (including time, money, skills, and cooperation with others) as well as beliefs about resources and opportunities and these can affect perceived behavioural control. Thus, although self-efficacy may be related to intention and behaviour, it is not the only factor to be considered. Perceived accessibility to the required necessary resources can also be important in predicting entrepreneurial intention.

The resource-based view (RBV) plays a crucial role in entrepreneurship research (Barney 1991) and is frequently used at the firm level in understanding concepts: resources, capabilities, and the management process. Although RBV theory was developed at the firm level – for explaining firm level behaviour, it is worth considering RBV theory in this research context since it is argued that without the perceived accessibility of relevant resources, a nascent entrepreneur in a Chinese village context will not proceed (whereas in a Western context the perceived unavailability of resources at the intention stage may not be such a crucial issue (Stevenson and Jarillo, 1990). The RBV spills over into an individual context in this regard. In a Chinese village context, resource availability relates to perceived firm sustainability which relates to entrepreneurial business start-up confidence relates to entrepreneurial intention (and ultimately, entrepreneurial behaviour). There is some support

for this notion. Marlow and Patton (2005), for example, present the importance of finance availability and accessibility to critical influence factors for new venture start-ups and the performance of established firms. Van de Ven (1993) identified the need to consider the external environment and individual access to different resources from different channels. Edelman and Yli-Renko (2010) developed the perceived availability of resources as an influence factor on venture start up; however, their findings show no significant relationship between the two variables.

Although RBV theory is applicable to firms, entrepreneurs individually access resources to get their firms up and running and to make them sustainable via the strategic allocation of resources (Barney, 1991). Hence, there is an overlap between the individual and the firm in small firms as they can be one in the same (Lumpkin and Dess, 1996). The type of resources that entrepreneurs access that influence their entrepreneurial perceptions therefore need to be explored for a better understanding of the entrepreneurial mind when examining start-up intentions in a Chinese village context. These perceptions include both the individual‘s perception for the supply of resources from the family as well as the public supply of resources.

3.5.2.1 Perceived Accessibility of Family Resources

Family involvement influences individual perceptions and firm performance (Chrisman, Chua & Steier 2002). The application of the RBV to family business in this research focuses on the individual‘s perceived family resource access prior to the business being established. In this regard, Sirmon and Hitt (2003) distinguished five family resource sources in the form of family firm capital: human, social, survivability, patient financial capital, and governance structures. From a firm RBV perspective, the deployment of key strategic resources leads to the development of key competencies and enhanced performance (Barney 1991). In a Chinese village context, where formal resource support is not as accessible as in a Western context, the family becomes an extremely important first source of resource gathering for the entrepreneur. Based on the limited theory available coupled with the interviews undertaken, this research identifies six items to measure the perceived accessibility to family resources. The perceived access to family resources construct appears as an exogenous latent variable in the structural model. The six items were measured by asking a series of questions using a seven point Likert scale where –1 = no confidence” and –7 = extreme confidence”. The questions that formed a part of this scale were as follows:

From your experience, how confident are you that you could obtain the necessary support from your **immediate family** in terms of …

1. Financial support, by way of money for the venture
2. Labour support for your venture
3. Business property to support your venture
4. Social capital in the form of personal contacts to support your venture
5. Business expertise to support your venture
6. Other technical, non-business expertise

3.5.2.2 Perceived Accessibility of Public Resources

In a Chinese village context, accessibility to public resources is comparatively difficult especially for nascent entrepreneurs who want to start up their first businesses. Even for experienced serial entrepreneurs who may have access to family resources, it may be difficult for them to access public resources; yet, it will still be important for them to have this access for any subsequent businesses. Based on existing theory and the interviews conducted, the perceived accessibility to public resources is measured by six items using a seven point Likert scale where ―1 = no confidence" and ―7 = extreme confidence". The questions that constituted the measure were as follows:

From your experience, how confident are you that you could obtain the necessary **public resources** in terms of …

1. Financial support, by way of money for the venture
2. Labour support for your venture
3. Business property to support your venture
4. Social capital in the form of personal contacts to support your venture
5. Business expertise to support your venture
6. Other technical, non-business expertise

3.5.3 Entrepreneurial Intention

In social psychological behaviour research, intention has been tested and validated as a good predictor of human behaviour. Intention, as an individual psychological concept, has contributed to entrepreneurship research especially at the individual level (Bird 1988; Douglas & Shepherd 2002; Krueger, & Carsrud 1993; Souitaris, Zerbinati & Al-Laham 2007; Zhao, Seibert & Hills, G 2005). Entrepreneurial intention starts from the moment the potential entrepreneur develops an original concept. Therefore, the exploration phase at the

very beginning of the process is important because it can lead to behaviour (McMullen 2006).

To measure an individual's entrepreneurial intention, this research applies a seven point Likert scale to the question: How likely will you start up a new business in five years? Where –1 = unlikely" and –7 = very likely".

3.6 Participant Groups

In order to gain insight into the questions asked, the research design included two groups of participants: existing entrepreneurs and non-entrepreneurs. In relation to the entrepreneur group, the following questions were asked:

- When did you start your business?
- What type of business is it?
- Including yourself, how many full-time employees are employed in your business?
- Prior to this business, how many businesses had you started or purchased?

Aside from providing information about the individual, these questions allowed for a check on whether a participant should be labelled an entrepreneur or a non-entrepreneur. Participants were selected from the village population. A list of names was provided by the village elder of entrepreneurs in the village and a random selection occurred from this list. A similar process was adopted for the non-entrepreneur group.

3.7 Piloting the Instrument

After developing the initial version of the questionnaire that contained the relevant construct item questions, the questionnaire was translated into Chinese. A preliminary translation of the questionnaire into Chinese was made by the researcher. The translation was then examined by two bilingual (Chinese/English) Chinese academics from Chinese to English to check the original English translation. Appendix B provides the interview questions in Chinese.

A pilot study was then conducted by distributing the Chinese questionnaire to the 10 Chinese village entrepreneurs and 10 non-entrepreneurs. The entrepreneurs and non-entrepreneurs were approached individually to consult with them about their understanding of the questionnaire items. Respondent comments about the questionnaire

were encouraged and any confusing and/or ambiguous items were identified by the respondents. Based on the feedback received, the questionnaire was only slightly modified. After considering the feedback, a final version of the survey instrument was developed. The newly modified questionnaire was then translated back into English and evaluated by two academic staff familiar with the field. They confirmed the final version of the questionnaire adopted in this research.

3.8 The Chinese Village as a Research Context: Instrument Considerations

In China, there is a huge gulf between cities such as Shanghai or Beijing (in which entrepreneurial success may be linked via ties with Western economies) and rural villages such as those in the west of China. In the more geographically isolated villages, the local villagers are more like traditional indigenous inhabitants with different family values, educational backgrounds, and motivations compared to their Chinese city counterparts. Thus, different social systems operate for people who live in Chinese cities and for those who live in Chinese villages. Given the sheer size of the Chinese population, it is no surprise that the majority of Chinese people still live in villages (Pei & Tang 2012). Even many Chinese who work in Chinese cities still retain their village ties (these individuals are still referred to as *villagers* according to the Hokou system (Ngai 2004)). Thus, village life is pervasive in China and cannot be ignored.

Chinese village education levels: One important differentiating factor between Chinese villagers and many Chinese city inhabitants (and Westerners) is reflected in the levels and comprehensiveness of the educational levels achieved. Chinese villagers often do not achieve a comprehensive education equivalent to what is achieved in Chinese cities or as occurs in many Western countries (see, for example, Parish et al. 1995). Thus, relatively speaking, many Chinese city entrepreneurs and Western entrepreneurs may be more educated compared to the levels of education found in Chinese villages. In addition, how the individual derives an education in a village may be different from what occurs in Chinese city and/or Western contexts since

(1) the village family unit plays a significant role in the learning process (Waters 2005), and

(2) both Chinese and village cultural issues and norms interact with the learning environment and/or process (Luo 1999).

Chinese village entrepreneurship: In China, since the late 1970s, the development of rural entrepreneurship has been closely associated with the emergence and development of village enterprises. Although considerable attention has been paid in recent years to aspects of entrepreneurship and small business development in China (Au & Ho Kwong 2009; De Brauw et al. 2002; Economy 2005; Mohapatra, Rozelle & Goodhue 2007; Puffer, McCarthy & Boisot 2010; Qian 2000; Qian & Xu 1993; Tan & Justin 2002), hardly any attention has been given to the nature and attributes of village entrepreneurs. Thus, peasant village entrepreneurs can be defined as those who have their roots in rural areas (working on the land) but are now the owners who engage in non-agricultural business operations.

In the village context, businesses typically are micro, small, or medium-sized (with a preponderance of micro businesses). Entrepreneurs, as business leaders, play an important role in creating employment, and wealth for individuals and their communities. Although entrepreneurial activity was discouraged for many years under previous Chinese regimes, there is now recognition that entrepreneurship at the village level is directly linked to Chinese village economic development (Simen 2006) and that villages are the engine room of the Chinese economy because of the significant numbers of businesses that operate in villages.

Although Chinese village entrepreneurs have achieved significant economic developments over the last three decades, they still face significant challenges. In addition to needing to deal with lower levels of education for themselves, they also face the challenges of poor infrastructure, poorly educated labour, often the lack of pervasiveness of a universal Chinese Mandarin language within and across villages, a lack of technical support for their businesses, and a lack of management knowledge due to the paucity of management training programs in villages (Fan & Chen 1996). These issues are unique to Chinese village entrepreneurs. All this happens within a transitional economy characterized by weak capital market structures, limited legal protection for property rights, and high institutional uncertainty creating an environment in which entrepreneurship may manifest, and present, itself in forms different than those found in more advanced economies (Ahlstrom & Bruton, 2002; Boisot & Child, 1988, 1996; Nee, 1992).

Issues for consideration: As the Chinese market-oriented economic system gradually takes shape, village entrepreneurs will confront competition and new challenges. The Chinese political environment and cultural nuances make it difficult to apply Western theories so as to understand economic and behavioural situations in China. Yet, much can be learned from adapting Western theories and measures to assist in better understanding similarities and differences between Western and Chinese village entrepreneurship processes and behaviours.

Some researchers have examined the different and contrasting contexts (Li & Chen 2009; Naktiyok, Nur Karabey & Caglar Gulluce 2009). They, however, have not considered the applicability of Western developed measures in Chinese village contexts.

For example, some authors have used De Noble et al.'s (1999) or Chen et al.'s (1998) scales as a basis for their studies (Naktiyok, Nur Karabey & Caglar Gulluce 2009). These scales, while shown to be stable and reliable in a Western context, have not been developed to reflect differing economic, educational, or cultural contexts that may influence the beliefs of individual in their capabilities to successfully achieve entrepreneurial tasks. For example, whereas Western behavioural instruments may implicitly assume a formal education is a given with questions framed accordingly, it cannot be assumed that these questions will be suitable in their current form for those with a lower education. Thus, when measuring behavioural variables in a Chinese village context, the indigenous nature of the Chinese villager needs to be considered when developing any Chinese village psychological entrepreneurship instrument (see, for example, Yan (2003) regarding Chinese villagers; also Dana (2000) regarding Indigenous entrepreneurship). Western developed entrepreneurship instruments need to be carefully applied in Chinese village contexts and these may only be relevant after appropriate language and cultural modifications have taken place.

These unique differences present opportunities to engage in entrepreneurship research in Chinese village contexts as there is much to understand in these environments. Yet, to date, most entrepreneurship research has occurred in Western contexts (which is surprising given the growing influence of China in world affairs) and there has been a paucity of research to explain the unique entrepreneurial phenomena that occurs in Chinese village contexts – whether at the individual, firm, or community levels (De Brauw et al. 2002; Lin 1992; Mohapatra, Rozelle & Goodhue 2007; Qian, Y & Xu 1993). This is reflected in the lack of related publications in leading entrepreneurship journals and even carries through to

the *Global Entrepreneurship Monitor* (GEM) program where data is collected predominantly from urban China sources as GEM Chinese report stated 2008.

For these reasons, this research focuses on individuals within the Chinese village context to improve our understanding of entrepreneurship as it occurs within this context. In so doing, it is hoped to present a clearer picture for Western researchers who may have only a limited understanding of the Chinese village as a research context due to the political isolation of China from the West prior to 1978 and also because of language and cultural barriers (since even researchers with a knowledge of Mandarin cannot always communicate effectively in the village context as China has various regional languages). With China's increasing presence on the global economic stage (Economy 2005), entrepreneurial theories need to be more encompassing and reflect both Western and Eastern similarities and differences. This is particularly the case with Chinese villages as they present themselves as unique entrepreneurship research phenomena.

3.9 Profile of the Chinese Villages that Provided the Context for this Research

This section provides a profile of the Chinese villages that provided the context for this research. The data primarily comes from three related villages located in Cixi. Located in the south of the Yangtze River delta, the economic region with the best development potential, Cixi is 60 kilometres away from Ningbo in its east. Figures 3.1 and 3.2 provide geographic details of Cixi's location.

Figure 3.1 Geographic Details of Cixi in the Yangtze River Delta

From Google Maps

Figure 3.2 Geographic Details of Cixi in China

From Google Maps

The city consists of an administrative region of 1,154 square kilometers, with a resident population of approximately 2 million. It is a powerful economic city with many entrepreneurs; one in five families in Cixi owns an industrial and commercial enterprise.

Table 3.6 Demographic of the Three Villages: Shengshantou, Dawan, and Zhenqian

	Shengshantou	Dawan	Zhenqian
Population	3,954M	2,976M	4,873M
Household	1,354M	1,163M	1,837M
Total GDP	380 million US$59.84 million	136.41 million US$21.48 million	186.10million US$29.31 million
Annual income/villager	12,000 Yuan (2011) US$1,904.76	13,548 Yuan (2011) US$2,133.54	10,401 Yuan (2011) US$1,637.95
Distance to city	12 kilometers	10 kilometers	13 kilometers
Geographic	2.5 square kilometers	0.9 square kilometers	1.9 square kilometers

From: Chinese network for Ten Thousand Villages

3.10 Participant Profile

The demographic data profiling the participants in this research appears below. The sample consists of 285 entrepreneurs, 28% were female and 72% were male, whereas of the

296 non-entrepreneurs, 46% were female and 54% were male (refer to Figure 3.2 and Figure 3.3).

Figure 3.2 Gender Profile of Entrepreneurs

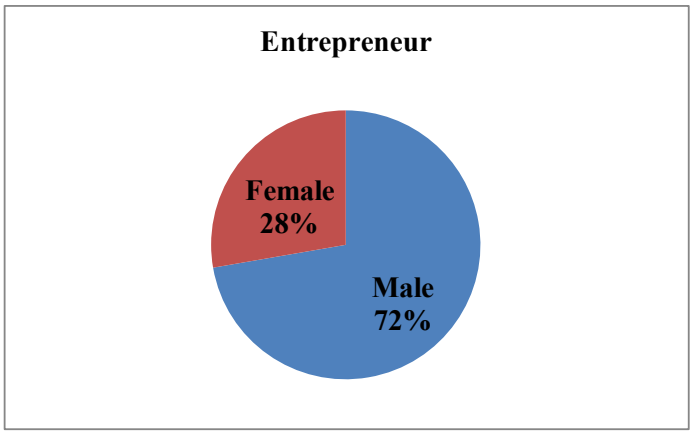
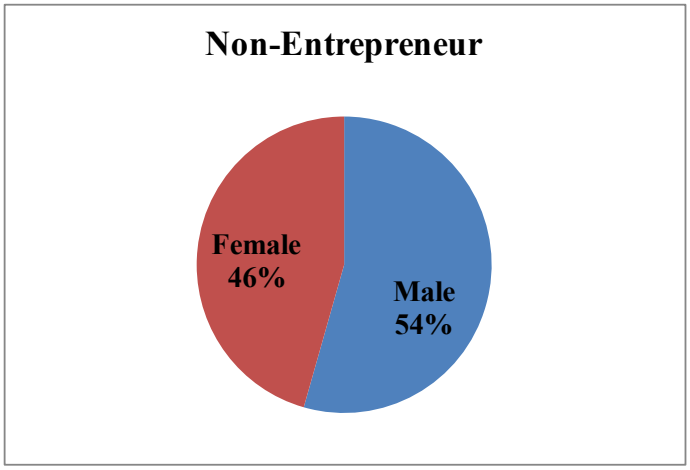


Figure 3.3 Gender Profile of Non-Entrepreneurs



The participant education levels for the entrepreneur and non-entrepreneur participants appear in Tables 3.7 and 3.8 respectively. These Tables were compiled based on the following questions:

What is the highest education level you achieved?

1. Primary School
2. Secondary (High) School
3. Senior Middle School, Technical or Trade Qualification
4. A Certificate after high school
5. A Diploma after high School
6. Undergraduate Degree
7. Postgraduate Degree

Table 3.7 Entrepreneur Education Levels

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	12	4.2	4.2	4.2
	2.00	150	52.6	52.6	56.8
	3.00	26	9.1	9.1	66.0
	4.00	55	19.3	19.3	85.3
	5.00	28	9.8	9.8	95.1
	6.00	5	1.8	1.8	96.8
	7.00	9	3.2	3.2	100.0
	Total	285	100.0	100.0	

Table 3.8 Non-Entrepreneur Education Levels

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	59	19.9	19.9	19.9
	2.00	111	37.5	37.5	57.4
	3.00	30	10.1	10.1	67.6
	4.00	50	16.9	16.9	84.5
	5.00	28	9.5	9.5	93.9
	6.00	7	2.4	2.4	96.3
	7.00	11	3.7	3.7	100.0
	Total	296	100.0	100.0	

The age of businesses for the entrepreneur group appear in Table 3.9. This Table was compiled based on the following questions:

When did you start your business?

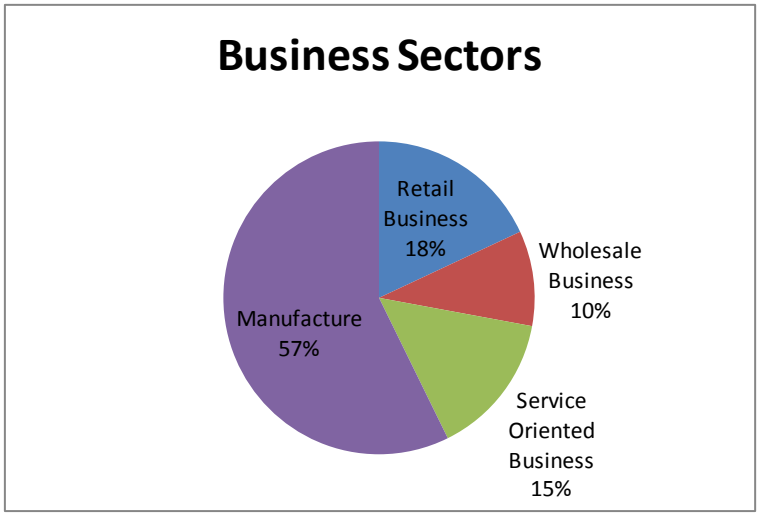
1 __ 2010 2 __2009 3 __2008 4 __2007 5 __2006 6 __2005 7 __Before 2005

Table 3.9 Age of Entrepreneurial Businesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	22	7.7	7.7	7.7
	2.00	18	6.3	6.3	14.0
	3.00	31	10.9	10.9	24.9
	4.00	9	3.2	3.2	28.1
	5.00	8	2.8	2.8	30.9
	6.00	17	6.0	6.0	36.8
	7.00	180	63.2	63.3	100.0
	Total	285	100.0	100.0	

The business sectors for the entrepreneur group appear in Figure 3.4.

Figure 3.4 Businesses Sectors Represented in Entrepreneur Group



The size of businesses for the entrepreneur group as reflected in the number of staff employed in a business appears in Table 3.10. This Table was compiled based on the following questions:

Including yourself, how many full-time employees are employed in your business?

1 __1 2 __2 3 __3-5 4 __6-9 5 __10-14 6 __15-19 7 __20-24 8 __25 or more

Table 3.10 No. Employees in Businesses in the Entrepreneur Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	62	21.8	21.8	21.8
	2	55	19.3	19.3	41.1
	3	47	16.5	16.5	57.5
	4	37	13.0	13.0	70.5
	5	34	11.9	11.9	82.5
	6	19	6.7	6.7	89.1
	7	8	2.8	2.8	91.9
	8	23	8.1	8.1	100.0
	Total	285	100.0	100.0	

3.11 Data Collection

Social network connections can positively influence response rates for survey research (Bartholomew & Smith 2006). This research, therefore, identified key *connectors* (recognized opinion leaders) in the village context.

Mail and email, as data collection channels have low response rates in China especially in Chinese village contexts. Thus, the questionnaire was circulated through different channels. First, the researcher used his personal social network to contact recognized opinion leaders. There were eight of these. These individuals were asked to help the researcher and personally circulate the questionnaire. Each agreed to do so. One day later, the questionnaire was collected by the opinion leaders. A second approach used the village school system. Elementary school principals were contacted who were asked to provide the questionnaire to their students for distribution to their parents. These questionnaires were then returned to the schools and collected.

Since it was individuals who personally distributed and collected the questionnaires, the response rate was high. There were 950 questionnaires circulated with 768 questionnaires received. Usable questionnaires were received from 296 non-entrepreneurs and 285 entrepreneurs (response rate = 61.16%).

The English and Chinese versions of the questionnaire appear in Appendix C and Appendix D respectively. The questionnaire included questions about demographic information, entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions.

3.12 Data Analysis

AMOS 18 was used in the primary data analyses along with SPSS (which was used for some of the preliminary analyses such as reliability calculations). AMOS 18 was used in evaluating the individual measurement models for entrepreneurial self-efficacy and perceived accessibility of family and public resources. Structural Equation Modeling was used to examine the relationships among the factors in the structural model.

3.12.1 Reliability

Reliability is used to measure the internal consistency level of a variable over multiple measurements (Hair, Black, Babin and Anderson, 2009). Reliability is influenced by the correlations among the construct items and the number of items (higher correlations and more items contribute to an increase in Cronbach Alpha). Reliability was calculated for the entrepreneurial self-efficacy and perceived accessibility of family and public resources constructs. A reliability value greater than 0.70 is considered acceptable; however, values in the range of 0.60 to 0.69 are acceptable in exploratory research (Hair, Black, Babin and Anderson, 2009).

3.12.2 Validity

Convergent validity measures the relationship between the items and a latent instrument. Validity is indicated when the estimated parameters are significant and the standardized loadings are greater than 0.70 with reliability above 0.5 (Fornell & Larcker 1981). Insights into the validity of the measures are provided by SEM –goodness-of-fit". If the SEM model fit indicators are within the relevant range, the validity of the constructs is confirmed.

3.12.3 Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) analysis, including Confirmatory Factor Analysis of measurement models, Path Analysis, and Full Structural Equation Modeling is

increasingly being adopted in entrepreneurship quantitative research (Audretsch, Bönte & Keilbach 2008; Hallak, Brown & Lindsay 2011; Simsek et al. 2009) because of its strengths when used in an appropriate manner (Shook et al. 2004). SEM is used in this research because of the nature of the research questions.

3.12.4 Normality of the Data

A common assumption underpinning structural equation models is that the underlying constructs are normally distributed (MacCallum, Roznowski & Necowitz 1992). However, many data sets fail to meet this requirement (Shook et al. 2004). Data normality was assessed in this research in terms of evaluation data skewness and data kurtosis. A skewness factor in excess of 2 indicates that data is non-normally distributed (Ryu 2011). Mardia‘s coefficient (produced in the AMOS output) provides insights into multivariate normality. Values greater than 3.0 suggest multivariate non-normality (Wothke 1996).

If the data is found to be non-normal, the appropriate Chi-square value to report when using AMOS is the Bollen-stine p statistic (the Satorra-Bentler Chi-square is reported when using LISREL or Mplus). The Bollen-Stine p is a specifically adjusted Chi-square goodness-of-fit statistic to account for non-normal data and is used in conjunction with bootstrapping (Bollen & Stine 1992).

3.12.5 Model Fit Criteria

In SEM, indictors are provided of the *goodness of model fit* to the data. Popular model fit indictors include the Chi-square, Root Mean-Square Error of Approximation (RMSEA), Standardized Root Mean-square Residual (SRMR), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI).

AMOS also reports other indices such as the Goodness-of-Fit Index (GFI) and Adjusted Goodness-of-Fit Index (AGFI). However, GFI and AGFI are influenced by sample size, and some researchers suggest less emphasis should be placed on these two indices for this reason (Aboa-Éboulé et al. 2011).

> **Chi-square (χ^2):** *When the data is normally distributed*, χ^2 is presents the statistical difference between the implied and sample variances and covariances matrices in the SEM model. The χ^2 is expected to be non-significant ($p > 0.05$)

if the data fits the model - suggesting that the model being tested is a good fit. However, if the data is distributed non-normal then, instead of using the χ^2 statistics, the Bollen-Stein Bootstrap p should be used which takes into consideration multivariate non-normality. As with the χ^2 statistics, Bollen-Stein p values greater than 0.05 suggest that the model is a good fit. However, other model fit indices should also be considered in determining model fit as examining model fit can sometimes not be an *all-or-nothing* process. It is a matter of looking at the various pieces of model fit statistical evidence in considering whether data fits the model or not. Thus, a discussion of some of the other key model fit indices follows.

Root Mean-Square Error of Approximation (RMSEA): This statistic reports the root mean square and accounts for the error of approximation (Browne & Cudeck 1993). Its use is recommended by Steiger (1980) amongst others. RMSEA favours models with larger numbers of parameters. The acceptable (maximum) levels of RMSEA (in considering model fit), as recommended by MacCallum, Browne and Sugawara (1996) are less than 0.01 (indicates excellent fit), greater than 0.01 but less than or equal to 0.05 (indicates good fit), and greater than 0.05 but less than or equal to 0.08 (indicates acceptable fit). RMSEA should also be examined in association with PCLOSE.

PCLOSE: PCLOSE is a test of the hypothesis that RMSEA is less than or equal to 0.05 (Browne & Cudeck 1992). It provides a p-value that indicates whether the data closely fits the model. If PCLOSE is greater than 0.05, then this suggests that the model is a good representation of the data.

Standardized Root Mean-square Residual (SRMR): The SRMR is an absolute measure of fit. It is defined as the standardized difference between an observed correlation and a predicted correlation. The acceptance level for SRMR should be less than 0.06 for good model fit (Hu & Bentler 1998). SRMR larger values - when other fits indices are in the relevant acceptable ranges - suggest that there may be outliers in the data.

Tucker-Lewis Index (TLI) (or Non-Normed Fit Index (NNFI)): The Tucker-Lewis Index coefficient was introduced by Tucker (1973) as a

non-normed fit index (NNFI). Its application was subsequently extended to SEM (Bentler & Bonett 1980). The TLI compares an expected model with an independent model. The acceptance level for TLI is greater than or equal to 0.95 (Hu & Bentler 1998).

Comparative Fit Index (CFI): The Comparative Fit Index is a modification of TLI to account for sample size (Bentler 1990). The CFI acceptance level is greater than or equal to 0.95 – this indicates good model fit.

Summary of Model Fit Statistics:

- Chi-square (χ^2) >0.05 or Bollen-Stein Bootstrap p >0.05
- RMSEA <0.08
- PCLOSE > 0.05
- SRMR < 0.06
- TLI $>$ 0.95
- CFI $>$ 0.95

The above model fit indices are applied in this research to confirm the goodness of the fit of the structural model developed in this research to the data collected.

3.12.6 Discriminant validity

Discriminant validity tests the relationship between two or more constructs/latent variables to ensure that the items underpinning one construct do not ―load" on another. Confirmatory factor analysis can confirm discriminant validity by reporting the correlations between the latent variables. When the correlations among the latent variables are greater than 0.85, the model is regarded as having poor discriminant validity (Kline 2010). Thompson (1997) provides another test for discriminant validity that involves comparing the factor loading pattern coefficients with the structural coefficients (calculated by multiplying the latent variable correlations by the pattern coefficients). If the structural coefficients are greater than the pattern coefficients, then there is discriminant validity among constructs.

3.12.7 Sample Size

As a broad general SEM maxim, the greater the sample size, the stronger the power of the SEM model. However, in the field, sometimes it is difficult to achieve large samples. For the SEM model to be stable and to achieve good model fit, it is important to achieve a

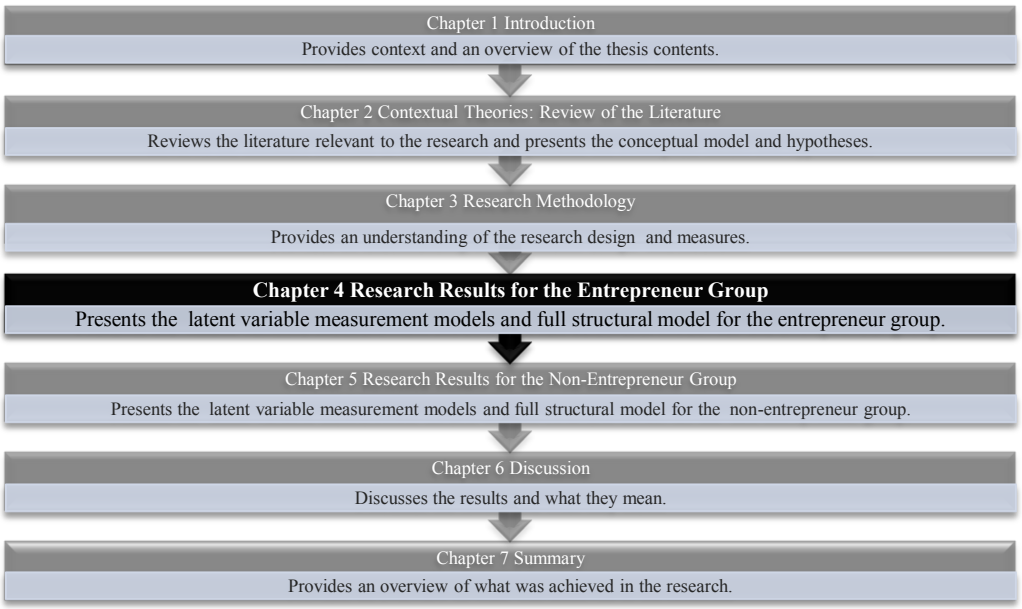
minimum sample size (MacCallum, Browne & Sugawara 1996). Although there is no agreement on what is the appropriate sample size to achieve in SEM, the distribution of the data and the numbers of items impact the sample size requirements. A sample size larger than 200 is often recommended (Hoelter 1983).

3.13 Summary

This Chapter discusses the research methodology framework and provided insights into the mixed method approach undertaken. This mixed method approach involved both qualitative and quantitative methods. The interviews undertaken guided and informed the researcher in his understanding of entrepreneurship in a Chinese village context. The results of the interviews informed the need to adapt the entrepreneurial self-efficacy scale for use in a Chinese village context. The interview results also were useful in developing a new measure for use in Chinese village context behavioural research: the perceived accessibility of resources. In this regard, the chapter provides insights into how the scale was developed.

In examining the inter-relationships between the entrepreneurial self-efficacy and perceived accessibility of resource latent variables and their inter-relationships with entrepreneurial intention (to start a business), the research design used two groups of participants: existing entrepreneurs and non-entrepreneurs. Both groups were selected from within a Chinese village context. 950 questionnaires were provided to participants, 768 questionnaires were completed and returned. After entering the data into an Excel database the data, preliminary analyses were using SPSS 18. Subsequently, the data was examined using AMOS. Confirmatory factor analyses of the constructs and their items were first undertaken (and necessary modifications were undertaken to ensure the model fitted the data). A full structural equation model analysis was then undertaken to examine the inter-relationships among the constructs in the model. Chapters 4 and 5 present the results of the analyses for the entrepreneur and non-entrepreneur groups respectively.

CHAPTER 4
Research Results for the Entrepreneur Group



4.1 Introduction

Chapter 4 presents the results of the analysis of the data for the entrepreneur group (Chapter 5 presents the results of the analyses of the data collected from the non-entrepreneur group). Details of the Chapter contents are as follows. The Chapter first starts with a presentation of a number of preliminary analyses of the data. Second, the entrepreneurial self-efficacy and perceived accessibility of resource measurement models are analysed including tests for instrument validity and reliability. Third, structural equation modelling (SEM) is employed to examine the relationships among the latent variables appearing in the model - entrepreneurial self-efficacy, perceived accessibility to family and public resources, and entrepreneurial intention. A discussion of the results is provided in Chapter 6.

4.2 Measurement Model Analyses

In this section, the analyses of the measurement models for the latent variables are presented. These latent variables are analysed using Amos 18. A confirmatory factor analysis is undertaken on the entrepreneurial self-efficacy construct. The full scale for entrepreneurial self-efficacy is then analysed together with the latent variable, perceived accessibility of family resources, and then with the latent variable, perceived accessibility of

public resources. The structural models for the entrepreneur group are then analysed for both entrepreneurial self-efficacy with perceived accessibility of family resources and entrepreneurial self-efficacy with perceived accessibility of public resources. Finally, the full structural model is analysed.

4.2.1 Assessing Multivariate Normality

Using Mardia's Coefficient (1974), this section presents the results of the tests of multivariate normality for the entrepreneur group distributions. Table 4.1 presents the results of these tests.

