

**MEDIATING AND MODERATING EFFECTS OF  
ENTREPRENEURIAL SELF-EFFICACY AND  
ABSORPTIVE CAPACITY ON THE RELATIONSHIP  
AMONG COGNITIVE FACTORS, STRATEGIC  
ORIENTATION AND FIRM PERFORMANCE OF  
SMALL AND MEDIUM SCALE HOTEL AND  
RESTAURANT INDUSTRY IN SRI LANKA**

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SCALE HOTEL AND RESTAURANT INDUSTRY IN SRI LANKA**

By

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**Thesis submitted to  
Othman Yeop Abdullah Graduate School of Business,  
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in Fulfilment of the Requirement for the Degree of Doctor of Philosophy**

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## ABSTRACT

The low performance of small and medium scale enterprises deprives their multiple contributions to the economies in their mobility towards the development. Though the issue has attracted the attention of many researchers, even today it is compelling due to the emerging global competition in the context of developing countries. The previous findings on the understanding of the complex relationships among factors influencing firm performance remain fragmented and unexplained. Therefore, the purpose of this study was to test a research model for investigating the effect of cognitive factors and strategic orientation on firm performance. The research model incorporated achievement motivation, personal goal setting, and mastery experience as cognitive variables while entrepreneurial orientation, market orientation, and learning orientation were configured as strategic orientation. The mediating role of self-efficacy and the moderating effect of absorptive capacity were also examined. The survey questionnaire translated into the native language was administered to a sample of 800 owner managers in the small and medium scale hotel and restaurant industry in Sri Lanka resulting in 350 usable responses. The stratified random sampling was the method used for the selection of the respondents to the sample. Data analysis was carried out by applying the structural equation modeling method. The findings widened the knowledge of the complex relationships among variables concerned indicating that the synergetic effect of cognitive variables and strategic orientation on firm performance is indispensable. Self-efficacy was found to be a significant mediating mechanism in the relationship between cognitive dispositions and firm performance. Strategic orientation of the organizations with higher level of absorptive capacity was found to be strongly related to firm performance. The results also extended the contextual validation of the research model in the developing countries.

**Keywords:** cognitive factors, strategic orientation, firm performance, self-efficacy, absorptive capacity

## ABSTRAK

Prestasi rendah perusahaan kecil dan sederhana tidak menggalakkan kepelbagaian sumbangan mereka kepada ekonomi dalam mobiliti ke arah pembangunan. Biarpun isu ini telah menarik perhatian ramai penyelidik, kini ianya didesak pula oleh kemunculan persaingan global dalam konteks negara-negara membangun. Penemuan sebelumnya tentang pemahaman hubungan kompleks antara faktor-faktor yang mempengaruhi prestasi firma masih lagi terlerai dan tidak terjawab. Oleh itu tujuan kajian ini adalah untuk menguji model kajian bagi menyiasat kesan faktor-faktor kognitif dan orientasi strategik terhadap prestasi firma. Model penyelidikan ini menggabungkan pencapaian motivasi, penetapan matlamat peribadi dan penguasaan pengalaman sebagai pembolehubah kognitif manakala orientasi keusahawanan, orientasi pasaran dan orientasi pembelajaran telah dikonfigurasikan sebagai orientasi strategik. Peranan pengantara efikasi sendiri dan penyederhana keupayaan absorptif juga diteliti. Soal selidik yang diterjemahkan ke dalam bahasa tempatan telah dimajukan kepada sampel 800 pengurus/pemilik hotel dan restoren berskala kecil dan sederhana di Sri Lanka, menghasilkan sebanyak 350 respons yang boleh digunakan. Kaedah persampelan rawak berstrata telah digunakan sebagai kaedah pemilihan responden untuk sampel. Analisis data telah dijalankan dengan menggunakan kaedah model persamaan berstruktur. Penemuan yang meluaskan pengetahuan tentang hubungan kompleks antara pembolehubah berkenaan menunjukkan bahawa kesan sinergi pembolehubah kognitif dan orientasi strategik kepada prestasi firma adalah amat diperlukan. Efikasi sendiri didapati memainkan peranan penting sebagai mekanisme pengantara dalam hubungan antara tabiat kognitif dan prestasi firma. Orientasi strategik organisasi dengan tahap keupayaan absorptif yang lebih tinggi didapati berkait rapat dengan prestasi firma. Hasil kajian juga memperluaskan kesahihan konteks model penyelidikan di negara-negara membangun.

**Kata kunci:** faktor-faktor kognitif, orientasi strategik, prestasi firma, efikasi sendiri, keupayaan daya menyerap

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## **LIST OF ABBREVIATIONS**

ACAP :	Absorptive Capacity
AM :	Achievement Motivation
AVE :	Average Variance Extracted
CR :	Construct Reliability
DV :	Dependent Variable
EO :	Entrepreneurial Orientation
ESE :	Entrepreneurial Self-efficacy
GS :	Goal Setting
IV :	Independent Variable
LO :	Learning Orientation
ME :	Mastery Experience
MEV:	Mediating Variable
MO :	Market Orientation
MOV:	Moderating Variable
PER :	Performance
SME :	Small and Medium Scale Enterprises
VIF :	Variable Inflation Factor

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Many of the previous empirical and other sources have continuously been emphasizing the centrality of a highly performing small and medium scale business sector for promoting the economic and social development of any country (Asian Productivity Organization, 2011; Kongolo, 2010; Griffin & Ebert, 2006; Piech, 2004; Ladzani & Vuuren, 2002; Ghobadian & Gallear, 1996). The multiple contributions of SMEs in terms of the innovations, the economic development, the employment generation, and in many other aspects have made their existence pivotal to the upward mobility of the developed and the less developed countries (Kongolo, 2010).

It has been reported that the small and medium scale business entities account for relatively a higher percentage of the total number of businesses in many of the countries (Asian Productivity Organization, 2012). Their contribution to the gross domestic product and the employment generation accounts for more than 75 percent in many of the nations in the Asian region. Moreover, they are considered as the seedbeds of entrepreneurship, the cornerstones for creativity and innovation, and the engines of the economic growth (Asian Productivity Organization, 2011). The SMEs represent the position of the most dynamic entities in any country. They are playing a pivotal role in the economic and the social progress of a nation by expediting the attainment of the socio-economic goals (Ghobadian & Gallear, 1996). Many of the well-developed and rapidly growing economies are characterized by a stronger SME sector which makes a vigorous effect on the employment creation and the innovation (Ladzani & Vuuren, 2002). They open the avenues for the innovation and the

diffusion of the technology among business entities (Piech, 2004). Griffin and Ebert (2006) posited that the SME sector is the main source of creating the new products and the processes that pour an extra vigour to the market place. They are considered as the “backbone” of any economy. Highly and constantly performing SME sector is one of the most influential features of the countries that had achieved a superior level of development (Wymenga, Spanikova, Barker, Konings, & Canton, 2012). The performance of the SMEs is a matter of greatest importance for the developing countries that are in a continuous struggle to achieve their socio-economic development. Especially, they give a definite support to the economies facing the challenges of unemployment and uneven income distribution (Subhan, Mehmood, & Sattar, 2013). Accordingly, a substantive bulk of evidences from previous literature has extended the support for the fact that a highly performing SME sector is central to the socio-economic development.

Though the indispensability of a highly performing SME sector for the economic and social development of a country is clear, in many of the developing countries, this sector currently faces a number of constraints such as lack of managerial capabilities, infrastructure facilities, modern technology, product quality, and market related issues. Owing to such constraints, low level of performance is one of the most important key issues in the SMEs in many of the developing countries though they are playing a crucial role in their economies (Asian Productivity Organization, 2011; Dasanayaka, 2011).

There is no exception for the Sri Lankan SME sector. The sector currently experiences the low productivity and faces many constraints such as policy inertia, lack of management capabilities, inappropriate technology, and low quality of products and service. The performance of this sector lags far behind the developed

countries and the other East Asian counterparts (Task Force for SME Sector Development Program, 2002). The hotel and restaurant sub sector faces the same issue in the face of increasing demand from the tourism industry. The government has also emphasized the need of more research in this area for creating a globally competitive SME sector committed to the sustainable growth of the country (Ministry of Finance & Planning, Sri Lanka, 2012). Some scholars also have emphasized the importance of investigating the complex relationships among SME performance and the internal and the external factors influencing performance for further understanding of the phenomenon (Emine, 2012; Panday, 2012; Altenburg & Eckhardt, 2006). Despite the prevailing importance of the research in this area, many of the previous studies have focused the issues in the large-scale organizations centred in the capital city and the suburbs (Ministry of Finance & Planning, Sri Lanka, 2006, 2012; Central Bank of Sri Lanka, 2012).

The issue of low performance in SMEs has been addressed over the years by many researchers and policy makers in various fields of studies (Emine, 2012; Panday, 2012; Altenburg & Eckhardt, 2006). A considerable number of studies have attempted to find possible ways of increasing the performance of the SMEs. As a result, many scholars from various disciplines have examined the issue for finding better avenues of achieving the competitive advantage and the performance of the SMEs (Neneh & van Zyl, 2012; Wymenga *et al.*, 2012). Some other scholars have attempted to test the research models with complex relationships in the SME performance since they believe that understanding of such relationships help resolving the issue to a reasonable extent (March & Sutton, 1997). Consequently, a number of studies have investigated the effect of predictors and the mediating and the moderating variables on the SME performance (Beniki & Papastathopoulos,

2011; Enriquez, Adame, & Camacho, 2011; Sirec & Mocnik, 2010; Acharya, Rajan, & Schoar, 2007).

Despite the fact that a plethora of studies have investigated the issue, even today, it remains not only unresolved but also keeps on worsening with the effect of the globalized competition currently emerging from different aspects (Asian Productivity organization, 2012). On one hand, the competition has emerged at the global level due to widespread electronic commerce and electronic business approaches and the SMEs in developing countries are facing the rivalry from their counterparts from all over the world. On the other hand, constraints faced by the SMEs in those countries have aggravated the issue which claims the ever-most importance at present (Van Huy, & Rowe, 2012). Therefore, there exists a resurgence of interest of the researchers on the issue in developing countries.

## **1.2 Research Problem**

The SME performance of the developing countries remains at a lower level compared to the developed countries (Asian Productivity Organization, 2011; Emine, 2012; Panday, 2012; Altenburg & Eckhardt, 2006). Accordingly, the low level of performance in the SMEs is one of the key issues in most of the developing countries though they have been expected to play a critical role in their economies. The current globalized competitive rivalry and the other numerous constraints faced by those countries have multiplied the importance of the issue (Asian Productivity Organization, 2006, 2011; Davidson, 2004).

The Sri Lankan SME sector records less contribution to the GDP compared to the developed countries (Asian productivity organization, 2012). The growth rate of the hotel industry lags behind the other Asian counterparts such as China, India,



Bangladesh, and Myanmar (see table 2.2). The annual growth rate of the sector has been declining until 2008 and then it shows a slight increase (see table 2.7). However, this increase is not at par with the demand created by the post-war revival of the tourism industry in Sri Lanka (see table 2.6). Having motivated by such basic grounds, an in-depth literature review on the SME performance was conducted and subsequently gained some fascinating insights into the available gaps.