Table 4.1 Results of Tests for Non-Normality for the Entrepreneur Group with all Items Included

Construct Factor Details*	Mardia's coefficient Results (Critical Ratio - c.r.)
Perceived Accessibility of Family Resources	38.298
Perceived Accessibility of Public Resources	41.983
Entrepreneurial Self-Efficacy: Searching	3.744
Entrepreneurial Self-Efficacy: Planning	4.809
Entrepreneurial Self-Efficacy: Marshalling	1.736
Entrepreneurial Self-Efficacy: Implementing People	26.530
Entrepreneurial Self-Efficacy: Implementing Finance	7.424

The results show the data is mostly distributed *non-normally* since Mardia's coefficient is larger than three in most instances (Mullan, Markland & Ingledew 1997). Thus, use of the Bollen-Stine p statistic as a replacement for the Chi-Square statistic was adopted to deal with the non-normality since structural equation modelling assumes normality of the data being analysed. For completeness, this research therefore reports both the Chi-square and Bollen-Stine bootstrap p statistics in the results (though the Bollen-Stine p is the relevant fit statistic that is used in the research).

4.2.2 Factor Analyses of the One Factor Congeneric Measurement Models

The following sections present the one-factor congeneric measurement models and the results for the constructs of interest in this research:

- Entrepreneurial Self-efficacy: Searching (3 items)
- Entrepreneurial Self-efficacy: Planning (4 items)
- Entrepreneurial Self-efficacy: Marshalling (3items)
- Entrepreneurial Self-efficacy: Implementing People (6 items)
- Entrepreneurial Self-efficacy: Implementing Finance (3 items)
- Perceived Accessibility of Family Resources (6 items)
- Perceived Accessibility of Public Resources (6 items)

In all cases, the latent variable variance was set to ―1" to allow for examination of all factor loadings and their significance. Using Maximum Likelihood (ML) Estimates, AMOS was used to run the one factor congeneric models. Analysis outputs generated included:

- Regression weights
- Sample Covariances
- Sample Correlations
- Standardized Regression Weights
- Squared Multiple Correlations
- Chi-square
- Bollen-Stine p
- Standardised Root Mean-square Residual (SRMR)
- Root Mean-Square Error of Approximation (RMSEA)
- Tucker-Lewis Index (TLI)
- Comparative Fit Index (CFI)

The one-factor measurement model results for the entrepreneur group follow.

4.2.3 One Factor Measurement Models

This section presents the results of the analysis for the entrepreneur group one factor measurement models for perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial self-efficacy (ESE) - searching, planning, marshalling, implementing people, and implementing finance. Since several of the ESE dimensions have less than four items, the analysis commences with entrepreneurial self-efficacy planning and entrepreneurial self-efficacy implementing people because these

have more than four items permitting adequate degrees of freedom to allow the analyses to proceed on these dimensions as *stand-alone* analyses.

Expected Chinese Village Context Effects: A major aim of this exploratory research was to build upon entrepreneurship theory, which had previously been predominantly developed within a Western context, and adapt the theory, where appropriate, to reflect environmental influences found within a Chinese village context. In this regard, a (Western-developed) ESE measure (McGee, Peterson, Mueller, and Sequeira, 2009) was employed. This research sets about adapting this instrument for use in a Chinese village context (though further research into the use of the instrument in a Chinese village context is warranted).

From this perspective, it is expected that the ESE instrument which comprises six dimensions and 22 items (three when attitude is excluded which is the case in this research since attitude is not core to the research questions addressed in this research) will need to be modified to "fit" the Chinese village context. This may mean reducing the number of items that comprise each ESE dimension and/or reducing the number of ESE dimensions. Following is a description of the operation that was undertaken in carrying out this process.

Item Reduction Process: The item reduction process starts at the basic measurement model level. Measurement models can either be congeneric (indicator items have different weights/regression coefficients and/or different error variances that contribute at different levels toward the variance of a dimension or factor) (see, for example, Jöreskog 1971) or parallel (indicator items and/or their error variances contribute somewhat equally toward the variance of the dimension/factor). In this research, there is no evidence or theory to suggest that the indicator item regression coefficients will be equal; hence, one factor congeneric models are assumed.

4.2.3.1 Entrepreneurial Self-Efficacy: Planning

The ESE Planning dimension includes four items:

- c14ese4: estimate customer demand for a new product or service
- c14ese5: determine a competitive price for a new product or service

- c14ese6: estimate the amount of start-up funds and working capital necessary to start my business
- c14ese7: design an effective marketing/advertising campaign for a new product or service

Figure 4.1 provides an overview of the one factor measurement model for entrepreneurial self-efficacy: planning.

Figure 4.1 One Factor Measurement Model for ESE: Planning

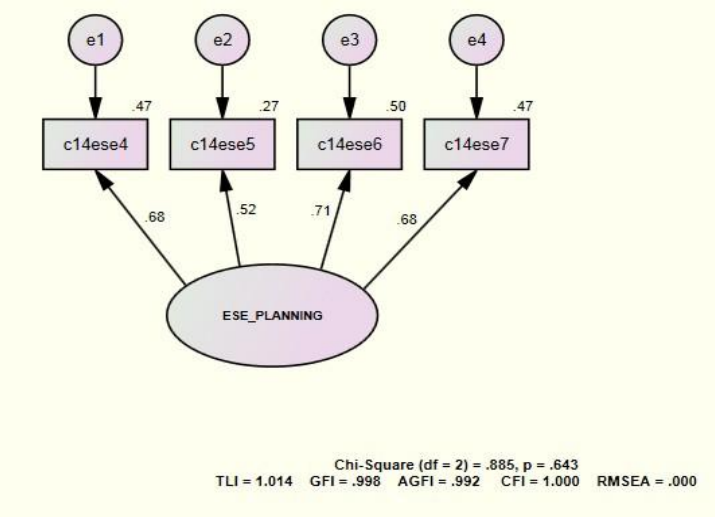


Table 4.2 Presents the statistics derived from the model analyses.

Table 4.2 Analysis Statistics of the One Factor Measurement Model for ESE: Planning

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese4-c14ese7	4	0.885	2	.643	.750	.000	.000	.093	.797	1.014	1.000	.0106	.741	3.6333	.8702

Comment: The ESE-P dimension remains as per the ESE theory. No changes to the dimension appear to be necessary when applied in a Chinese village context.

As can be seen, the model, as developed, appears to fit the data since all the model fit indices are within the relevant ranges. Thus, the model appears to be relevant in a Chinese village context and no item reduction is necessary.

Table 4.3 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for entrepreneurial self-efficacy: planning.

Table 4.3 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model ESE: Planning

●Sample Covariances (1. Entrepreneurs)

	c14ese7	c14ese6	c14ese5	c14ese4
c14ese7	1.669			
c14ese6	.711	1.230		
c14ese5	.496	.442	1.258	
c14ese4	.653	.585	.468	1.208

Condition number = 4.880

Eigenvalues

3.066 .931 .740 .628

Determinant of sample covariance matrix = 1.327

●Sample Correlations (1. Entrepreneurs)

	c14ese7	c14ese6	c14ese5	c14ese4
c14ese7	1.000			
c14ese6	.496	1.000		
c14ese5	.343	.355	1.000	
c14ese4	.460	.480	.380	1.000

Condition number = 4.524

Eigenvalues

2.263 .699 .537 .500

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971).

Table 4.4 provides the regression weights, standardised regression weights, and squared multiple correlations for the entrepreneurial self-efficacy: planning dimension.

Table 4.4 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for ESE: Planning

● Regression Weights: (1.Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
c14ese7	<---	ESE_PLANNING	.881	.080	11.065	***	par_1
c14ese6	<---	ESE_PLANNING	.786	.068	11.524	***	par_2
c14ese5	<---	ESE_PLANNING	.581	.072	8.122	***	par_3
c14ese4	<---	ESE_PLANNING	.753	.068	11.110	***	par_4

●Standardized Regression Weights: (1. Entrepreneurs - Default model)

			Estimate
c14ese7	<---	ESE_PLANNING	.682
c14ese6	<---	ESE_PLANNING	.709
c14ese5	<---	ESE_PLANNING	.518
c14ese4	<---	ESE_PLANNING	.685

●Squared Multiple Correlations: (1. Entrepreneurs - Default model)

	Estimate
c14ese7	.465
c14ese6	.502
c14ese5	.269
c14ese4	.469

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.518 to 0.709, and the squared multiple correlations ranging from 0.269 to 0.502. The larger these items, the stronger their contribution toward model variance.

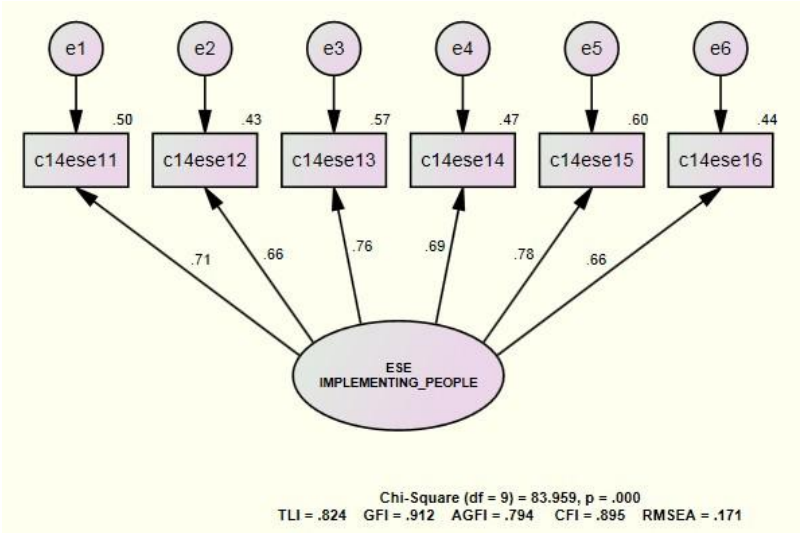
4.2.3.2 Entrepreneurial Self-Efficacy: Implementing People

The McGee et al. (2009) ESE: Implementing People dimension comprises six items; thus, the ESE Implementing People dimension is a function of these observed variables:

- c14ese11: Supervise employees
- c14ese12: Recruit and hire employees
- c14ese13: Delegate tasks and responsibilities to employees in my business
- c14ese14: Deal effectively with day-to-day problem and crises
- c14ese15: Inspire, encourage, and motivate my employees
- c14ese16: Train employees

Figure 4.2 provides an overview of the one factor measurement model for entrepreneurial self-efficacy: implementing people.

Figure 4.2 One Factor Measurement Model for ESE: Implementing People



As can be seen from the model fit indices appearing in Figure 4.2, the model does not fit the data well as the model fit statistics are not within the relevant ranges. (For example, in terms of the acceptable cut-off levels for model fit, p is significant being less than 0.5; TLI and CFI are less than 0.95; both GFI and AGFI are less than 0.95 – though these indices are affected by sample size and could be considered to be less relevant than the others cited; and RMSEA is greater than 0.5.) As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.5.

Table 4.5 Analysis Statistics of the One Factor Measurement Model for ESE: Implementing People

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese11-c14ese16	6	83.959	8	.000	.002	.171	.139	.206	.000	.824	.895	.0604	.805	3.6830	.9125
Remove c14ese12	5	23.202	5	.000	.034	.113	.069	.162	.011	.932	.966	.0321	.741	3.8041	.82298
Remove c14ese13	4	.488	2	.783	.816	.000	.000	.076	.884	1.013	1.000	.0071	.705	3.7333	.94148

The revised model appears in Figure 4.3. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.3 Revised One Factor Measurement Model for ESE: Implementing People

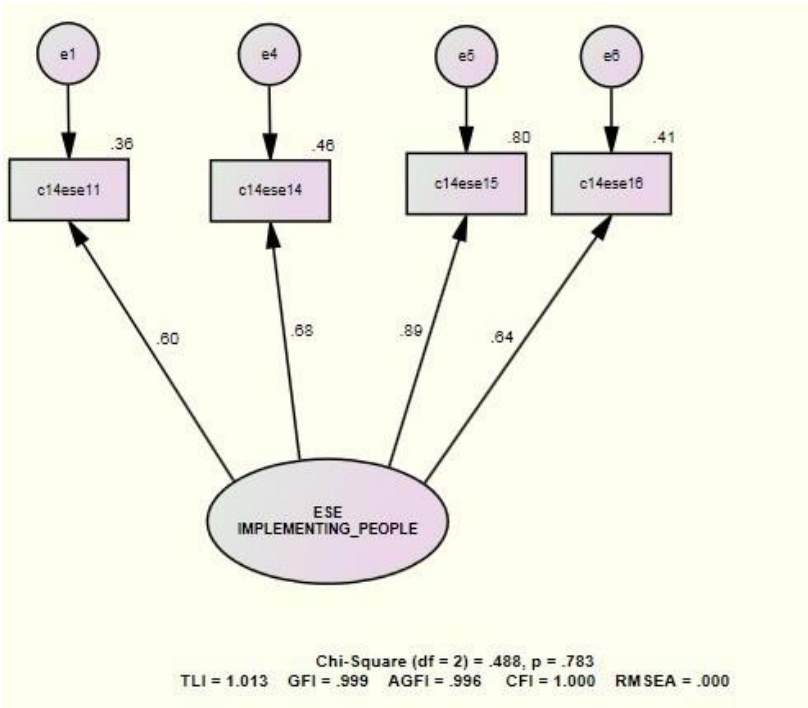


Table 4.6 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for ESE: Implementing People.

Table 4.6 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model ESE: Implementing People

●Sample Covariances (Entrepreneurs)

	c14ese16	c14ese15	c14ese14	c14ese11
c14ese16	1.573			
c14ese15	.882	1.492		
c14ese14	.592	.833	1.255	
c14ese11	.576	.767	.560	1.392

Condition number = 7.438

Eigenvalues

3.562 .907 .764 .479

Determinant of sample covariance matrix = 1.183

●Sample Correlations (Entrepreneurs)

	c14ese16	c14ese15	c14ese14	c14ese11
c14ese16	1.000			
c14ese15	.576	1.000		
c14ese14	.421	.608	1.000	
c14ese11	.389	.532	.424	1.000

Condition number = 7.475

Eigenvalues

2.485 .613 .569 .333

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971).

Table 4.7 provides the regression weights, standardised regression weights, and squared multiple correlations for the entrepreneurial self-efficacy: implementing people dimension.

Table 4.7 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Entrepreneurial Self-efficacy: Implementing People

●Regression Weights: (Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
c14ese11	<---	ESE_IP	.710	.069	10.297	***	par_1
c14ese14	<---	ESE_IP	.763	.064	11.916	***	par_2
c14ese15	<---	ESE_IP	1.091	.066	16.501	***	par_3
c14ese16	<---	ESE_IP	.804	.072	11.100	***	par_4

●Standardized Regression Weights: (Entrepreneurs - Default model)

			Estimate
c14ese11	<---	ESE_IP	.602
c14ese14	<---	ESE_IP	.681
c14ese15	<---	ESE_IP	.893
c14ese16	<---	ESE_IP	.641

●Squared Multiple Correlations: (Entrepreneurs - Default model)

	Estimate
c14ese16	.411
c14ese15	.797
c14ese14	.463
c14ese11	.362

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.602 to 0.893, and the squared multiple correlations ranging from 0.362 to 0.797.

The measures of fit statistics can be seen as confirming construct validity where the measured indicators are taken to actually measure the latent construct or factor shown in the model (Kline 2005). Convergence validity (which is a measure of the magnitude of the direct structural relationship between a measured variable and a latent construct or factor is achieved when the regression coefficients or factor loadings are significantly different from zero.

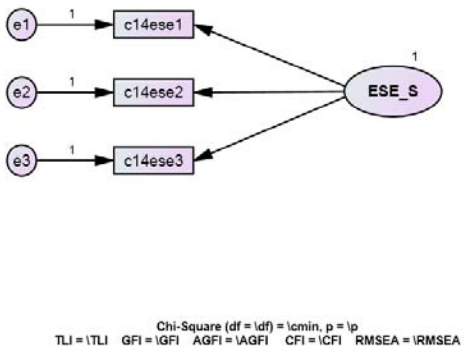
4.2.3.3 Entrepreneurial Self-Efficacy: Searching

The McGee et al. (2009) ESE: Searching dimension comprises three items. Thus, the ESE: Searching latent variable is a function of the three observed variables: c14ese1, c14ese2, c14ese3 …

- c14ese1: Brainstorm (come up with) a new idea for a product or service
- c14ese2: Identify the need for a new product or service
- c14ese3: Design a product or service that will satisfy customer needs and wants

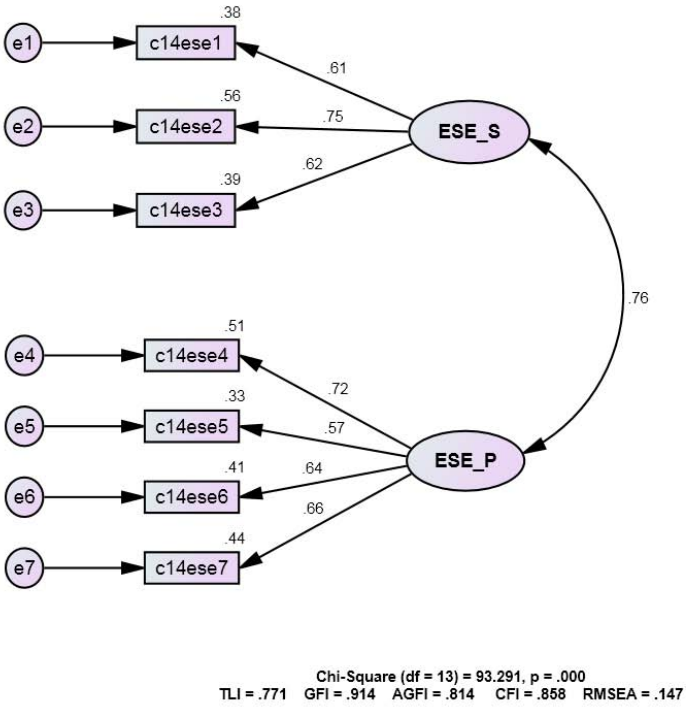
Figure 4.4 provides an overview of the ESE: Searching measurement model.

Figure 4.4 One Factor Measurement Model for ESE: Searching



There are, however, insufficient degrees of freedom to analyse the one factor ESE: Searching measurement model. For this reason, for analysis purposes, the one factor ESE: Searching measurement model needs to be paired with another measurement model to increase the degrees of freedom thereby allowing for analysis. Since the ESE: Planning measurement model has already been analysed and was determined to be a good fit of the data, this model is used to pair with the ESE: Searching measurement model. Figure 4.5 provides details on the paired measurement models.

Figure 4.5 Paired Measurement Models for ESE: Searching and ESE: Planning



As can be seen from the model fit indices appearing in Figure 4.5, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.8.

Table 4.8 Analysis Statistics of the Paired One Factor Measurement Models ESE: Searching and ESE Planning

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese1 – c14ese 3	3	93.291	13	.000	.002	.147	.120	.176	.000	.771	.858	.0681	.685	3.5883	.91997

Remove c14ese 3	2	25.829	8	.001	.068	.089	.052	.128	.043	.920	.957	.0442	.661	3.4895	1.02344
c14ese 2 and absorb c14ese 1 into	1	0.044	5	.074	.251	.060	.000	.113	.322	.967	.984	.0627	S Alpha	PS Alpha	PS Alpha

Comment: This analysis resulted in ESE-S being left with only one item – c14ese1 - and therefore this one item was absorbed into ESE-P to make the model run. The new ESE construct comprised of ESE-P (4 items) and ESE-S (one item) is ***relabelled ESE-PS****. Thus, the ESE theory required a significant alteration when it came to applying the ESE-S dimension in a Chinese village context.*

The revised model appears in Figure 4.6. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.6 Revised Paired Measurement Models for ESE: Searching and ESE: Planning

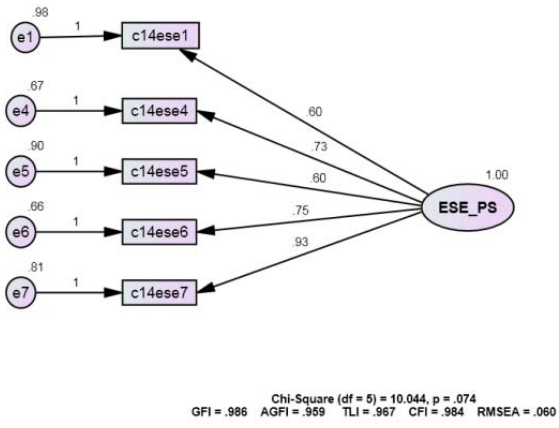


Table 4.9 shows the sample covariances, sample correlations, and eigenvalues for the revised one-factor measurement model for ESE: planning-searching.

Table 4.9 Sample Covariances, Sample Correlations, and Eigenvalues for the Revised One-Factor Measurement Model ESE: Planning-Searching

●Sample Covariances (Entrepreneurs)

	c14ese7	c14ese6	c14ese4	c14ese5	c14ese1
c14ese7	1.669				
c14ese6	.711	1.230			
c14ese4	.653	.585	1.208		
c14ese5	.496	.442	.468	1.258	
c14ese1	.640	.380	.395	.423	1.339

Condition number = 5.562

Eigenvalues

3.476 .977 .931 .695 .625

Determinant of sample covariance matrix = 1.373

●Sample Correlations (Entrepreneurs)

	c14ese7	c14ese6	c14ese4	c14ese5	c14ese1
c14ese7	1.000				
c14ese6	.496	1.000			
c14ese4	.460	.480	1.000		
c14ese5	.343	.355	.380	1.000	
c14ese1	.428	.296	.310	.326	1.000

Condition number = 5.469

Eigenvalues

2.560 .751 .695 .525 .468

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971).

Table 4.10 provides the regression weights, standardised regression weights, and squared multiple correlations for the ESE: Planning-Searching dimension.

Table 4.10 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for ESE: Planning-Searching

●Regression Weights: (Entrepreneurs - Default model)

	Estimate	S.E.	C.R.	P	Label
c14ese5 <--- ESE_PS	.596	.070	8.501	***	par_1
c14ese4 <--- ESE_PS	.732	.066	11.061	***	par_2
c14ese6 <--- ESE_PS	.754	.067	11.315	***	par_3
c14ese7 <--- ESE_PS	.926	.077	12.041	***	par_4
c14ese1 <--- ESE_PS	.603	.073	8.298	***	par_5

●Standardized Regression Weights: (Entrepreneurs - Default model)

	Estimate
c14ese5 <--- ESE_PS	.532
c14ese4 <--- ESE_PS	.666
c14ese6 <--- ESE_PS	.680
c14ese7 <--- ESE_PS	.717
c14ese1 <--- ESE_PS	.521

●Squared Multiple Correlations: (Entrepreneurs - Default model)

	Estimate
c14ese7	.514
c14ese6	.462
c14ese4	.444
c14ese5	.283
c14ese1	.271

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.521 to 0.717, and the squared multiple correlations ranging from 0.271 to 0.514.

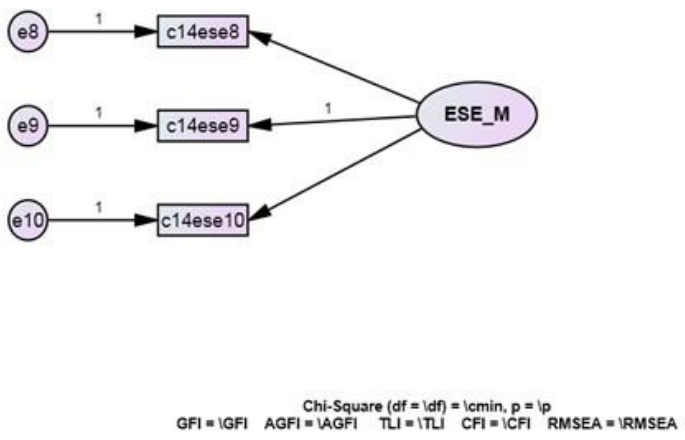
4.2.3.4 Entrepreneurial Self-Efficacy: Marshalling

The McGee et al. (2009) ESE: Marshalling dimension comprises three items. Thus, the latent ESE: Marshalling latent variable is a function of the three observed variables: c14ese8, c14ese9, c14ese10 …

- c14ese8: Get others to identify with and believe in my vision and plans for a new business
- c14ese9: Network-i.e., make contact with and exchange information with others
- c14ese10: Clearly and concisely explain verbally/in writing my business idea in everyday term

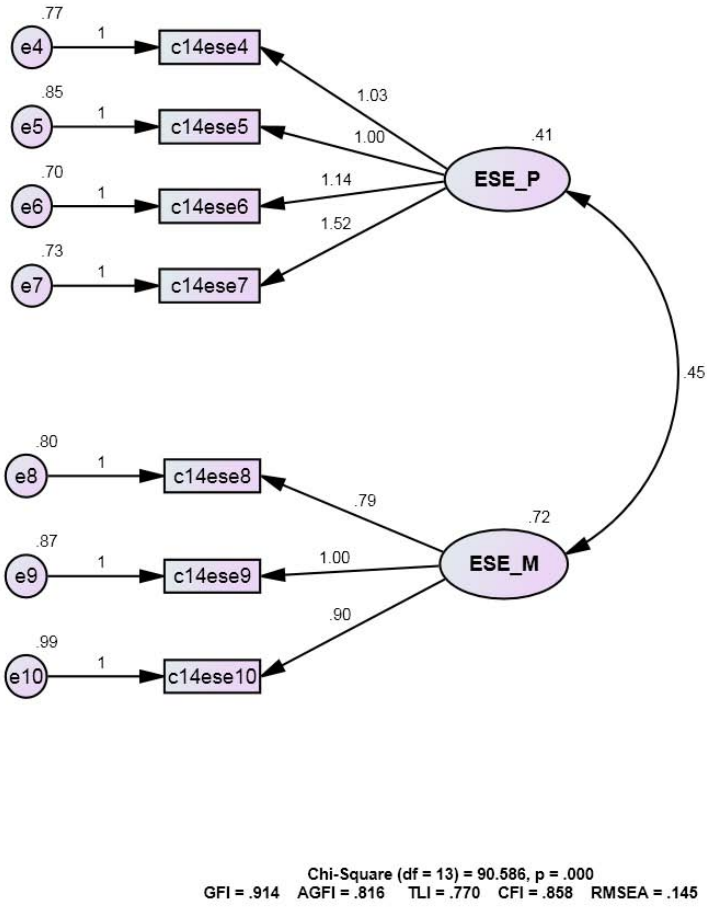
Figure 4.7 provides an overview of the ESE: Marshalling measurement model.

Figure 4.7 One Factor Measurement Model for ESE: Marshalling



There are, however, insufficient degrees of freedom to analyse the one factor ESE: Marshalling measurement model. For this reason, for analysis purposes, the one factor ESE: Marshalling measurement model needs to be ―paired" with another measurement model to increase the degrees of freedom thereby allowing for analysis. Since the ESE: Planning measurement model has already been analysed and was determined to be a good fit of the data, this model is used to pair with the ESE: Marshalling measurement model. Figure 4.8 provides details on the paired measurement models.

Figure 4.8 Paired Measurement Models for ESE: Marshalling and ESE: Planning



As can be seen from the model fit indices appearing in Figure 4.8, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.11.

Table 4.11 Analysis Statistics of the Paired One Factor Measurement Models ESE: Marshalling and ESE: Planning

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach	Mean	SD
c14ese8-c14ese10	3	90.586	13	.000	.004	.145	.118	.174	.000	.770	.858	.0719	.659	3.6012	.93844

Remove c14ese10	2	59.388	8	.000	.002	.150	.116	.187	.000	.780	.883	.0662	.622	3.5649	1.01840
Remove c14ese8	1	26.959	5	.000	.002	.124	.081	.172	.004	.868	.934	.0484	-	3.59	1.265
Remove c14ese9	0	0.885	2	0.643	.750	0.000	0.000	0.093	0.797	1.014	1.000	0.0106			

Comment: This analysis resulted in ESE-M being completely eliminated as the model did not fit the data. This is a significant alteration to the ESE theory when it is applied in a Chinese village context.

The revised fitted model resulted in the ESE: Marshalling dimension being completely eliminated in order to fit the model to the data. What remained after the ESE: Marshalling dimension was eliminated was the ESE: Planning dimension which appears previously in this Chapter. Thus, ESE: Marshalling does not appear to be relevant for application in a Chinese village context. Since the ESE-Planning statistics have been presented previously, they are not presented here.

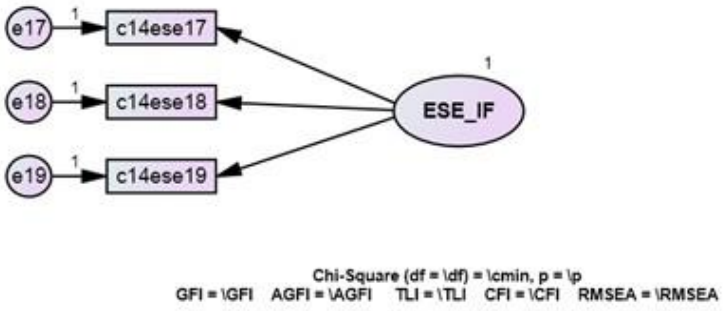
4.2.3.5 Entrepreneurial Self-Efficacy: Implementing Financial

The McGee et al. (2009) ESE: Implementing Financial dimension comprises three items. Thus, the latent ESE: Implementing Financial latent variable is a function of the three observed variables: c14ese17, c14ese18, c14ese19.

- c14ese17: Organize and maintain the financial records of my business
- c14ese18: Manage the financial assets of my business
- c14ese19: Read and interpret financial statements

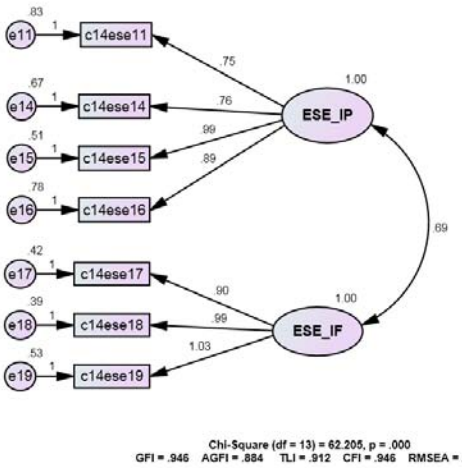
Figure 4.9 provides an overview of the ESE: Implementing Financials measurement model.

Figure 4.9 One Factor Measurement Model for ESE: Implementing Financials



There are, however, insufficient degrees of freedom to analyse the one factor ESE: Implementing Financials measurement model. For this reason, for analysis purposes, the one factor ESE: Implementing Financials measurement model needs to be paired with another measurement model to increase the degrees of freedom thereby allowing for analysis. Since the ESE: Implementing People measurement model has already been analysed and the revised model was determined to be a good fit of the data, this model is used to pair with the ESE: Implementing Financials measurement model. Figure 4.10 provides details on the paired measurement models.

Figure 4.10 Paired Measurement Models for ESE: Implementing Financials and ESE: Implementing People



As can be seen from the model fit indices appearing in Figure 4.10, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.12.

Table 4.12 Analysis Statistics of the Paired One Factor Measurement Models ESE: Implementing Financials and ESE: Implementing People

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese17-c14ese19	3	62.205	13	.000	.006	.115	.088	.145	.000	.912	.946	.0562	.863	3.8456	1.04904
Remove c14ese17	2	36.363	8	.000	.016	.112	.076	.150	.003	.919	.957	.0473	.815	3.8281	1.12208
Remove c14ese19	1	29.307	5	.000	.010	.131	.087	.178	.002	.896	.948	.0436		3.89	1.172
Remove c14ese18	0	.488	2	.783	.816	.000	.000	.076	.884	1.013	1.000	.0071	.705	3.7333	.94148

Comment: This analysis resulted in ESE-IF being completely eliminated as the model did not fit the data. This is a significant alteration to the ESE theory when it is applied in a Chinese village context.

The revised fitted model resulted in the ESE: Implementing Financials dimension being completely eliminated in order to fit the model to the data. What remained after the ESE: Implementing Financials dimension was eliminated was the ESE: Implementing People dimension which appears previously in this Chapter. Thus, ESE: Implementing Financials does not appear to be relevant for application in a Chinese village context. Since the ESE-Implementing People statistics have been presented previously, they are not presented here.

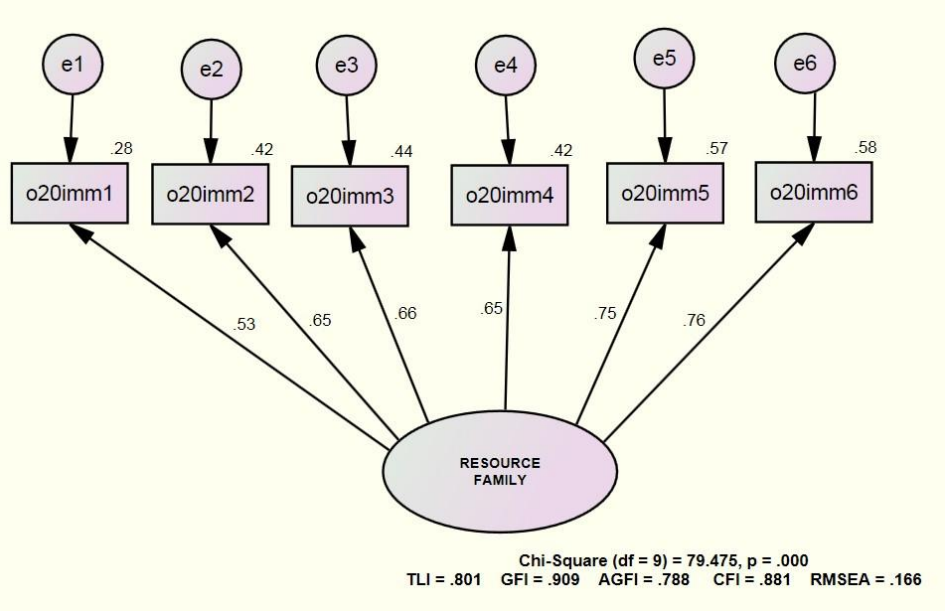
4.2.3.6 Perceived Accessibility of Family Resources

The Perceived Accessibility of Family Resources dimension was developed in this research to meet a perceived gap in the literature when it came to considering issues that are important to Chinese village entrepreneurs in determining whether they proceed to establish a business or not. Based on the data collected in an earlier phase of this research from Chinese village entrepreneurs, the Perceived Accessibility of Family Resources dimension was identified as comprising six items:

- o20 imm1: financial support by the way of money for the venture
- o20 imm2: labour support for your venture
- o20 imm3: business property to support your venture
- o20 imm4: social capital in the form of personal contacts to support your venture
- o20 imm5: business expertise to support your venture
- o20 imm6: other technical, non business expertise to support your venture

Figure 4.11 provides an overview of the one factor measurement model for Perceived Accessibility of Family Resources.

Figure 4.11 One Factor Measurement Model for Perceived Accessibility of Family Resources



As can be seen from the model fit indices appearing in Figure 4.11, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.13.

Table 4.13 Analysis Statistics of the One Factor Measurement Model for Perceived Accessibility of Family Resources

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
020imm1 – 020imm6	6	79.475	9	.000	.008	.166	.134	.201	.000	.801	.881	.0627	.829	5.0292	1.29920
Remove 020imm3	5	17.828	5	.003	.194	.095	.050	.145	.050	.939	.969	.0410	.796	4.1778	1.09976
Remove 020imm4	4	6.582	2	0037	.279	.090	.019	.170	.141	.955	.985	.0349	.757	3.3105	.91135

Comment: This analysis resulted in two items being removed from the original dimension (items 020imm3 and 020imm4).

The revised model appears in Figure 4.12. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.12 Revised One Factor Measurement Model for Perceived Accessibility of Family Resources

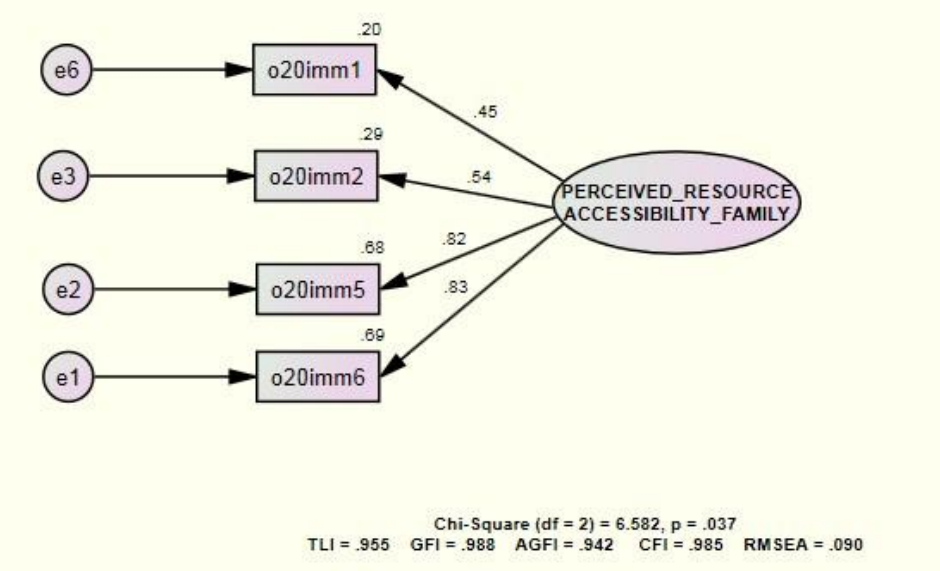


Table 4.14 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for Perceived Accessibility of Family Resources.

Table 4.14 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model Perceived Accessibility of Family Resources

●Sample Covariances (Entrepreneurs)

	o20imm6	o20imm5	o20imm2	o20imm1
o20imm6	3.855			
o20imm5	2.500	3.418		
o20imm2	1.406	1.310	2.734	
o20imm1	1.170	1.105	.967	2.872

Condition number = 6.862

Eigenvalues

7.727 2.265 1.761 1.126

Determinant of sample covariance matrix = 34.701

●Sample Correlations (Entrepreneurs)

	o20imm6	o20imm5	o20imm2	o20imm1
o20imm6	1.000			

	o20imm6	o20imm5	o20imm2	o20imm1
o20imm5	.689	1.000		
o20imm2	.433	.429	1.000	
o20imm1	.352	.353	.345	1.000

Condition number = 7.458

Eigenvalues

2.321 .742 .626 .311

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971).

Table 4.15 provides the regression weights, standardised regression weights, and squared multiple correlations for the Perceived Accessibility of Family Resources dimension.

Table 4.15 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Perceived Accessibility of Family Resources

● Regression Weights: (Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
o20imm5	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY_FAMILY	1.524	.106	14.321	***	par_1
o20imm6	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	1.625	.113	14.391	***	par_2
o20imm1	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.754	.104	7.218	***	par_3
o20imm2	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.885	.099	8.903	***	par_4

●Standardized Regression Weights: (Entrepreneurs - Default model)

			Estimate
o20imm5	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.824
o20imm6	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.828

			Estimate
o20imm1	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.445
o20imm2	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.535

●Squared Multiple Correlations: (Entrepreneurs - Default model)

	Estimate
o20imm6	.685
o20imm5	.679
o20imm2	.287
o20imm1	.198

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.445 to 0.828, and the squared multiple correlations ranging from 0.198 to 0.685.

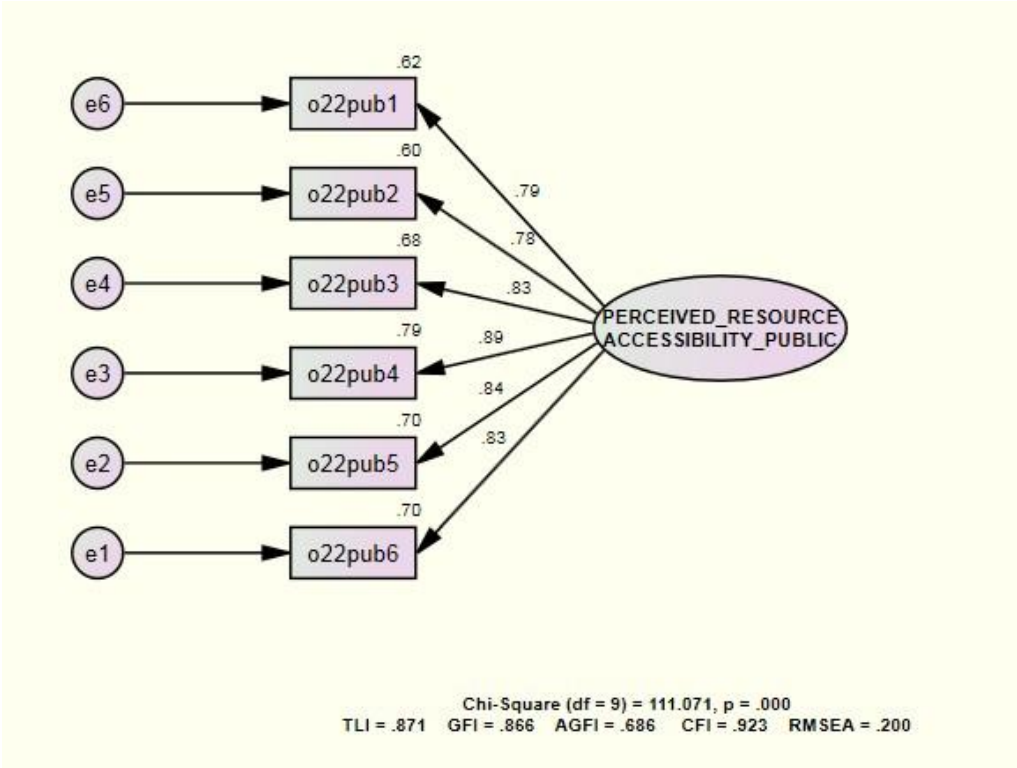
4.2.3.7 Perceived Accessibility of Public Resources

The Perceived Accessibility of Public Resources dimension complements the Perceived Accessibility of Family Resources dimension. It was developed to meet a perceived gap in the literature when it came to considering resource issues that are important to Chinese village entrepreneurs in determining whether they proceed to establish a business or not. Based on the data collected in an earlier phase of this research from Chinese village entrepreneurs, the Perceived Accessibility of Public Resources dimension was identified as comprising six items:

- o22pub1: financial support by the way of money for the venture
- o22pub2: labour support for your venture
- o22pub3: business property to support your venture
- o22pub4: social capital in the form of personal contacts to support your venture
- o22pub5: business expertise to support your venture
- o22pub6: other technical, non business expertise to support your venture

Figure 4.13 provides an overview of the one factor measurement model for Perceived Accessibility of Public Resources.

Figure 4.13 One Factor Measurement Model for Perceived Accessibility of Public Resources



As can be seen from the model fit indices appearing in Figure 4.13, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.16.

Table 4.16 Analysis Statistics of the One Factor Measurement Model for Perceived Accessibility of Public Resources

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
o22pub1 – o22pub6	6	111.071	9	.000	.002	.200	.168	.234	.000	.871	.923	.0505	.927	4.7123	1.60985

Remove o22pub2	5	41.962	5	.000	.008	.161	.118	.208	.000	.929	.964	.0361	.918	3.9298	1.35622
Remove o22pub3	4	6.941	2	.031	.232	.087	.013	.167	.156	.983	.994	.0140	.902	3.1310	1.10306

The revised model appears in Figure 4.14. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.14 Revised One Factor Measurement Model for Perceived Accessibility of Public Resources

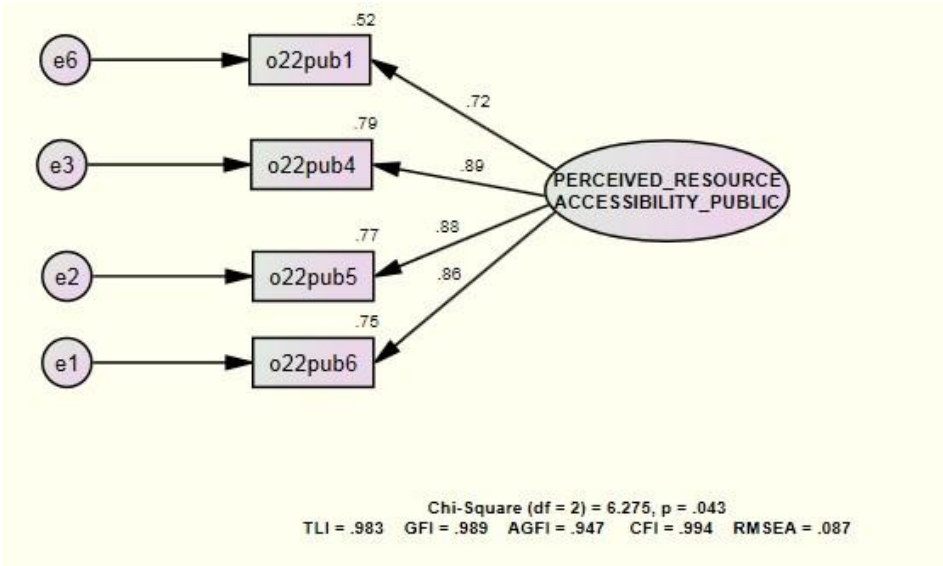


Table 4.17 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for Perceived Accessibility of Public Resources.

Table 4.17 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model Perceived Accessibility of Public Resources

● Sample Covariances (Entrepreneurs)

	o22pub1	o22pub6	o22pub4	o22pub5
o22pub1	3.964			

	o22pub1	o22pub6	o22pub4	o22pub5
o22pub6	2.321	3.473		
o22pub4	2.371	2.524	3.195	
o22pub5	2.236	2.691	2.622	3.488

Condition number = 15.921

Eigenvalues

10.914 1.693 .827 .685

Determinant of sample covariance matrix = 10.473

●Sample Correlations (Entrepreneurs)

	o22pub1	o22pub6	o22pub4	o22pub5
o22pub1	1.000			
o22pub6	.625	1.000		
o22pub4	.666	.758	1.000	
o22pub5	.602	.773	.786	1.000

Condition number = 15.237

Eigenvalues

3.110 .442 .243 .204

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971).

Table 4.18 provides the regression weights, standardised regression weights, and squared multiple correlations for the Perceived Accessibility of Family Resources dimension.

Table 4.18 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Perceived Accessibility of Public Resource

● Regression Weights: (Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
o22pub5	<---	PERCEIVED_RESOURCE ACCESSIBILITY_P UBLIC	1.644	.089	18.373	***	par_1
o22pub4	<---	PERCEIVED_RESOURCE ACCESSIBILITY_P UBLIC	1.593	.085	18.729	***	par_2
o22pub6	<---	PERCEIVED_RESOURCE ACCESSIBILITY_P UBLIC	1.611	.090	17.848	***	par_3
o22pub1	<---	PERCEIVED_RESOURCE ACCESSIBILITY_P UBLIC	1.432	.105	13.616	***	par_4

●Standardized Regression Weights: (Entrepreneurs - Default model)

			Estimate
o22pub5	<---	PERCEIVED_RESOURCE_ACCESSIBILITY _PUBLIC	.880
o22pub4	<---	PERCEIVED_RESOURCE_ACCESSIBILITY _PUBLIC	.891
o22pub6	<---	PERCEIVED_RESOURCE_ACCESSIBILITY _PUBLIC	.864
o22pub1	<---	PERCEIVED_RESOURCE_ACCESSIBILITY _PUBLIC	.719

●Squared Multiple Correlations: (Entrepreneurs - Default model)

	Estimate
o22pub1	.517
o22pub6	.747
o22pub4	.794
o22pub5	.775

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.719 to 0.891, and the squared multiple correlations ranging from 0.517 to 0.794.

4.2.4 Combined Measurement Model Analyses

This section presents the results of the analyses of the combined measurement models.

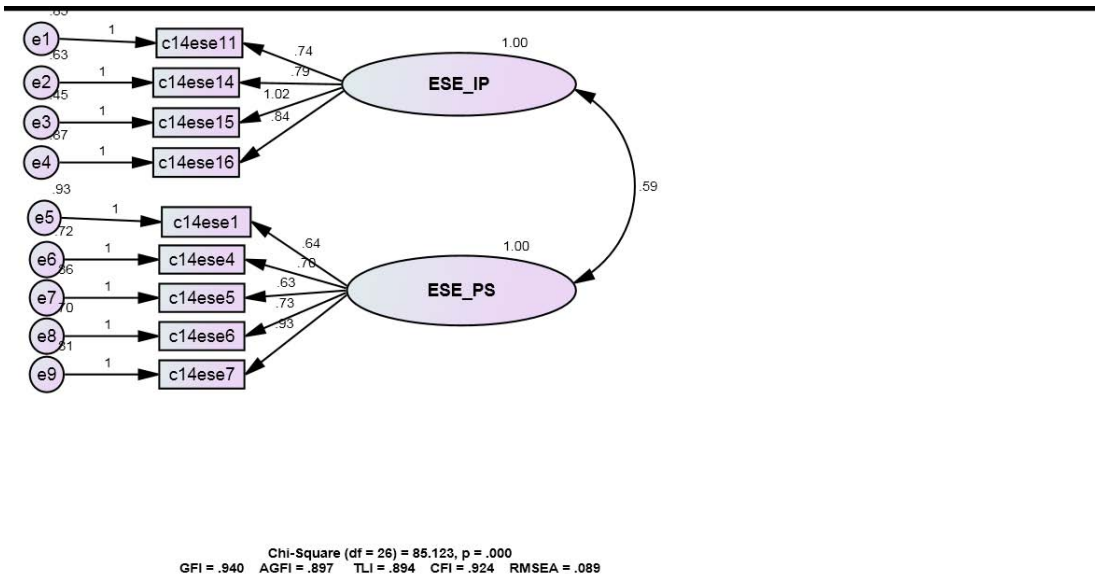
4.2.4.1 Combined Measurement Model - Entrepreneurial Self-Efficacy

After taking the necessary steps to fit the individual measurement models to the data, the revised Entrepreneurial Self-Efficacy (ESE) construct in this research was comprised of the following dimensions:

- ESE: Implementing People, and
- ESE: Planning-Search

The combined measurement model for the revised ESE construct that reflects a Chinese village entrepreneurship context appears in Figure 4.15.

Figure 4.15 ESE Combined Measurement Model



As can be seen from the model fit indices appearing in Figure 4.15, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a

process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.19.

Table 4.19 Analysis Statistics of the Combined ESE Measurement Models

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR
C14ese11, C14ese14-C14ese16 C14ese1, C14ese4--C14ese7	9	85.123	26	.000	.012	.089	..69	.111	.001	.894	.924	.0597
Remove C14ese14	8	53.851	19	.000	.036	.080	.056	.106	.024	.915	.943	.0510
Remove C14ese15	7	22.609	13	.047	.343	.051	.006	.085	.438	.954	.978	.0346

Comment: This analysis resulted in two items being removed from the original ESE-IP dimension (items C14ese14 and C14ese15).

The revised model appears in Figure 4.16. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.16 Revised ESE Combined Measurement Model

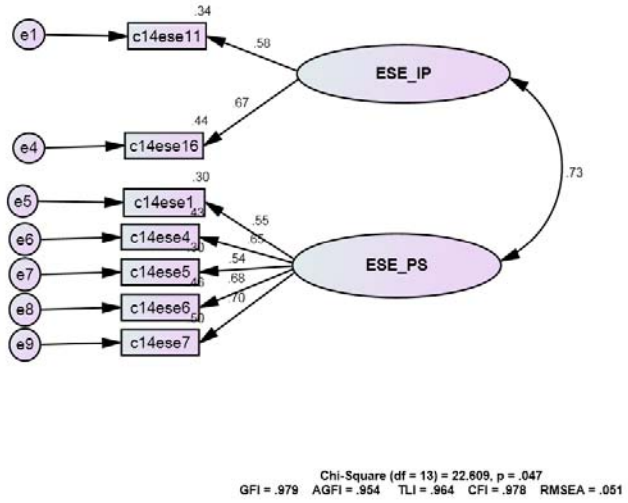


Table 4.20 shows the sample covariances, sample correlations, and eigenvalues for the Revised Combined ESE Measurement Model.

Table 4.20 Sample Covariances, Sample Correlations, and Eigenvalues for the Revised Combined ESE Measurement Model

●Sample Covariances (Entrepreneurs)

	c14ese7	c14ese6	c14ese4	c14ese5	c14ese1	c14ese16	c14ese11
c14ese7	1.669						
c14ese6	.711	1.230					
c14ese4	.653	.585	1.208				
c14ese5	.496	.442	.468	1.258			
c14ese1	.640	.380	.395	.423	1.339		
c14ese16	.561	.420	.387	.436	.468	1.573	
c14ese11	.362	.416	.352	.309	.432	.576	1.392

Condition number = 7.033

Eigenvalues

4.264 1.320 .968 .936 .915 .660 .606

Determinant of sample covariance matrix = 1.866

●Sample Correlations (Entrepreneurs)

	c14ese7	c14ese6	c14ese4	c14ese5	c14ese1	c14ese16	c14ese11
c14ese7	1.000						
c14ese6	.496	1.000					
c14ese4	.460	.480	1.000				
c14ese5	.343	.355	.380	1.000			
c14ese1	.428	.296	.310	.326	1.000		
c14ese16	.347	.302	.281	.310	.323	1.000	
c14ese11	.238	.318	.271	.234	.316	.389	1.000

Condition number = 7.040

Eigenvalues

3.072 .917 .730 .698 .624 .522 .436

As can be seen from the eigenvalues, there appears to be a two factor solution for the model which reflects the two constructs in the combined measurement model.

Table 4.21 provides the regression weights, standardised regression weights, and squared multiple correlations for the ESE combined measurement model dimensions.

Table 4.21 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for the Revised Combined ESE Measurement Model

● Regression Weights: (Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
c14ese11	<---	ESE_IP	.689	.083	8.274	***	par_1
c14ese16	<---	ESE_IP	.836	.092	9.048	***	par_2
c14ese5	<---	ESE_PS	.610	.069	8.857	***	par_3
c14ese4	<---	ESE_PS	.720	.065	11.042	***	par_4
c14ese6	<---	ESE_PS	.750	.065	11.481	***	par_5
c14ese7	<---	ESE_PS	.910	.075	12.080	***	par_6
c14ese1	<---	ESE_PS	.632	.071	8.900	***	par_7

●Standardized Regression Weights: (Entrepreneurs - Default model)

			Estimate
c14ese11	<---	ESE_IP	.584
c14ese16	<---	ESE_IP	.667
c14ese5	<---	ESE_PS	.544
c14ese4	<---	ESE_PS	.655
c14ese6	<---	ESE_PS	.676
c14ese7	<---	ESE_PS	.704
c14ese1	<---	ESE_PS	.547

●Squared Multiple Correlations: (Entrepreneurs - Default model)

	Estimate
c14ese7	.496
c14ese6	.457
c14ese4	.429
c14ese5	.296
c14ese1	.299
c14ese16	.444
c14ese11	.341

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.544 to 0.704, and the squared multiple correlations ranging from 0.296 to 0.496.

4.2.4.2 Combined Measurement Model – Perceived Resource Accessibility

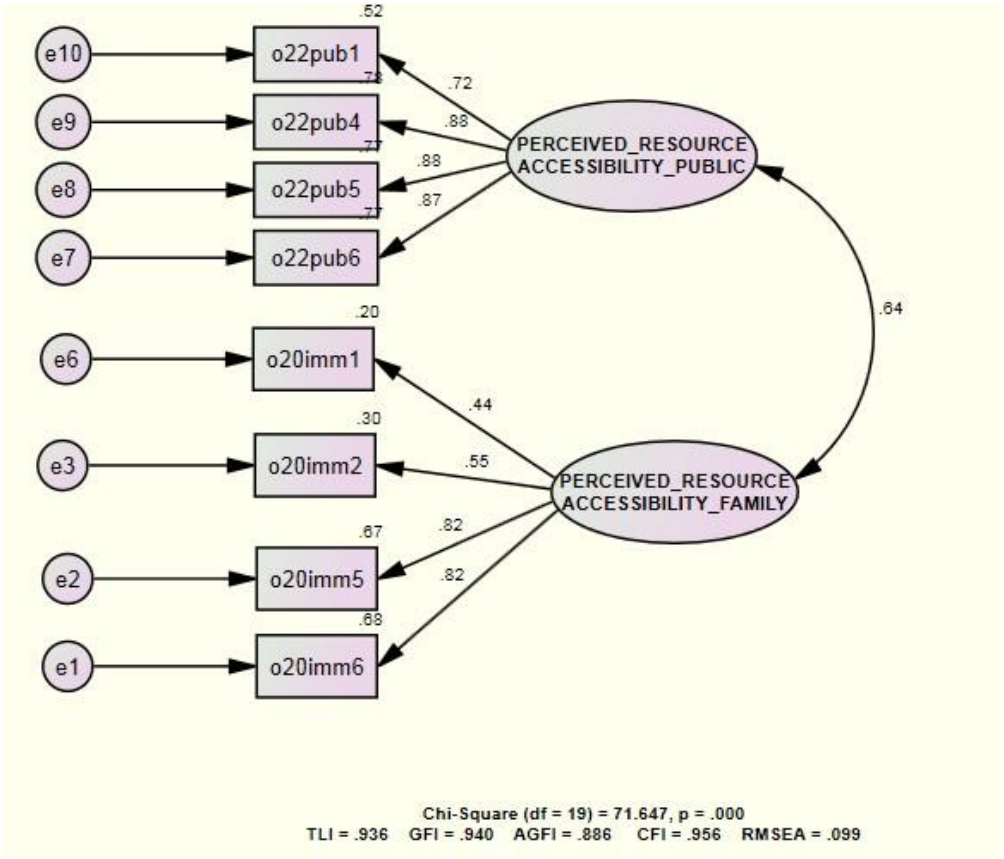
After taking the necessary steps to fit the individual measurement models to the data, the revised Perceived Resource Accessibility constructs in this research comprised the following dimensions:

- Perceived Accessibility of Family Resources, and

- Perceived Accessibility of Public Resources.

The combined measurement model for the revised Perceived Accessibility of Resources construct that reflects a Chinese village entrepreneurship context appears in Figure 4.17.

Figure 4.17 Perceived Accessibility of Resources Combined Measurement Model



As can be seen from the model fit indices appearing in Figure 4.17, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.22.

Table 4.22 Analysis Statistics of the Combined Perceived Accessibility of Resource Measurement Models

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR

Remove O20imm1	7	32.111	13	.002	.092	.072	.041	.104	.113	.973	.983	.0319
O20imm1, O20imm2, O20imm5, O20imm6 O20pub1, O20pub4- O20pub6	8	71.647	19	.000	.014	.099	.099	.075	.001	.936	.956	.0446

Comment: This analysis resulted in one item being removed from the original dimensions (item O20imm1) resulting in a good fitting model.

The revised model appears in Figure 4.18. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.18 Revised Perceived Accessibility of Resources Combined Measurement Model

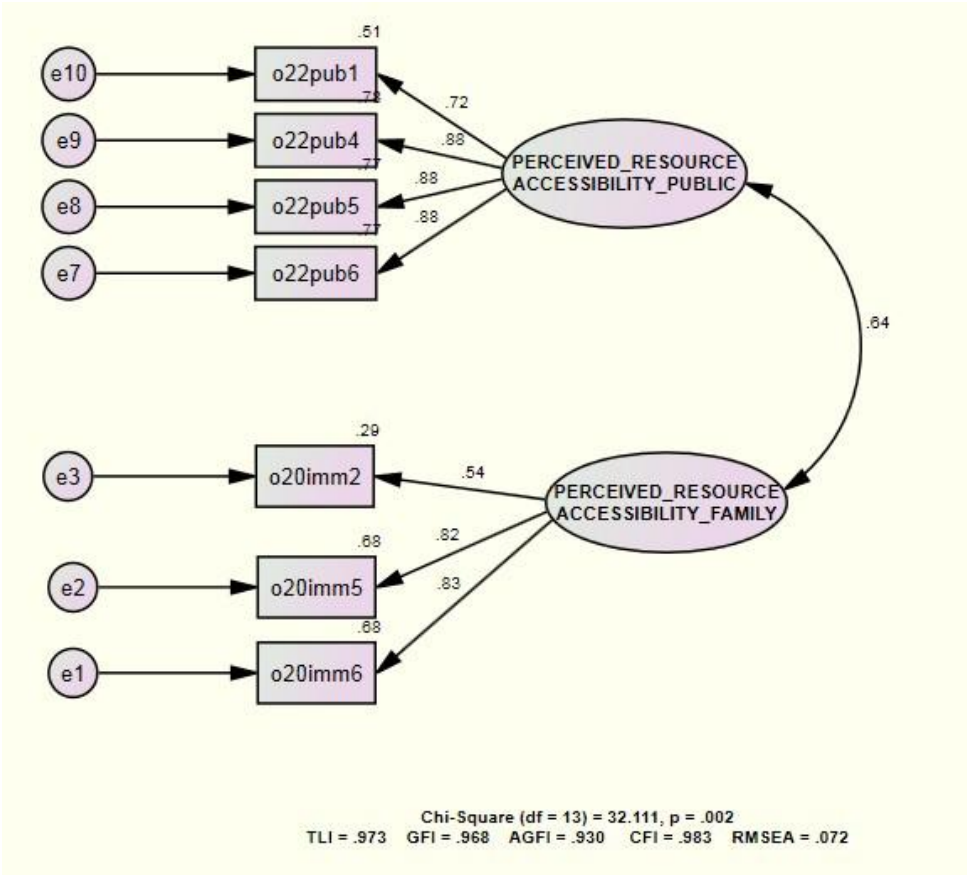


Table 4.23 shows the sample covariances, sample correlations, and eigenvalues for the combined measurement model for Perceived Accessibility of Resources.

Table 4.23 Sample Covariances, Sample Correlations, and Eigenvalues for the Revised Perceived Accessibility of Resources Combined Measurement Model

● Sample Covariances (Entrepreneurs)

	o22pub1	o22pub6	o22pub4	o22pub5	o20imm6	o20imm5	o20imm2
o22pub1	3.964						
o22pub6	2.321	3.473					
o22pub4	2.371	2.524	3.195				
o22pub5	2.236	2.691	2.622	3.488			
o20imm6	1.489	1.940	1.419	1.599	3.855		
o20imm5	1.240	1.724	1.432	1.555	2.500	3.418	
o20imm2	.908	1.049	1.081	1.168	1.406	1.310	2.734

Condition number = 20.880

Eigenvalues

14.212 3.782 1.915 1.665 1.131 .741 .681

Determinant of sample covariance matrix = 97.702

●●Sample Correlations (Entrepreneurs)

	o22pub1	o22pub6	o22pub4	o22pub5	o20imm6	o20imm5	o20imm2
o22pub1	1.000						
o22pub6	.625	1.000					
o22pub4	.666	.758	1.000				
o22pub5	.602	.773	.786	1.000			
o20imm6	.381	.530	.404	.436	1.000		
o20imm5	.337	.500	.433	.450	.689	1.000	
o20imm2	.276	.340	.366	.378	.433	.429	1.000

Condition number = 20.064

Eigenvalues

4.084 1.085 .657 .441 .316 .215 .204

As can be seen from the eigenvalues, there appears to be a two factor solution for the model which reflects the two constructs in the combined measurement model.

Table 4.24 provides the regression weights, standardised regression weights, and squared multiple correlations for the Perceived Availability of Resources combined measurement model dimensions.

Table 4.24 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for the Revised Perceived Accessibility of Resources Combined Measurement Model

● Regression Weights: (Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
o20imm5	<--	PERCEIVED_RESOURCE ACCESSIBILITY_FAMILY	1.523	.101	15.033	***	par_1
o20imm6	<--	PERCEIVED_RESOURCE ACCESSIBILITY _FAMILY	1.625	.108	15.112	***	par_2
o20imm2	<--	PERCEIVED_RESOURCE ACCESSIBILITY _FAMILY	.887	.099	8.980	***	par_3
o22pub5	<--	PERCEIVED_RESOURCE ACCESSIBILITY _PUBLIC	1.642	.089	18.384	***	par_4
o22pub4	<--	PERCEIVED_RESOURCE ACCESSIBILITY _PUBLIC	1.576	.085	18.473	***	par_5
o22pub6	<--	PERCEIVED_RESOURCE ACCESSIBILITY _PUBLIC	1.633	.089	18.277	***	par_6
o22pub1	<--	PERCEIVED_RESOURCE ACCESSIBILITY _PUBLIC	1.427	.105	13.579	***	par_7

●Standardized Regression Weights: (Entrepreneurs - Default model)

			Estimate
o20imm5	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.824
o20imm6	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.828
o20imm2	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _FAMILY	.536
o22pub5	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.879
o22pub4	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.882

			Estimate
o22pub6	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.876
o22pub1	<---	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.717

●Squared Multiple Correlations: (Entrepreneurs - Default model)

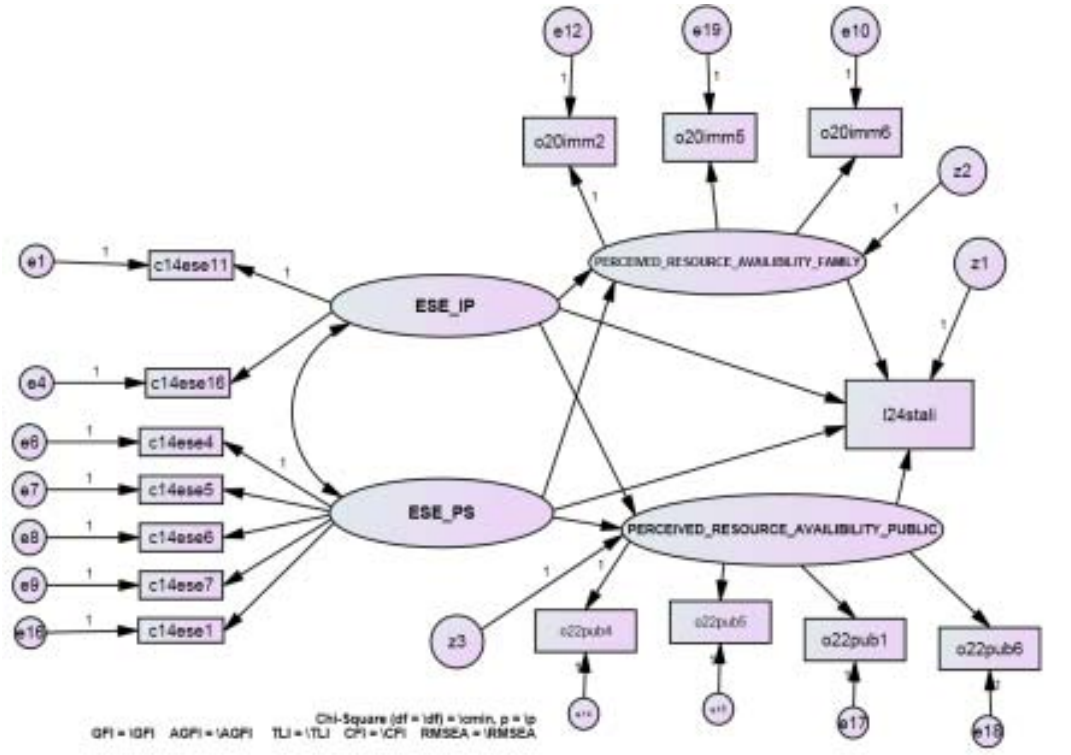
	Estimate
o22pub1	.514
o22pub6	.767
o22pub4	.778
o22pub5	.773
o20imm6	.685
o20imm5	.679
o20imm2	.287

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.536 to 0.882, and the squared multiple correlations ranging from 0.287 to 0.778.