The past research studies in performance have been extended into two main streams. One stream has investigated the ways of enhancing the organizational performance. The other has focused on the complex relationships of performance. (March & Sutton, 1997). In the latter stream, the factors affecting organizational performance have been the interest of the many researchers from different disciplines such as economics, entrepreneurship, and strategic management (Mitchell, Busenitz, Lant, Mc Dougall, Morse, & Smith, 2002). In economics, an output-based approach was followed but it was less beneficial in explaining the entrepreneurial outcomes (Low & MacMillan, 1988; Rumelt, 1987; Schumpeter, 1934). The entrepreneurship researchers have attempted to use trait-based studies for explaining the phenomenon but have not been very successful due to the inconsistent findings (Mitchell *et al.*, 2002; Begly & Tan, 2001; Sexton & Bowman-Upton, 1991; Shaver, 1995; Brockhaus & Horowitz, 1986; Coulton & Udell, 1976). In strategic management, multi-variant research models including variables from various fields of studies have been tested (Enriquez *et al.*, 2011; Mancinelli & Mazzanti, 2009).

Despite the variation in the field of studies, the researchers have been investigating some common factors to explain their complex relationships with the organizational performance. The factors such as cognitive traits (Shane & Venkataraman, 2000; Lumpkin & Erdogan, 1999; Lumpkin & Dess, 1996; Miner, Smith, & Bracker, 1989;

Begley & Boyd, 1987), organizational variables (Beneki & Papastathopoulos, 2011; Leitner & Idenberg, 2010), environmental and market related factors (Enriquez, *et al.*, 2011; Mancinelli & Mazzanti, 2009; Wincent & Westerberg, 2005; Romano & Ratnathunga, 1995; Adams & Hall, 1993) take the precedence among them. However, the existing literature gives the insight that neither of the single set of variables nor the combination of factors from the different areas has been able to completely explain the phenomenon and still the issue remains inconclusive (Li, 2008; Luthans & Ibrayeva, 2006; Zaho, Seibert, & Hills, 2005).

The theory of need for achievement and many other studies provide a strong theoretical background for the importance of achievement motivation to the entrepreneurs. They suggest a linear, positive relationship between achievement motivation and individual performance (McClelland, 1961; Olusola, 2011; Pandey, 2011; Jones, Macpherson, & Thorpe, 2010; Stewart & Roth, 2007; Smith, Bracker, & Miner, 1987). Although few studies have investigated the role of achievement motivation as a predictor variable of organizational level performance, they have yielded mixed results (Sidek & Zinol, 2011; Zhang & Burning, 2011; Ryan, Tipu, & Zaffane, 2011). In addition, achievement motivation has been considered as a crucial factor for the SMEs in the developing countries. As they face many obstacles in the volatile environmental conditions, the human agency needs a higher level of achievement motivation to bounce back in the face of such obstacles (Sirec & Mocnic, 2010; Kirkaldy, Furnham, & Levine, 2001). Nevertheless, less research has been conducted in understanding the role of achievement motivation in the SME performance and the variable has not been given due attention in the developing countries (Ryan *et al.*, 2011; Luthans & Ibrayeva, 2006; Kirkaldy *et al.*, 2001).

The goal-setting theory and a number of other studies have strongly proven a linear relationship between goal-setting and individual level performance. This relationship has been considered as one of the most proven relationships in the past. (Locke & Latham 1990; Locke & Latham, 2002; Locke, Shaw, Saari, & Latham, 1981; Seijts, Latham, Tasa, & Latham, 2004). Many of the previous goal setting studies have been conducted on individual level performance as laboratory experiments. There are only few studies in SME context though it would be a possible predictor of the organizational level performance.

The social cognitive theory and the other previous studies have proven the relationship between mastery experience and individual level performance (Bandura, 1986; Anyster, Goodman, & Wallis, 2006; Chowdhury, Endress, & Lanis, 2002). The definition of mastery experience encompassing fast failures and successes is broader compared to the entrepreneurial experience that has been previously tested in entrepreneurship research (Bandura, 1986). Although the studies have proven a strong relationship between mastery experience and individual performance, it has not been previously tested as a predictor of the firm level performance.

Self-efficacy has been strongly proven by the social cognitive theory as a determinant of the individual level performance (Bandura, 1986). Moreover, the variable has also shown positive relationships with achievement motivation (Li, 2008; Luthans & Ibrayeva, 2006; Bandura, 1986), goal setting (Early & Lituchy, 1991; Locke & Latham, 1990; Eden, 1988; Garland, 1985), and mastery experience (Joet, Usher, & Bressoux, 2011; Mueller & Goic, 2003; Debowski, Wood, & Bandura, 2001; Minniti & Bygrave, 2001; Dawes, Horan, & Hackett, 2000; Bandura, 1997; Boyd & Vozikis, 1994; Wood & Bandura, 1989; Fuchs, 1982).

Therefore, achievement motivation, goal setting, and mastery experience have been positively related to both self-efficacy and individual performance enabling a possible assumption for a mediating role of self-efficacy in the firm level performance (see Baron & Kenny, 1986). The researchers have emphasized the importance of self efficacy to the human agency of SMEs in developing countries because they need the characteristics of resilience and bouncing back in the face of constraints faced by them (Luthans & Ibrayeva, 2006; Sirec & Mocnic, 2010). Moreover, it can also be reasonably assumed that these cognitive factors would be effective at the firm level in the Asian countries compared to West for the premise that the Asian cultures are more collectivistic and valuing the cohesion within groups (Oyserman, Coon, & Kemmelmeier, 2002; Cohen & Nisbett, 1994). Few studies had previously investigated the role of self-efficacy at organizational level performance (Hmieleski & Baron, 2008b; Sanda, 2011; Bratkovic, Antoncic & DeNobel, 2012; Lai & Chen, 2012). However, none of the previous studies has investigated the mediating role of self-efficacy in the relationship between above three cognitive factors and SME performance.

In addition to cognitive dispositions, the researchers have studied the variables such as market orientation, entrepreneurial orientation, learning orientation, and technology orientation as predictors of the firm performance (Wang, 2008; Frishammar & Horte, 2007; Aziz & Yassin, 2010; Li, Zhao, Tan, & Liu, 2008; Kurtinaitiene, 2005; Hult, Hurley, & Knight, 2004). Hakala (2010) has configured these four orientations as dimensions of strategic orientation. However, the previous studies have examined those dimensions separately or with the other contingent variables in predicting the firm performance (Hakala, 2010; Hakala, 2011). Therefore, it can be assumed that this recent configuration of strategic orientation

would be a good predictor variable to firm performance because it is a constellation of few orientations.

Absorptive capacity has been the focus of some researchers as a predictor of organizational performance and found significant positive relationships (Yeoh, 2009; Zahra & George, 2002; Lane, Salk, & Lyles, 2001). It was found that absorptive capacity is a crucial factor in determining the success or the failure of SMEs (Gray, 2006; Hayton & Zahra, 2005; George, Zahra, Wheatley, & Khan, 2001; Cohen & Levinthal, 1990). The knowledge-based view emphasizes the importance of knowledge related dynamic capabilities in achieving the organizational performance (Newbert, Gopalakrishnan, & Kirchoff, 2008; Teece, Pisano, & Shuen, 1997; Grant, 1996; Teece & Pisano, 1994). Absorptive capacity, as a dynamic capability, provides the ability to extend and leverage existing competencies of the organization (Sun & Anderson, 2010; Zonooz, Farzam, Satarifar, & Bakhshi, 2011; Ucbasaran, Westhead, & Wright, 2001). Consequently, it can be expected that absorptive capacity would possibly leverage exploiting strategic orientation that represents the resources, the positions, and the processes of exploring and exploiting. It is likely to affect positively the relationship between strategic orientation and the firm performance making the relationship stronger, significant, and directional. However, the moderating effect of absorptive capacity on the relationship between strategic orientation and firm performance has not been previously investigated to the best of the knowledge of the researcher.

Based on the concepts of triadic reciprocity and analytic decomposition of triadic factors in the social cognitive theory, cognitive factors and strategic orientation are assumed to be collectively affecting the SME performance. However, none of the

studies has investigated these two sets of variables in a single firm performance model.

Therefore, there is an obvious need of investigating how cognitive factors and strategic orientation affect the SME performance and whether self-efficacy mediates the relationship between cognitive factors and SME performance. It is also an obvious need to investigate the moderating effect of absorptive capacity on the relationship between strategic orientation and firm performance.

### **1.3 Research Questions**

To explore the research problem outlined above, following research questions were addressed by this study.

1. Are there significant relationships between cognitive factors and performance of the SME hotel and restaurant industry in Sri Lanka
2. Does entrepreneurial self-efficacy mediate the relationship between cognitive factors and performance of the SME hotel and restaurant industry in Sri Lanka
3. Are there significant relationships between strategic orientation and performance of the SME hotel and restaurant industry in Sri Lanka
4. Does absorptive capacity moderate the relationship between strategic orientation and performance of the SME hotel and restaurant industry in Sri Lanka

### **1.4 Research Objectives**

The study investigates the effect of cognitive factors and strategic orientation on firm performance. The extent to which self-efficacy mediates the relationship between cognitive factors and the firm performance was also investigated. The study further

examined the moderating effect of absorptive capacity on the relationship between strategic orientation and firm performance.

More specifically, the research objectives of this study can be stated as follows.

1. To determine the significant relationship between the cognitive factors and performance of the SME hotel and restaurant industry in Sri Lanka
  - a) To determine the significant relationship between achievement motivation and performance of the SME hotel and restaurant industry in Sri Lanka
  - b) To determine the significant relationship between goal setting and performance of the SME hotel and restaurant industry in Sri Lanka
  - c) To determine the significant relationship between mastery experience and performance of the SME hotel and restaurant industry in Sri Lanka
2. To determine the mediating effect of self-efficacy in the relationship between cognitive factors and performance of the SME hotel and restaurant industry in Sri Lanka
  - a) To determine the mediating effect of self-efficacy on the relationship between achievement motivation and performance of the SME hotel and restaurant industry in Sri Lanka
  - b) To determine the mediating effect of self-efficacy on the relationship between goal-setting and performance of the SME hotel and restaurant industry in Sri Lanka
  - c) To determine the mediating effect of self-efficacy on the relationship between mastery experience and performance of the SME hotel and restaurant industry in Sri Lanka

3. To determine the significant relationship between strategic orientation and performance of the SME hotel and restaurant industry in Sri Lanka
  - a) To determine the significant relationship between market orientation and performance of the SME hotel and restaurant industry in Sri Lanka
  - b) To determine the significant relationship between entrepreneurial orientation and performance of the SME hotel and restaurant industry in Sri Lanka
  - c) To determine the significant relationship between learning orientation and performance of the SME hotel and restaurant industry in Sri Lanka
4. To determine the moderating effect of absorptive capacity on the relationship between strategic orientation and performance of the SME hotel and restaurant industry in Sri Lanka
  - a) To determine the moderating effect of absorptive capacity on the relationship between market orientation and performance of the SME hotel and restaurant industry in Sri Lanka
  - b) To determine the moderating effect of absorptive capacity on the relationship between entrepreneurial orientation and performance of the SME hotel and restaurant industry in Sri Lanka
  - c) To determine the moderating effect of absorptive capacity on the relationship between learning orientation and performance of the SME hotel and restaurant industry in Sri Lanka



### **1.5 Significance of the Study**

This study contributes to the existing body of knowledge by introducing several new variables and relationships. Goal setting and mastery experience are two new variables introduced by this study as predictors of firm level performance. Introducing the new configuration of market orientation, entrepreneurial orientation, and learning orientation as strategic orientation to predict firm performance was a new contribution. The study also introduced absorptive capacity as a moderator variable between strategic orientation and firm performance. Investigating achievement motivation, goal setting, and mastery experience together as independent variables in a single research model was a new contribution in performance studies. Moreover, strategic orientation together with the three cognitive factors as independent variables of SME performance was a new contribution.