4.3 Full Structural Model

After taking the necessary steps to fit the individual measurement models to the data and examining the combined measurement models for each of the constructs, the structural model that includes all individual measurement models is examined. The structural model appears in Figure 4.19.

Figure 4.19 Full Structural Model



The model did not fit the data as the model fit statistics were not within the relevant ranges. As such, a reduction process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.25.

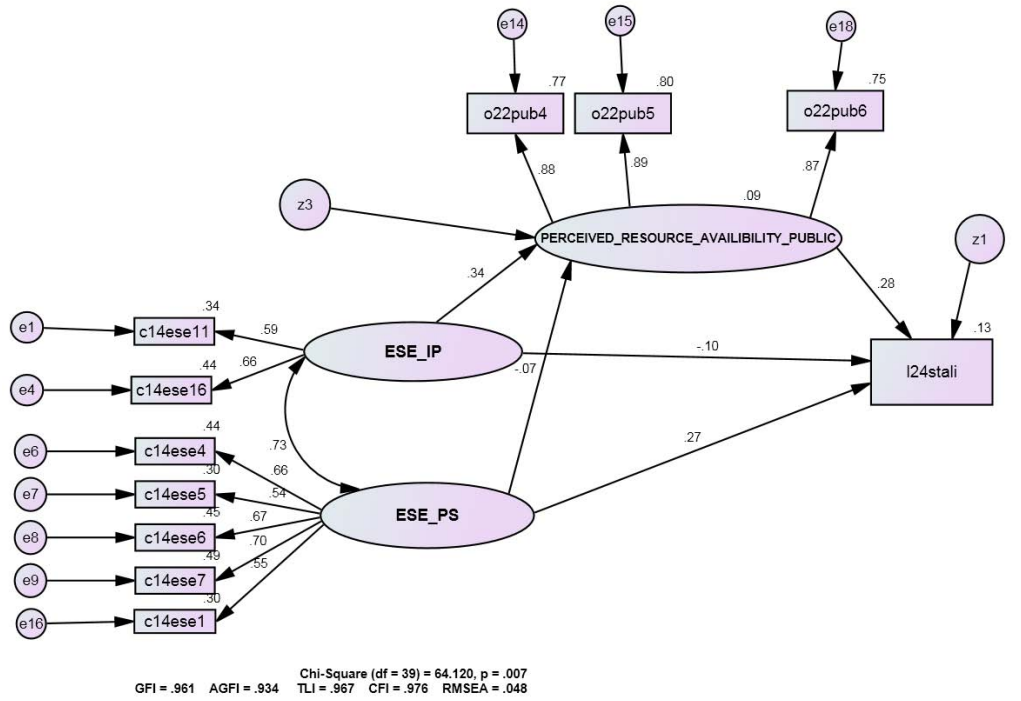
Table 4.25 Analysis Statistics of the Combined Measurement Model

Items	Chi Sq	df	p	Bollen-Stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR
	203.790	82	.000		.072	.060	.085	.002	.909	.929	
Remove o22imm5	157.015	69	.000		.067	.053	.081	.023	.921	.940	
Remove o22imm2	132.031	60	.000	.030	.065	.050	.080	.050	.932	.947	.0642
Remove o22imm6	82.869	49	.002	.152	.049	.030	.067	.502	.963	.973	.0493
Remove o22pub1	64.120	39	.007	.204	.048	.025	.068	.550	.967	.976	.0461

Comment: All the perceived accessibility to family resource items were removed resulting in a good fitting model.

The revised model appears in Figure 4.20. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 4.20 Revised Structural Model



Note that an alternative model approach was attempted by including all indicator items in the one combined perceived public and family resource availability construct. This model did not fit and so after fitting the model to the data, the same model as appears in Figure 4.20 was achieved.

Table 4.26 shows the sample covariances, sample correlations, and eigenvalues for the revised structural model.

Table 4.26 Sample Covariances, Sample Correlations, and Eigenvalues for the Revised Structural Model

● Sample Covariances (Entrepreneurs)

	o22pub6	c14ese1	l24stali	o22pub4	o22pub5	c14ese7	c14ese6	c14ese4	c14ese5	c14ese16	c14ese11
o22pub6	3.473										

	o22pub6	c14ese1	l24stali	o22pub4	o22pub5	c14ese7	c14ese6	c14ese4	c14ese5	c14ese16	c14ese11
c14ese1	.577	1.339									
l24stali	1.121	.352	4.534								
o22pub4	2.524	.394	.947	3.195							
o22pub5	2.691	.469	1.016	2.622	3.488						
c14ese7	.345	.640	.395	.290	.237	1.669					
c14ese6	.184	.380	.301	.281	.089	.711	1.230				
c14ese4	.094	.395	.534	.066	.007	.653	.585	1.208			
c14ese5	.157	.423	.315	.239	.161	.496	.442	.468	1.258		
c14ese16	.372	.468	.162	.442	.333	.561	.420	.387	.436	1.573	
c14ese11	.294	.432	.446	.366	.360	.362	.416	.352	.309	.576	1.392

Condition number = 17.417

Eigenvalues

9.732 4.322 3.467 1.308 1.025 .927 .919 .778 .692 .628 .559

Determinant of sample covariance matrix = 31.503

●Sample Correlations (Entrepreneurs)

	o22pub6	c14ese1	l24stali	o22pub4	o22pub5	c14ese7	c14ese6	c14ese4	c14ese5	c14ese16	c14ese11
o22pub6	1.000										
c14ese1	.268	1.000									
l24stali	.282	.143	1.000								
o22pub4	.758	.191	.249	1.000							
o22pub5	.773	.217	.255	.786	1.000						
c14ese7	.143	.428	.143	.126	.098	1.000					
c14ese6	.089	.296	.128	.142	.043	.496	1.000				
c14ese4	.046	.310	.228	.034	.003	.460	.480	1.000			
c14ese5	.075	.326	.132	.119	.077	.343	.355	.380	1.000		
c14ese16	.159	.323	.061	.197	.142	.347	.302	.281	.310	1.000	
c14ese11	.133	.316	.178	.174	.163	.238	.318	.271	.234	.389	1.000

Condition number = 17.623

Eigenvalues

3.567 2.248 .962 .853 .709 .698 .597 .500 .435 .230 .202

As can be seen from the eigenvalues, there appears to be a four factor solution for the model which reflects the four variables in the combined measurement model.

Table 4.27 provides the regression weights, standardised regression weights, and squared multiple correlations for the revised structural model dimensions.

Table 4.27 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for the Revised Structural Model

● Regression Weights: (Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
PERCEIVED_RESOURCE_ACCESSIBILITY_PUBLIC	<---	ESE_IP	.776	.389	1.993	.046	par_10
PERCEIVED_RESOURCE_ACCESSIBILITY_PUBLIC	<---	ESE_PS	-.146	.331	-.442	.658	par_11
c14ese11	<---	ESE_IP	1.000				
c14ese16	<---	ESE_IP	1.206	.190	6.342	***	par_1
c14ese5	<---	ESE_PS	.841	.111	7.562	***	par_2
c14ese4	<---	ESE_PS	1.000				
c14ese6	<---	ESE_PS	1.026	.115	8.905	***	par_3
c14ese7	<---	ESE_PS	1.246	.136	9.159	***	par_4
l24stali	<---	PERCEIVED_RESOURCE_ACCESSIBILITY_PUBLIC	.377	.089	4.230	***	par_5
l24stali	<---	ESE_IP	-.320	.470	-.681	.496	par_6
l24stali	<---	ESE_PS	.791	.400	1.981	.048	par_7
c14ese1	<---	ESE_PS	.873	.115	7.602	***	par_8
o22pub6	<---	PERCEIVED_RESOURCE_ACCESSIBILITY_PUBLIC	1.027	.054	18.991	***	par_9
o22pub5	<---	PERCEIVED_RESOURCE_ACCESSIBILITY_PUBLIC	1.062	.054	19.767	***	par_13
o22pub4	<---	PERCEIVED_RESO	1.000				

	Estimate	S.E.	C.R.	P	Label
URCE_ACCESSIBILITY_PUBLIC					

●Standardized Regression Weights: (Entrepreneurs - Default model)

			Estimate
PERCEIVED_RESOURCE_AVAILIBILITY_PUBLIC	<--	ESE_IP	.342
PERCEIVED_RESOURCE_AVAILIBILITY_PUBLIC	<--	ESE_PS	-.068
c14ese11	<--	ESE_IP	.586
c14ese16	<--	ESE_IP	.665
c14ese5	<--	ESE_PS	.545
c14ese4	<--	ESE_PS	.661
c14ese6	<--	ESE_PS	.672
c14ese7	<--	ESE_PS	.701
l24stali	<--	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.278
l24stali	<--	ESE_IP	-.104
l24stali	<--	ESE_PS	.270
c14ese1	<--	ESE_PS	.548
o22pub6	<--	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.865
o22pub5	<--	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.893
o22pub4	<--	PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.878

●Squared Multiple Correlations: (Entrepreneurs - Default model)

	Estimate
PERCEIVED_RESOURCE_ ACCESSIBILITY _PUBLIC	.087
o22pub6	.748
c14ese1	.301
l24stali	.130
o22pub4	.772
o22pub5	.797
c14ese7	.491
c14ese6	.451
c14ese4	.437
c14ese5	.297
c14ese16	.442
c14ese11	.343

As can be seen from the Table above, most of the items are significant with the exception of the ESE PS – Perceived Resource Accessibility Public relationship and the ESE IP - 124stali relationship. With the exception of these two relationships, standardized regression weights range from 0.270 to 0.893, with the squared multiple correlations ranging from 0.87 to 0.797.

4.4 Level of Support for Hypotheses

As a result of the above analyses, the level of support for the Hypotheses underpinning the model for the entrepreneur group is as follows:

H1 hypothesised that a higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group. This hypothesis was not supported. The relationship between perceived accessibility of family resources and entrepreneurial intention is not significant for the entrepreneur group.

H2 hypothesised that a higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group. This hypothesis was supported. The relationship between perceived accessibility of public

resources and entrepreneurial intention is positive and significant for the entrepreneurs group. (β=0.28, p=0.001)

H3 hypothesised that a higher level of entrepreneurial self-efficacy will be positively associated with higher entrepreneurial intentions for the entrepreneur group. This hypothesis was supported. The relationship between entrepreneurial self-efficacy and entrepreneurial intention is positive and significant for the entrepreneur group. (β=0.27, p=0.048)

H4 hypothesised that entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of family resources for the entrepreneur group. This hypothesis was not supported. The relationship between entrepreneurial self-efficacy and perceived accessibility of family resources is not significant for the entrepreneur group.

H5 hypothesised that entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of public resources for the entrepreneur group. This hypothesis was supported. The relationship between entrepreneurial self-efficacy and perceived accessibility of public resources is positive and significant for the entrepreneur group. (β=0.34, p=0.046)

4.5 Chapter Summary

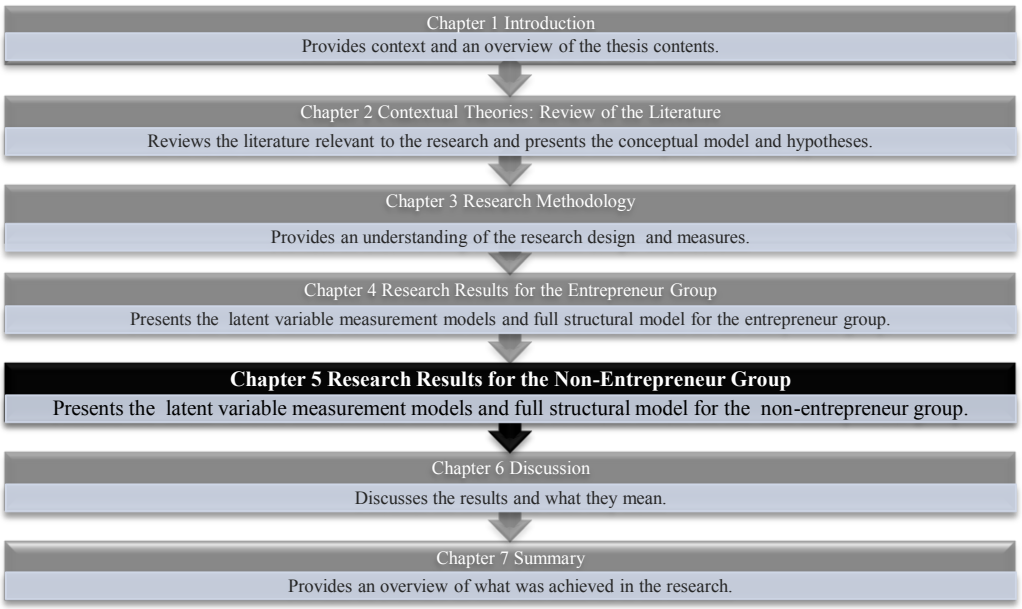
Chapter 4 presented the results of the analyses undertaken with the entrepreneur group. This Chapter was divided into two main sections. The first section presented the analyses for the individual measurement models for ESE, and perceived accessibility to family and public resources. Using Maximum Likelihood (ML) Estimates, AMOS was used to run the one factor congeneric models. Analysis outputs generated included:

- Regression weights
- Sample Covariances
- Sample Correlations
- Standardized Regression Weights
- Squared Multiple Correlations
- Chi-square
- Bollen-Stine p
- Standardised Root Mean-square Residual (SRMR)
- Root Mean-Square Error of Approximation (RMSEA)

- Tucker-Lewis Index (TLI)
- Comparative Fit Index (CFI)

The second part of the Chapter examined the full structural model that started with ESE and perceived accessibility of family and public resources. After the analysis process was completed, the perceived accessibility of the family resource construct was eliminated. It appears that in a Chinese village context, existing entrepreneurs do value being able to access public resources.

CHAPTER 5
Research Results for the Non-Entrepreneur Group



5.1 Introduction

Chapter 5 presents the results of the analyses for the non-entrepreneur group. The Chapter first presents the results of a number of preliminary analyses including reliability and validity. Structural equation modelling (SEM) is then used to test the relationship among the latent variables in the model: entrepreneurial self-efficacy, perceived accessibility of family and public resources, and entrepreneurial intention. A discussion of the results is provided in Chapter 6.

5.2 Measurement Model Analyses

This section presents the results of the analyses for the measurement models. The sub-instruments of entrepreneurial self-efficacy and perceived accessibility of resources are tested using Amos. One factor measurement models are first examined to evaluate the fit of the models with the data. This step is necessary prior to examining the full structural model which examines the relationships among the latent variables appearing in the model.

5.2.1 Assessing Multivariate Normality

One of the assumptions that underlies SEM is that the data is multivariate normally distributed. If the data does not meet this assumption then a revised Chi-Square statistic

should be used as one of the model fit indices. In AMOS, this is the Bollen-Stine p. Mardia's Coefficient (1974) is used in this research to evaluate the multivariate normality for the non-entrepreneur group distributions. This statistic can be provided in the AMOS output reports. Table 5.1 presents the results of the non-normality tests.

Table 5.1 Results of Tests for Non-Normality for the Non-Entrepreneur Group with all Items Included

Construct Factor Details*	Mardia's coefficient Results (Critical Ratio - c.r.)
Perceived Accessibility of Family Resources	31.102
Perceived Accessibility of Public Resources	27.790
Entrepreneurial Self-efficacy: Searching	2.175
Entrepreneurial Self-efficacy: Planning	0.306
Entrepreneurial Self-efficacy: Marshalling	5.062
Entrepreneurial Self-efficacy: Implementing People	15.893
Entrepreneurial Self-efficacy: Implementing Finance	7.471

The results show that the data is mainly distributed non-normally since Mardia's coefficient is larger than three for most sub-instrument data (Mullan, Markland & Ingledew 1997). Thus, use of the Bollen-Stine p statistic as a replacement for the Chi-Square statistic was adopted to deal with the non-normality since structural equation modelling assumes normality of the data being analysed (however, both the Chi-square and Bollen-Stine bootstrap statistics are reported).

5.2.2 Analysis of the One Factor Congeneric Models

The following sections present the one-factor congeneric measurement models and the results for the constructs of interest in this research:

- Entrepreneurial Self-efficacy: Searching (3 items)
- Entrepreneurial Self-efficacy: Planning (4 items)
- Entrepreneurial Self-efficacy: Marshalling (3items)
- Entrepreneurial Self-efficacy: Implementing People (6 items)
- Entrepreneurial Self-efficacy: Implementing Finance (3 items)

- Perceived Accessibility of Family Resources (6 items)
- Perceived Accessibility of Public Resources (6 items)

In all cases, the latent variable variance was set to –1" to allow for examination of all factor loadings and their significance. Using Maximum Likelihood (ML) Estimates, AMOS was used to run the one factor congeneric models. Analysis outputs generated included:

- Regression weights
- Sample Covariances
- Sample Correlations
- Standardized Regression Weights
- Squared Multiple Correlations
- Chi-square
- Bollen-Stine p
- Standardised Root Mean-square Residual (SRMR)
- Root Mean-Square Error of Approximation (RMSEA)
- Tucker-Lewis Index (TLI), and
- Comparative Fit Index (CFI)

The one-factor measurement model results for the non-entrepreneur group are presented in the following sections.

5.2.3 One Factor Measurement Models

This section presents the results of the analyses for the non-entrepreneur group one factor measurement models for perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial self-efficacy (ESE) – searching, planning, marshalling, implementing people and implementing finance. Since several sub-instruments have less than four items (resulting in insufficient degrees of freedom being available to undertake evaluation of the measurement models for these variables individually – they need to be paired with another variable to increase the number of degrees of freedom), the research starts with entrepreneurial self-efficacy: planning and entrepreneurial self-efficacy: implementing people which have more than four items. The analyses involve an item reduction process as explained in Chapter 4.

5.2.3.1 Entrepreneurial Self-efficacy: Planning

The ESE: Planning dimension includes four items:

- c14ese4: estimate customer demand for a new product or service
- c14ese5: determine a competitive price for a new product or service
- c14ese6: estimate the amount of start-up funds and working capital necessary to start my business
- c14ese7: design an effective marketing/advertising campaign for a new product or service

Figure 5.1 provides an overview of the one factor measurement model for entrepreneurial self-efficacy: planning.

Figure 5.1 One Factor Measurement Model for ESE: Planning

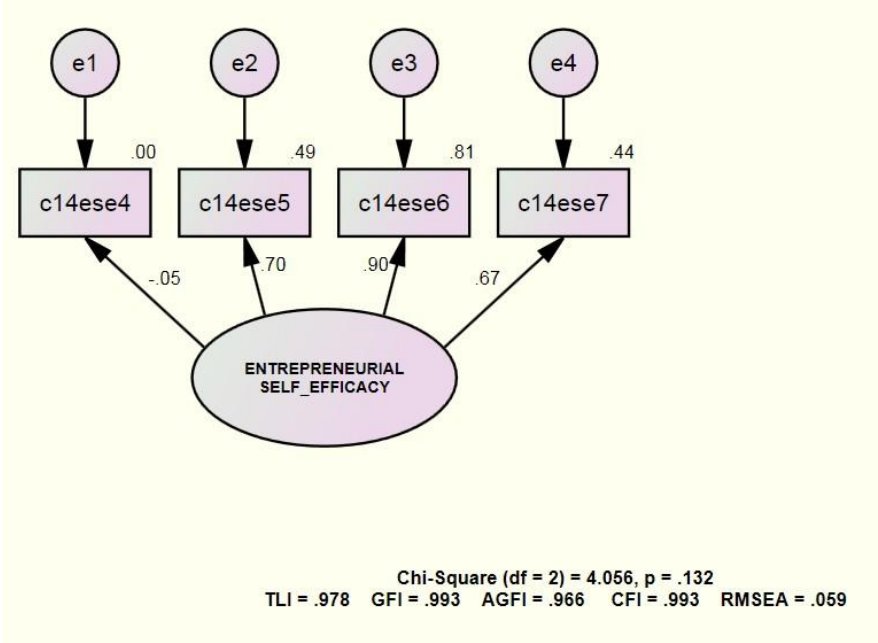


Table 5.2 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for Entrepreneurial Self-efficacy: Planning.

Table 5.2 Analysis Statistics of the One Factor Measurement Model for ESE: Planning

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese4--c14ese7	4	4.056	2	.132	.128	.059	.000	.000	.324	.978	.993	.0263	.602	3.703	1.095

As can be seen, the model, as developed, appears to fit the data since all the model fit indices are within the relevant ranges. Thus, the model appears to be relevant in a Chinese village context and no item reduction is necessary.

Table 5.3 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for entrepreneurial self-efficacy: planning.

Table 5.3 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model ESE: Planning

●Sample Covariances (2. Non-Entrepreneurs)

	c14ese7	c14ese6	c14ese5	c14ese4
c14ese7	1.128			
c14ese6	.700	1.208		
c14ese5	.538	.747	1.168	
c14ese4	.059	-.074	-.047	1.249

Condition number = 6.400

Eigenvalues

2.500 1.261 .601 .391

Determinant of sample covariance matrix = .741

●Sample Correlations (2. Non-Entrepreneurs)

	c14ese7	c14ese6	c14ese5	c14ese4
c14ese7	1.000			
c14ese6	.600	1.000		
c14ese5	.468	.629	1.000	

	c14ese7	c14ese6	c14ese5	c14ese4
c14ese4	.050	-.061	-.039	1.000

Condition number = 6.485

Eigenvalues

2.135 1.012 .524 .329

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971).

Table 5.4 provides the regression weights, standardised regression weights, and squared multiple correlations for entrepreneurial self-efficacy: planning dimension.

Table 5.4 the Entrepreneur Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for the Perceived Entrepreneurial Self-efficacy: Planning

● Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
c14ese4	<---	ENTREPRENEURIAL_SELF_EFFICACY	-.052	.070	-.743	.457	par_1
c14ese5	<---	ENTREPRENEURIAL_SELF_EFFICACY	.756	.062	12.133	***	par_2
c14ese6	<---	ENTREPRENEURIAL_SELF_EFFICACY	.990	.063	15.728	***	par_3
c14ese7	<---	ENTREPRENEURIAL_SELF_EFFICACY	.707	.061	11.542	***	par_4

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate
c14ese4	<---	ENTREPRENEURIAL_SELF_EFFICACY	-.047
c14ese5	<---	ENTREPRENEURIAL_SELF_EFFICACY	.699
c14ese6	<---	ENTREPRENEURIAL_SELF_EFFICACY	.901
c14ese7	<---	ENTREPRENEURIAL_SELF_EFFICACY	.666

●Squared Multiple Correlations: (2. Non-Entrepreneurs - Default model)

	Estimate
c14ese7	.444
c14ese6	.811

	Estimate
c14ese5	.489
c14ese4	.002

As can be seen, c14ese4 is not significant while the other items are significant with the standardized regression weights ranging from-0.047 to 0.901, and the squared multiple correlations ranging from 0.002 to 0.811. C14ese4 therefore contributes little in the way of variance in this sub-instrument; however, since the measurement model requires more than three items for the software to show the model fit, this item is kept temporarily to facilitate the analysis.

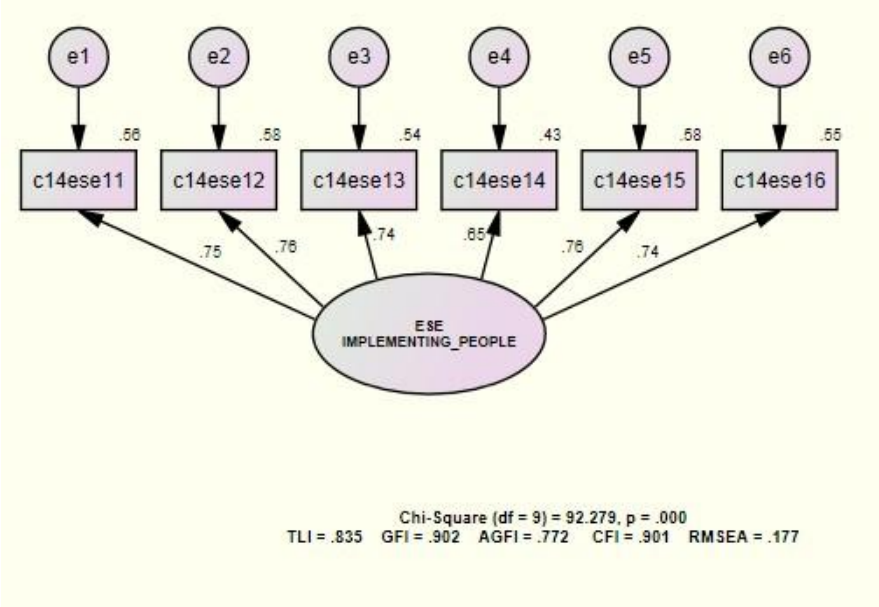
5.2.3.2 Entrepreneurial Self-Efficacy: Implementing People

The Entrepreneurial Self-efficacy: Implementing People instrument comprises six items. The latent ESE implementing people is a function of the observed variables:

- c14ese11: Supervise employees
- c14ese12: Recruit and hire employees
- c14ese13: Delegate tasks and responsibilities to employees in my business
- c14ese14: Deal effectively with day-to-day problem and crises
- c14ese15: Inspire, encourage, and motivate my employees
- c14ese16: Train employees

Figure 5.2 provides an overview of the one factor measurement model for entrepreneurial self-efficacy: implementing people.

Figure 5.2 One Factor Measurement Model
for Entrepreneurial Self-Efficacy: Implementing People



As can be seen from the model fit indices appearing in Figure 5.2, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 5.5.

Table 5.5 Analysis Statistics of the One Factor Measurement Model
for ESE: Implementing People

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese11-c14ese16	6	92.279	9	.000	.002	.177	.145	.211	.000	.835	.901	.0559	.875	3.804	1.049
Remove c14ese15	5	23.567	5	.000	.024	.112	.069	.160	.011	.937	.968	.03359	.847	3.784	1.045
Remove c14ese14	4	2.462	2	.292	.443	.028	.000	.123	.521	.997	.999	.0137	.839	3.762	1.043

The revised model appears in Figure 5.3. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.3 Revised One Factor Measurement Model for ESE: Implementing People

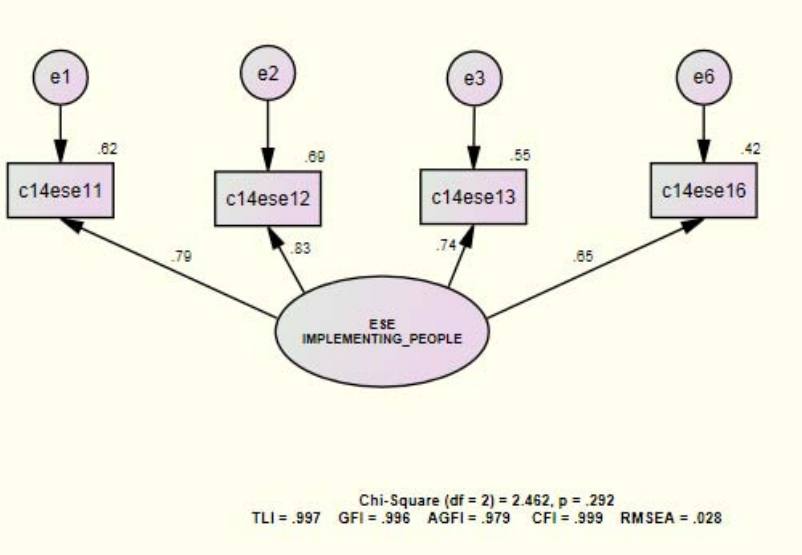


Table 5.6 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for ESE: Implementing People

Table 5.6 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model for Entrepreneurial Self-efficacy: Implementing People

● Sample Covariances (2. Non-Entrepreneurs)

	c14ese16	c14ese13	c14ese12	c14ese11
c14ese16	1.151			
c14ese13	.549	.983		
c14ese12	.564	.605	.994	
c14ese11	.586	.632	.736	1.216

Condition number = 8.535

Eigenvalues

2.931 .623 .447 .343

Determinant of sample covariance matrix = .280

●Sample Correlations (2. Non-Entrepreneurs)

	c14ese16	c14ese13	c14ese12	c14ese11

	c14ese16	c14ese13	c14ese12	c14ese11
c14ese16	1.000			
c14ese13	.516	1.000		
c14ese12	.527	.612	1.000	
c14ese11	.496	.578	.669	1.000

Condition number = 8.292

Eigenvalues

2.703 .541 .429 .326

As can be seen from the eigenvalues, there appears to be a one factor solution for the model (Jöreskog 1971). Table 5.7 provides regression weights, standardised regression weights, and squared multiple correlations for the entrepreneurial self-efficacy: implementing people dimension.

Table 5.7 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Entrepreneurial Self-efficacy: Implementing People

● Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
c14ese11	<---	ESE_IMPLEMENTING_PEOPLE	.871	.058	15.067	***	par_1
c14ese12	<---	ESE_IMPLEMENTING_PEOPLE	.831	.051	16.189	***	par_2
c14ese13	<---	ESE_IMPLEMENTING_PEOPLE	.737	.053	13.906	***	par_3
c14ese16	<---	ESE_IMPLEMENTING_PEOPLE	.693	.060	11.584	***	par_4

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate
c14ese11	<---	ESE_IMPLEMENTING_PEOPLE	.790
c14ese12	<---	ESE_IMPLEMENTING_PEOPLE	.833
c14ese13	<---	ESE_IMPLEMENTING_PEOPLE	.743
c14ese16	<---	ESE_IMPLEMENTING_PEOPLE	.646

●Squared Multiple Correlations: (2. Non-Entrepreneurs - Default model)

	Estimate

	Estimate
c14ese16	.417
c14ese13	.552
c14ese12	.694
c14ese11	.624

Each of the items is significant with the standardized regression weights ranging from 0.646 to 0.833, and the squared multiple correlations ranging from 0.417 to 0.694.

The measures of fit statistics can be seen as confirming construct validity where the measured indicators are taken to actually measure the latent construct or factor shown in the model (Kline 2005). Convergence validity (which is a measure of the magnitude of the direct structural relationship between a measured variable and a latent construct or factor) is achieved when the regression coefficients or factor loadings are significantly different from zero.

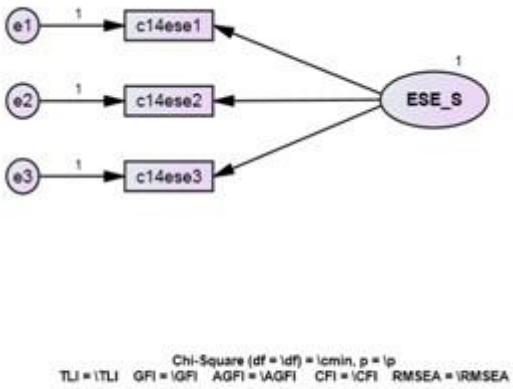
5.2.3.3 Entrepreneurial Self-efficacy: Searching

The McGee et al. (2009) ESE: Searching sub-instrument consists of 6 items. The latent variable, ESE-Searching, is a function of the observed variables:

- c14ese1: Brainstorm (come up with) a new idea for a product or service
- c14ese2: Identify the need for a new product or service
- c14ese3: Design a product or service that will satisfy customer needs and wants

Figure 5.4 provides an overview of the ESE: Searching measurement model.

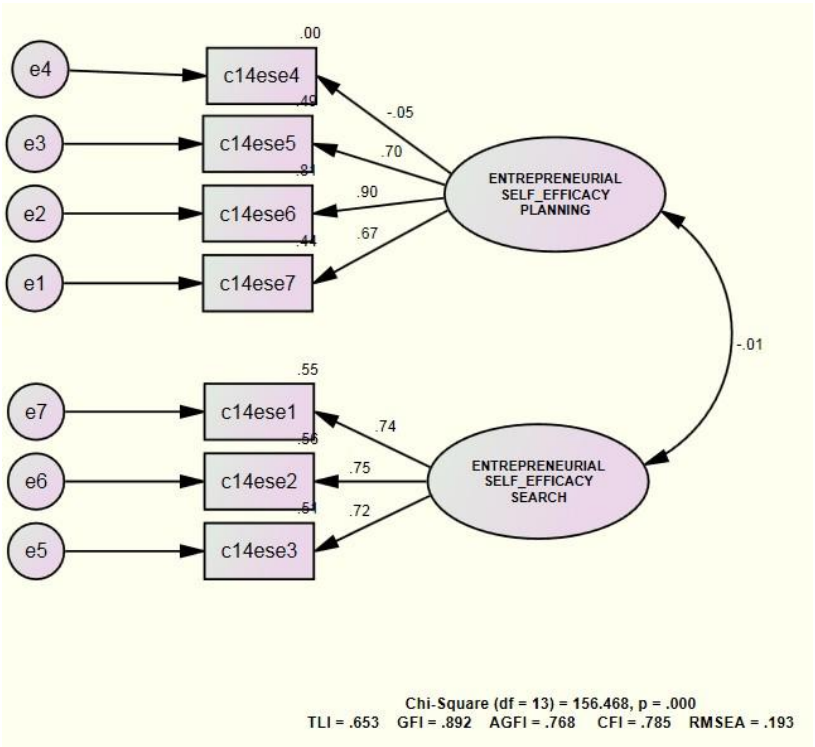
Figure 5.4 One Factor Measurement Model for ESE: Searching



As discussed in Chapter four, latent variable, ESE: Planning is used to pair with ESE: searching for analysis purpose since ESE: Searching has insufficient degrees of freedom due to containing only three items (four are needed as a minimum dor there to be adequate degrees of freedom to allow analysis).

Figure 5.5 provides an overview of the two factor measurement model for: Entrepreneurial Self-efficacy: Searching and Entrepreneurial Self-efficacy: Planning:

Figure 5.5 Two Factor Measurement Model for ESE: Searching and ESE: Planning



As can be seen from the model fit indices appearing in Figure 5.5, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected. The steps undertaken and the resulting analysis statistics appear in Table 5.8.

Table 5.8 Analysis Statistics of the Paired One Factor Measurement Models

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese1 – c14ese7	7	156.468	13	.000	.002	.193	.167	.221	.000	.653	.785	.1694	.778(1-3)	3.732(1-3)	1.0707(1-3)
Remove c14ese4	6	7.209	8	.514	.471	.000	.000	.064	.870	1.003	1.000	.0218	.778(1-3)	3.732(1-3)	1.0707(1-3)

The revised model appears in Figure 5.6. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.6 Revised Paired Measurement Models for ESE: Searching and ESE: Planning

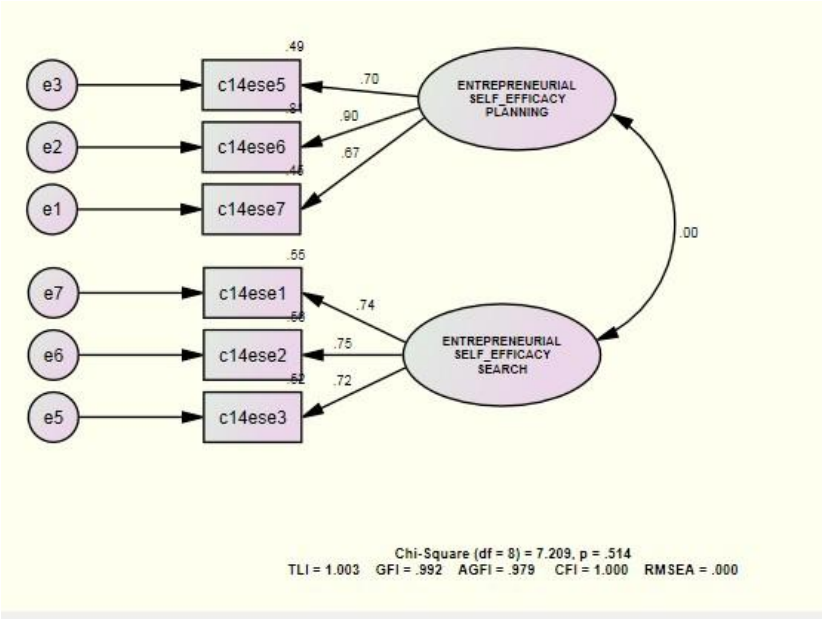


Table 5.9 provides sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for ESE: Searching and planning.

Table 5.9 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model for Entrepreneurial Self-Efficacy: Searching and Planning

● Sample Covariances (2. Non-Entrepreneurs)

	c14ese3	c14ese1	c14ese2	c14ese7	c14ese6	c14ese5
c14ese3	1.329					
c14ese1	.638	1.080				
c14ese2	.629	.586	1.030			
c14ese7	.082	-.041	-.010	1.128		
c14ese6	.029	-.038	.024	.700	1.208	
c14ese5	-.040	-.025	-.026	.538	.747	1.168

Condition number = 6.495

Eigenvalues

2.502 2.395 .663 .522 .474 .385

Determinant of sample covariance matrix = .379

●Sample Correlations (2. Non-Entrepreneurs)

	c14ese3	c14ese1	c14ese2	c14ese7	c14ese6	c14ese5
c14ese3	1.000					
c14ese1	.532	1.000				
c14ese2	.538	.556	1.000			
c14ese7	.067	-.038	-.009	1.000		
c14ese6	.023	-.033	.022	.600	1.000	
c14ese5	-.032	-.022	-.024	.468	.629	1.000

Condition number = 6.542

Eigenvalues

2.141 2.081 .568 .450 .433 .327

The eigenvalues appear to be a two factor solution for the model. Table 5.10 provides the Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations for Entrepreneurial Self-Efficacy: Searching and Planning

Table 5.10 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for ESE: Searching and Planning

● Regression Weights: (2. Non-Entrepreneurs - Default model)

		Estimate	S.E	C.R.	P	Label
c14ese7	<-- ENTREPRENEURIAL_SELF_EFFICACY_PLANNING	.710	.067	11.587	***	par_
c14ese6	<-- ENTREPRENEURIAL_SELF_EFFICACY_PLANNING	.986	.067	15.687	***	par_
c14ese5	<-- ENTREPRENEURIAL_SELF_EFFICACY_PLANNING	.758	.067	12.167	***	par_
c14ese1	<-- ENTREPRENEURIAL_SELF_EFFICACY_SEARCH	.771	.067	12.615	***	par_
c14ese2	<-- ENTREPRENEURIAL_SELF_EFFICACY_SEARCH	.760	.067	12.742	***	par_
c14ese3	<-- ENTREPRENEURIAL_SELF_EFFICACY_SEARCH	.827	.067	12.214	***	par_

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

		Estimate
c14ese7	<--- ENTREPRENEURIAL_SELF_EFFICACY_PLANNING	.668
c14ese6	<--- ENTREPRENEURIAL_SELF_EFFICACY_PLANNING	.898
c14ese5	<--- ENTREPRENEURIAL_SELF_EFFICACY_PLANNING	.701
c14ese1	<--- ENTREPRENEURIAL_SELF_EFFICACY_SEARCH	.742
c14ese2	<--- ENTREPRENEURIAL_SELF_EFFICACY_SEARCH	.749
c14ese3	<--- ENTREPRENEURIAL_SELF_EFFICACY_SEARCH	.718

●Squared Multiple Correlations: (2. Non-Entrepreneurs - Default model)

	Estimate
c14ese3	.515
c14ese1	.550
c14ese2	.561
c14ese7	.447
c14ese6	.806

	Estimate
c14ese5	.491

Each of the items is significant with the standardized regression weights ranging from 0.668 to 0.898, and the squared multiple correlations ranging from 0.447 to 0.806.

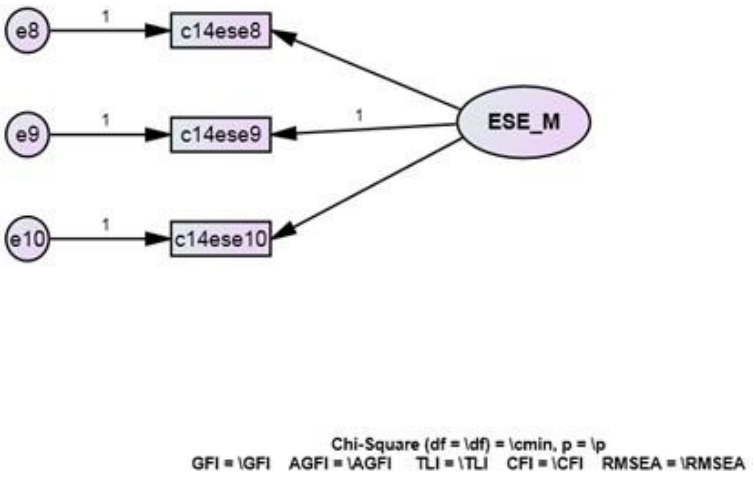
5.2.3.4 Entrepreneurial Self-Efficacy: Marshalling

The McGee et al. (2009) ESE: Marshalling dimension comprises three items:

- c14ese8: Get others to identify with and believe in my vision and plans for a new business
- c14ese9: Network-i.e., make contact with and exchange information with others
- c14ese10: Clearly and concisely explain verbally/in writing my business idea in everyday term

Figure 5.7 provides an overview of the ESE: Marshalling measurement model.

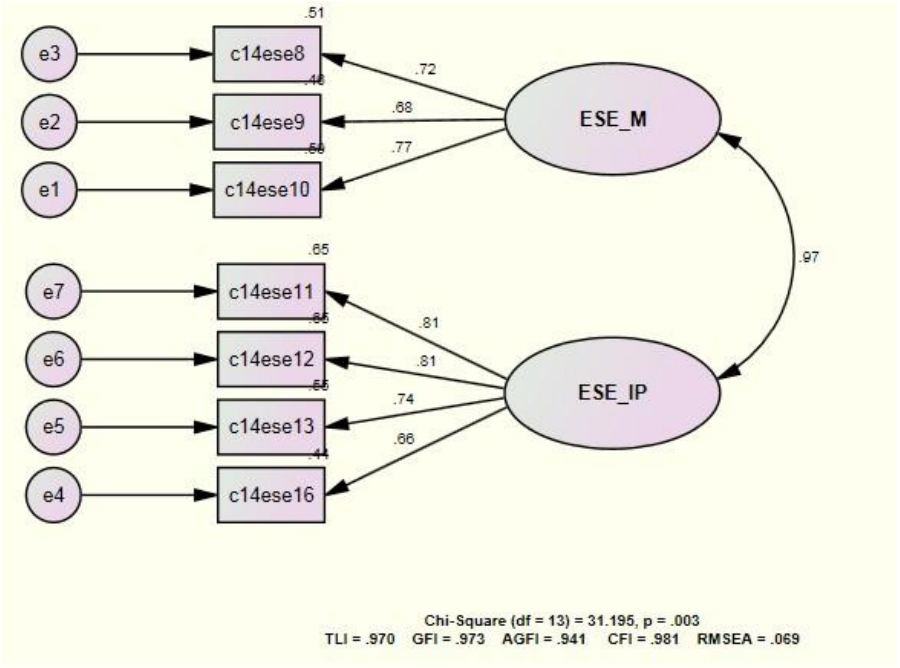
Figure 5.7 One Factor Measurement Model for ESE: Marshalling



Once again, there are insufficient degrees of freedom to analyse the one factor ESE: Marshalling measurement model as there are less than four indicator items reflected in the model. For this reason, for analysis purposes, the one factor ESE: Marshalling measurement model is paired with another ESE measurement model to increase the degrees of freedom

thereby facilitating analysis. Since the ESE: Planning measurement model has already been analysed and was determined to be a good fit of the data, this model is used to pair with the ESE: Marshalling measurement model. Figure 5.8 provides details on the paired measurement models.

Figure 5.8 Two Factor Measurement Model for Entrepreneurial Self-Efficacy: Marshalling and Entrepreneurial Self-Efficacy: Implementing People



As can be seen from the model fit indices appearing in Figure 5.8, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data that was collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 5.11.

Table 5.11 Analysis Statistics of the Paired One Factor Measurement Models ESE: Marshalling and ESE: Implementing People

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD
c14ese8-10 c14ese11,12, 13,16	7	31.195	13	.003	.084	.069	.038	.100	.142	.970	.981	.0272	.767(8-10)	3.789(8-10)	1.060(8-10)
Remove c14ese9	6	6.979	8	.539	.743	.000	.000	.062	.882	1.002	1.000	.0161	.666(8,10)	3.824(8,10)	1.052(8,10)

The revised model appears in Figure 5.9. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.9 Revised Paired Measurement Models for ESE: Marshalling and ESE: Implementing People

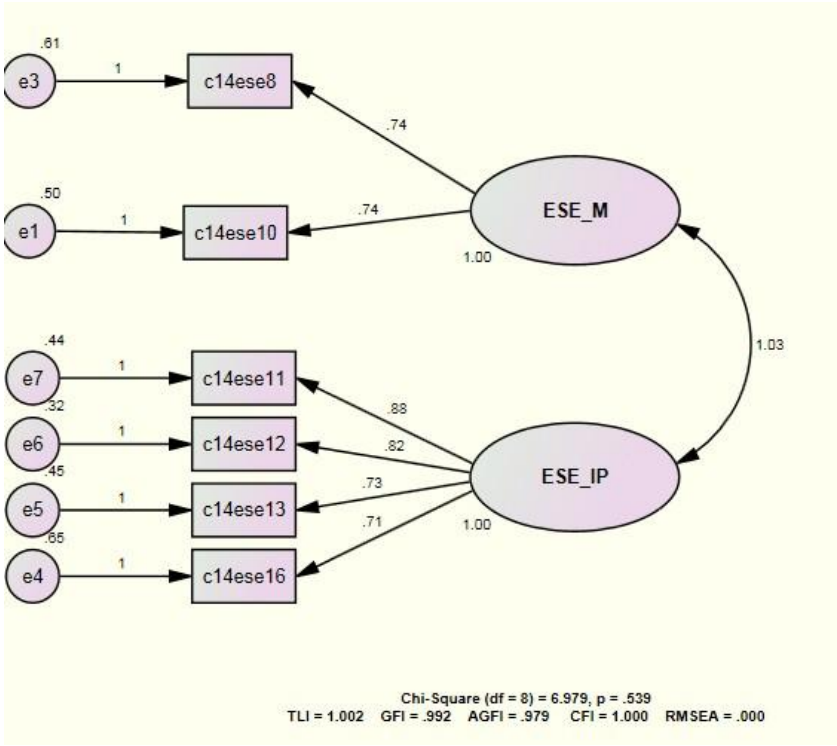


Table 5.12 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model for Entrepreneurial Self-Efficacy: Marshalling and Entrepreneurial Self-Efficacy: Implementing People

● Sample Covariances (2. Non-Entrepreneurs)

	c14ese16	c14ese13	c14ese12	c14ese11	c14ese10	c14ese8
c14ese16	1.151					
c14ese13	.549	.983				
c14ese12	.564	.605	.994			
c14ese11	.586	.632	.736	1.216		
c14ese10	.532	.547	.623	.684	1.042	
c14ese8	.601	.544	.619	.671	.551	1.165

Condition number = 12.155

Eigenvalues

4.119 .646 .560 .460 .428 .339

Determinant of sample covariance matrix = .099

●Sample Correlations (2. Non-Entrepreneurs)

	c14ese16	c14ese13	c14ese12	c14ese11	c14ese10	c14ese8
c14ese16	1.000					
c14ese13	.516	1.000				
c14ese12	.527	.612	1.000			
c14ese11	.496	.578	.669	1.000		
c14ese10	.486	.540	.612	.608	1.000	
c14ese8	.519	.508	.575	.563	.500	1.000

Condition number = 11.588

Eigenvalues

3.776 .568 .493 .455 .382 .326

As can be seen from the eigenvalues appears to be two factors solution for the model. Table 5.13 provides the regression weights, standardised regression weights, and squared multiple correlations for ESE: marshalling and implementing people dimensions.

Table 5.13 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for ESE: Marshalling and Implementing People

● Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate	S.E	C.R.	P	Lab
c14ese8	<--	ENTREPRENEURIAL_SELF_EFFICACY_MARSHALING	.745	.06	12.45	**	par_
c14ese10	<--	ENTREPRENEURIAL_SELF_EFFICACY_MARSHALING	.739	.05	13.13	**	par_
c14ese11	<--	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.879	.05	15.82	**	par_
c14ese12	<--	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.821	.04	16.58	**	par_
c14ese13	<--	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.728	.05	14.08	**	par_
c14ese16	<--	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.709	.05	12.22	**	par_

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate
c14ese8	<---	ENTREPRENEURIAL_SELF_EFFICACY_MARSHALING	.690
c14ese10	<---	ENTREPRENEURIAL_SELF_EFFICACY_MARSHALING	.724
c14ese11	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.798
c14ese12	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.823
c14ese13	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.735
c14ese16	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.661

●Squared Multiple Correlations: (2. Non-Entrepreneurs - Default model)

	Estimate
c14ese16	.437
c14ese13	.540
c14ese12	.678
c14ese11	.636

	Estimate
c14ese10	.524
c14ese8	.476

Each of the items is significant with the standardized regression weights ranging from 0.661 to 0.823, and the squared multiple correlations ranging from 0.437 to 0.678.

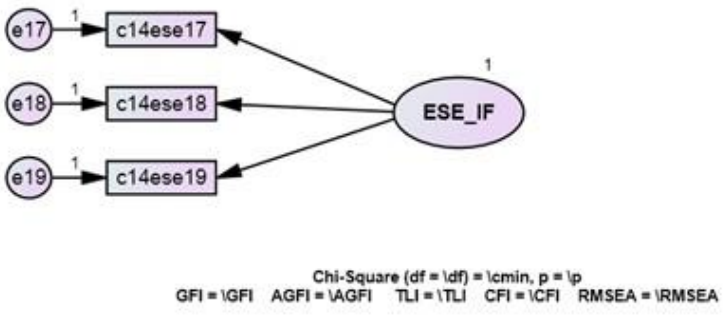
5.2.3.5 Entrepreneurial Self-Efficacy: Implementing Financials

The latent ESE: Implementing Financial is a function of the observed variables: because

- c14ese17: Organize and maintain the financial records of my business
- c14ese18: Manage the financial assets of my business
- c14ese19: Read and interpret financial statements

Figure 5.10 provides an overview of the ESE: implementing financial measurement model.

Figure 5.10 One Factor Measurement Model for ESE: Implementing Financial

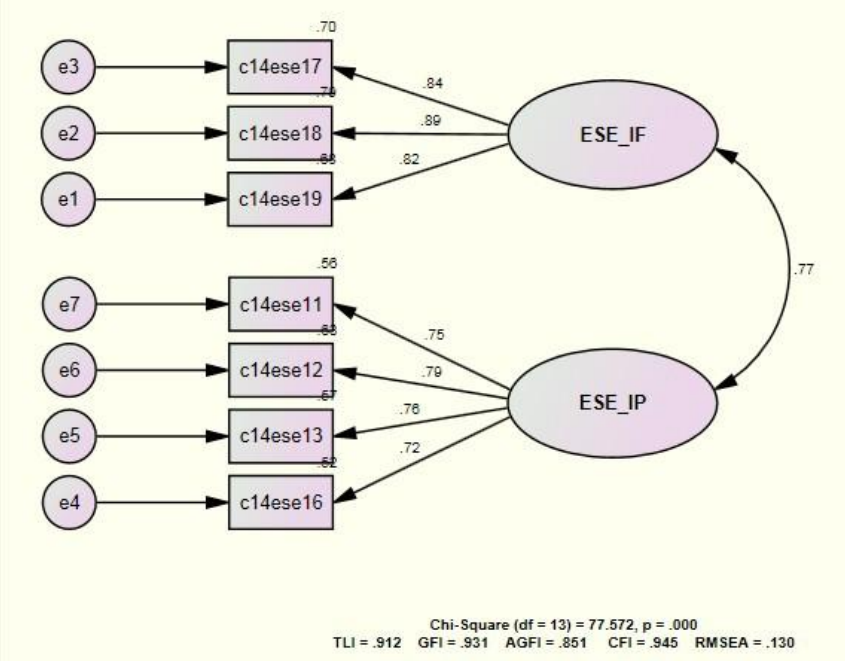


There are, however, insufficient degrees of freedom to analyse the one factor ESE: Implementing Financials measurement model. For this reason, for analysis purposes, the one factor ESE: implementing financial measurement model needs to be paired with another measurement model to increase the degrees of freedom thereby allowing for analysis.

Since the ESE: implementing people measurement model has already been analysed and the revised model was determined to be a good fit of the data, this model is used to pair with the ESE: Implementing Financials measurement model. Figure 5.11 provides details on the paired measurement models.

Figure 5.11 provides an overview of the two factor measurement model for ESE: implementing financial and ESE: implementing people:

Figure 5.11 Two Factor Measurement Model for ESE: Implementing People and Implementing Financial



As can be seen from the model fit indices appearing in Figure 4.10, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 4.12.

Table 5.14 Analysis Statistics of the Paired One Factor Measurement Models ESE: Implementing Financials and ESE: Implementing People

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach	Mean	SD

c14ese11,12,13,16 c14ese17-19	7	77.572	13	.000	.006	.130	.103	.158	.000	.912	.945	.0605	.874(17-19)	3.881(17-19)	1.143(17-19)
Remove c14ese16	6	16.942	8	.0031	.245	.062	.018	.103	.278	.983	.991	.0297	.874(17-19)	3.881(17-19)	1.143(17-19)

The revised model appears in Figure 5.12. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.12 Revised Paired Measurement Models
for ESE: Implementing Financials and ESE: Implementing People

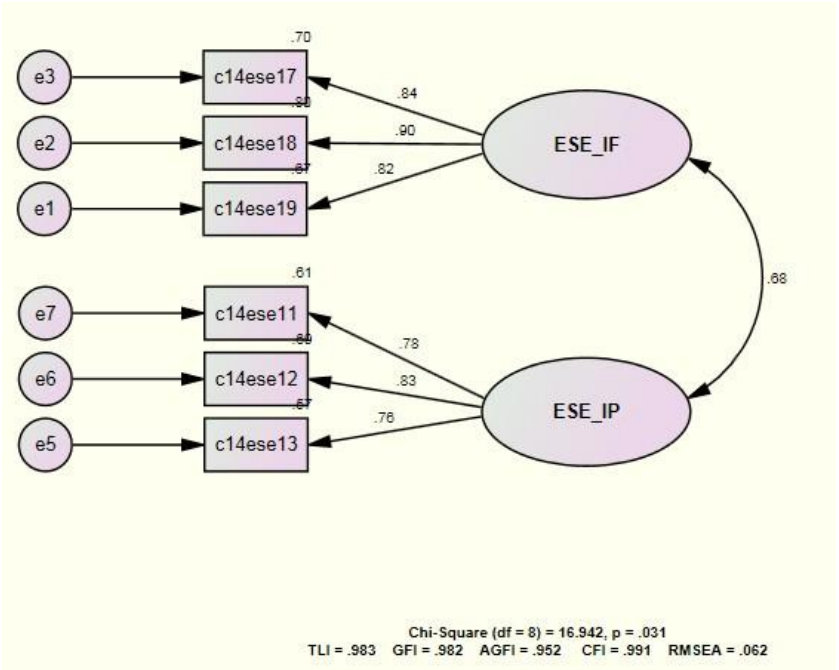


Table 5.15 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for ESE: implementing people and implementing financials.

Table 5.15 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model for ESE: Implementing People and ESE: Implementing Financials

● Sample Covariances (2. Non-Entrepreneurs)

	c14ese19	c14ese18	c14ese17	c14ese13	c14ese12	c14ese11
c14ese19	1.275					
c14ese18	.935	1.261				
c14ese17	.792	.885	1.099			
c14ese13	.564	.546	.513	.983		
c14ese12	.541	.531	.485	.605	.994	
c14ese11	.479	.541	.521	.632	.736	1.216

Condition number = 15.419

Eigenvalues

4.270 1.101 .465 .391 .323 .277

Determinant of sample covariance matrix = .077

●Sample Correlations (2. Non-Entrepreneurs)

	c14ese19	c14ese18	c14ese17	c14ese13	c14ese12	c14ese11
c14ese19	1.000					
c14ese18	.737	1.000				
c14ese17	.669	.751	1.000			
c14ese13	.504	.491	.494	1.000		
c14ese12	.480	.474	.464	.612	1.000	
c14ese11	.384	.437	.450	.578	.669	1.000

Condition number = 16.422

Eigenvalues

3.737 .955 .432 .361 .289 .228

As can be seen from the eigenvalues appears to be a two factor solution for the model. Table 5.16 provides regression weights, standardised regression weights, and squared multiple Correlations for ESE: implementing people and financial dimensions.

Table 5.16 Group Scalars

(Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations)

for ESE: Implementing Financial and ESE: Implementing People

● Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
c14ese11	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.861	.058	14.833	***	par_1
c14ese12	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.828	.051	16.101	***	par_2
c14ese13	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.748	.053	14.186	***	par_3
c14ese17	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_FINANCE	.876	.052	16.970	***	par_5
c14ese18	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_FINANCE	1.006	.053	18.845	***	par_6
c14ese19	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_FINANCE	.923	.056	16.459	***	par_7

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate
c14ese11	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.781
c14ese12	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.830
c14ese13	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_PEOPLE	.755
c14ese17	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_FINANCE	.835
c14ese18	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_FINANCE	.896
c14ese19	<---	ENTREPRENEURIAL_SELF_EFFICACY_IMP_FINANCE	.818

●Squared Multiple Correlations: (2. Non-Entrepreneurs - Default model)

	Estimate
c14ese19	.669
c14ese18	.802
c14ese17	.697
c14ese13	.570
c14ese12	.689
c14ese11	.610

Each of the items is significant with the standardized regression weights ranging from 0.755 to 0.896, and the squared multiple correlations ranging from 0.570 to 0.802.

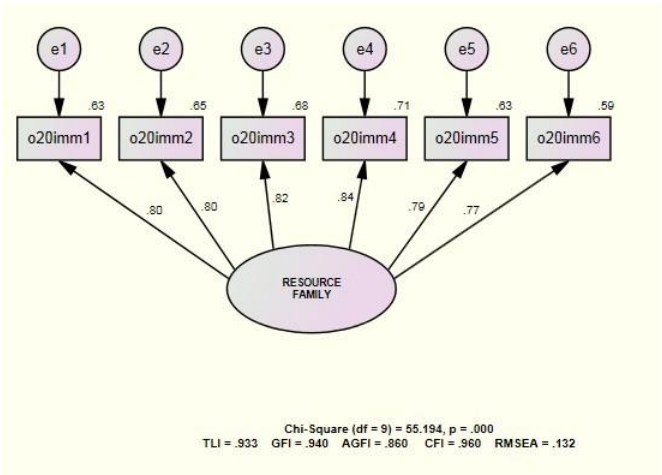
5.2.3.6 Perceived Accessibility of Family Resources

Perceived Accessibility of Family Resource instrument includes 6 items:

- o20 imm1: financial support by the way of money for the venture
- o20 imm2: labour support for your venture
- o20 imm3: business property to support your venture
- o20 imm4: social capital in the form of personal contacts to support your venture
- o20 imm5: business expertise to support your venture
- o20 imm6: other technical, non business expertise to support your venture

Figure 5.13 provides an overview of the one factor measurement model for Perceived Accessibility of Family Resource

Figure 5.13 One Factor Measurement Model for Perceived Accessibility of Family Resource



As can be seen from the model fit indices appearing in Figure 5.13, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data. The steps undertaken and the resulting analysis statistics appear in Table 5.17.

Table 5.17 Analysis Statistics of the One Factor Measurement Model for Perceived Accessibility of Family Resources

Items	020imm1 – 020imm6	Remove 020imm2	Remove 020imm1
No of items	6	5	4
Chi Sq	550194	24.158	0.701
df	9	5	2
p	.000	.000	.701
Bollen-stine p	.006	.034	.810
RMSEA	.132	.114	.000
LO90	.018	.071	.000
HI90	.103	.161	.085
PCLOSE	.278	.009	.841
TLI	.933	.956	1.006
CFI	.960	.978	1.000
SRMR	.0340	.0263	.0054
Cronbach [illegible]	.871	.848	.832
Mean	5.043	5.037	4.974
SD	1.6525	1.662	1.666

Comment: This analysis resulted in two items being removed from the original dimension (items 020imm3 and 020imm4).

The revised model appears in Figure 5.14. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.14 Revised One Factor Measurement Model for Perceived Accessibility of Family Resources

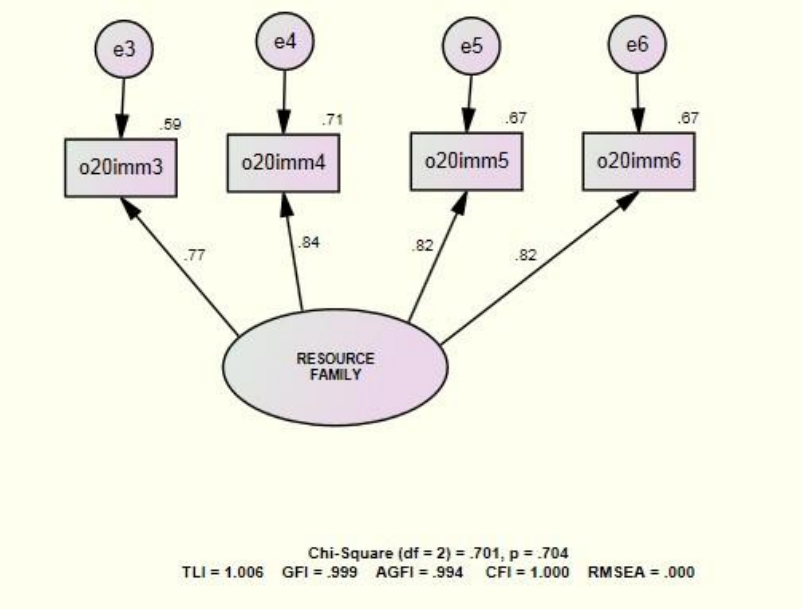


Table 5.18 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for perceived accessibility of family resource

Table 5.18 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model for Perceived Accessibility of Family Resource

● Sample Covariances (2. Non-Entrepreneurs)

	o20imm6	o20imm5	o20imm4	o20imm3
o20imm6	2.092			
o20imm5	1.492	2.385		
o20imm4	1.461	1.594	2.205	
o20imm3	1.390	1.440	1.447	2.292

Condition number = 9.875

Eigenvalues

6.661 .915 .724 .674

Determinant of sample covariance matrix = 2.976

As can be seen from the eigenvalues appears to be a one factor solution for the model. Table 5.19 provides regression weights, standardised regression weights, and squared multiple Correlations for perceived accessibility of family resource dimension.

Table 5.19 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Perceived Accessibility of Family Resource

● Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
o20imm3	<---	RESOURCE_FAMILY	1.158	.078	14.856	***	par_1
o20imm4	<---	RESOURCE_FAMILY	1.249	.073	17.053	***	par_2
o20imm5	<---	RESOURCE_FAMILY	1.264	.077	16.365	***	par_3
o20imm6	<---	RESOURCE_FAMILY	1.181	.072	16.312	***	par_4

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate
o20imm3	<---	RESOURCE_FAMILY	.765
o20imm4	<---	RESOURCE_FAMILY	.841
o20imm5	<---	RESOURCE_FAMILY	.818
o20imm6	<---	RESOURCE_FAMILY	.816

●Squared Multiple Correlations: (2. Non-Entrepreneurs - Default model)

	Estimate
o20imm6	.666
o20imm5	.669
o20imm4	.708
o20imm3	.585

Each of the items is significant with the standardized regression weights ranging from 0.765 to 0.841, and the squared multiple correlations ranging from 0.585 to 0.708.

5.2.3.7 Perceived Accessibility of Public Resources

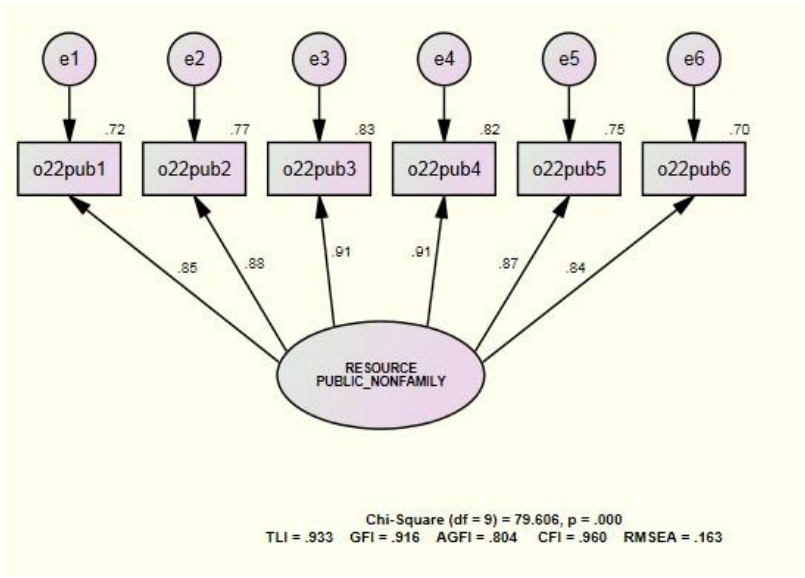
Perceived accessibility of public resource instrument includes 6 items:

- o22pub1: financial support by the way of money for the venture
- o22pub2: labour support for your venture

- o22pub3: business property to support your venture
- o22pu41: social capital in the form of personal contacts to support your venture
- o22pub5: business expertise to support your venture
- o22pub6: other technical, non business expertise to support your venture

Figure 5.15 provides an overview of the one factor measurement model for perceived accessibility of public resource

Figure 5.15 One Factor Measurement Model for Perceived Accessibility of Public Resource



As can be seen from the model fit indices appearing in Figure 5.15, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 5.20.

Table 5.20 Analysis Statistics of the One Factor Measurement Model for Perceived Accessibility of Public Resources

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR	Cronbach Alpha	Mean	SD

o22pub1 – o22pub6	6	79.606	9	.000	.002	.163	.131	.197	.000	.933	.960	.163	.938	4.739	1.73717
Remove o22pub5	5	8.214	5	.145	.449	.047	.000	.102	.467	.995	.998	.0099	.928	4.739	1.7416

The revised model appears in Figure 5.16. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.16 Revised One Factor Measurement Model for Perceived Accessibility of Public Resources

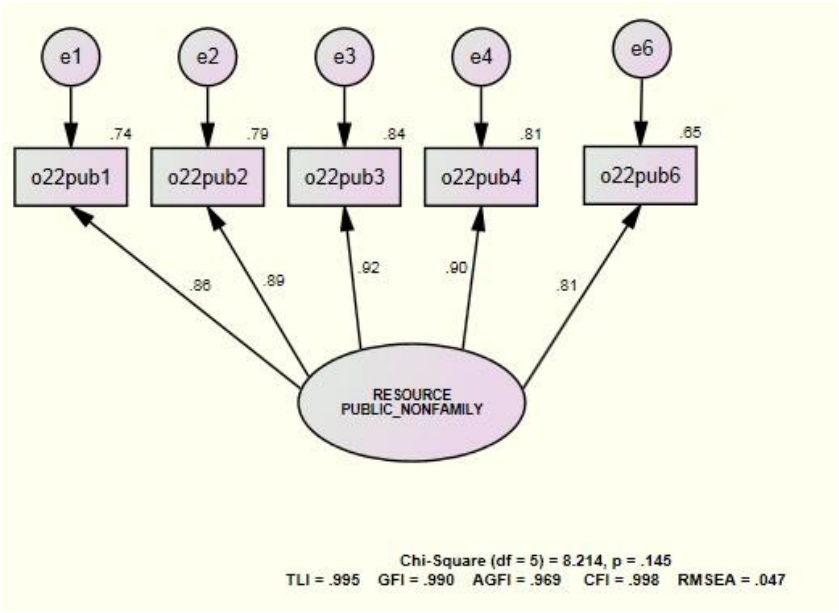


Table 5.21 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for perceived accessibility of public resources.