In addition, the study empirically contributed by testing the effects of cognitive variables and strategic orientation on the SME performance and the mediating and the moderating effects of entrepreneurial self-efficacy and absorptive capacity. The proposed structural paths of this research model were underpinned by few major existing theories, mainly, the social cognitive theory, the resource-based theory, the theory of achievement motivation, and the goal-setting theory. The findings of the study furthered the knowledge of those theories.

The findings also would be helpful in designing entrepreneurial education in the schools, the universities, and the other higher education institutes. The empirical evidences would help the policy makers, the curriculum developers, and the entrepreneurship trainers in both formal and informal education sector. Since this study cover both cognitive and organizational level variables in the SMEs, the findings will be more important for the entrepreneurs to realize which cognitive

factors to be developed among people and what dimensions of strategic orientation should be given the priority at the organizational level.

The findings of this study claim the practical importance to the stakeholders of the hotel and restaurant industry in Sri Lanka. In the short run, the findings would be practically used by the policy makers, the authorities, the entrepreneurs, the managers, and the funding agents to face the issues created by the recent boom in the Sri Lankan tourism industry. In the long term, the findings of the study would help taking measures to make the Sri Lankan SME sector more competitive, value adding, and contributing to the economic growth of the country. As the relationships of these variables have never been tested in the Sri Lankan SME sector, there exists a contextual importance in the current study.

### **1.6 Scope of the Study**

The study mainly focuses the performance of the small and medium scale enterprises. The firm level performance is selected as the criterion variable since the low performance is a major issue in the developing countries. The complex relationships among firm performance and its determinants are the focus of the study. The independent variables extended into two main areas namely, cognitive factors and strategic orientation. Cognitive factors included achievement motivation, goal setting and mastery experience. Self-efficacy was incorporated as a mediating variable between cognitive factors and firm performance. These variables were selected for the study because self-efficacy may be a possible mediator and possibly explain the variance of firm performance and especially relevant to developing countries. Strategic orientation included market orientation, entrepreneurial orientation, and learning orientation. Absorptive capacity was assumed to be a moderator variable between strategic orientation and firm performance.

The study was conducted in the Sri Lankan small and medium scale hotel and restaurant industry. The study covered the small and medium scale hotels and restaurants in five geographical areas. Ninety five percent of the total establishments are located in these areas where cover the Colombo city, the South coast, the East coast, the up country, and the ancient cities.

## **1.7 Definitions of Terms**

Definitions of terms and other relevant concepts in this study are adapted from the definitions by previous authors to fit for the context of hotel and restaurant industry in Sri Lanka.

### **1.7.1 Firm Performance**

Firm performance is defined as the business performance of the firm, which denotes by return on the corporate investment, the net profit position relative to the competition, the return on investment position relative to the competition, the return on sales, and the financial liquidity position relative to the competition (Venkataraman, 1989).

### **1.7.2 Achievement Motivation**

The study defines achievement motivation as striving to increase or to keep as high as possible, one's own capabilities in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore either succeed or fail (Heckhausen, 1967).

### **1.7.3 Goal Setting**

The peoples' inclination to set and attain specific standard of performance targets within specific period is the definition used in the study for the variable goal setting (Locke *et al.*, 1981).

#### **1.7.4 Mastery Experience**

Definition for the mastery experience used in this study is “Individuals’ experiences in the past performance and the failures in the entrepreneurial activities” (Bandura, 1986)

#### **1.7.5 Self-efficacy**

Self-efficacy is defined as “The degree to which individuals perceive themselves as having the ability to successfully perform the different roles of entrepreneurship.” (DeNoble *et al.*, 1999).

#### **1.7.6 Strategic Orientation**

Strategic orientation is defined as “The principles that direct the organizational activities and behaviours essential for the performance of the firm” (Gatignon & Xuereb, 1997).

#### **1.7.7 Market Orientation**

The definition for the variable market orientation is “The organizational culture that creates the necessary behaviours for the creation of superior value for buyers, which in turn, increase the performance” (Narver & Slater, 1990).

#### **1.7.8 Entrepreneurial Orientation**

Entrepreneurial orientation is defined as “The extent to which the organization is entrepreneurial including three dimensions namely, risk-taking, innovativeness and pro-activeness” (Covin & Selivn, 1989).

#### **1.7.9 Learning Orientation**

Learning orientation defined by Sinkula, Baker, and Noordewier (1997) as “Set of organizational values that influence the propensity of the firm to learn.” is used.

### **1.7.10 Absorptive Capacity**

For the variable absorptive capacity, the current study used the definition by Cohen and Levinthal (1989) as “The ability of a firm to recognize new external information, assimilate it and apply it to commercial ends”.

### **1.7.11 Small and Medium Scale Industry**

This study considers small and medium scale hotel and restaurant sector as “Entities with value of fixed assets other than land and buildings up to 16 Million Sri Lankan Rupees”. The definition is taken from the ministry of industry, tourism, and investment promotion, Sri Lanka.

## **1.8 Organization of the Thesis**

The thesis is compiled with seven chapters. The chapter one, introduction starts with the study background and the statement of the problem. Next, the research questions and the research objectives are outlined. A brief description of the significance and the scope of the study are included and the final part of the chapter presents the definitions of the variables. Chapter two, titled as hotel and restaurant industry in Sri Lanka, presents an overview of the Sri Lankan SME sector, the contributions of the industry, the constraints faced by the industry, and the motivations and the justifications for conducting the study in the Sri Lankan hotel and restaurant industry. The chapter three, literature review, comprises with a compilation and a critical review of the previous literature associated with the relationships among independent, dependent, mediating and moderating variables specified in the research model. The chapter concludes with a brief description of the underpinning theories. The chapter four, titled as theoretical and hypotheses development, presents the theoretical framework on which the research model and the hypotheses of the current study were based. The graphical representation of the research model was

presented at the end of the chapter. The chapter five presents a description of research methodology adapted by the study. The content of the chapter comprises with the research approach, the conceptual framework, the population and the sample selection, the research instruments, the operationalization of variables, the method of data collection, and the data analysis. The chapter six presents the data collected in the study and the results of the analysis and the findings followed by a discussion of the results. The last chapter of the thesis presents the conclusions based on the findings of the study followed by the recommendations, the implications of the findings, the limitations of the study and the suggestions for the future studies.

## **CHAPTER TWO**

### **SME HOTEL AND RESTAURANT INDUSTRY IN SRI LANKA**

#### **2.1 Introduction**

The purpose of this chapter is to provide a basic insight into the SME sector and the hotel and restaurant industry in Sri Lanka, where the research model of the study was empirically investigated. The first part of the chapter presents the basic information of and the constraints faced by the SME industry. The rest of the chapter highlights the contribution from the industry to the economy, the information on hotel and restaurant sector, and the issues faced by the hotel and restaurant sector. Finally, it presents the justification for selecting the hotel and restaurant industry for testing the research model of this study.

#### **2.2 SME Sector in Sri Lanka**

The SME sector is a major player of the Sri Lankan economy. This sector consists of more than 90 percent of the total business entities of the country (Department of Registrar of Companies, Sri Lanka, 2012). The vision articulated for this sector by the government is “To be globally competitive through an entrepreneurial culture committed to sustainable growth”. The government has given a significant emphasis to the SME sector and prioritized it as an important strategic sector (Ministry of Finance and Planning, Sri Lanka, 2006). The national strategy for the SMEs indicates that, undoubtedly, highly performing SME sector can play a major role in encountering the challenges of the low productivity and the other issues such as the regional development, the income generation, the unemployment, and the poverty eradication.

The small-scale enterprises are defined in Sri Lanka as “The entities with the asset value not exceeding 20 million Rs. without land and buildings. The medium-scale SMEs are the entities with the asset value not exceeding 50 million Rs. excluding the land and building values. In addition, different institutions adopt the definitions in terms of different criteria such as the value of the fixed assets, the number of employees, the invested capital or as their combination (Task Force for SME Sector Development Programme, 2002). The table 2.1 below shows the definitions of SMEs adopted by Sri Lankan organizations.

Table 2.1  
*Definitions of SMEs in Sri Lanka*

Institution	Criterion used	Medium scale	Small scale
The Dept. of Small Industries	Capital investment	Between 5-25m Rs.	Less than 5 m Rs.
	No. of Employees	Between 5-50	Less than 50 employees
Sri Lanka Export Development Board	Capital investment	More than 40 m Rs	Less than 20 m Rs.
	Annual export	More than 100 m Rs.	Less than.100 m Rs.
Sri Lanka Standards Institution	No. of Employees	Between 50-249	Less than 50
Ministry of Industry, Tourism and Investment Promotion	Value of fixed assets other than land and buildings	Up to Rs. 16 m Rs.	Less than 16 m Rs.
Federation of Chambers of Commerce	Capital employed	Between Rs.2 m to 20 m Rs.	Less than 2 m Rs.
World Bank (for Sri Lankan country studies)	No. of employees	Between 50-99	Less than 1- 49

Source: Task Force for SME Sector Development Program, (2002) and Dassanayake (2011)



The Sri Lankan SME sector consists of a vast array of business areas including manufacturing, services, agriculture, tourism, construction, fisheries, and mining. The relative contributions from all of these areas cannot be produced due to information paucity in this sector. However, the industrial sector represents the highest proportion of the total SMEs in Sri Lanka. As per the definition used by this study, 96 percent of entities can be categorized as SMEs. Among them, 85 percent and 11 percent account for the small-scale enterprises and the medium-scale enterprises respectively. The highest percentage of the total entities (33 percent) is reported by the sub sector food, beverage, and tobacco products followed by the textile apparel and leather products (19 percent). Seventy five percent of the total SMEs are comprised with the entities from three groups of sub sectors namely food, beverage, and tobacco products, textile, apparel, and leather products and mining. The lowest percentage is represented by the sub sector, basic metal products (0.1 percent) (Task Force for SME Sector Development Program, 2002).

The geographical distribution of the entities in the island shows a wide disparity. The most of the SMEs are located in the Western province of the country. Nearly 80 percent of the SMEs are centred in two main cities in the Western province namely, Gampaha and Colombo. Fifty-two percent of the medium-scale enterprises and 28 percent of the small-scale entities are concentrated in these two cities. It indicates that the disparity of geographical distribution is more severe in the medium-scale enterprises in comparison with the small-scale establishments. The Central province accounts for the second highest number of establishments, reporting 25 percent and 18 percent of the medium-scale and the small-scale enterprises respectively. The lowest is reported from the North Central province with three percent of both the small-scale and the medium-scale enterprises (Department of Census and Statistics,

Sri Lanka, 2010; Task Force for SME Sector Development Program, 2002). The most of the SMEs are family businesses which are owner-managed or run by family individuals. Relative to large-scale business entities, this sector is more labour intensive than capital intensive (Dassanayake, 2011).