Table 5.21 Sample Covariances, Sample Correlations, and Eigenvalues for the One-Factor Measurement Model for Perceived Accessibility of Public Resource

● Sample Covariances (2. Non-Entrepreneurs)

	o22pub6	o22pub4	o22pub3	o22pub2	o22pub1
o22pub6	2.969				

	o22pub6	o22pub4	o22pub3	o22pub2	o22pub1
o22pub4	2.015	2.520			
o22pub3	2.025	1.999	2.400		
o22pub2	1.812	1.957	1.925	2.308	
o22pub1	1.896	1.983	1.955	1.853	2.543

Condition number = 25.908

Eigenvalues

10.325 .952 .598 .468 .399

Determinant of sample covariance matrix = 1.096

●Sample Correlations (2. Non-Entrepreneurs)

	o22pub6	o22pub4	o22pub3	o22pub2	o22pub1
o22pub6	1.000				
o22pub4	.737	1.000			
o22pub3	.758	.813	1.000		
o22pub2	.692	.811	.818	1.000	
o22pub1	.690	.783	.791	.765	1.000

Condition number = 24.484

Eigenvalues

4.066 .337 .241 .189 .166

Eigenvalues appear to be a one factor solution for the model. Table 5.22 provides regression weights, standardised regression weights, and squared multiple Correlations for perceived accessibility of public resource dimension.

Table 5.22 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Perceived Accessibility of Public Resource

● Regression Weights: (2. Non-Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
o22pub1	<---	RESOURCE_PUBLIC_NONFAMILY	1.376	.075	18.436	***	par_1
o22pub2	<---	RESOURCE_PUBLIC_NONFAMILY	1.350	.070	19.352	***	par_2
o22pub3	<---	RESOURCE_PUBLIC_NONFAMILY	1.419	.070	20.357	***	par_3

		Estimate	S.E.	C.R.	P	Label
o22pub4	<--- RESOURCE_PUBLIC_NONFAMILY	1.432	.072	19.837	***	par_4
o22pub6	<--- RESOURCE_PUBLIC_NONFAMILY	1.393	.084	16.644	***	par_5

●Standardized Regression Weights: (2. Non-Entrepreneurs - Default model)

	Estimate
o22pub6	.654
o22pub4	.814
o22pub3	.838
o22pub2	.790
o22pub1	.745

Each of the items is significant with the standardized regression weights ranging from 0.809 to 0.916, and the squared multiple correlations ranging from 0.654 to 0.838.

5.2.4 Combined Measurement Model

This section presents the results of the combined measurement models.

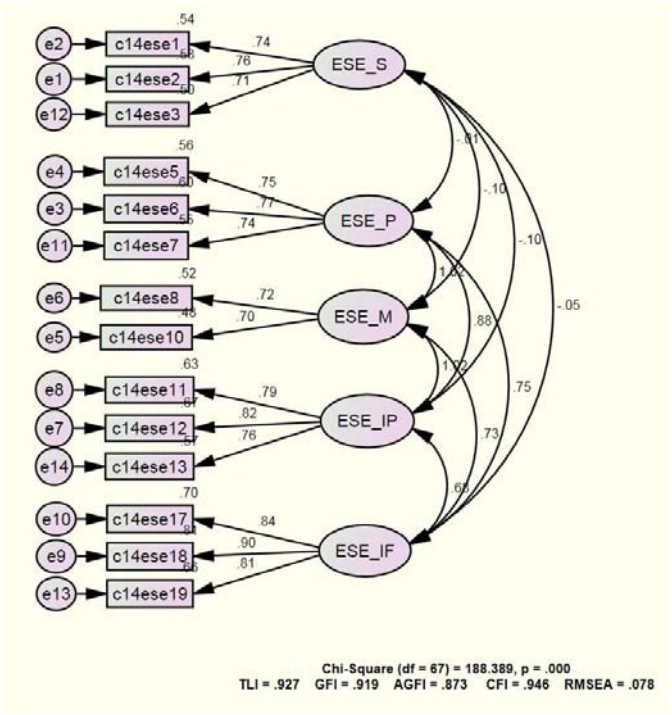
5.2.4.1 Combined Measurement Model - Entrepreneurial Self-Efficacy

The Entrepreneurial Self-Efficacy construct dimensions were combined after taking the necessary steps to fit the individual measurement model to the data. The individual dimension reduction process resulted in the following number of indictor items for each of the ESE dimensions: ESE-Searching - 3 items; ESE: Planning - 3 items; ESE-Marshalling - 2 items; ESE-Implementing People - 3 items; ESE-Implementing Financial - 3 items.

Although the results deviate from the theory (McGee, J.E. et al. 2009), the deviation can be considered to reflect the Chinese village culture context within which the data was collected. McGee et al.‘s (2009) research developed the ESE instrument in a Western environment context.

Figure 5.17 presents the analysis for the combined ESE measurement model.

Figure 5.17 Combined Measurement Model for ESE



As can be seen from the model fit indices appearing in Figure 5.17, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected. The steps undertaken and the resulting analysis statistics appear in Table 5.23.

Table 5.23 Analysis Statistics of the Combined ESE Measurement Models

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR
C14ese1-3 C14ese5-7 C14ese8,10 C14ese11-13 C14ese17-19	14	188.389	67	.000	.002	.078	.065	.092	.000	.927	.946	.0446
Remove C14ese3	13	159.651	55	.000	.002	.080	.066	.095	.000	.929	.950	.0415

.0367	.0319	.0336	.0294	.0299	.0208	
.971	.971	.968	.973	.981	.995	
.956	.958	.951	.955	.968	.991	
.076	.062	.007	.015	.094	.604	
.082	.085	.101	.0105	.098	.079	
.048	.049	.061	.058	.044	.000	
.065	.067	.080	.081	.071	.041	
.018	.018	.008	.010	.052	.359	
.000	.000	.000	.000	.001	.127	
44	38	29	21	17	11	
98.376	88.228	84.233	61.677	42.146	16.402	
12	11	10	9	8	7	
Remove C14ese5	Remove C14ese2	Remove C14ese1	Remove C14ese13	Remove C14ese13	Remove C14ese6	

Comment: This analysis resulted in two items being removed from the original ESE-IP dimension (items C14ese14 and C14ese15).

The revised model appears in Figure 5.18. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.18 Revised ESE Combined Measurement Model

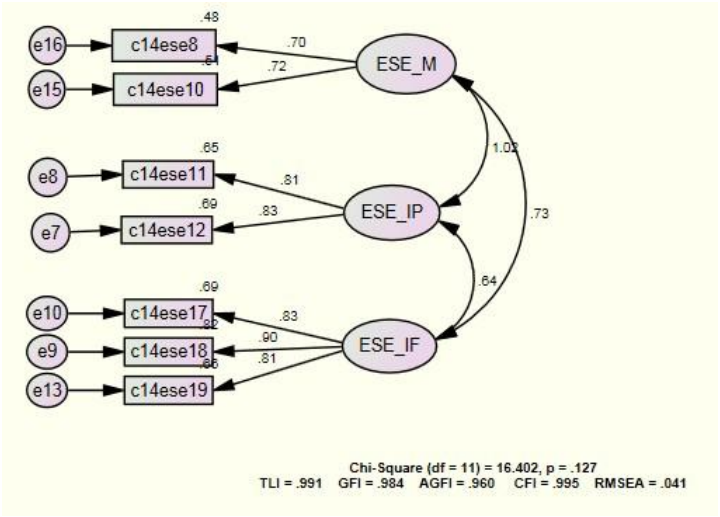


Table 5.24 shows the sample covariances, sample correlations, and eigenvalues for the one-factor measurement model for combined measurement model for ESE

Table 5.24 Sample Covariances, Sample Correlations, and Eigenvalues for the Combined Measurement Model for ESE

● Sample Covariances (2. Non Entrepreneurs)

	c14ese8	c14ese10	c14ese19	c14ese17	c14ese18	c14ese11	c14ese12
c14ese8	1.165						
c14ese10	.551	1.042					
c14ese19	.532	.472	1.275				
c14ese17	.485	.453	.792	1.099			
c14ese18	.617	.485	.935	.885	1.261		
c14ese11	.671	.684	.479	.521	.541	1.216	
c14ese12	.619	.623	.541	.485	.531	.736	.994

Condition number = 17.974

Eigenvalues

4.782 1.246 .579 .451 .406 .324 .266

Determinant of sample covariance matrix = .054

●Sample Correlations (2. Non Entrepreneurs)

	c14ese8	c14ese10	c14ese19	c14ese17	c14ese18	c14ese11	c14ese12

	c14ese8	c14ese10	c14ese19	c14ese17	c14ese18	c14ese11	c14ese12
c14ese8	1.000						
c14ese10	.500	1.000					
c14ese19	.436	.409	1.000				
c14ese17	.428	.423	.669	1.000			
c14ese18	.509	.423	.737	.751	1.000		
c14ese11	.563	.608	.384	.450	.437	1.000	
c14ese12	.575	.612	.480	.464	.474	.669	1.000

Condition number = 18.915

Eigenvalues

4.148 1.068 .509 .400 .368 .288 .219

As can be seen from the eigenvalues appears to be a three factors solution for the model. Table 5.25 provides regression weights, standardised regression weights, and squared multiple correlations for combined measurement model for ESE.

Table 5.25 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for Combined Measurement Model for ESE.

● Regression Weights: (2. Non Entrepreneurs - Default model)

	Estimate	S.E.	C.R.	P	Label
c14ese12 <--- ESE_IP	1.000				
c14ese11 <--- ESE_IP	1.076	.073	14.667	***	par_1
c14ese18 <--- ESE_IF	1.000				
c14ese17 <--- ESE_IF	.859	.048	17.819	***	par_2
c14ese19 <--- ESE_IF	.906	.052	17.307	***	par_4
c14ese10 <--- ESE_M	1.000				
c14ese8 <--- ESE_M	1.026	.090	11.423	***	par_5

●Standardized Regression Weights: (2. Non Entrepreneurs - Default model)

	Estimate
c14ese12 <--- ESE_IP	.830

			Estimate
c14ese11	<---	ESE_IP	.807
c14ese18	<---	ESE_IF	.903
c14ese17	<---	ESE_IF	.831
c14ese19	<---	ESE_IF	.814
c14ese10	<---	ESE_M	.717
c14ese8	<---	ESE_M	.696

●Squared Multiple Correlations: (2. Non Entrepreneurs - Default model)

	Estimate
c14ese8	.485
c14ese10	.515
c14ese19	.662
c14ese17	.690
c14ese18	.815
c14ese11	.651
c14ese12	.688

As can be seen each of the items are significant with the standardized regression weights ranging from 0.696 to 0.903, and the squared multiple correlations ranging from 0.485 to 0.815.

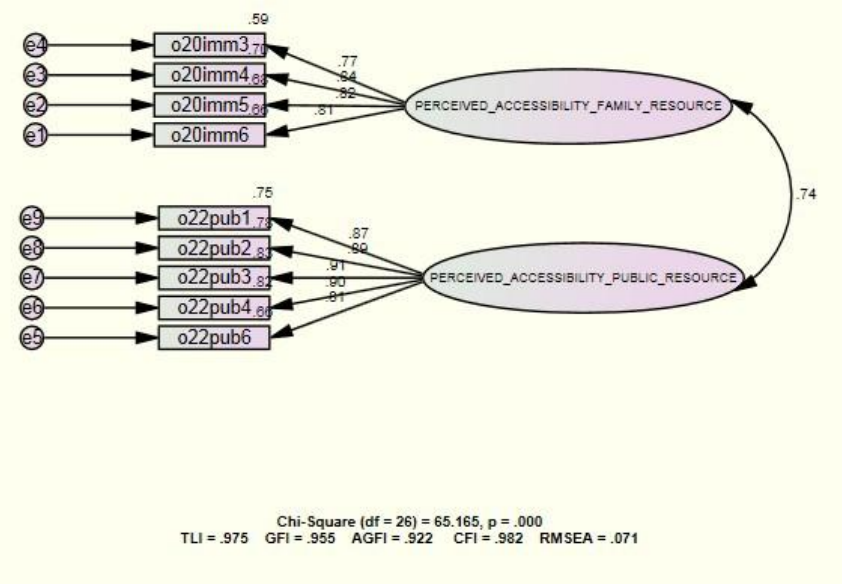
5.2.4.2 Combined Measurement Model – Perceived Resource Accessibility

After taking the necessary steps to fit the individual measurement models to the data, the revised Perceived Resource Accessibility constructs in this research comprised the following dimensions:

- Perceived Accessibility of Family Resources, and
- Perceived Accessibility of Public Resources.

The combined measurement model for the revised Perceived Accessibility of Resources construct that reflects a Chinese village entrepreneurship context appears in Figure 5.19.

Figure 5.19 Perceived Accessibility of Resources Combined Measurement Model



As can be seen from the model fit indices appearing in Figure 5.19, the model does not fit the data well as the model fit statistics are not within the relevant ranges. As such, a process was undertaken to fit the model to the data collected within a Chinese village context. The steps undertaken and the resulting analysis statistics appear in Table 5.26.

Table 5.26 Analysis Statistics of the Combined Perceived Accessibility of Resource Measurement Models

Items	No of items	Chi Sq	df	p	Bollen-stine p	RMSEA	LO90	HI90	PCLOSE	TLI	CFI	SRMR
O20imm3-6 O20pub1-4 O20pub6	9	65.165	26	.000	.078	.071	.050	.093	.050	.975	.982	.00249
Remove O22pub6	8	36.204	19	.010	.232	.055	.027	.083	.342	.986	.991	.0221

Comment: This analysis resulted in one item being removed from the original dimensions (item O22pub6) resulting in a good fitting model.

The revised model appears in Figure 5.20. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.20 Revised Perceived Accessibility of Resources Combined Measurement Model

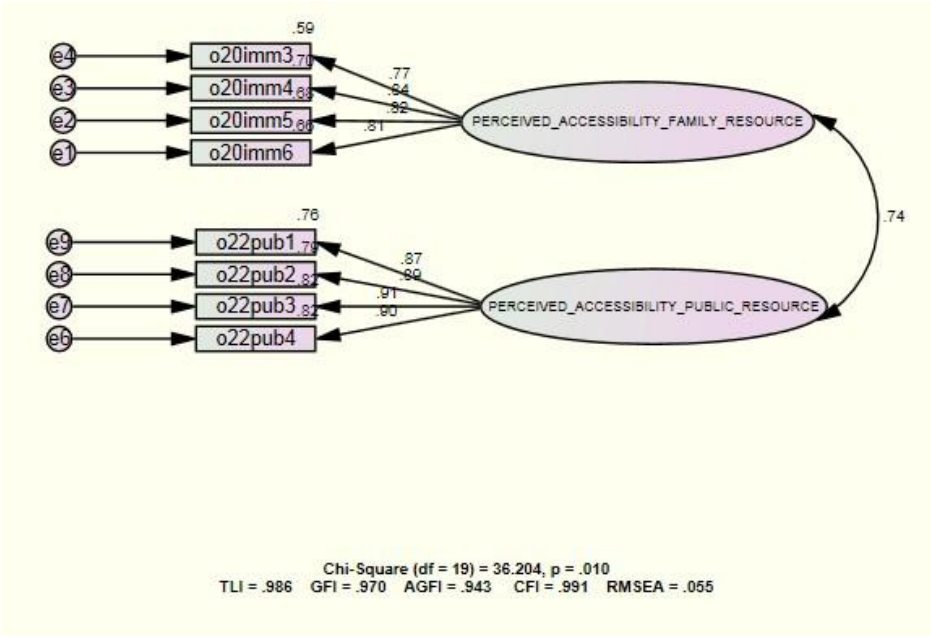


Table 5.27 shows the sample covariances, sample correlations, and eigenvalues for the combined measurement model for Perceived Availability of Resources.

Table 5.27 Sample Covariances, Sample Correlations, and Eigenvalues for the Revised Perceived Availability of Resources Combined Measurement Model

● Sample Covariances (2. Non Entrepreneurs)

	o22pub1	o22pub2	o22pub3	o22pub4	o20imm3	o20imm4	o20imm5	o20imm6
o22pub1	2.543							
o22pub2	1.853	2.308						
o22pub3	1.955	1.925	2.400					
o22pub4	1.983	1.957	1.999	2.520				
o20imm3	1.229	1.162	1.316	1.229	2.292			
o20imm4	1.341	1.165	1.200	1.368	1.447	2.205		

	o22pub1	o22pub2	o22pub3	o22pub4	o20imm3	o20imm4	o20imm5	o20imm6
o20imm5	1.494	1.225	1.284	1.423	1.440	1.594	2.385	
o20imm6	1.232	1.096	1.125	1.263	1.390	1.461	1.492	2.092

Condition number = 31.903

Eigenvalues

12.586 2.373 .977 .741 .678 .560 .437 .395

Determinant of sample covariance matrix = 1.416

●Sample Correlations (2. Non Entrepreneurs)

	o22pub1	o22pub2	o22pub3	o22pub4	o20imm3	o20imm4	o20imm5	o20imm6
o22pub1	1.000							
o22pub2	.765	1.000						
o22pub3	.791	.818	1.000					
o22pub4	.783	.811	.813	1.000				
o20imm3	.509	.505	.561	.511	1.000			
o20imm4	.566	.517	.521	.580	.644	1.000		
o20imm5	.607	.522	.537	.580	.616	.695	1.000	
o20imm6	.534	.499	.502	.550	.635	.680	.668	1.000

Condition number = 32.603

Eigenvalues

5.342 1.026 .421 .335 .305 .226 .181 .164

As can be seen from the eigenvalues, there appears to be a two factor solution for the model which reflects the two constructs in the combined measurement model. Table 5.28 provides the regression weights, standardised regression weights, and squared multiple correlations for the Perceived Accessibility of Resources combined measurement model dimensions.

Table 5.28 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for the Revised Perceived Accessibility of Resources Combined Measurement Model

● Regression Weights: (2. Non Entrepreneurs - Default model)

	Estimate	S.E.	C.R.	P	Label
o20imm6 <--- PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	1.000				

			Estimate	S.E.	C.R.	P	Label
o20imm5	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	1.086	.069	15.689	***	par_1
o20imm4	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	1.061	.066	16.003	***	par_2
o20imm3	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	.994	.069	14.368	***	par_3
o22pub4	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	1.000				
o22pub3	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.977	.040	24.346	***	par_4
o22pub2	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.943	.040	23.441	***	par_5
o22pub1	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.967	.044	22.177	***	par_6

●Standardized Regression Weights: (2. Non Entrepreneurs - Default model)

			Estimate
o20imm6	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	.811
o20imm5	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	.824
o20imm4	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	.837
o20imm3	<---	PERCEIVED_ACCESSIBILITY_FAMILY_RESOURCE	.769
o22pub4	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.904
o22pub3	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.906
o22pub2	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.891
o22pub1	<---	PERCEIVED_ACCESSIBILITY_PUBLIC_RESOURCE	.870

●Squared Multiple Correlations: (2. Non Entrepreneurs - Default model)

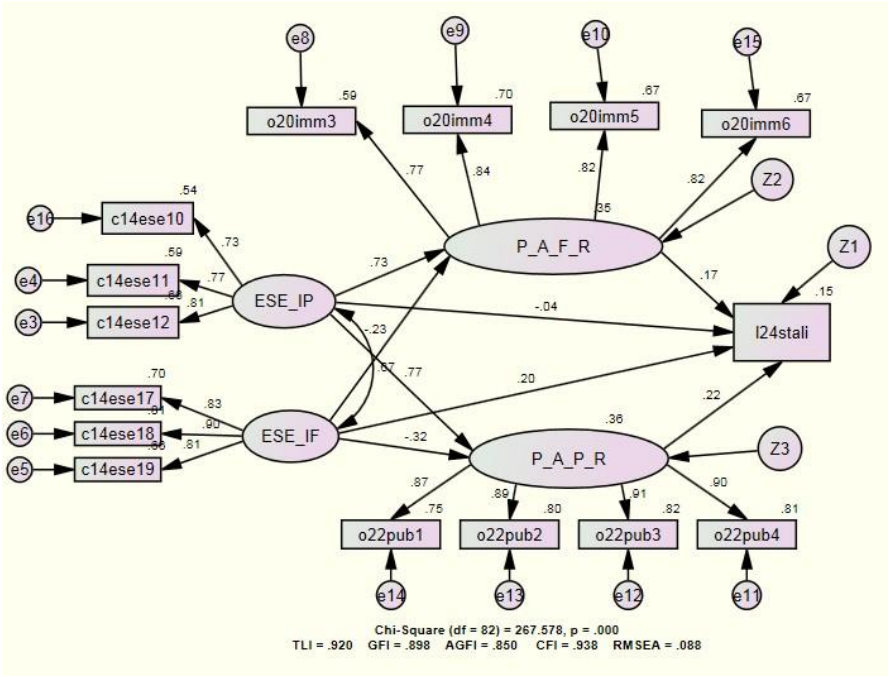
	Estimate
o22pub1	.758
o22pub2	.795
o22pub3	.820
o22pub4	.818
o20imm3	.592
o20imm4	.701
o20imm5	.679
o20imm6	.657

As can be seen from the Table above, each of the items are significant with the standardized regression weights ranging from 0.769 to 0.882, and the squared multiple correlations ranging from 0.592 to 0.820.

5.3 Full Structural Model

After taking the necessary steps to fit the individual measurement models to the data and examining the combined measurement models for each of the constructs, the structural model that includes all individual measurement models is examined. The structural model appears in Figure 5.21.

Figure 5.21 Full Structural Model



The model did not fit the data at all as the model fit statistics were not within the relevant ranges. As such, a process was undertaken to fit the model to the data. The steps undertaken and the resulting analysis statistics appear in Table 5.29.

Table 5.29 Analysis Statistics of the Structural Model

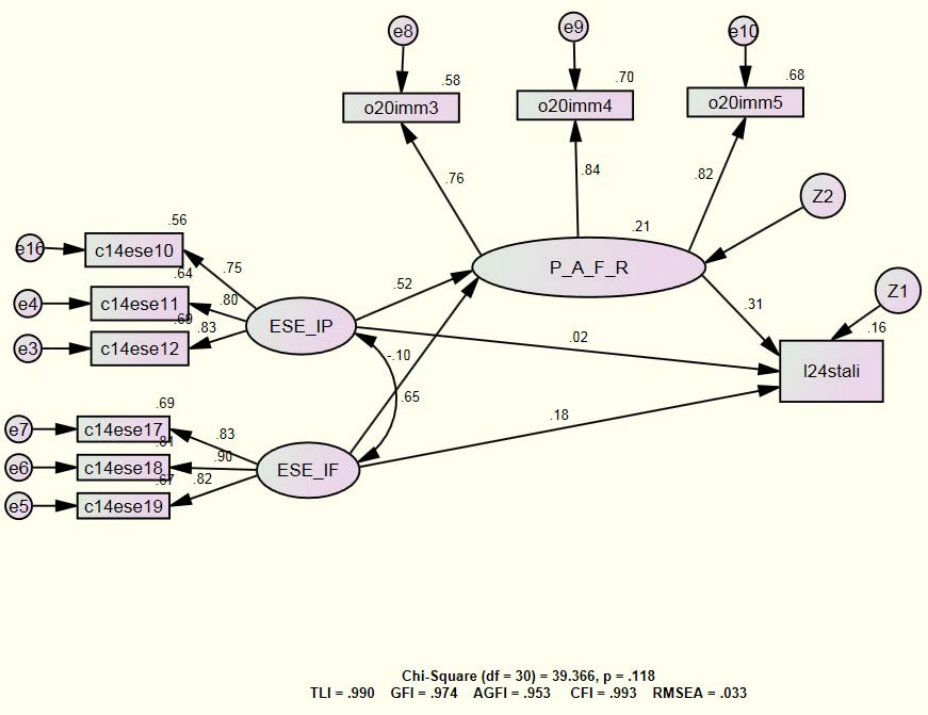
Items	Chi Sq	df	p	Bollen -stine p	RMSE	LO90	HI90	PCLOSE	TLI	CFI	SRMR
	267.578	82	.000	.002	.088	.076	.099	.000	.920	.938	.1114
Remove	220.702	69	.000	.002	.086	.074	.099	.000	.923	.942	.1079

o22pub1											
Remove o22pub4	182.383	57	.000	.002	.086	.072	.101	.000	.922	.943	.0952
Remove o22pub2,3	60.084	39	.017	.200	.043	.019	.063	.695	.982	.988	.0327
Remove 020imm6	39.366	30	.118	.365	.033	.000	.058	.856	.990	.993	.0263

Comment: All the perceived accessibility to public resource items were removed resulting in a good fitting model.

The revised structural model appears in Figure 5.22. This revised model fits the data as the model fit indices are within the tolerable limits. The revised model appears to be relevant for application in a Chinese village context.

Figure 5.22 Revised Structural Model



Note that an alternative model approach was attempted by including all indicator items in the one combined perceived public and family resource availability construct. This model did not fit and so after fitting the model to the data, the same model as appears in Figure 5.22 was achieved. Table 5.30 shows the sample covariances, sample correlations, and eigenvalues for the revised structural model.

Table 5.30 Sample Covariances, Sample Correlations, and Eigenvalues for the Revised Structural Model

● Sample Covariances (2. Non Entrepreneurs)

	o20imm5	l24stali	o20imm4	o20imm3	c14ese17	c14ese18	c14ese19	c14ese11	c14ese12	c14ese10
o20imm5	2.385									
l24stali	.894	3.495								
o20imm4	1.594	.729	2.205							
o20imm3	1.440	.859	1.447	2.292						
c14ese17	.292	.401	.177	.340	1.099					
c14ese18	.225	.480	.242	.338	.885	1.261				
c14ese19	.260	.519	.310	.388	.792	.935	1.275			
c14ese11	.521	.377	.446	.475	.521	.541	.479	1.216		
c14ese12	.453	.443	.424	.530	.485	.531	.541	.736	.994	
c14ese10	.459	.449	.471	.378	.453	.485	.472	.684	.623	1.042

Condition number = 26.792

Eigenvalues

7.281 3.182 2.644 1.142 .890 .718 .425 .396 .314 .272

Determinant of sample covariance matrix = .643

●Sample Correlations (2. Non Entrepreneurs)

	o20imm5	l24stali	o20imm4	o20imm3	c14ese17	c14ese18	c14ese19	c14ese11	c14ese12	c14ese10
o20imm5	1.000									
l24stali	.310	1.000								
o20imm4	.695	.263	1.000							
o20imm3	.616	.304	.644	1.000						
c14ese17	.180	.204	.114	.214	1.000					
c14ese18	.130	.229	.145	.199	.751	1.000				
c14ese19	.149	.246	.185	.227	.669	.737	1.000			
c14ese11	.306	.183	.272	.285	.450	.437	.384	1.000		
c14ese12	.294	.238	.286	.351	.464	.474	.480	.669	1.000	
c14ese10	.291	.235	.310	.245	.423	.423	.409	.608	.612	1.000

Condition number = 19.843

Eigenvalues

4.339 1.906 .989 .788 .455 .405 .337 .305 .257 .219

As can be seen from the eigenvalues, there appears to be a four factor solution for the model which reflects the four variables in the combined structural model. Table 5.31 provides the regression weights, standardised regression weights, and squared multiple correlations for the revised structural model dimensions.

Table 5.31 Group Scalars (Regression Weights, Standardised Regression Weights, and Squared Multiple Correlations) for the Revised Structural Model

● Regression Weights: (2. Non Entrepreneurs - Default model)

			Estimate	S.E.	C.R.	P	Label
P_A_F_R	<---	ESE_IP	.721	.136	5.295	***	par_7
P_A_F_R	<---	ESE_IF	-.126	.112	-1.125	.260	par_8
c14ese12	<---	ESE_IP	1.000				
c14ese11	<---	ESE_IP	1.062	.075	14.147	***	par_1
c14ese19	<---	ESE_IF	1.000				
c14ese18	<---	ESE_IF	1.095	.063	17.242	***	par_2
c14ese17	<---	ESE_IF	.948	.059	16.106	***	par_3
o20imm3	<---	P_A_F_R	1.000				
o20imm4	<---	P_A_F_R	1.077	.079	13.559	***	par_4
o20imm5	<---	P_A_F_R	1.099	.082	13.434	***	par_5
l24stali	<---	ESE_IP	.045	.214	.209	.834	par_9
l24stali	<---	ESE_IF	.363	.168	2.158	.031	par_10
l24stali	<---	P_A_F_R	.494	.114	4.328	***	par_11
c14ese10	<---	ESE_IP	.922	.069	13.263	***	par_12

●Standardized Regression Weights: (2. Non Entrepreneurs - Default model)

			Estimate
P_A_F_R	<---	ESE_IP	.518
P_A_F_R	<---	ESE_IF	-.101
c14ese12	<---	ESE_IP	.833

			Estimate
c14ese11	<---	ESE_IP	.800
c14ese19	<---	ESE_IF	.816
c14ese18	<---	ESE_IF	.898
c14ese17	<---	ESE_IF	.834
o20imm3	<---	P_A_F_R	.764
o20imm4	<---	P_A_F_R	.838
o20imm5	<---	P_A_F_R	.823
l24stali	<---	ESE_IP	.020
l24stali	<---	ESE_IF	.179
l24stali	<---	P_A_F_R	.305
c14ese10	<---	ESE_IP	.749

●Squared Multiple Correlations: (2. Non Entrepreneurs - Default model)

	Estimate
P_A_F_R	.211
c14ese10	.561
o20imm5	.677
l24stali	.161
o20imm4	.703
o20imm3	.583
c14ese17	.695
c14ese18	.807
c14ese19	.666
c14ese11	.639
c14ese12	.693

As can be seen from the Table above, most of the items are significant with the exception of the ESE IF – Perceived Accessibility of Family relationship and the ESE IP - 124stali relationship. With the exception of these two relationships, standardized regression

weights range from -.101 to 0.898, and the squared multiple correlations ranging from 0.161 to 0.807.

5.4 Level of Support for Hypotheses

As a result of the above analyses, the level of support for the Hypotheses underpinning the model for the non-entrepreneur group is as follows:

H6 hypothesised that a higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group. This hypothesis was supported. The relationship between perceived accessibility of family resources and entrepreneurial intention is positive and significant for the non-entrepreneur group. (β=0.31, p=0.001)

H7 hypothesised that a higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group. This hypothesis was not supported. The relationship between perceived accessibility of public resources and entrepreneurial intention is not significant for the non-entrepreneur group.

H8 hypothesised that a higher level of entrepreneurial self-efficacy leads to higher entrepreneurial intentions for the non-entrepreneur group. This hypothesis was supported. The relationship between entrepreneurial self-efficacy and entrepreneurial intention is positive and significant for the non-entrepreneur group. (β=0.18, p=0.031)

H9 hypothesised that entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of family resources for the non-entrepreneur group. This hypothesis was supported. The relationship between entrepreneurial self-efficacy and perceived accessibility of family resources is significant for the non-entrepreneur group. (β=0.52, p=0.001)

H10 hypothesised that entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of public resources for the non-entrepreneur group. This hypothesis was not supported as the relationship is not significant.

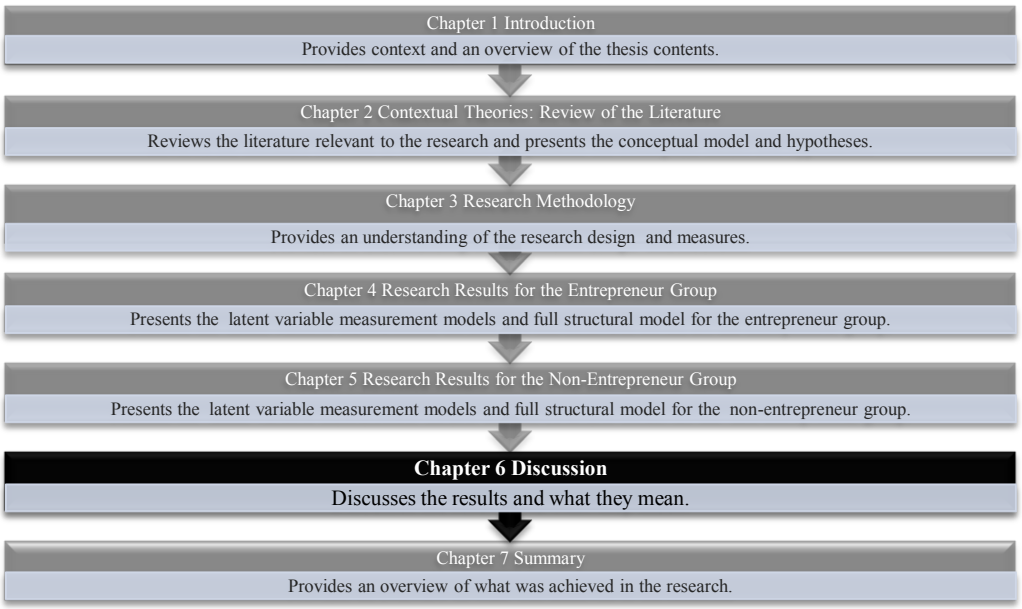
5.5 Chapter Summary

Chapter 5 used AMOS18 to analyse the data collected from the non-entrepreneur group. The Chapter was divided into two main sections. The first section presented the analysis for individual measurement models of ESE, perceived accessibility of family and public resource. It then presented the full measurement model for entrepreneurial self-efficacy with perceived accessibility of family resources and then with perceived accessibility of public resources. Analysis outputs generated included:

- Regression weights
- Sample Covariances
- Sample Correlations
- Standardized Regression Weights
- Squared Multiple Correlations
- Chi-square
- Bollen-Stine p
- Standardised Root Mean-square Residual (SRMR)
- Root Mean-Square Error of Approximation (RMSEA)
- Tucker-Lewis Index (TLI)
- Comparative Fit Index (CFI)

Section 2 provides details of the full structural model for ESE with perceived accessibility of family and public resource. The full structural model was examined and the results presented. It appears that in a Chinese village context, the perceived accessibility of family resources influences entrepreneurial intention more than public resources for non-entrepreneurs.