### **2.3 Competitive Environment**

The major competitive rivalry for the Sri Lankan SMEs is coming from the large-scale enterprises. The upgraded technology and the benefits from economies of scale in the large-scale enterprises have given the ability for them to pose a higher competition in terms of the price, the product quality, the promotion, the distribution, and in many other aspects. In addition to the competition from the national level, some significant recent changes in international context where the Sri Lankan SMEs are operated can be observed. Since the Sri Lankan economy is one of the most liberalized economies, the competition from the foreign products has become a great challenge for SMEs. In addition, competitiveness of Sri Lankan SMEs has been shaped by the Sri Lanka-Pakistani and Sri Lanka-India bilateral free trade agreements. The recent invasion of the market by Chinese products has also aggravated the situation (Lanka News Papers, 2013).

The most recent and significant challenge for SMEs has been the emerging, widespread e-commerce and e-business activities. It has increased the mobility of capital and removed international boundaries and barriers of trade. On the other hand, rapidly increasing internet usage among the people has gradually improved their involvement in online purchasing. Accordingly, the Sri Lankan SMEs face international competition from the competitors of the every nook and cranny of the world. Although facing this competition needs strong well performing SMEs, their expansion and growth have been constrained by the policy, market, and product

related issues (Asian Productivity Organization, 2011; Task Force for SME Sector Development Program, 2002).

#### **2.4 Constraints Faced by the SME Sector**

The Task Force for SME Sector Development Program (2002) has identified a number of constraints faced by the Sri Lankan SME sector. Among them, policy inertia is a major obstacle. Though there are few policy reforms after the post-economic liberalization period, there is no enactment of favourable policy reforms conducive to efficient SME sector. For example, in 1980s and early 1990s, trade liberalization policy was given the priority. However, that has been more favourable towards the large-scale sector and even adversely affected SMEs. Because of this existing policy inertia, SME sector has not been able to exploit the advantages created by the liberalization of the economy (Task Force for SME Sector Development Program, 2002).

Another constraint faced by the SME sector is the low level of technology and the absence of technical and managerial skills. The low level of technology has directly reduced the operational efficiency of the SMEs. The lack of technical and managerial skills reduces the ability to compete against the rivals. The government supportive organizations and other organizations such as universities have not taken the responsibility of improving the technical and professional managerial skills in this sector. The lack of market information and the marketing skills is another important obstacle identified. The most of the Sri Lankan SMEs have limited their market space only to the regional niche markets. Consequently, this sector has not been exploiting the potential market opportunities in both local and foreign markets (Asian Productivity Organization, 2011).

The lack of infrastructure facilities has impeded the growth and the success of the SME sector. The electricity and water, the telephone facilities, the road access are not adequately supplied to the SMEs out of the urban areas while the cost of acquiring them remains very high. The regulatory role of the government such as lengthy and complex procedures and documentations, outdated rules and regulations are also considered as a heavy constraint for the development of the SME sector (Task Force for SME Sector Development Program, 2002).

The low survival rate of the SMEs is another constraint. Twenty five percent of newly started SMEs collapse around two years of their inception. Only 20 percent of SMEs survive within eight years (Lanka News Papers, 2013). This survival rate is relatively lower in Sri Lanka compared to European Union. In European Union, more than 50 percent of businesses survive after five years (European Union, 2012). Dassanayake (2011) has also indicated few constraints faced by the Sri Lankan SME sector such as financial, market and technological related constraints, and misplaced national priorities. These constraints may result in unnecessary delays, excessive costs, and discouraging the entrepreneurs.

## **2.5 Contribution to the Economy**

The Sri Lankan SME sector's contribution to the GDP of the country is nearly 50 billion US Dollars in 2012 (World Economic Forum, 2012). Although this sector contributes more than 95 percent of the total industrial establishments, the value addition from the sector is low similar to many other developing countries. Quoting the Department of Census and Statistics, Dassanayake (2011) has indicated that the value addition from the SME sector remains as low as 20 percent. The food and beverage sub sector makes the highest value addition reporting 52 percent of the total value addition from SMEs. Lanka News Papers (2013) reported that the economic

contribution of Sri Lankan SMEs remains low. Perera and Wijesinha (2011) reported that comparatively Sri Lankan SMEs have low level of productivity and the sector needs new development strategies.

Contribution of SMEs in terms of employment is more than 60 percent in Sri Lanka. The highest contribution to this portion comes from food, beverage and textile, apparel sub sectors reporting 38 percent and 24 percent respectively. Mining subsector provides the 12 percent of the total employments. These three sub sectors contribute nearly 75 percent of the employment in SMEs. In comparison with the developed countries and the counterparts in East Asia, the average growth of the performance rate remains far behind in Sri Lanka (Asian Productivity Organization, 2011, 2012). The table 2.2 shows the country comparison of average annual performance rate of selected industries.

Table 2.2

*Country Comparison of Average Growth of Performance Rate of Industry*

country	Agriculture	Mining	Manufaturing.	Hotel Wholesale and retail	Transport communications
Bahrain	1.2	1.5	8.2	5.1	8.4
Bangladesh	3.2	7.9	7.3	6.5	7.3
Cambodia	5.1	16.7	11.6	7.2	7.4
China	4.1	10.6	10.6	12.0	8.6
India	2.6	4.6	7.7	8.5	12.2
Indonesia	3.5	0.8	4.3	5.5	12.0
Kuwait	3.0	2.4	8.3	8.2	14.1
Lao PDR	2.8	46.4	8.7	10.7	9.0
Mongolia	2.8	5.5	8.0	6.1	14.3
Myanmar	8.3	13.2	20.0	10.9	17.1
Oman	1.8	2.4	11.5	11.4	12.0
Qatar	2.3	11.0	6.1	14.6	28.3
Sri Lanka	2.4	11.8	3.7	4.4	7.9

Source: Adapted from Asian Productivity Organization (2012)

As per the table, the growth of the performance rate of the Sri Lankan SMEs has been lagging behind the other countries. Especially, it is lower than almost all the other countries in the hotel and the agriculture sectors. According to Altenburg and Eckhardt (2006), the small firms claim lower productivity level compared to the large firms and this productivity gap is larger in the developing countries. Nishantha (2010) indicated that the Sri Lankan SME sector has not reached its full potential in terms of the performance.

## 2.6 Hotel and Restaurant Industry

The Sri Lankan hotel industry consists of star graded establishments and non-graded hotels and restaurants. The government's classification of star graded hotels ranges from one star to five stars. Some regional and international companies such as Aitken Spence, Jet wing Hotels, John Keells, Hilton, Taj, and Aman dominate this large-scale star graded hotel industry in Sri Lanka (Wij, 2011; Sri Lanka Tourism Development Authority, 2010). The largest percentage of the hotels and restaurants in the country are unclassified and represents the small-scale and the medium-scale establishments registered in the Sri Lanka Tourism Development Authority (Sri Lanka Tourism Development Authority, 2011).

Table 2.3  
*Distribution of Hotels in Sri Lanka Based on Star Category in 2011*

Star Grade	establishments	percentage
Graded from 5 to 1 star	109	9%
Unclassified	1099	91%

Sources: Ministry of Economic Development, Sri Lanka (2011) and Sri Lanka Tourism Development Authority (2010, 2011)

The table 2.3 shows that 91 percent of total hotels and restaurants are represented by the unclassified sector and they contribute more than 50 percent of the total supply

(Wij, 2011; RAM Ratings Lanka, 2011; Asia Securities, 2010). Therefore, the unclassified segment is a significant portion of the Sri Lankan hotel and restaurant industry. This small and medium scale, unclassified sector caters the demand that cannot be satisfied by the star graded hotels. They are expected to be a major player in the tourism industry in Sri Lanka (Wij, 2011; Asia Securities, 2010). These unclassified hotels are located in five main geographical areas in the country. Information on regional distribution of unclassified hotels is shown in the table 2.4 below. As the table shows, the capital, Colombo city, is the focus of Sri Lankan hotel industry. Thirty nine percent of the total hotels are located there. The Southern region becomes the second followed by the ancient cities and the Eastern coast is the last with only one percent of the total establishments.

Table 2.4  
*Regional Distribution of Hotels*

Location	Percentage
Colombo	39%
South coast	35%
Ancient cities	19%
Up-country	6%
East coast	1%

Source: RAM Ratings Lanka (2011)

## **2.7 The Current Issues Faced by Hotel and Restaurant Industry**

The tourism industry of Sri Lanka, which suffered immensely from internal civil conflicts, has been achieving good recovery from the year 2010. The tourist arrivals to Sri Lanka increased sharply by 44 percent in the year 2010 compared to the previous year. The number of tourist arrivals in 2011 exceeded 700,000, and in 2012, it was over one million. In 2012, earnings from the tourism industry peaked by 62 percent. The room occupancy of hotels and restaurants also reported an increase to a

rate of 70:1. The spending per tourist per night has increased from US Dollars 78 in 2009 to 88 US Dollars in 2010 (Central Bank of Sri Lanka, 2010, 2012).

In addition to the current revival, the government has also higher expectations in the growth of the tourism industry. The target of the Sri Lankan government in 2016 is 2.5 million in tourist arrivals. The tourism strategic plan for the five-year period of 2011-2016 has specified the importance of promoting the SME hotel and restaurant sector to face the increasing demand. The recent revival and the future expectations in the tourism industry demands both quantitative and qualitative improvements in the Sri Lankan hotel and restaurants industry (Ministry of Economic Development, 2011; Wij, 2011).

The higher targets of tourist arrivals for the coming five years will remarkably increase the demand for hotel rooms and other facilities. The country currently has 22248 registered hotel rooms from both classified and unclassified establishments as per the Ministry of Economic Development, Sri Lanka (see table 2.5 below).

Table 2.5  
*Accommodation in Graded and Unclassified Establishments*

Establishment	Capacity in no of rooms
Hotels	
Graded from 5 to 1star	9289
Unclassified	12959
Total	22248

Sources: Ministry of Economic Development, Sri Lanka, (2011) and Sri Lanka Tourism Development Authority, 2011)

The government targets 2.5 million tourist arrivals by 2016. Based on this target, it has been projected that additional 40,778 rooms should be catered by the Sri Lankan hotel and restaurant industry within the next five years (see table 2.6).



Consequently, the room supply is expected to be doubled and other parallel services are to be improved simultaneously.

Table 2.6  
*Estimation of Additional Room Requirement by 2016*

Total number of tourist arrivals in 2010	654,476
Existing stock of hotel rooms in Sri Lanka	14,598 star-rated and unclassified rooms
Ratio of travelers-to-rooms	45 travelers per room or 45:1
Projected number of travelers in 2016	2,500,000
Keeping the ratio of travelers-to-rooms constant,	
Total number of hotel rooms required by 2016	55,239
additional number of hotel rooms required in next five years	40,778

Source: Wij, (2011)

In addition, the hotel and restaurant sector needs to achieve many qualitative improvements to meet the customer expectations (Ministry of Economic Development, 2011; Wij, 2011). The growth of the contribution to the gross domestic product from the unclassified hotel and restaurant sector has been declining from 2006 to 2008. However, in the years of 2009 /2010 it has increased (See table 2.7)

Table 2.7  
*Annual Growth Rate of Sectoral Contribution in Sri Lanka*

	2006/05	2007/06	2008/07	2009/08	2010/9
	% change	% change	% change	%change	% change
Hotels and Restaurants,	2.5	-2.3	-5	13.3	32.9

Source: Department of Census and Statistics Sri Lanka (2010)

As table 2.7 shows, Growth of the contribution to gross domestic product from the unclassified hotels and restaurant sector has been declining from 2.5 percent to -5 percent within three years. Though it has been slightly increasing in the last three years, this level of growth in the hotels and restaurants industry is at par below with the demand created by post-war revival of the tourism industry.