CHAPTER 6
Discussion



6.1 Introduction

Chapter 6 discusses the statistical results presented in Chapters 4 and 5. It interprets the results in terms of entrepreneurship-related theory in a Chinese village context. The Chapter links the data to the study‘s research objectives, research questions, and hypotheses, and discusses the results in terms of the self-efficacy and perceived planned behaviour literature within the entrepreneurship field in a Chinese village context.

6.2 Sample Summary

The research undertaken for this thesis included entrepreneurs and non-entrepreneurs in a Chinese village context. 950 questionnaires were delivered and 768 responses were received. The data included usable questionnaires received from 285 entrepreneurs and 296 non-entrepreneurs (Response rate = 61.16%). Females made up 28% of the entrepreneur sample and 46% of the non-entrepreneur sample while males made up 72% of the entrepreneur sample and 54% of the non-entrepreneur sample. The proportion male-female respondents is more balanced in the non-entrepreneurs‘ sample than the entrepreneurs‘ sample where the proportion of female entrepreneurs is less than male entrepreneurs. The proportional representation is similar to Cooke (2005) who identified that the female and

male workforce proportion is almost equal but managerial positions are still dominated by males in China.

Just over half of the entrepreneurs (52.6%) were educated at secondary school level. Only 1.8% of the sample had a bachelor‘s degree and 3.2% had a postgraduate degree. A significant number of the non-entrepreneurs (37.5%) were educated at secondary school levels. 2.4% of the non-entrepreneurs had a bachelor‘s degree and 3.7% had a postgraduate degree. Nearly 20% of the non-entrepreneurs had only received a primary school education which is a much higher than for the entrepreneur group (4.2%). These results indicate that the general formal education levels in the village were low. Anecdotal observations by the researcher in other Chinese villages suggest similar patterns in these villages. Thus, because many Western developed entrepreneurship instruments are developed in more educated environments, the application of Western developed instruments – *as is* - in Chinese village contexts may be problematic. As Bandura (1977) identified, education is a primary factor of influence on individual self-efficacy. Thus, *ceteris paribus*, lower educated individuals may provide different self-efficacy levels than more educated people. In addition, the lower education levels in the Chinese village may support why rural regions still mainly rely on small manufacturing businesses which are less reliant on an educated workforce.

The businesses in the sample were mainly established before 2005 (63.2%). Post 2005 2008 is the year with the highest annual business start up rate in this study (10.9% start-ups), 2009 shows 6.3% start-ups, 2010 shows 7.7% start-ups, compared to 2005 (6%), 2006 (2.8%), and 2007 (3.2%). It seems that despite the 2008 economic crisis, there were still good business opportunities in at least the three Chinese villages from which the data was collected that encouraged entrepreneurial activity. Thus, the majority of the businesses were established for at least five years providing the entrepreneurs at the helm of these businesses with a reasonable period of experience in entrepreneurial leadership and management.

Most businesses surveyed operated in the manufacturing industry (57%), followed by retail (18%), services (15%), and wholesale (10%). Most village businesses were micro to small: 91.9% of businesses surveyed employed less than 25 employees. This suggests the majority of business is in the Chinese villages examined were small and were primarily involved in the manufacturing industry.

6.3 Research Questions and Hypothesis Testing

The research adopted a quantitative research approach since this was deemed to be the best approach to explore the research questions, test the hypotheses, and examine the relationships and constructs incorporated in the hypothesized conceptual structural model. A comprehensive literature review was first undertaken which informed development of research questions, hypotheses, and the structural model. Interviews were then held with 10 entrepreneurs to refine the survey instrument.

The following section discusses the results with the research questions providing context for the discussion. RQ1 addresses a construct newly identified in this research. RQ2 examines to what extent a Western developed entrepreneurial self-efficacy scale is relevant for application in a Chinese village context. RQ3 and RQ4 attempt to analyse the cognitive entrepreneurial elements to statistically examine the inter-relationships among ESE, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions within the entrepreneur and non-entrepreneur groups.

First the summary of the Hypothesis testing is presented followed by a discussion of the results in terms of the research questions (RQs).

No.	Hypothesis	Level of Support
H1	A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.	Not supported
H2	A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.	Supported
H3	A higher level of entrepreneurial self-efficacy will be positively associated with higher entrepreneurial intentions for the entrepreneur group.	Supported
H4	Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of family resources for the entrepreneur group.	Not supported
H5	Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of public resources for the entrepreneur group.	Supported
H6	A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the	Supported

	non-entrepreneur group.	
H7	A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.	Not supported
H8	A higher level of entrepreneurial self-efficacy leads to higher entrepreneurial intentions for the non-entrepreneur group.	Supported
H9	Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of family resources for the non-entrepreneur group.	Supported
H10	Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of public resources for the non-entrepreneur group.	Not supported

RQ1: To what extent does the perceived accessibility of family and public resources influence Chinese village entrepreneur intentions to start a business?

The relationship between the perceived accessibility of resources and entrepreneurial intention for both entrepreneurs and non-entrepreneurs was statistically significant. Family resources (but not public resources) were perceived to be important for non-entrepreneurs and public resources (not family resources) were perceived to be important for entrepreneurs.

Thus, this study statistically confirms perceived accessibility of resources as a newly identified variable that influences entrepreneurial intention in a Chinese village context. In support of these findings, Shinnar, Giacomin, and Janssen (2012) found that *perceived lack of support* significantly and negatively influenced entrepreneurial intentions, and perceived lack of competency had no significant relationship to entrepreneurial intention, using Chinese samples. The perceived accessibility of family and public resources relationships with entrepreneurial intentions in the Chinese village context is not specifically addressed in Shinnar et al.‘s (2012) research and this research therefore adds to their findings and contributes to existing theory. It is worth noting Shinnar et al.‘s (2012) finding that perceived lack of competency had a significant relationship to entrepreneurial intention in American samples. This doctoral research identifies the source and the type of resources to explore in the relationship between resources and other cognitive factors. Thus, the results of this research suggest that perceived accessibility of family and public resources is an antecedent of entrepreneurial intentions in a Chinese village context. The implication of this finding is discussed later in the Chapter.

RQ2: To what extent can a Western developed entrepreneurial self-efficacy instrument be applied in a Chinese village context and to what extent does this instrument need to be adapted to reflect Chinese village cultural, situational, and environmental influences?

This research found the Western developed entrepreneurial self-efficacy instrument required modification in its application to a Chinese village context. There may be a number of reasons for this.

First, an entrepreneurial self-efficacy instrument developed within a WEIRD (Western, Educated, Industrialised, Rich, Democratic) (Henrish et al. 2010) societal context requires modification for it to be relevant to a Chinese village context. Roy, Walters and Luk (2001) identified the problems associated with applying (Western) ―business relative research" in a Chinese context. The probability sample, political influence, comparative limited access to secondary data, survey applicability, and survey implementation may cause puzzles when applying Western based research methodology. When applying entrepreneurial cognition research in a Chinese village context, the Western context based constructs may need modification due to the large difference in culture, educational background, industry, and economic situation between developed context and developing countries' village context. The results of this research provide support for Roy, Walters and Luk's (2001) comments.

Cultural differences between Western and Chinese contexts have been discussed and supported by economic, business, management, and entrepreneurship researchers. Steensma et al. (2000) recommend theoretical modification when applying management research in Chinese contexts, and more specifically in Chinese village contexts where Chinese traditional culture is more pervasive. Kreiser, Marino, and Weaver (2002) identify the need to test the universality of constructs developed in more specific and different contexts. The focus of Western ESE research has been perceived to be personal capability with respect to starting a business. Nisbett (2003) draws our attention to the differences between Western and Chinese cultural subjective norms in terms of individualism and collectivism. In China, a collectivist culture emphasizes the importance of family and/or public support rather than individual capability which may require developing a collective ESE instrument to measure these specific entrepreneurial cognition elements.

A second reason why McGee et al.'s (2009) entrepreneurial self-efficacy instrument required modification in a Chinese village context may be due to the economic situation found in Chinese villages. For example, in 2008, the average annual income of each villager in Shaanxi Province was 3,136 Yuan (US$494) (National Bureau of Statistics of China 2008). With this lower annual income, perceptions will be influenced by different factors compared to more affluent societies. The Western developed context is characterized by business knowledge informed by a mature market system. With this large economic gap, Western entrepreneurs are more likely to be opportunity-oriented whereas in a Chinese village context, people will more likely be more necessity oriented. Thus, Chinese villager intentions to start up new businesses may be as a result of a need to survive rather than to prosper. With different expected economic outcomes, the entrepreneurial cognition elements such as entrepreneurial self-efficacy will be interpreted differently.

A third possible reason for modification of the ESE scale is because China previously was a "State oriented system". The entrepreneurs who grew up in this system may not be familiar with a competitive market system that tends to exist in China today. Thus, perceived necessary capability that enables entrepreneurs to confidently start up their business will be different from that of Western entrepreneurs. These factors may cause Westerners to think and behave differently from Chinese village entrepreneurs.

The fourth reason why modifications are needed to the ESE scale is because of villager education levels. Just over half of the entrepreneurs (52.6%) were educated at secondary school level. Only 1.8% of the sample had received a bachelor's degree and 3.2% had a postgraduate degree. Nearly 20% of the non-entrepreneurs had only a primary school education. Thus, because many Western developed entrepreneurship instruments are developed in more educated environments, the application of Western developed instruments – *as is* - in Chinese village contexts may be problematic. As Bandura (1977) identified, education is a primary factor of influence on individual self-efficacy. In addition, the lower education levels in the Chinese village may support why rural regions still mainly rely on small manufacturing businesses which are less reliant on an educated workforce. Most businesses surveyed operated in the manufacturing industry (57%) and most village businesses were small/micro: 91.9% of businesses surveyed employed less than 25 employees. This suggests the profile for businesses in the Chinese village examined is

primarily small and is focused on manufacturing. Thus, the capability to operate this particular level of small business may be different compared to Western contexts.

Considering that 96% of psychological samples come from countries with only 12 % of the world‘s population (Henrich, Heine, and Norenzayan, 2010), and that examining ESE in Chinese village context where approximately 10% of the world population is located provides support for the importance of this research.

RQ3: To what extent are entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions inter-related when examined in a Chinese village context among entrepreneurs?

This section discusses RQ3‘s sub questions and related Hypotheses 1, 2, 3, 4, and 5 to examine the inter-relationships among entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions for the entrepreneur group.

RQ3a. To what extent do individual perceptions of accessibility of family resources influence entrepreneurial intentions for the entrepreneur group?

RQ3b. To what extent do individual perceptions of accessibility of public resources influence entrepreneurial intentions for entrepreneur group?

RQ3c. To what extent does entrepreneurial self-efficacy influence entrepreneurial intentions for the entrepreneur group?

RQ3d. To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of family resources for the entrepreneur group?

RQ3e. To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of public resources for the entrepreneur group?

In order to test these research questions, the following research hypotheses are examined.

H1: A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

H2: A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

H3: A higher level of entrepreneurial self-efficacy will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

H4: Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of family resources for the entrepreneur group.

H5: Entrepreneurial self-efficacy will be positively associated with an individual‘s perceived accessibility of public resources for the entrepreneur group.

RQ3a: To what extent do individual perceptions of accessibility of family resources influence entrepreneurial intentions for the entrepreneur group?

This question explored the relationship between perceived accessibility of family resources and entrepreneurial intentions for entrepreneurs. The literature review identified a relationship between resources and business start-up intentions, and described the family's role in contributing resources. However, once the business has started, the family resources have been transformed into a firm resource. From there, the entrepreneurs' perceptions are influenced by public resources rather than family resources.

H1: A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

The items that measured perceived accessibility of family resources were:

- o20 imm1: financial support by the way of money for the venture.
- o20 imm2: labour support for your venture
- o20 imm3: business property to support your venture
- o20 imm4: social capital in the form of personal contacts to support your venture
- o20 imm5: business expertise to support your venture
- o20 imm6: other technical, non business expertise to support your venture

Before testing this relationship, the measurement model test revealed that the perceived accessibility of family resources was highly correlated with perceived accessibility of public resources which suggested one construct needed to be deleted from the model. In the analysis process, based on the analysis results, it was decided that the perceived accessibility of family resources would be deleted from the full structural model. There are three possible reasons that may explain why the perceived accessibility of family resources does not directly contribute to the variance in the structural model. First, the entrepreneurs surveyed may already have full access to family resources; thus, the perceived accessibility of family resources may not be as important as perceived accessibility of public resources for the entrepreneurs who intend to start up a new business. Second, the perceived accessibility of family resources by the entrepreneur group were perceived to be insufficient to start other

new businesses; that is, because they were experienced, the entrepreneur group appreciated that a certain level of resources is required to start a business and that their perceptions of what was available from family members was insufficient. Third, the entrepreneur group may feel that they are fully in control of their situation and therefore do not need assistance from family members.

RQ3b: To what extent do individual perceptions of the accessibility of public resources influence entrepreneurial intentions for the entrepreneur group?

This question explores the relationship between perceived accessibility of public resources and entrepreneurial intentions for entrepreneurs. The literature review suggested a relationship between resources and business start-up intentions, and that initial resources can be accessed from public sources. This section examines Research Question 2 by testing Hypothesis 2.

H2: A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the entrepreneur group.

The hypothesis for this question was supported. The standardized effect is (β =0.28 and the significance level was $p<0.001$). The items that measured perceived accessibility of public resources were:

- o22 pub1: financial support by the way of money for the venture.
- o22 pub2: labour support for your venture
- o22 pub3: business property to support your venture
- o22 pub4: social capital in the form of personal contacts to support your venture
- o22 pub5: business expertise to support your venture
- o22 pub6: other technical, non business expertise to support your venture

o22pub1, o22pub2 and o22pub3 were omitted from the analysis in the process of developing the measurement model and the full structural equation model as they did not contribute to model variance. A possible reason is that existing entrepreneurs already have sufficient finance to afford the labour and business property costs. The social capital,

business expertise, and technical expertise items were retained. Social networking is important in a Chinese village context and the opportunity for entrepreneurs to consider starting a business mainly comes from external interactions. It seems that entrepreneurial intentions to start a new business is less influenced by finance, labour, and/or business property issues which, while important in a start-up decision, are less relevant. The primary influencing resource factor was external social networks (or external human resource interactions) which suggests that the strategy to foster nascent entrepreneurs and stimulate regional economic development in Chinese villages is to stimulate social network interactions. This could involve social functions and /or entrepreneurship training sessions whereby successful entrepreneurs are able to mix and network with less successful and/or nascent entrepreneurs. A potential role for government is to fill the resource gap where the market forces are not working including stimulating social networks. This is consistent with Chrisman et al. (2005)

RQ3c: To what extent does entrepreneurial self-efficacy influence entrepreneurial intentions for the entrepreneur group?

This question explores the relationship between entrepreneurial self-efficacy and entrepreneurial intentions in the entrepreneur group. The literature review identified that entrepreneurial self-efficacy predicts intention. For example, DeNoble et al. (1999) found a number of latent variables to have a significant relationship with entrepreneurial intention. Other scholars however have used only one item to measure entrepreneurial self-efficacy and identified significant relationships between entrepreneurial self-efficacy and entrepreneurial intention (Krueger, NF, Reilly & Carsrud 2000) . In this research, it was necessary to modify the ESE instrument used so that it was relevant for use in a Chinese village context.

H3: A higher level of entrepreneurial self-efficacy leads to higher entrepreneurial intentions for the entrepreneur group.

The hypothesis for this question was supported. A higher level of entrepreneurial self-efficacy was positively associated with entrepreneurial intentions for the entrepreneur group. The standardized effect was $\beta = 0.27$ with a significance level of $p=0.048$ between ESE_PS and entrepreneurial intentions. ESE_IP did not significantly influence entrepreneurial intentions.

The McGee et al, (2009) items for entrepreneurial self-efficacy appear in Table 6.1.

Table 6.1 The McGee et al. (2009) entrepreneurial self-efficacy instrument

Searching
1) Brainstorm (come up with) a new idea for a product or service
2) Identify the need for a new product or service
3) Design a product or service that will satisfy customer needs and wants
Planning
4) Estimate customer demand for a new product or service
5) Determine a competitive price for a new product or service
6) Estimate the amount of start-up funds and working capital necessary to start my business
7) Design an effective marketing/advertising campaign for a new product or service
Marshalling
8) Get others to identify with and believe in my vision and plans for a new business
9) Network—i.e., make contact with and exchange information with others
10) Clearly and concisely explain verbally/in writing my business idea in everyday terms
Implementing People
11) Supervise employees
12) Recruit and hire employees
13) Delegate tasks and responsibilities to employees in my business
14) Deal effectively with day-to-day problem and crises
15) Inspire, encourage, and motivate my employees
16) Train employees
Implementing Finance
17) Organize and maintain the financial records of my business
18) Manage the financial assets of my business
19) Read and interpret financial statements

However, the McGee et al. (2009) items were reduced to seven items that were associated with two ESE latent variables: ESE_PS and ESE_IP. The indicator items that measured these latent variables appear below.

ESE_PS:

- O20ese 1: Brainstorm (come up with) a new idea for a product or service
- O20ese 4: Estimate customer demand for a new product or service
- O20ese 5: Determine a competitive price for a new product or service.
- O20ese 6: Estimate the amount of start-up funds and working capital necessary to start my business
- O20ese 7: Design an effective marketing/advertising campaign for a new product or service

ESE_IP:

- O20ese 11: Supervise employees
- O20ese 16: Train employees

Before the discussion about the relationships, possible reasons why some of the items or sub instruments have been deleted is worth discussing. For example, the implementing finance and marshalling dimension was deleted. Implementing finance in a small business is not complex; thus it may not significantly contribute to entrepreneurial intention. Also, in the Chinese village context, the concept of a business plan is rarely considered. This may lead to this dimension not having the same contribution as in developed countries. The relationship between entrepreneurial self-efficacy and entrepreneurial intentions was tested and found to be significant. Shinnar, Giacomin, and Janssen (2012) found that perceived lack of competency does not significantly influence entrepreneurial intention with Chinese samples. However, they found a significant relationship between perceived lack of competency and entrepreneurial intentions with an American sample. This research confirms the relationship between entrepreneurial self-efficacy and entrepreneurial intentions in a Chinese context. Specifically, this research identified a relationship between

ESE_PS and entrepreneurial intentions, but did not find a relationship between ESE_IP and entrepreneurial intentions. There are two possible explanations for this finding.

One explanation is that entrepreneurial self-efficacy actually includes items to measure entrepreneurial capability and managerial capability. If so, then perceived entrepreneurial capability significantly influences entrepreneurial intentions; however, perceived managerial capability is not significant. As discussed in Chapter 3, DeNoble et al. (1999) developed an entrepreneurial self-efficacy scale founded upon the ESE relationship with entrepreneurial intentions and entrepreneurial action. Only three of the dimensions (developing new product and market opportunities, building an innovative environment, and coping with the unexpected) demonstrated a statistically significant relationship with entrepreneurial intentions. The other dimensions (initiating investor relationships, defining core purpose, and developing critical human resources) did not demonstrate a significant relationship with entrepreneurial intentions. The first three latent variables (developing new product and market opportunities, building an innovative environment, and coping with the unexpected) were more likely measuring entrepreneurial self-efficacy, while (initiating investor relationships, defining core purpose, and developing critical human resources) were more likely measuring managerial self-efficacy. It is suggested that there is a similar situation with the McGee et al. (2009) instrument. It also included items more likely to measure entrepreneurial and managerial self-efficacy. However, McGee et al. (2009) did not use Structural Equation Modeling (SEM) to test the latent variable relationships to entrepreneurial intentions. Their research found that entrepreneurial planning and searching significantly influenced entrepreneurial intentions, while more managerial latent variables (entrepreneurial self-efficacy implementing people) had no significant relationship with entrepreneurial intentions.

A second possible explanation is because a Chinese village is a collective community; thus, the entrepreneurship process is dynamic and involves different individuals who contribute different skills. Entrepreneurs are those who specifically perceive higher levels of entrepreneurial capability (such as entrepreneurial self-efficacy: planning and searching). This is especially true for individuals who have successful business experiences and who may only need entrepreneurial capability but not managerial capability (because one can employ individuals who have managerial capability). Individuals with entrepreneurial

capability may be more *unlikely* to be employed due to a higher possibility that they will start their own businesses.

RQ3d: To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of family resources for the entrepreneur group?

This research question is designed to examine the relationship between entrepreneurial self-efficacy and perceived family resources for entrepreneurs. Those individuals who have higher levels of capability may access more family resources. The specific hypothesis to address this question is Hypothesis 4.

H4: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of family resources for the entrepreneur group

The hypothesis was not significant; the items to measure perceived accessibility of family resource were omitted in this model. The reason for this is that they did not contribute to the model variance. A reason why this may be the case is that successful entrepreneurs may believe that they have total control of the family resources. In this case, individual capability does not change the accessibility of family resources; thus, perceived capability may not significantly influence an individual's perceived accessibility of family resources.

RQ3e: To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of public resources for the entrepreneur group?

This research question was designed to understand the relationship between entrepreneurial self-efficacy and perceived public resources for entrepreneurs. The individual's perceived higher entrepreneurial self-efficacy is more likely to result in increased access to public resources. Hypothesis 5 is designed to test this research question.

H5: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of public resources for the entrepreneur group.

The hypothesis for this question was partly supported. The standardized effect between ESE_IP and perceived accessibility of public resource is $\beta = 0.34$ with a significance level of $p = 0.046$. The relationship between ESE_PS and perceived accessibility of public resource was not significant. One possible explanation is that perceived accessibility of public

resources in the Chinese village context is, in reality, determined by an individual's current financial situation or personal credit, not their individual entrepreneurial capability.

RQ4: To what extent are entrepreneurial self-efficacy, perceived accessibility of family resources, perceived accessibility of public resources, and entrepreneurial intentions inter-related when examined in a Chinese village context among non-entrepreneurs?

This section analyses Research Question 4's sub questions and tests Hypotheses 6, 7, 8, 9, and 10.

RQ4a. To what extent do individual perceptions of accessibility of family resources influence entrepreneurial intentions for the non-entrepreneur group?

RQ4b. To what extent do individual perceptions of accessibility of public resources influence entrepreneurial intentions for the non-entrepreneur group?

RQ4c. To what extent does entrepreneurial self-efficacy influence entrepreneurial intentions for the non-entrepreneur group?

RQ4d. To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of family resources for the non-entrepreneur group?

RQ4e. To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of public resources for the non-entrepreneur group?

In order to test these research questions, the following research hypotheses are applied.

H6: A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.

H7: A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.

H8: A higher level of entrepreneurial self-efficacy leads to higher entrepreneurial intentions for the non-entrepreneur group.

H9: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of family resources for the non-entrepreneur group.

H10: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of public resources for the non-entrepreneur group.

RQ4a: To what extent do individual perceptions of accessibility of family resources influence entrepreneurial intentions for the non-entrepreneur group?

This question explores the relationship between perceived accessibility of family resources and entrepreneurial intentions for non-entrepreneurs. The literature review identified a relationship between family resources and business start-up intentions, and described the family's role in contributing resources. H4a is designed to answer research question 4a.

H6: A higher level of perceived accessibility of family resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.

The items to measure perceived accessibility of family resources were:

- o20 imm1: financial support by the way of money for the venture.
- o20 imm2: labour support for your venture
- o20 imm3: business property to support your venture
- o20 imm4: social capital in the form of personal contacts to support your venture
- o20 imm5: business expertise to support your venture
- o20 imm6: other technical, non business expertise to support your venture

Hypothesis 6 was supported. The standardized effect was $\beta = 0.31$ with a significance level of $p<0.001$.

o20 imm1, o20 imm2, o20 imm6 were omitted for this analysis as they did not contribute toward the variance in the model. The business property, social capital, and business expertise items were retained. Social networks are important in a Chinese village context and, because the non-entrepreneurs did not have experience in operating a business, their intentions to start a new business required business expertise support to operate their business and/or business property. Finance, labour, and technical expertise support cannot significantly contribute to entrepreneurial intention.. A possible reason for this is that funding and labour were believed to be insufficient to cover start-up expenses including labour. This is especially the case for individuals who did not have previous successful business experience. However, this possible explanation needs to be confirmed with further research. The social capital and business expertise items were included for both the entrepreneur and non-entrepreneur groups.

RQ4b: To what extent do individual perceptions of accessibility of public resources influence entrepreneurial intentions for the non-entrepreneur group?

This question explores the relationship between perceived accessibility of public resources and entrepreneurial intentions for non-entrepreneurs. The literature review identified a relationship between public resources and business start-up intentions with start up resources being possibly accessed from the public resources available.

H7: A higher level of perceived accessibility of public resources will be positively associated with higher entrepreneurial intentions for the non-entrepreneur group.

The items to measure perceived accessibility of family resources were:

- o22 pub1: financial support by the way of money for the venture.
- o22 pub2: labour support for your venture
- o22 pub3: business property to support your venture
- o22 pub4: social capital in the form of personal contacts to support your venture
- o22 pub5: business expertise to support your venture
- o22 pub6: other technical, non business expertise to support your venture

This question explores the relationship between perceived accessibility of public resources and entrepreneurial intentions for non-entrepreneurs. Perceived accessibility of family resources and public resources presented high correlation levels. As a result, the latent variable to measure perceived accessibility of public resources was omitted from the structural model. There are two theoretical reasons to justify this elimination. First, the non-entrepreneur group had low access to public resources, and their perception of accessibility of family resources influenced their entrepreneurial intentions. Another possible reason is that the perceived accessibility of family and public resources are correlated (as was the case here), with individual perceived higher accessibility of family resources having a higher level of perceived accessibility compared with public resources. For the non-entrepreneurs, the perceived accessibility of family resources was more representative for an individual‘s perceived accessibility of resources.

RQ4c: To what extent does entrepreneurial self-efficacy influence entrepreneurial intentions for the non-entrepreneur group?

This question explores the relationship between entrepreneurial self-efficacy and entrepreneurial intentions for the non-entrepreneur group. Some scholars only use one item to measure entrepreneurial self-efficacy in examining the relationships between entrepreneurial self-efficacy and entrepreneurial intentions (Krueger, NF, Reilly & Carsrud 2000). Others (such as De Noble et al. 1999) used multiple latent variables. This doctoral research begins with multiple latent variables to measure ESE (McGee et al., 2009). Hypothesis 8 is used to test the relationship between entrepreneurial self-efficacy and entrepreneurial intention.

H8: A higher level of entrepreneurial self-efficacy leads to higher entrepreneurial intentions for the non-entrepreneur group

The hypothesis for this question was supported. A higher level of entrepreneurial self-efficacy was positively associated with entrepreneurial intention for non-entrepreneurs. The standardized effect was $\beta = 0.18$ with a significance level of $p = 0.031$ between ESE_IF and entrepreneurial intentions. ESE_IP did not significantly influence entrepreneurial intentions. The McGee et al. (2009) items used to measure entrepreneurial self-efficacy appear in Table 6.2.

Table 6.2 The McGee et al. (2009) entrepreneurial self-efficacy instrument

Searching
1) Brainstorm (come up with) a new idea for a product or service
2) Identify the need for a new product or service
3) Design a product or service that will satisfy customer needs and wants
Planning
4) Estimate customer demand for a new product or service
5) Determine a competitive price for a new product or service
6) Estimate the amount of start-up funds and working capital necessary to start my business
7) Design an effective marketing/advertising campaign for a new product or service
Marshalling
8) Get others to identify with and believe in my vision and plans for a new business

9) Network—i.e., make contact with and exchange information with others
10) Clearly and concisely explain verbally/in writing my business idea in everyday terms
Implementing People
11) Supervise employees
12) Recruit and hire employees
13) Delegate tasks and responsibilities to employees in my business
14) Deal effectively with day-to-day problem and crises
15) Inspire, encourage, and motivate my employees
16) Train employees
Implementing Finance
17) Organize and maintain the financial records of my business
18) Manage the financial assets of my business
19) Read and interpret financial statements

The McGee et al. (2009) items were reduced to six items to measure two latent variables: ESE_IP, ESE_IF in order to better fit the model when applied in the Chinese village context.

ESE_IP:

- O20ese 10: Clearly and concisely explain verbally/in writing my business idea in everyday terms
- O20ese 11: Supervise employees
- O20ese 12: Recruit and hire employees

ESE_IF:

- O20ese 17: Organize and maintain the financial records of my business
- O20ese 18: Manage the financial assets of my business
- O20ese 19: Read and interpret financial statements

This research confirmed the positive relationship between entrepreneurial self-efficacy and entrepreneurial intentions for the non-entrepreneur group. However, although this research found the relationship between ESE_IF and entrepreneurial intentions to be significant, the relationship between ESE_IP and entrepreneurial intention was not significant. Two possibilities can explain this finding. One explanation is that the non-entrepreneur group does not have the business experience and will therefore be financially sensitive. Thus, perceived financial capability influences their entrepreneurial intention. However, similar to the entrepreneur group, the entrepreneurial intention relationship is significant for non-entrepreneurs.

RQ4d: To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of family resources for the non-entrepreneur group?

This research question is designed to examine the relationship between entrepreneurial self-efficacy and perceived family resources for the non-entrepreneur group. Individuals who have high levels of capability may access more family resources. The relationship between entrepreneurial self-efficacy and perceived family resources has been conceptually discussed (DeNoble, Ehrlich & Singh 2007); however, a statistical test is needed to confirm the relationship. The specific hypothesis to answer this question is Hypothesis 4d.

H9: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of family resources for the non-entrepreneur group.

The hypothesis for this question was partly supported. The standardized effect between ESE_IP and perceived accessibility of public resource was $\beta = 0.52$ with a significance level of $p<0.001$. The relationship between ESE_IF and perceived accessibility of family resource was not significant.

One possible explanation for this is that the individual who is able to better communicate with people will have greater accessibility to family resources. Perceived finance capability does not influence perceived accessibility of family resources in the Chinese village context. The accessibility of resources is primarily dependent upon how the relationship with family members rather than on one's finance capability.

RQ4e: To what extent does entrepreneurial self-efficacy influence individual perceptions of accessibility of public resources for the non-entrepreneur group?

This research question is designed to understand the relationship between entrepreneurial self-efficacy and perceived public resources for non-entrepreneurs. It is expected that an individual's higher perceived entrepreneurial self-efficacy levels will more likely result in greater access to public resources. Hypothesis 4e is designed to test this research question.

H10: Entrepreneurial self-efficacy will be positively associated with an individual's perceived accessibility of public resources for the non-entrepreneur group.

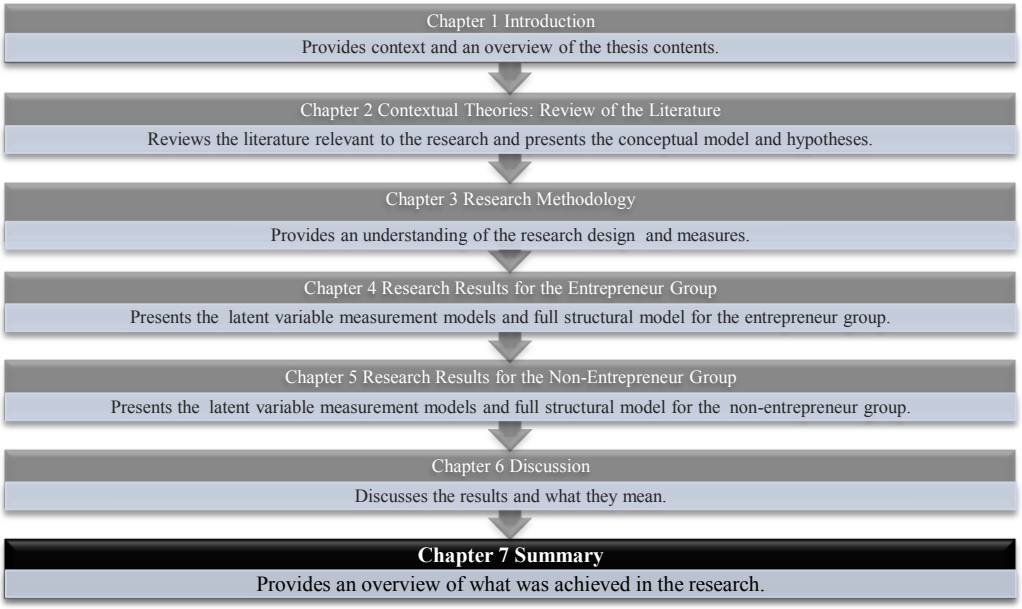
The hypothesis tested was not significant because the items to measure perceived accessibility of public resource were omitted from this model since they did not contribute toward model variance. An underlying reason may be because the perceived accessibility of public resources for non-entrepreneurs is mainly influenced by their ~~"c~~redit standing" rather than their capability. In this case, individual capability did not change the perceived accessibility of public resources.