## **2.8 Justification for Selecting the Hotel and Restaurant Industry**

The current research model hypothesized that the three cognitive factors (achievement motivation, goal setting, and mastery experience) and three strategic orientations (market orientation, entrepreneurial orientation, and learning orientation) positively related to the SME performance. Testing these relationships needed a context that can be assumed to have a higher level of cognitive dispositions and strategic orientations.

Compared to the growth of the entire SME sector, the hotel and restaurant sub sector in Sri Lanka shows relatively a higher level of growth rate at present. Though it had a slight decline until 2009, it has been increasing since then. For the reason that the growth of the Sri Lankan hotel and restaurant sector has been increasing while that of entire SME sector is lagging behind, it can be assumed that the cognitive dispositions of the people in this sector are favourably different from the other sectors. It is also reasonable for assuming that this sector may be strategic oriented than the other sectors.

In addition, this context is well worth considering for this study since the current growth rate and the level of performance in this sector have created a big mismatch compared to the demand created by the recent revival of the Sri Lankan tourism industry. To face this situation, The Sri Lankan Government has prepared a strategic plan for the five-year period from 2011 to 2016. One of the main strategies to achieve the objectives specified in the plan is to promote the SME hotel and restaurant sector to face the increasing demand (Ministry of Economic Development, Sri Lanka, 2011; Central Bank of Sri Lanka, 2010; Department of Census and Statistics, Sri Lanka, 2010).

Therefore, there is a practical significance of selecting this sector for the current study. Moreover, the relationships specified in this research model had never been tested previously in this context and it provides a rich context for testing the research model of the study.

## **2.9 Summary**

The Sri Lankan SME sector has been experiencing a low level of productivity over the years. Its contribution to the economy is far behind the developed countries and the East Asian counterparts. In addition, this sector faces many constraints common to all the developing countries and they have impeded the growth and the performance of the sector. Compared to the entire SME sector, the Sri Lankan hotel and restaurant sub sector displays some upward mobility in terms of performance and shows the features of an ideal context to test the research model of the study.

## **CHAPTER THREE**

### **LITERATURE REVIEW**

#### **3.1 Introduction**

This chapter reviews the existing literature related to the SME performance. The first part of the chapter focuses on the organizational performance followed by the other variables in the research model. The second part focuses on the existing literature on the relationships among dependent, independent, mediating and moderating variables. The third part is dedicated to the underpinning the theories of the study and their relations to the hypothesized paths of the proposed research model.

#### **3.2 Firm Performance**

The term firm performance is generally used to denote the organizational success. It is considered as the achievement of expected organizational outcomes such as goals and objectives. The firm performance has been defined as “The comparison of the value created by a firm with the value owners expected to receive from the firm” (Alchian & Demsetz, 1972). Another definition of the construct viewed it as “The way organization carries its objectives into effect” (Flapper, Fortuin, & Stoop, 1996). It is clear that the common notion for both of the above definitions are related to outcomes of the organization.

The researchers consider the firm performance as a multidimensional concept. According to Kaplan and Norton (1996), the concept should measure all aspects of the performance that are relevant to the success of the organization. Carton and Hofer (2010) developed a multidimensional measure for financial performance and noted that a consensus has not been reached in measuring the firm performance in management research. Brush and VanderWerf (1992) also have supported the idea

that there is no consensus on the dimensions of the construct. Further, they have shown that thirty-four studies in management have used more than thirty different conceptualizations of firm performance. Accordingly, the previous studies in management have used wide range of measures of firm performance such as growth (e.g. market share, turnover) profitability (e.g. net profit, return on investment) and survival (Foley & Green, 1989).

For the last four decades, the firm performance is a concept widely focused by many researchers from different fields of studies (Rogers & Wright, 1998; March & Sutton, 1997; Venkatraman & Ramanujam, 1986). Two of such main fields of studies are strategic management and entrepreneurship. In strategic management, the construct is considered as in the heart of the discipline (Venkatraman & Ramanujam, 1986) and has been conceptualized mainly in financial aspects focusing the improvement of the firm performance (Rogers & Wright, 1998). In entrepreneurship studies, the firm performance has been widely used as a dependent variable (Rogers & Wright, 1998; March & Sutton, 1997). Murphy, Trailer, and Hill (1996) noted that 51 studies in entrepreneurship from 1987 to 1993 have used organizational performance as the dependent variable. Most of the entrepreneurship studies, which used the firm performance as a dependent variable, have attempted to explain the variance of the construct (Carton & Hofer, 2010; Brush & Vanderwerf, 1992). Accordingly, the research in the area of firm performance has extended into two main streams. One is to investigate how to improve the firm performance and the other is to explain the variance in firm performance (March & Sutton, 1997).

The role of SMEs is indispensable for any country due to their multiple contributions to the economy and the society in different aspects such as economic growth, employment generation and innovations. SME's influence on economy of any nation

is very strong and they have been the major source of the employment creation, the product innovation and international markets (Ladzani & Vuuren, 2002). They are also considered as the most dynamic businesses in any country (Ghobadian & Gallear, 1996). Kongolo (2010) noted that the SMEs provide a massive contribution to the economies and largely contribute to the generation of employment and the wealth creation in economies. They are also a good source of new products, processes, and idea generation (Griffin & Ebert, 2006). Consequently, this sector is considered as the “driving force” behind the modern economies despite the fact that they are developed or underdeveloped. Most of the well-developed economies in the world have been characterized by a highly performing network of SMEs. For instance, the economy of the United State is mainly driven by SMEs and they sustain the technological lead in the market place (Bovee, Thill, & Mascon, 2007).

More than 90 percent of enterprises in the Asian Productivity Organization’s member countries are SMEs. They account for about 75 percent of the gross domestic product in many countries. This sector is considered as the engine of the economic growth, the cornerstones for creativity and innovation, and the seedbeds of entrepreneurship (Asian Productivity Organization, 2006). A strong SME sector is very important for most the developing economies to face the issues of unemployment and international competition. It is a significant characteristic of a growing economy and considered as the way of accelerating the achievement of wider socio-economic goals (Hall & Harvie, 2003). Altenburg and Eckhardt (2006) reported that the SME performance of developing countries remains at a lower level compared to the developed countries. Emine (2012) indicated that the SMEs in developing countries face the issue of low performance although they are considered as an instrument of achieving the development objectives. Panday (2012) indicated that the SMEs in developing

countries records low level of performance in comparison with the developed countries. Accordingly, highly performing SME sector is considered as the “backbone” of the economies of developing countries since it gives an unparalleled contribution to the upward mobility of their economies (Smallbone & Rogut, 2005).

Despite the fact that the SME sector is not dispensable in a country’s economic and social progress, they are less productive and face constraints in many of the Asian countries. They are characterized by the backwardness in technology, the lack of human resource and entrepreneurial capabilities, the lack of professional management systems and the unavailability of timely information, the poor quality and the standardization in product and services. All these factors may eventually affect widespread low productivity of the sector (Asian Productivity Organization, 2006, 2011).

### **3.3 Factors Influencing Firm Performance**

Acharya *et al.* (2007) have investigated the relationship between SME sales performance and six psychometric variables. Independent variables included achievement motivation, self-efficacy, need for dominance, passion for work, locus of control, and meta-cognitive activity. They found that achievement motivation among other variables has reported a higher correlation with sales performance. Sagal *et al.* (2007) have examined the effect of the level of owner entrepreneurs’ experience and education on firm performance. They proved that the entrepreneurial experience is positively related to firm performance.

In Meta analysis conducted by Collins, Hanges, and Locke (2004), the effect of need for achievement on entrepreneurial performance was examined. The study confirmed that entrepreneurial performance is strongly predicted by achievement motivation.

Previous entrepreneurial experience, education, and gender were included as endogenous constructs by Li (2008) in a conceptual model proposed for investigating firm's entrepreneurial performance. Leitoa and Franco (2011) suggested that cognitive and entrepreneurial characteristics could not be considered as good predictors of firm's economic and non-economic success. Jones *et al.* (2010) stressed the importance of the owner managers in determining the performance of the small-scale firms. Pushpakumari (2009) conducted a study in Japanese SMEs to investigate the effect of individual values on firm performance. The results suggested that the higher the level of entrepreneurial values the higher the business performance of SMEs. In contrast, the average level of firm performance is achieved by the firms that have owners with mixed values. She further stressed that little research has focused outside the western contexts on the role of owner managers' cognitive traits.

Herri (2011) conducted a study in the Indonesian manufacturing firms for determining the role of cognitive traits in firm performance. According to the findings of the study, cognitive traits of corporate level executives are decisive in determining the organizational success. Jones, Macpherson, Thorpe, and Ghecham (2007) emphasized that the human capital is a major determinant of the success of SMEs. Hambrick and Mason (1984) suggested that the personal factors are so important to firm's success and the organization can be considered as an extension of the key personnel of the organization. Sirec and Mocnik (2010) investigated the effect of the human capital, social capital, and entrepreneur's psychological factors on venture performance. The model incorporated eight individual psychological factors as independent variables predicting the variance of venture performance. Eight variables included vision, intuition, overconfidence, independence, self-efficacy, risk tolerance, need for achievement, and locus of control. The results



proved moderate support for the relationships. It was concluded that, contrary to most of the findings, human capital that consists of explicit knowledge, tacit knowledge, experience, and age had not proven any relationship with venture performance. However, a significant and positive relationship between social capital and venture performance was partly confirmed.

Gibb and Davies (1990) developed a performance model with four types of variables influencing performance of SMEs. The four variables were personality, management, sector-led variables, and market-led variables. They found that personality variable make no significant effect on performance while Market-led variables significantly affect SME performance. Based on the conceptualization of SME performance model by Gibb and Davies (1990), Kolvereid and Bullvage (1996) presented a conceptual framework of SME performance. The framework included entrepreneur traits, organizational features, and environmental variables as determinants of growth intention of the entrepreneur. A path between growth intention and actual firm performance was also proposed.

Hay (1992) studied the variables that may hinder the growth of SMEs. The study tested seven variables that represent personal, market, and organizational level variables. Among seven variables, the first was related to poor financial control. The second variable was related to a situation where responsibilities and roles, coordination, reporting, and controlling are not clearly defined and labeled as managerial control. The third variable was managerial style which refers to an inappropriate organizational structure and management involvement in all aspects of organizational activities. The fourth was managerial capacity that refers to lack of skills and abilities of understanding product, marketing, finance, management, employee, and strategic aspects. The fifth factor was lack of market growth and

named as market condition. The sixth factor was poor relationship with and lack of knowledge of customers. Discontinuity of managing change was the last variable of the model. Based on the findings, Hay (1992) concluded that all these factors hamper the success of small-scale firms. He further argued that the firm could be expected to perform better when these negatively affected factors are removed. However, the model has been tested in a small sample of a pilot study.

Adams and Hall (1993) studied a performance model that incorporated environmental factors and individual variables as determinants of SME performance. Market, political, legal, social, and economic characteristics were included under the environmental factors. Among personal variables, abilities, entrepreneurial skills, knowledge, experience, motivation, and objectives of the key decision makers were considered. The researchers argued that better understanding of both types of factors leads to better performance of small-scale firms. Romano and Ratnathunga (1995) conceptualized a research model similar to the model investigated by Adams and Hall (1993). The model proposed the need for testing the simultaneous effect of management contextual factors, external contextual variables, and internal contextual variables on firm performance. Under the external contextual factors, supply of raw materials, financial market, labour market, competition, and general economic conditions have been considered. Non-price competition, research and development, marketing policies, innovative ability, and internal technology have been considered under the internal factors. Leadership style, management typology, previous experience, and educational background were incorporated into the model under the management contextual variables. In addition, formal planning and control was a mediating variable in the proposed model.

Petrakis (1997) tested a research model to determine the factors influencing the performance of SMEs. The independent variables of the model were incentives, structure, market opportunities, resource needs, attitudes, and personal abilities. According to Petrakis (1997), personal abilities and attitudes were constraints to the performance of SMEs.

Herri (2002) proposed a SME performance model to determine the complex relationships among firm performance, personality, environmental uncertainty, and business strategy. It was empirically tested in a sample of 300 entrepreneurs in Indonesian small and medium scale manufacturing industry. The model examined the moderating effect of environmental uncertainty in the relationship between business strategy and firm performance. It also tested mediating effect of business strategy in the relationship between entrepreneur's personality and firm performance. The study concluded that the relationship between business strategy and firm performance was moderated by environmental uncertainty. Further, he found that a partial mediation of business strategy exists in the relationship between firm performance and personality characteristics.

Shane, Locke, and Collins (2003) conducted a comprehensive literature review on the relationships among cognitive factors, entrepreneurial characteristics, and performance. Based on the review, they suggested a research model which included cognitive factors and entrepreneurial characteristics as independent variables. Under the entrepreneurial characteristics, goal setting, drive, passion, self-efficacy independence, locus of control, and need for achievement were incorporated. Cognitive factors consisted with skills, abilities, knowledge, and vision.

Beneki and Papastathopoulos (2011) investigated the relationship between information technology related factors and firm performance in a hierarchical log linear model. The model tested five variables namely, information technology investments, implementing electronic customer relationship marketing, competitive rivalry, adoption to electronic business, and electronic commerce. The results proved that all variables had a direct relationship with firm performance. Cervone and Wood (1995) found that cognitive, self-regulatory processes significantly influence performance and this influence varies in different contexts. Choueke and Amstron (2000) found that the organizational culture significantly affect the success of small-scale firms. Crane and Crane (2007) investigated the effect of dispositional optimism on entrepreneurial success. They found a significant but moderate relationship between two variables.

Enriquez *et al.* (2011) investigated the role of market related variables in company growth. The study found that market share, amount in advertising, and promotion significantly affect the expansion of the company. Inmyxai and Takahashi (2009) investigated the effect of the education of entrepreneurs, business development services for entrepreneurs, and experience of entrepreneurs. The results indicated that human capital is very important for the business development. They further elaborated that the entrepreneurs' human capital in terms of skills and knowledge are strategic resources that help the firm to increase the productivity.

Islam, Khan, and Obaidullah (2011) empirically tested individual and organizational traits as determinants of the success of small businesses. They found that the both types of factors significantly affect the dependant variable. The study further emphasized that both internal and external factors simultaneously affect the performance of small-scale firms. Aziz and Yasin (2010) investigated the influence

of market orientation and external environment on performance in the Malaysian agro-food sector. Information dissemination, competitor orientation, and customer orientation were found to be causal to the economic success of the firm. Leitner and Idenberg (2010) conducted a longitudinal study to investigate the relationship between generic strategies and performance of SMEs. They examined that the SMEs implementing generic strategies such as low cost or differentiation significantly outperform the firms with no strategy. No empirical evidence was found for supporting the proposition and they concluded that generic strategies are not sufficient to ensure the performance of SMEs in long run. Internal network has an effect on survival and competitive advantage of firms than external network. Littunen (2000) made this conclusion in a study in Finnish manufacturing and service organizations.

Pandey (2011) tested a research model to understand the complex relationships among personality traits, cognitive reflections, and business success. Personality traits were passion for work, need for dominance, meta-cognitive activity, locus of control, and achievement motivation. Cognitive reflections were intelligent quotient, risk aversion, and time preference. He found that achievement motivation, locus of control, and age positively and significantly affect the business success. Mancinelli and Mazzanti (2009) reported positive significant relationship between research and development and performance.

Tuan and Yoshi (2007) investigated the factors influencing the growth of manufacturing SMEs. The variables were incorporated into the model under four main categories namely, external factors, strategy, firm characteristics, and owner manager characteristics. Firm size, ownership, and firm ages were considered under the firm characteristics. Owner manager's characteristics incorporated into the model

were educational background and prior sector experience. New product introduction under the category of strategy and competition under the external factors were considered. The results indicated a positive relationship between firm size and growth. Education and experience did not show a significant relationship with growth of SMEs. Intensity of competition reported negative and significant effect. Networking is positively related to entrepreneurial performance. Firm level performance is not significantly influenced by chief executive officers' personal, cognitive traits (Wincent & Westerberg, 2005).

Table 3.1  
*Summary of Literature on Multivariate Performance Models*

Variable category	variable	study
Cognitive factors	Achievement motivation	Acharya <i>et al.</i> (2007), Collins <i>et al.</i> (2004); Sirec and Mocnik (2010); Shane <i>et al.</i> (2003); Pandey (2011)
	Locus of control	Sirec and Mocnik (2010); Acharya <i>et al.</i> (2007); Shane <i>et al.</i> (2003); Pandey (2011)
	optimism	Crane and Crane (2007)
	Meta cognitive activity	Acharya <i>et al.</i> (2007); Pandey (2011)
	Goals	Locke and Latham, (1990), Segal and Rimler, (2011)
	Need for dominance	Acharya <i>et al.</i> (2007); Pandey (2011)
	Passion for work	Acharya <i>et al.</i> (2007); Pandey (2011)
	Self-efficacy	Acharya <i>et al.</i> (2007); Sirec and Mocnik (2010); Shane <i>et al.</i> (2003); Cervone and Wood (1995)
	Entrepreneurial values	Pushpakumari (2009)
	Attitudes	Petrakis (1997)
	Risk tolerance	Sirec and Mocnik (2010)
	Overconfidence	Sirec and Mocnik (2010)
	Intuition	Sirec and Mocnik (2010)
	Vision	Sirec and Mocnik (2010); Shane <i>et al.</i> (2003)
	Motivation	Adams and Hall (1993)
Personal characteristics	Founder's education	Segal <i>et al.</i> (2007); Li (2008); Inmyxai and Takahashi (2009); Tuan and Yoshi (2007)
	Founder's Experience	Segal <i>et al.</i> (2007); Jones <i>et al.</i> (2010); Li (2008); Adams and Hall (1993); Inmyxai and Takahashi (2009); Tuan and Yoshi (2007); Kidane and Harvey (2009)
	Gender	Li (2008)

Table 3.1 continued

	Personality	Herri (2011); Gibb and Davis (1990); Herri (2002); Pandey (2011)	
	Abilities and skills	Adams and Hall (1993); Shane <i>et al.</i> (2003); Petrakis (1997)	
	Growth intention	Kolvereid and Bullvage (1996)	
Firms characteristics	Human capital	Jones <i>et al.</i> (2007); Sirec and Mocnik (2010)	
	Social capital	Sirec and Mocnik (2010)	
	Management	Gibb and Davis (1990)	
	Financial control	Hay (1992)	
	Managerial control	Gibb and Davis (1990)	
	Customer relationships	Hay (1992)	
	Structure	Petrakis (1997)	
	strategy	Herri (2002)	
	ICT related factors	Beneki and Papastathopoulos (2011); Leitner and Idenberg (2010)	
	Culture	Choeuke and Amstron (2000)	
	Research and development	Mancinelli and Mazzanti (2009)	
	Firm size and age	Tuan and Yoshi (2007)	
	Market related variables	Market	Gibb and Davis (1990)
		Market condition	Hay (1992); Adams and Hall (1993)
Competition		Romano and Rathnathunga (1995); Tuan and Yoshi (2007)	
Market share, advertising, promotion		Enriquez <i>et al.</i> (2011)	
Marketing policies		Romano and Rathnathunga (1995)	
Market opportunities		Petrakis (1997)	
External factors		External environment	Adams and Hall (1993); Romano and Rathnathunga (1995); Aziz and Yasin (2010)
	Role of incentives	Petrakis (1997)	
	Environmental uncertainty	Herri (2002)	
	Networking	Littunen (2000); Wincent and Westerberg (2005)	

Source: Author constructed based on literature review

The model developed by Kidane and Harvey (2009) with seven independent variables did not show a good fit in explaining the success of entrepreneurs. They

have suggested the need of including wide array of variables in future performance models to investigate variation of success of entrepreneurs. The findings proved that only number of years in the business operation and social impact are significant contributors to entrepreneurs' success.

The existing literature on the factors affecting firm performance revealed that many researchers have investigated the multivariate models that incorporated different categories of variables. The table 3.1 shows a summary of those factors. As the table shows, previous studies have explored various factors under few main categories such as cognitive factors, personal characteristics, firm characteristics, market related variables, and external factors. In addition, past multivariate models provide evidences for using many combinations of variables from different categories for explaining their relationships with firm performance.

### **3.4 Achievement Motivation and Performance**

The origin of the construct, achievement motivation is considered as Murray's (1938) ideas on the motive, "tendency to doing things rapidly". Murray's ideas highly influenced the theory of need for achievement which introduced the concept achievement motivation (McClelland, 1961). The theory posits that people with achievement motivation exhibit role behavior such as moderate risk taking, energetic and instrumental activity, taking responsibility, knowledge of results of decisions, and anticipation of future possibilities. McClelland (1962) refined the roles as taking responsibility of problem solving, establishing goals, taking moderate risk, and looking for feedback on performance.

The theory of need for achievement indicates a linear relationship between achievement motivation and performance. It also posits that entrepreneurs need this



characteristic than people in other positions. The theory claims that people with higher achievement motivation prefer tasks that involve skills and effort (McClelland, 1961).

McClelland (1965) conducted a longitudinal study and found that people with higher achievement motivation look for entrepreneurial positions than other types of positions. In this study, McClelland used a sample of 55 students graduated in 1961 whose need for achievement was measured and recorded in 1947. Fourteen years later, after they settled in their occupational choices, they were evaluated and categorized into entrepreneurial and non-entrepreneurial positions. The results indicated that 83 percent of the entrepreneurs had been high in achievement motivation and 79 percent of non-entrepreneurs had been low in need for achievement. McClelland concluded that people with higher need for achievement gravitate towards business occupations in entrepreneurial nature. In his findings, he specially noted that students with higher achievement motivation but selected other professions have modified the style in which they carried out the duties in their professions. With these findings, many researchers focused their attention on achievement motivation in entrepreneurship.