6.4 Summary

This Chapter discusses the results presented in Chapters 4 and 5. The findings show the inter-relationships between perceived accessibility of resources and entrepreneurial intention in a Chinese village context. The Chinese village provides a research context that is different from Western research contexts due to environmental influences that affect participant behaviour (education levels, culture, way of doing business, etc.). Thus, there needed to be modification of the Western developed ESE instrument for it to be relevant in a Chinese village context. This research shows that only one sub-instrument (dimension) for entrepreneurial self-efficacy (searching and planning) significantly influenced entrepreneurial intention for the entrepreneur group. In the non-entrepreneur group, ESE_implementing finance significantly influenced entrepreneurial intention. The relationship between perceived *public* resources accessibility and entrepreneurial intention was significant for the entrepreneur group. In contrast, the relationship between perceived *family* resources accessibility and entrepreneurial intention was significant for the non-entrepreneur group. ESE was related to the perceived accessibility of public resource for the entrepreneur group, and was related to the perceived accessibility of family resources for the non-entrepreneur group. The model shows that the relationships among the key elements are different for entrepreneurs and non-entrepreneurs. As a result of the above,

two new constructs with scales appropriate for measurement in a Chinese village context were developed which contribute toward existing entrepreneurship theory at the individual level of analysis.

CHAPTER 7
Summary



7.1 Introduction

This final Chapter reviews the purpose, methodology, and findings of the research. First, a summary is presented of the previous six chapters. Second, a discussion of the theoretical contribution of the work is presented in terms of understanding entrepreneurship cognition and entrepreneurship in a Chinese village context. Third, the practical implications of the work for policy-makers, training course designers, and practitioners are outlined. Fourth, the limitations of the research are presented together with suggestions for future research directions.

7.2 Research Summary

Chapter 1 explored the general background of the research and described the theoretical and practical need for the work, which was conducted in the context of a Chinese village. It explained the research objectives, research questions, research problem, and the significance of the research. The Chapter also identifies the inter-relationships among the variables of interest within a Chinese village context.

Chapter 2 reviewed the contextual foundations for this research, explaining entrepreneurship from the economic origins of the field to the individual entrepreneur as the

economic actor. The Chapter analyses the meaning of entrepreneurship in a Chinese context and discussed how this is similar and yet different from entrepreneurship in the West. Chapter 2 also reviews the literature contributing to the psychological elements used in this research including Azjen‘s (1991) model underpinning the theory of planned behaviour. The Chapter describes the interrelationships among entrepreneurial intention and social norms, attitudes, and perceived behaviour control (self-efficacy). The literature gaps are summarized and a new conceptual model is developed to better understand entrepreneurial intentions in a Chinese village context.

Self-efficacy theory comprises an internal belief component and an expected external response. Entrepreneurship researchers place emphasis on exploring the concept of internal beliefs but tend to overlook the expected external response under exploration in this research. Chapter 2 introduced the relatively new entrepreneurial cognition concept of perceived accessibility of resources from family and public community and links this to entrepreneurial self-efficacy. The foundation for the current research lies in how the individual perceives expected economic outcomes and the social environment. Having introduced the theory and research context, Chapter 2 then developed hypotheses for each of the underlying constructs (entrepreneurial self-efficacy and perceived accessibility of resources) relevant to the Chinese village context that was the focus of this research.

Chapter 3 described the research methodology employed in this study including questionnaire development, participants, data collection, and data analysis techniques (using structural equation modelling). It outlined the data analysis process, including distribution of descriptive statistics, reliability tests, validity tests, measurement model analyses, and structural equation modeling (SEM). An interview framework helped the researcher develop a clear understanding of entrepreneurship-related phenomena in the Chinese village and this informed the development of the survey instrument. Chapter 3 described the development of a new sub-instrument for perceived accessibility of resources (both family and public) and also explained why McGee et al.‘s (2009) entrepreneurial self-efficacy instrument is most appropriate for the current research context – but which required adapting to suit a Chinese village context.

The research sample included entrepreneurs and non-entrepreneurs from Chinese villages. Chapter 4 presented the results and outcomes of the quantitative analyses for the entrepreneur sample. It analysed the entrepreneurial self-efficacy and perceived accessibility

of resources instruments to confirm their validity and reliability. The measurement model analyses showed that the sub-instruments and full instruments had good model fit. Data interpretation and structural equation modelling were used to test the inter-relationships among the entrepreneurial self-efficacy, perceived accessibility of resources, and entrepreneurial intention constructs for the entrepreneur group. Chapter 5 similarly presented the results and outcomes of the quantitative analyses for the non-entrepreneur sample including the results of reliability and validity tests.

Chapter 6 discussed the results from the entrepreneur and non-entrepreneur samples in terms of the research questions and research hypotheses. It described the results of reliability and validity tests and confirmed whether the hypotheses generated in this research were supported or not. The Chapter also compared the results to previous quantitative research conducted in Western contexts.

7.3 Response to Research Questions and Research Objectives

The first research objective of this study was to understand entrepreneurial cognition in the context of a Chinese village. This objective was achieved by undertaking a comprehensive literature review and by conducting interviews with Chinese village entrepreneurs and non-entrepreneurs in order to better understand their entrepreneurial cognition. This objective was also achieved by introducing two new constructs (with associated scales): perceived accessibility of family resources and perceived accessibility of public resources. The study also identified what types of perceived resources existed and where they originated.

The second research objective was to explain village entrepreneurship in China through entrepreneurial cognition theory. This objective was achieved by a wide-ranging literature review from broad entrepreneurship to specific Chinese village entrepreneurship. This research used social psychological theory to develop entrepreneurial cognition concepts to explain village entrepreneurship.

The final research objective was to examine the inter-relationships among perceived accessibility of family resources, perceived accessibility of public resources, entrepreneurial self-efficacy, and entrepreneurial intentions. This research statistically tested the interrelationship among these constructs and provides theoretical implications and practical recommendations as a result of interpreting the results.

7.4 Theoretical Contributions

This research contributes to improved theoretical understanding of the perceived accessibility of resources from both family and public sources, entrepreneurial self-efficacy, entrepreneurial cognition, and entrepreneurship generally in the context of a Chinese village. These areas are discussed below.

7.4.1 Perceived Accessibility of Resources as a New Construct

This research introduced a new sub-construct: perceived accessibility of resources, which links resource-based theory literature to individual entrepreneurial cognition research, in a Chinese village context. From an entrepreneurship perspective, an individual‘s perceived accessibility to external resources arises from a perceived external response from the environment. Perceived support from family or community influences individual entrepreneurial cognition and this research tests its predictive power for both entrepreneur and non-entrepreneur groups.

7.4.2 Perceived Family Resources and Entrepreneurial Intention

This research argues that the perceived positive responsiveness of the environment can be transferred to a perceived accessibility of resources from family or community. Individual-level and firm-level research can be connected by shifting individually accessed resources into a firm-level resource (Brush et al. 2001). Particularly in new business ventures, resources can tend to originate from the family and then be transferred into the business. The current research confirms that perceived family resources are an important influencing factor for predicting entrepreneurial intention. Extant family business research tends to focus on the relative advantages and disadvantages of family-owned versus non-family businesses. These researchers have identified the uniqueness of the family business; however, the role of the family in business start-up cognition is comparatively under-explored – particularly in a Chinese village context. The current research project demonstrates the relationship between perceived accessibility of family resources and entrepreneurial intention. The family‘s contribution to entrepreneurial intention is confirmed by empirical research using data from non-entrepreneur groups in the Chinese village context. The current research found that perceived family resources positively influence the entrepreneurial intentions of non-entrepreneurs.

7.4.3 Perceived Public Resources and Entrepreneurial Intention

The entrepreneurs studied believed that public resources contributed funding, social network, and business expertise to their potential ventures. The non-entrepreneurs believed that public resources contributed social network, property, finances, and labor to their potential ventures. There are different ways of accessing family and public resources and potential supporters apply different evaluations to decide whether to offer support or not. Thus, perceived public resources need to be discussed and tested separately from perceived family resources. This research found that public resources are an important source for entrepreneurs. The predictive power of perceived public resources on entrepreneurial intention is confirmed statistically; however this needs further exploration in a broader research context. Also, although the relationship between perceived accessibility of public resources and entrepreneurial self-efficacy is tested, its relationship to other entrepreneurial psychological elements needs to be studied further.

7.4.4 Entrepreneurial Self-Efficacy (Perceived Planned Behaviour)

Previous entrepreneurial self-efficacy theory has tended to concentrate on efficacy, while ignoring the expected outcome element, which is an estimate of the external or social responsiveness of an action (Mauer, Neergaard & Linstad 2009). Even Azjen‘s (1986) intention-based research primarily focused on efficacy and ignored perceived external responses. However, Bandurra‘s original work on self-efficacy (1977) included two elements: efficacy and outcome expectation. The current research has introduced perceived accessibility of resources to measure an expected external response which modifies intended behaviour. The entrepreneurial self-efficacy construct includes perceived external responsiveness and is similar to the perceived planned behaviour of Ajzen‘s (2002) research, which included both internal perceived control and controllability. However, most entrepreneurial cognition research has been based on Ajzen‘s (1986) model, which excluded the controllability concept. The current research empirically tests the controllability concept and confirms it in a Chinese village context.

Perceptions of controllability and external responsiveness are specific and important consideration in the context of collectivist social behaviour, exhibited in the Chinese social context, for achieving an expected successful entrepreneurial outcome. In entrepreneurial

cognition research, entrepreneurial self-efficacy and perceived planned behaviour concepts need to take account perceived external responsiveness or controllability.

7.4.5 Entrepreneurial Cognition

This research contributes to the entrepreneurial cognition field by introducing perceived external influence factors. In order to understand the entrepreneurial mind, entrepreneurial cognition research has focused on entrepreneurial motivation, emotion, self-efficacy, passion, locus of control, attributions, and intention (Carsrud & Brännback 2009). However, it is also important to understand the entrepreneurial cognition involved in predicting entrepreneurial success. Entrepreneurial self-efficacy is associated with entrepreneurial intention and thus business success; however, the relationship between current entrepreneurial self-efficacy in this research, as one important part of entrepreneurial cognition research, and entrepreneurial intention has been found to be not significant without the original self-efficacy‘s expected external responsiveness elements in Chinese village context.

This empirical study explored the relationship between perceived external resources within an entrepreneurial cognition model. The research focused on perceived accessibility of resources and entrepreneurial self-efficacy to explore the entrepreneurial cognition phenomenon within a Chinese village context.

7.4.6 Entrepreneurship in the Chinese Village Context

This research was conducted in the comparatively unexplored context of the Chinese village. This context is a rich environment for entrepreneurship research since it is where most private, small- and medium-sized enterprises in China originate. The study empirically investigated the entrepreneurial cognition of entrepreneurs and non-entrepreneurs in the Chinese village context. The results describe the relationship between entrepreneurial self-efficacy and perceived accessibility of resources, and their inter-relationships with entrepreneurial intention. In this collective culture, perceived individual capability is not necessarily the predictor of entrepreneurial intention since families and communities are involved in the business start-up process. Perceived accessibility of resources is also important in terms of access to social networks, business advice, and technical support for entrepreneurs. Perceived accessibility of resources is important in terms of access to business property, social networks, and business advice for non-entrepreneurs.

This quantitative research concentrates on individual perceptions of family and public resources to investigate the relationship among the psychological elements (individual intention, entrepreneurial self-efficacy and entrepreneurial attitude). The work contributes to a better understanding of entrepreneurial cognition and particularly in the Chinese village context.

7.5 Practical Implications for Policy-Makers, Entrepreneurship Course Designers, and Practitioners

This research has several implications for policy-makers, entrepreneurship course designers, potential serial entrepreneurs, and nascent entrepreneurs.

7.5.1 Policy-Makers

The evidence from this study suggests that public accessibility of resources is important for encouraging individuals to start their first business and then go on to be serial entrepreneurs. Policy-makers who understand this can try to provide more information about the availability of resources while also making more resources available to assist potential and serial entrepreneurs within a community. For example, the government could offer training courses or services to assist the potential entrepreneur to more clearly understand that resources are available and accessible. Greater access to information on the resources available to support entrepreneurship will increase perceptions regarding accessibility of public resources and strengthen entrepreneurial intention.

The government in China runs community meetings and can help individuals realize the importance of family support. Increasing family awareness and support for the entrepreneurship phenomenon will establish a community environment that encourages entrepreneurship. This will increase individuals‘ perceptions of the accessibility of family resources. Perceived accessibility of family and public resources positively influence entrepreneurial intention. Thus, policy-makers can directly contribute to increasing the availability of public resources and provide training courses for both potential entrepreneurs and their family members that improve the chance of family resources being more accessible to individual entrepreneurs.

7.5.2 Entrepreneurship Course Design

The Western notion of a valid and reliable ESE instrument has limited predictive power in the Chinese village context. This raises three important issues for course design in a Chinese village entrepreneurship context:

1. The collectivist village environment may require that family members be invited to participate in training courses in order to improve the external family environment for potential business operators.

2. Such a course may specifically focus on strengthening individual capacities to access more external support. In a collectivist environment, it is easier for budding entrepreneurs to access the managerial know-how of others, than develop these abilities themselves.

Course designers who understand the perceived accessibility of family and public resources can develop better training courses for students (both entrepreneurs and potential entrepreneurs) who want to start a new business. This will require both an awareness raising element and developing confirmation behaviour before capital investment is made to reduce family risk.

7.5.3 Practitioners

This research makes a twofold contribution to practitioners. First, identifying perceived accessibility of resources as an important influence factor reminds the entrepreneur to be alert to a wide range of potential resources in their community. Entrepreneurs should also establish a supportive family environment to strengthen their intention to engage in new business opportunities. It is especially important for non-entrepreneurs to realize the importance of family support. Creating a new venture is a dynamic and complex process and entrepreneurial cognition elements change throughout the different stages of the process. Intention also has different phases; thus, practitioners need to confirm the perceived external accessibility of resources and support, which will in turn influence other entrepreneurial cognition elements. Nevertheless, the main expectation of the potential entrepreneur is business success. However, there is a gap between reality and perception. The perceived accessibility of resources and support is a measurable and, more importantly, effective way to achieve a specific entrepreneurial task. Improving managerial capability is a lengthy,

practical learning process; it is more effective to simply access external social network support to manage the business.

In the village context, individual capability cannot increase significantly due to a lack of education and training and specifically in entrepreneurship. Thus, perceived external accessibility of resources and support is the most effective way to increase entrepreneurial intention and behaviour and achieve business success. However, an effective way of reducing risk is to confirm the perception of accessibility of resources and support from family and the public before the business decision is made.

7.6 Research Limitations

There were a number of limitations associated with this exploratory research. First, although the research measures the perceived *accessibility* of family and public resources, accessibility is actually influenced by perceived *availability* of resources and perceived *capability* of gaining the resources. In a family context, the accessibility of resources is mainly determined by the perceived availability of resource, and capability is likely to play a limited role. In the cases of public resources, accessibility may be influenced by the capability of the entrepreneur to gain the resources. However, the current research did not investigate the differences between perceived availability of, and perceived capability to gain, external resources. Measuring accessibility, in terms of both perceived availability and perceived capability, may better predict entrepreneurial intention; reveal how perceived availability of resource influence individuals‘ perceived accessibility of resources; and better explain the psychological side of the entrepreneurial start-up process. This requires future research.

A second limitation of the current research is sample size. Both groups were larger than 250 and this is acceptable in structural equation modelling; however, it is not a large enough sample for a cross-model validation test. Some researchers recommend that the structural equation model be complemented by a cross-model validation test to confirm the validity of the measurement or structural model (Camstra & Boomsma 1992). Cross-model validation tests require splitting the sample into two data sets. One data set is used to calibrate and is defined as the validation sample (Byrne 2001). Researchers use the first data set to establish one model which they then confirm with the second data set. However, it is not feasible to

split the 285 entrepreneurs and 296 non-entrepreneurs into four groups. This research uses convergent and discriminant validity tests to confirm the instrument‘s validity.

A third limitation relates to the generalizability of the results. The sample was collected from three closely related villages in China surrounding the City of Cixi: Shengshantou, Dawan, and Zhenqian. To the extent that the results are generalizable to other Chinese villages remains to be seen as there can be cultural differences between Chinese villages including different dialects spoken in different villages. To this extent, additional research needs to be undertaken in other Chinese villages.

A fourth limitation concerns the stability of the constructs. Being perceptual, they may change over time. Ideally, repeated measures longitudinal study would be undertaken that can examine construct stability. Future research in this area would benefit from such a longitudinal study.

7.7 Implications for Future Research

The research findings identified a significant relationship between perceived accessibility of resources, both from family and public, and entrepreneurial intention in a Chinese village context, for both entrepreneur and non-entrepreneur groups. The expected relationship between entrepreneurial self-efficacy and perceived accessibility of family and public resources was partly supported. The entrepreneurial self-efficacy also had limited power to predict entrepreneurial intention in the Chinese village context. The perceived accessibility of resources was tested in the village context; however, the validity and reliability of the instrument has not been tested in a developed Western context such as the United States, United Kingdom, or Australia. Thus, the perceived accessibility of resources needs more conceptual and empirical research to confirm that it is perceived external responsiveness within the entrepreneurship phenomenon.

It is important to build comparisons between different nations in order to provide a better understanding of entrepreneurial cognition. It benefits the individuals who want to start up a business in a new country to understand the domestic entrepreneurial mind. This requires further research to investigate perceived accessibility of resources and entrepreneurial self-efficacy in other Western contexts.

Also, the entrepreneurial cognition concept needs further testing to investigate the relationship between perceived accessibility of resources and business performance, by applying longitudinal research. Longitudinal research which includes entrepreneurial performance as a dependent variable will provide more empirical evidence of the predictive power of perceived accessibility of resources and entrepreneurial self-efficacy for behaviour outcomes in a Chinese village context.

The influence factors on entrepreneurial self-efficacy and perceived accessibility of resources need to be explored to better understand entrepreneurial cognition. It would also be worth exploring cross-country comparisons to better develop the entrepreneurial cognition model. Such research could use culture as one intermediate variable and other influence factors, such as political power, as the dependent variable. Also, the instrument to measure perceived accessibility of resources can be defined within different research contexts; for example, specific industries.

7.8 Conclusion

The main contribution of this research is that it empirically tested the relationship between perceived accessibility of family and public resources and entrepreneurial intention, and confirmed the importance of the role of resources in entrepreneurial cognition research – particularly that undertaken in a Chinese village context. The relationship between entrepreneurial self-efficacy and entrepreneurial intention was found to be significant for some specific dimensions of the ESE construct applied in this research. The expected significant relationship between entrepreneurial self-efficacy and perceived accessibility of resources was not confirmed. The notion of perceived accessibility of resources contributes to entrepreneurial cognition research; however, the research conducted in a Chinese village context requires further refinement in terms of entrepreneurial self-efficacy. The difference between the non-entrepreneur and entrepreneur groups contributes to a better understanding of the entrepreneurial mind in the two groups. It helps non-entrepreneurs gain a better understanding about the entrepreneur‘s mind, providing valuable insights for individuals who intend to start up their first businesses. The relationship between perceived accessibility of resources and other entrepreneurial cognition concepts also equips policy-makers, entrepreneurship course designers, and practitioners with knowledge that can benefit the community and individuals within.

The research identifies the perceived accessibility of resources as an antecedent of entrepreneurial intention. Although the concept of entrepreneurial self-efficacy is relevant to a Chinese village context, it has limited power to predict entrepreneurial intention in the Chinese village context – at least in so far as the instrument that was developed in this research. This suggests that further studies need to be undertaken to investigate this phenomenon further. This research contributed to the entrepreneurship literature by examining an under-researched area (Chinese village entrepreneurship) but an area that is extremely important given the contributions that entrepreneurs who operate in this area make to China and the world economy. In so doing, it has established a platform for further research in other developing world contexts in order to better understand the entrepreneurial mind in those regions.

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APPENDIX A

Interview Questions (English):

INTERVIEW FRAMEWORK FOR CHINESE VILLAGE ENTREPRENEURS

Interview Section	Objectives
Section 1: Introduction	
Do you consent to recording the interview for later academic reference? Interviewee to provide a general introduction of their business‘ style；e.g.，what kind of business: retail, factory, etc.	Gain consent for recording Start the conversation with a familiar topic to encourage them to talk, and have a general understanding of his/her business.
Section 2: Background of their family, business and individual routine activities	
Introduce the extended family members who are in the business … what are their roles? When did you start your business? Why did you start your business? Where the entrepreneurial opportunity comes from and how you assess it as opportunity? How many employees do you have? Where did you get the finance support for the business? How many businesses have you developed and/or operated to date? Can you describe typical daily activities What are the particular things you have to do for the business in one week … in one month?	To obtain a general practical understanding of the framework of village business, and try to open entrepreneurs‘ mind to say something about their individual daily behaviours and firm activities.
Section 3: Questions about entrepreneurial capabilities relevant to Chinese village context	
What kind of abilities does one need to start a new business? Please list 5 of them What kind of abilities does one need to grow an existing business? Please list 5 of them	Determine important difference in a village entrepreneurs‘ understands of entrepreneurial capabilities from that of Western theory.
Section 4: Family business	
Do you regard your business as a family business? What percentage of business income does the	Explore whether there may be a relationship between the Chinese village context and

family take from the business? Is the business owned by one family or more than one family? What is the relationship? If more than one family, why cooperate?	Western family business constructs
Section5: Entrepreneurs‘ business understanding	
Can you separate you business process into 3-5 steps? What are they? On what basis do you separate the business into those stages? During different stage, are there some difference of the acquirement of capabilities What is more important? Entrepreneurial capabilities or accessibility of support?	Explore different capability or external support, may required in different business development stage
Section 6: To compare the practical and theoretical differences observed during the interview	
Can you briefly discuss each of the following in terms of your understanding : Develop new market Develop new products Innovation for people and techniques Initiating investor relationships Coping with unexpected challenges Risk taking Developing social net works Developing critical human resources Financial control aspects of your business What constitutes a supportive family environment Opportunity recognition and how it develops and builds capability Management and leadership Ethical issues in your business Accessibilities of external support	Explore any missing aspects or observed differences from the practical business discussions between Western theory and the Chinese village context

APPENDIX B

Interview Questions (Chinese):

访谈问题:

中国农村企业家访谈基本框架

访谈部分	目的
第一部分：介绍	
1) 为了以后的学术参考，您同意对访谈进行录音吗？ 2) 请被采访者对他们的生意做一个基本介绍（什么类型的生意：开店，工厂...）	(1) 获得录音许可 (2) 从他们熟悉的话题入手开始对话鼓励他们开始提供信息，对他们的生意有一个基本的了解。
第二部分:家庭、生意的基本背景、个体的日常生活安排	
介绍在生意中的家族成员…他们主要做些什么工作？ 您什么时候开始做这个生意的? 您为什么开始做这个生意? 创业的机会是怎么来的， 您是怎么评定这是一个机遇的？ 您现在雇佣了多少员工？ 您创业的资本是怎么组成的？ 到现在为止，您已经发展或者运作过几个	获得实际农村商业的基本情况，尝试着让企业家能够打开思路，聊一下他们的个体日常生活与企业行为。

生意了？ 您能大概描述一下您一天的日常生活吗？ 您为了生意在一周或者一个月中要做的一些特殊的事情?	
第三部分: 有关于中国农村背景下的创业能力	
创业需要的哪些能力? 请罗列 5 项或者更多。 发展现有的生意需要哪些能力？请罗列 5 项或者更多。	测定农村企业家对于创业能力理解与西方理论的重要不同之处。
第四部分: 家族企业	
您认为您的生意是家族生意嘛？？ 家庭收入有多少比率是来至于这个生意的？ 这个生意产权是一个家庭的还是几个家庭的，如果是多于一个家庭，是跟谁合作的？	发掘中国农村背景企业跟西方家族企业构成之间可能存在的关系。
第五部分: 企业家的生意理解	
您能把您创业的过程分成 3-5 部分吗？具体是哪些?您是根据什么做这个分类的？在不同的阶段 ， 是不是有不同的能力要求？	发掘在创业过程中需要的不同的能力与外部支持。

哪个比较重要？创业能力还是各种支持的到位？ 哪些支持对您创业很重要？	
第六部分: 在访谈中比较现实与理论的区别	
请您根据您的理解简单的讨论一下以下问题: • 开发新市场 • 开发新产品 • 技术创新 • 建立于投资者的联系 • 应付一些意外的挑战 • 承担风险 • 发展社会关系 • 发展关键的人力资本 • 对于生意的财务控制 • 什么组成一个很有支持性的家庭环境 • 机会认知与机会的发展 • 管理与领导 • 生意中的道德问题 • 获得外界支持	通过观察发掘任何遗漏有关于西方理论跟中国农村背景下创业不同的地方。

APPENDIX C

Survey (English)

Entrepreneurship, Commercialisation and Innovation Centre

THE UNIVERSITY OF ADELAIDE AUSTRALIA

Thank you for agreeing to participate in this survey. The results of this survey are strictly confidential; information on individual firms will not be disclosed. There are no right or wrong answers, just tell us what you think. If you have questions, please feel free to contact Xu Ting (ting.xu@adelaide.edu.au), Entrepreneurship, Commercialisation and Innovation Centre, Level 1 Engineering South Building, The University of Adelaide SA 5005, Telephone: +61 8-8303 7422.

If you have not started a business, please start from question 5 …

(For this section, please put a √ next to the answer that you select)

1 When did you start your business?
__ 2010 __2009 __2008 __2007 __2006 __2005 __Before 2005

2 What type of business is it? __a retail business __a wholesale business __a service oriented business __manufacturing

3 Including yourself, how many full-time employees are employed in your business?
__1 __2 __3-5 __6-9 __10-14 __15-19 __20-24 __25 or more

4 Prior to this business, how many businesses have you started or purchased?
__1 __2 __3 __4 __5 __More than 5

5 How much confidence do you have in your ability to …

		Very little				Very much
1	Brainstorm (come up with) a new idea for a product or service	1	2	3	4	5
2	Identify the need for a new product or service	1	2	3	4	5
3	Design a product or service that will satisfy customer needs and wants	1	2	3	4	5
4	Estimate customer demand for a new product or service	1	2	3	4	5
5	Determine a competitive price for a new product or service	1	2	3	4	5
6	c14ese6 Estimate the amount of start-up funds and working capital necessary to start my business	1	2	3	4	5
7	Design an effective marketing/advertising campaign for a new product or service	1	2	3	4	5
8	Get others to identify with and believe in my vision and plans for a new business	1	2	3	4	5
9	Network—i.e., make contact with and exchange information with others	1	2	3	4	5
10	Clearly and concisely explain verbally/in writing my business idea in everyday terms	1	2	3	4	5
11	Supervise employees	1	2	3	4	5
12	Recruit and hire employees	1	2	3	4	5
13	Delegate tasks and responsibilities to employees in my business	1	2	3	4	5
14	Deal effectively with day-to-day problem and crises	1	2	3	4	5
15	Inspire, encourage, and motivate my employees	1	2	3	4	5
16	Train employees	1	2	3	4	5
17	Organize and maintain the financial records of my business	1	2	3	4	5
18	Manage the financial assets of my business	1	2	3	4	5
19	Read and interpret financial statements	1	2	3	4	5

6 From your experience, how confident are you that you could obtain the necessary support from your immediate family in terms of …

		Not Confident						Very Confident
1	Financial support by way of money for the venture	1	2	3	4	5	6	7
2	Labour support for your venture	1	2	3	4	5	6	7
3	Business property to support your venture	1	2	3	4	5	6	7
4	Social capital in the form of personal contacts to support your venture	1	2	3	4	5	6	7
5	Business expertise to support your venture	1	2	3	4	5	6	7
6	Other technical, non-business expertise to support your venture	1	2	3	4	5	6	7

7 From your experience, how confident are you that you could obtain the necessary public or other sources in terms of …

		Not Confident						Very Confident
1	Financial support by way of money for the venture	1	2	3	4	5	6	7
2	Labour support for your venture	1	2	3	4	5	6	7
3	Business property to support your venture	1	2	3	4	5	6	7
4	Social capital in the form of personal contacts to support your venture	1	2	3	4	5	6	7
5	Business expertise to support your venture	1	2	3	4	5	6	7
6	Other technical, non-business expertise to support your venture	1	2	3	4	5	6	7

		Unlikely						Very likely
8	How likely will you start up a new business in five years	1	2	3	4	5	6	7

Finally, some questions about you

1 What is your gender? 1 ___Female 2 ___Male

2 What is the highest education level you achieved?

___Primary School

___Secondary (High) School

___Technical or Trade Qualification

___A Diploma after high School

___Undergraduate Degree

___Postgraduate Degree

Thank you for your patience and cooperation. It is greatly appreciated.

If you would like to receive a summary of the results for all firms that participated in the survey, please complete the following information:

Name: _____

Firm: _____

Address: _____

_____

Phone Number: _____

Email Address: _____

APPENDIX D

Survey (Chinese)

Entrepreneurship, Commercialisation and Innovation Centre

THE UNIVERSITY OF ADELAIDE AUSTRALIA

感谢你同意参加该调研。调研结果严格保密；企业相关信息不会被泄露。答案不存在对与错，只要告诉我们你所想的。如果有任何的疑问，请联系徐挺或谢森。

(ting.xu@adelaide.edu.au), Entrepreneurship, Commercialisation and Innovation Centre, Level 1 Engineering South Building, The University of Adelaide SA 5005,联系电话: +61 8-8303 7422. +86 13916562331

如果您还没有创业经历请直接从第 5 个问题开始回答…

(在该部分，请在你悬着的答案边打(√))

1 您什么时候开始您的生意？
__ 2010 __2009__2008__2007__2006__2005__ 2005**之前**

2 生意类型? __零售店 __批发店 __服务行业__制造业

3 包括您自己在内，您雇佣了多少全职员工？

__1__2__3-5__6-9__10-14__15-19__20-24__25**或更多**

4 在这个生意之前，您开创过或者购买过几个生意？

__1__2__3__4__5__**多于**5

5 您对自己以下各项能力的自信程度… **非常少** **非常多**

1	集体讨论产生新产品或新服务的想法	1	2	3	4	5
2	发现对于新产品或者新服务的需求	1	2	3	4	5
3	设计一项产品或服务来满足客户需求	1	2	3	4	5
4	估计客户对于一项新产品或新服务的需求	1	2	3	4	5
5	为新产品或新服务制定一个有竞争力的价格	1	2	3	4	5
6	估计创业所必需的启动资金与劳力	1	2	3	4	5
7	为新产品或新服务筹划有效市场或广告活动	1	2	3	4	5
8	获得别人对商业计划的认同与支持	1	2	3	4	5
9	合作，与他人联系并交换信息	1	2	3	4	5
10	在日常谈判中能清晰简明的用语言或者文字表达	1	2	3	4	5
11	指导员工	1	2	3	4	5
12	招聘雇佣员工	1	2	3	4	5
13	委派任务与职责给员工	1	2	3	4	5
14	有效处理日常问题与危机	1	2	3	4	5
15	启示，鼓励并激励我的员工	1	2	3	4	5
16	培训员工	1	2	3	4	5
17	梳理并维持生意的财务记录	1	2	3	4	5
18	管理财务资金	1	2	3	4	5
19	理解并能说明财务报表	1	2	3	4	5

6 根据你的经验，您对于从直系家庭（父母，子女，兄弟，姐妹）获得以下必要的支持的自信心有多少…

		不自信						非常自信
1	创业的资金支持	1	2	3	4	5	6	7
2	创业劳力支持（除自己以外）	1	2	3	4	5	6	7
3	创业场地支持	1	2	3	4	5	6	7
4	社会人际关系支持创业	1	2	3	4	5	6	7
5	企业家提供商业建议	1	2	3	4	5	6	7
6	技术人员支持创业	1	2	3	4	5	6	7

7 根据您的经验，您从公共或者其他资源（非个人，家庭，家族或者朋友）获得必要的支持的自信心有多少…

		不自信						非常自信
1	创业的资金支持	1	2	3	4	5	6	7
2	创业劳力支持（除自己以外）	1	2	3	4	5	6	7
3	创业场地支持	1	2	3	4	5	6	7
4	社会人际关系支持创业	1	2	3	4	5	6	7
5	企业家提供商业建议	1	2	3	4	5	6	7
6	技术人员支持创业	1	2	3	4	5	6	7

		不太可能						很有可能
8	您在 5 年内创业的可能性有多少	1	2	3	4	5	6	7

最后是有关您的一些情况

1. 性别? ___**女** ___**男**

2. 您的最高学历?

___小学 ___初中 ___技校证书 ___大专

___本科 ___研究生

感谢您的耐心与合作

如果您愿意收到参加该调研简要结果报告，请填写以下信息：

姓名: _____

联系电话: _____

邮箱地址**:** _____

公司名称: _____

地址: _____

_____

APPENDIX E

List of Publications from Doctoral Research

Xu, Ting, Lindsay, Noel, O'Connor, Allan (2010). An extended application of entrepreneurial self-efficacy in a family business Chinese village context. *IFERA 2010 Family Business Forum*, Zhuhai, China, February.

Xu, Ting, Lindsay, Noel, O'Connor, Allan (2010). Toward the development of an "ESE" Scale for Chinese villagers. *7th AGSE International Entrepreneurship Research Exchange 2010*, Coolum, University of the Sunshine Coast, February.

Wang，Ge, Xu，Ting (2009). Actualizing entrepreneurship education in Chinese higher vocational and technical colleges. *6th AGSE International Entrepreneurship Research Exchange 2009*, ECIC, University of Adelaide, South Australia, Australia, February.