Hines (1973) studied the level of achievement motivation among entrepreneurs, accountants, engineers, and middle managers. He found a higher level of achievement motivation in entrepreneurs than in all the other groups. Durand and Shea (1974) found that those who more actively perform their work have a higher level of achievement motivation than low-active owners in a study of a sample of small business owners. Lachman (1980) found significant difference between achievement motivation in managers and entrepreneurs. Smith and Miner (1984, 1985) studied the difference of achievement motivation in high growing

entrepreneurs and low growing entrepreneurs. They found that achievement motivation is significantly higher in higher growth entrepreneurs. Begley and Boyd (1987) investigated a sample of business founders and non-founder managers and found that the former have significantly high need for achievement.

Collins *et al.* (2004) found that achievement motivation has significant correlation with entrepreneurial performance in a meta-analytic study. The study focused both group and individual level performance. In the same study, they found that the achievement motivation is a better predictor of individual performance than career choice. Stewart and Roth (2007) found the results consistent with Collins *et al.* (2004) in another meta-analysis. They found that entrepreneurs who display higher need for achievement achieve higher growth. They further revealed that the cultural and the contextual variables affect need for achievement. It was found that entrepreneurial activities have a positive relationship with achievement motivation by Johnson (1990) in a comprehensive literature review on achievement motivation. A significant positive correlation between achievement motivation and entrepreneurs' potential was confirmed in a study conducted among young adults by Ryan *et al.* (2011).

The goal setting theory explains three levels of explanations to the human action and performance. The first level is goal and intention. The second level includes sources of goals such as motives, values, and personality. The third level includes the roots of motives, values, and personality. The theory states that the higher levels affect action through the immediate levels. Therefore, the immediate level theories such as the goal setting theory, the turnover intention theory, and the social cognitive theory are more successful explaining the human action than the lower level theories such as

(Locke & Latham, 1990). The social cognitive theory also indicates that achievement motivation predicts performance (Bandura, 1986).

Achievement motivation is a key success factor for the performance of small-scale businesses (McClelland & Burnham, 1976). It was found that the success of small-scale businesses managed by the male entrepreneurs is highly characterized by the variable achievement motivation (Carsrud & Olm, 1986). Smith *et al.* (1987) conducted a study in a sample of high-tech owners and managers. They found that the company success was affected by achievement motivation. In a study of small business owner-managers, Johnson (1989) found that achievement motivation is significantly and positively correlated with return on sales, sales growth, and overall organizational success. The variable need for achievement has the greatest effect on venture performance among other personality variables (Lee & Tsang, 2001). Swierczek and Thanh ha (2003) confirmed a significant positive effect of achievement motivation on venture success in Vietnam small and medium scale businesses. Sales performance of rural kiosk operators in India was significantly affected by need for achievement (Acharya *et al.*, 2007).

Sirec and Mocnik (2010) investigated the difference among personal characteristics of entrepreneurs and their impact on the performance of small-scale business enterprises. Achievement motivation was one of the independent variables investigated in this study. The relationship was moderately supported by the results. One issue in the measurement of this study was the lower rate of reliability scores (Cronbach's alpha = 0.57). Sidek and Zinol (2011) suggested that the achievement motivation of entrepreneurs significantly affects the success of small-scale construction industry in Malaysia. Olusola (2011) conducted a study and found the roles of motivation and self-efficacy as predictors of job performance. It was

concluded that motivation is very essential for optimal productivity. Zhang and Burning (2011) found a positive and significant effect of owner-manager's need for achievement on the SME performance.

In a study of a sample including 67 entrepreneurs and 48 non-entrepreneurs, Nandy (1973) concluded that achievement motivation is positively related to entry into the business but it is not related to the business success. Begley and Boyd (1987) found that need for achievement made no significant effect on the financial outcomes of the firm. Deshpande, Grinstein, Kim, and Ofek (2013) found that achievement motivation leads to strategic orientation and in turn, affect business performance in both Japanese and American firms.

Stewart and Roth (2007) argued that the achievement motivation among entrepreneurs and managers are highly different in countries with limited capital sources, inadequate infrastructure, and unfavourable government policies. Ryan *et al.* (2011) elaborated on the ambiguity of the relationship between achievement motivation and performance in different contexts. According to them, the most of the studies on need for achievement have been conducted in developed countries and therefore, there is a need of testing the relationship in developing countries where they face many challenges in promoting the entrepreneurship. Luthans and Ibrayeva (2006) suggested that the individual variables especially affiliated to the less developed nations with the transition economies where most of the SMEs are relatively small and owner managed. Kirkaldy *et al.* (2001) also suggested that need for achievement is particularly important for the entrepreneurs in the developing countries.

Johnson (1990) pointed out the need of conducting more studies on need for achievement with precisely operationalized and valid instruments. Collins *et al.* (2004) emphasized that the direction of the relationship between achievement motivation and performance has been established but the magnitude of the relationship is unclear and need further investigations. Ryan *et al.* (2011) indicated that the relationship between achievement motivation and entrepreneurs' performance is still unclear though there is large number of research contributions. Sirec and Mocnik (2010) also suggested the need for further empirical and theoretical investigations on the relationship.

The existing literature on achievement motivation and performance reveals that studies in achievement motivation research in entrepreneurship have been extended into two main streams. One stream is to compare the existence of achievement motivation in entrepreneurs and non-entrepreneurs. In this stream, many of the studies have proven high level of achievement motivation in entrepreneurs than other categories of people. (McClelland, 1961; Hines, 1973; Nandy, 1973; Smith & Miner, 1985; Begley & Boyd, 1987).

The other stream is to examine the achievement motivation as a predictor of performance. In this stream, some of the studies have investigated individual level performance while the other few studies have examined the firm level performance. Further, it was revealed that achievement motivation as a predictor of firm level performance had yielded inconsistent results (Smith *et al.*, 1987; Lee & Tsang, 2001; Collins *et al.*, 2004; Stewart & Roth, 2007; Ryan *et al.*, 2011).

Some other researchers had argued that majority of studies related to achievement motivation has been conducted in developed countries and neglected in developing

countries. In addition, it has been pointed out the requirement of further research on the relationship between achievement motivation and firm performance because the relationship is yet to be clarified (Kirkadly *et al.*, 2001; Luthans & Ibrayeva, 2006).

### **3.5 Goal-setting and Performance**

Locke & Latham (1990) define goals as something wants to be attained consciously. Goal setting is referred to establishing a standard of competency of a task to be achieved within a given period of time (Locke *et al.*, 1981). The goal setting theory distinguishes the intention, the task, the deadline, the aim, and the objective from a goal. The intention refers to a determination to take a certain action. Though the purpose refers to conscious goal, it is a motive that underlines a goal. The end and the objective refer end-result of a planned effort and the aim refers to a conscious desire. The standard is considered as a rule to measure or evaluate the things. The deadline refers to a time by which some task should be completed. The goal setting theory indicates two dimensions of a goal namely, the intensity and the content. The content refers to the result being expected and the intensity refers to the factors such as the degree of individual commitment towards the goal, the effort required to form the goal, the place of the goal in the individual's goal hierarchy, and the importance of the goal (Locke & Latham, 1990).

In addition, the theory has identified different types of goals such as the proximal goals, the distal goals, the learning goals, the performance goals, the assigned goals, the participative goals, and the personal goals. The proximal goals are short-term goals while the distal goals are long-term goals. The assigned goals, the participative goals, and the personal goals are based on the method of setting goals. The personal goals are important in the situations where the individual's role is critical. The goal setting theory assumes that the human behavior is goal directed and the human action

is directed by the conscious goals and intentions (Locke *et al.*, 1981; Locke & Latham, 1990).

The goal setting-performance relationship has been the focus of researchers from 1960s. The goal setting theory assumes a linear goal setting-performance relationship at an individual level (Locke & Latham, 1990). The goals positively affect individual level performance and this relationship has been verified in Asia, Europe, North America, and Australia according to Locke and Latham (2002). Knight, Durham, and Locke (2001) proved that the team with highest goal had the highest performance in a repeated measure research design. In the same study, a significant and positive correlation was reported between goal difficulty and performance. Seijts *et al.* (2004) tested the relationship between specific, challenging, learning goals, and performance in an experiment with a sample of business school students. The results supported the relationship. It was also proved that the relationship is strong when the task is complex than it is simple. The participants who got challenging goals achieved higher performance than the participants who were urged to do the best.

Kanfer and Ackerman (1989) found that specific goals reduce the performance when people have less knowledge or skills to perform the relevant task effectively. Seijts and Latham (2001) replicated the study of Kanfer and Ackerman (1989) and confirmed that specific goals reduce the performance when the relevant goal requires acquisition of knowledge. Vancouver, Thompson, and Williams (2001) found that personal goals make negative effects on performance and cause poor performance.

Segal and Rimler (2011) concluded that owner-manager entrepreneurial goals have a direct effect on firm performance in a study in small-scale natural food stores. Fu,

Richards, and Jones, (2009) investigated the effect of goals on new product sales in a sample of industrial sales people and concluded that goals positively influence on new product sales. In a meta-analysis on goal setting and group performance, Kleingeld, Mierlo, and Arends, (2011) found that there exists a robust effect of goal setting on group performance. The findings also indicated that the effect of specific, difficult goals on group performance is significant compared to non-specific goals. Hornaday and Wheatley (1986) found that the managers who set the goals for their small businesses obtained higher financial performance (Kleingeld, Mierlo, & Arends, 2011). Bandura (1988) posited that clear production goals increase the productivity of organizations.

Dossett, Latham, and Mitchell (1979) found similar performance levels despite the fact that the goal is assigned or personal. Latham and Marshall (1981) further supported these findings confirming that how a goal is set is not important in predicting performance whether the goals are personal, participatively set or assigned. Locke *et al.* (1981) indicated that most of the studies have used assigned goals but personal goals may play a major role in situations where individual personality is important. A few research studies have investigated the relationship between goal setting and firm level performance. Only two studies have investigated the effect of goal setting on firm level outputs (Segal & Rimler, 2011; Fu *et al.*, 2009). Among these two studies, Segal and Rimler's (2011) study has considered the entrepreneurial goals and firm performance. Fu *et al.* (2009) have studied the relationship between personal goals and new product sales of the firm.

The existing literature on the relationship between goal setting and performance reveals few important facts. Different studies have used various types of goals such as the assigned goals, the participative goals, the personal goals, and the learning



goals. The goal setting theory and the majority of studies have examined the relationship at the individual level. In last four decades, goal setting-individual performance relationship had been supported by many studies and considered as the most supported relationship in research (Seijts *et al.*, 2004). Locke *et al.* (1981) summarized the findings of goal setting-individual performance studies from 1969 to 1980 and have shown that 25 experimental laboratory studies had confirmed positive relationship. Four studies have found partial support and six laboratory-experimental studies have found no empirical evidences for the relationship. Fifteen experimental studies have proven positive relationships in varying degrees. Further, they found that twenty-four field experiments supported that specific individual goals increase performance than vague personal goals. These results from the field experiments were supported by twenty laboratory studies. Seven correlational studies partially supported the positive relationship while two studies had found negative relationships. A few studies have found results controversial to the goal setting-performance relationship (Kanfer & Ackerman, 1989; Seijts & Latham, 2001; Vancouver *et al.*, 2001; Vancouver & Kendall, 2006). As a whole, many of the previous studies have been conducted in laboratory settings and the majority of correlational studies had found only a partial positive relationship (Locke *et al.*, 1981).

### **3.6 Experience and Performance**

The experience is defined as the active participation in the events surrounding a particular activity (Csikszentmihaly & Larson, 1996). According to Bruner (1986), experience involves the individuals receiving consciousness events. It can be linked to other experiences, interpreting, reflecting, reacting, feeling, and sensing. The experience in entrepreneurship research has been interpreted in different ways.

Corbett (2007) conceptualized the concept as acquired knowledge and skills through experience. It also creates the entrepreneurial expertise and the practical wisdom. For Shane and Khurana (2003), it is the collection of happenings to an entrepreneur in his/her career. It is defined as the collection of events in entrepreneurial process by Bhawe (1994). For Cope and Watts (2000), the experience is direct observation and participation in the events of entrepreneurial context. Morris, Kuratco, Schindehutte, & Spivac (2012) interpret entrepreneurial experience as a lived-through event. According to Baron and Ensley (2006), experience is the total outcome of previous entrepreneurial activities.

In a study on owner-managed small and medium scale enterprises in Lao, it was found that previous experience of entrepreneurs positively related to firm performance (Inmyxai & Takahashi, 2009). Segal *et al.* (2007) proved higher correlation between level of experience and firm performance. Bird (1988) found positive relationship between entrepreneurial intentions/actions and previous entrepreneurial experience. Papastathopoulos and Beniki (2010) investigated the relationship between small business owner managers' previous entrepreneurial experience and firm information, and computer technology performance. The findings confirmed the positive relationship. Firm performance is positively affected by entrepreneurs' experience but the expertise is a stronger determinant of firm performance than the experience (Reuber & Fischer, 1994).

Bates (1990) examined the role of the level of education, managerial experience, and previous industry experience as the determinants of performance in small and medium scale businesses. He found that only education level has a positive effect on performance. Both previous industry experience and managerial experience did not

prove a positive relationship. Cooper, Woo, and Dunkelberg (1989) found positive relationship between entrepreneurial experience and performance.

Duchesneau and Gartner (1990) investigated the relationship between managerial experience of entrepreneurs in seven functional areas and firm performance. The results proved a positive relationship. Dyke, Fischer, and Reuber (1992) found positive relationship between entrepreneurs' managerial experience and firm performance. Schindehutte, Morris, and Allen (2006) found entrepreneurial experience positively related to firm performance.

Hashi and Krasniqi (2011) emphasized that entrepreneurs' experience, education, and training have positive effects on firm performance. Bann (2009) studied the effect of entrepreneur's experience on firm performance and concluded that it is decisive in determining the business success.

The previous literature reveals that some studies have investigated entrepreneurs' experience as a determinant of SME performance and yielded inconsistent results in past four decades (Hashi & Krasniqi, 2011; Inmyxai & Takahashi, 2009; Segal, Borgia, & Schoenfeld, 2007; Bates, 1990). The previous researchers also argue that many of the previous studies have defined entrepreneurs' experience in terms of the number of years in the business. They have further emphasized the need of wider definition covering the experience accumulated by the past performance including successes and failures (Morris *et al.* 2012; Bann, 2009; Zhao *et al.*, 2005). The social cognitive theory defines mastery experience as the experience on the past performance comprised with past successes and failures (Bandura, 1986). The direct experience, referred as the mastery experience or enactive mastery in the social cognitive theory is considered to be based on the experience of the individual on the

past successes or the failures (Bandura, 1986; Bandura, Adams, & Beyer, 1977). The social cognitive theory had strongly proven that mastery experience influence individual performance (Bandura, 1986). Bandura (1988) posited that the past success experiences increase the performance while the past failure experiences create self-doubt in the organizational contexts. Some other researchers have also pointed out that mastery experience is a kind of entrepreneurial experience and very important for the success of SMEs (Zhao *et al.*, 2005).

### **3.7 Self-efficacy and Performance**

The social cognitive theory defines self-efficacy as “Individuals’ judgment of their abilities to execute some courses of action that requires for attaining an outcome”. It is the peoples’ perception on their abilities in performing a task. The generality, the strength, and the magnitude are the three dimensions of self-efficacy (Bandura, 1986; Bandura, 1989). The difficulty of the task to be attained is referred as the magnitude. The strength is the degree of conviction of attainability of task performance. Peoples’ self-efficacy belief is strengthened by the information coming from four sources namely, emotional arousal, social persuasion, vicarious experience, and mastery experience. According to the social cognitive theory, self-efficacy operates as the common mechanism of behavioural change. Self-efficacy belief is the most important among cognitive factors that affect every day lives of people (Bandura, 1986).

The social cognitive theory has very strongly proven self-efficacy as a determinant of individual performance (Bandura, 1986). People with enhanced perceived self-efficacy successfully execute the tasks. Therefore, higher the degree of self-efficacy higher the individual performance (Schunk, 1981). Self-efficacy predicts future behavior better than past performance (Bandura, Adams, Hardly, & Howells, 1980;

Schunk, 1981). Bandura (1988) emphasized that self-efficacy belief determines how much effort people will exert in a task. Phillips and Gully (1997) found positive direct relationship between self-efficacy and individual performance in an experiment conducted among undergraduate students. They further found that self-efficacy affects performance through goal setting. The results also indicated that self-efficacy ability and self-set goals together explain 30 percent of the variance in performance.

Stajkovic and Luthans (1998) have conducted a meta-analysis to determine the magnitude of the relationship between working performance and self-efficacy. The relationship was proven positive and strong. According to the findings of the study, self-efficacy contributed to 28 percent of performance improvement. An argument raised against this meta-analytic study was that the study had considered only cross sectional designs and the lower level of confident level in the study (Vancouver *et al.*, 2001). Seijts *et al.* (2004) found positive direct effect of self-efficacy on individual performance in an experiment of a sample of business school students. Acharya *et al.* (2007) found a significantly higher correlation between self-efficacy and sales performance of rural kiosk operators in India. Ozer and Bandura (1990) concluded that people with stronger self-efficacy have higher control over their negative thinking. Olusola (2011) concluded that productivity of employees in industrial settings is mainly affected by their self-efficacy. Lebusa (2011) conducted a study in a small sample of students. The results proved that there is a positive effect of self-efficacy on performance. The entrepreneurial intention was found to be positively related to self-efficacy in a study conducted by Chen and He (2011). This study assessed the students' perceptions, and focused on entrepreneurial intention.

Powers (1991) argued that self-belief increases the optimism in perception and in turn, decrease the individual performance. He further argued that people make less effort when there is a confidence of achieving the success. Bandura and Jourden (1991) concluded that no increase in individual performance was reported due to self-efficacy. They explained that self-efficacy provides little incentives to increase the degree of effort needed to achieve high level of performance. Stone (1994) tested in an experiment how overestimation of initial self-efficacy affects decision-making. He found that positive expectations produce overconfidence, but does not increase effort or performance. The results further proved that self-efficacy judgments made in complex tasks are biased toward the overestimates of peoples' personal ability. Cervone and Wood (1995) also found a negative correlation between individual performance and self-efficacy.

Vancouver *et al.* (2001) conducted two studies in two samples of undergraduates using a within person procedure. In the first study with 56 undergraduate participants, a reverse causality was found though the relationship between self-efficacy and individual performance reported positive. The second study involving 185 undergraduates replicated the findings of first study and found that past performance has a negative influence on future performance. Contrast to the most of the previous findings, this study found that performance enhances self-efficacy rather than self-efficacy enhances performance demonstrating a reverse causality of the relationship. As indicated by Vancouver *et al.* (2001), this study challenged the strongly established positive relationship between individual performance and self-efficacy. However, this study was conducted among undergraduates by using a computer game in a lab setting. Vancouver, Thompson, Tischner, and Putka (2002) also conducted two experimental studies. In the first study, 87 undergraduates were

divided into two groups and allowed to play an analytical computer game. They were allowed ten experimental trials. Prior to each trial, self-efficacy was measured. Self-efficacy was manipulated in subsequent trials and tested whether the self-efficacy affects the performance. Contrast to the findings of the most of previous studies on self efficacy-performance relationship, it found no causal relationship between two variables in the person level. Similar to the findings of Vancouver *et al.* (2001), this study also found that self-efficacy decreases individual performance. The second study was conducted with 104 undergraduates. The results reconfirmed the findings of the first study demonstrating a negative relationship between self-efficacy and individual performance. Vancouver and Kendall (2006) again confirmed the negative relationship between two constructs in a laboratory study.

Chen, Greene, and Crick (1998) developed an instrument to measure the entrepreneurial self-efficacy with five dimensions namely, financial control skills, risk-taking, management, innovation, and marketing. DeNobel, Jung, and Ehrlich (1999) developed a scale in entrepreneurial specific domain and tested its relationship with entrepreneurial intentions and actions of practicing entrepreneurs. The results suggested a significant relationship between self-efficacy measured in entrepreneurial domain and entrepreneurial intentions. Zhao *et al.* (2005) tested the relationship between self-efficacy measured in entrepreneurial specific domain and entrepreneurial intentions and actions. The study focused the MBA students of business faculties in five universities. The survey was done in two phases. The first survey was administered on 778 incoming MBA students and the second survey was conducted after two years when the students were graduating. The results found a positive relationship. Forbes (2005) investigated the effect of self-efficacy measured

in entrepreneurial domain on decision to start new firms and effective management. The effect found was positive and significant.

Brice and Spencer (2007) investigated the variables that improve the likelihood for starting and effectively managing a firm. The study considered graduating business students. The focus was the start-intention and effectively managing a venture. It was found that higher the entrepreneurial self-efficacy of individuals higher the effectiveness of management. Wilson, Kickul, and Marlino (2007) conducted a study among the MBA students and found that self-efficacy would act as an obstacle to entrepreneurial performance. This study has mainly focused on career intentions of adolescents and adult students.

Hmieleski and Baron (2008a) studied the effect of self-efficacy on venture growth and the results proved a positive effect. In this study, self-efficacy was measured in entrepreneurial specific domain and firm performance was the focus. In contrary, Hmieleski and Baron (2008b) found that self-efficacy reduces firm performance rather than increase under some moderating conditions. Drnovesk, Wincent, and Cardon (2010) emphasized the role of entrepreneurial self-efficacy in entrepreneurs' success as they face uncertainty and obstacles in making their goals a reality.

Literature review on self-efficacy and performance reveals that the social cognitive theory and many of the other studies have firmly supported the positive relationship between self-efficacy and individual performance (Bandura, 1986; Bandura, 1997; Bandura, 1982; Bandura, Adams, & Beyer, 1977; Bandura, 1977a). Few studies only have found opposite findings by challenging this well-established relationship. (Cervone & wood, 1995; Powers, 1991; Stone, 1994). By demonstrating a total contradiction with previous findings, only two studies have supported the reverse



causality which means that performance causes self-efficacy, rather than self-efficacy causes performance (Vancouver *et al.*, 2002; Vancouver *et al.*, 2001). Another single study had argued for the inadequacy of empirical evidences for establishing strong self-efficacy-performance relationship for the reason that most of the previous studies were cross sectional (Cook, Campbell, & Paracchio, 1990).

Available literature further reveals that still there is a disagreement regarding the measure of self-efficacy appropriate in entrepreneurship research (McGee, Peterson, Mueller, & Sequeira, 2009). Some researchers have used and argued for the sufficiency of general self-efficacy indicating that it is capable enough to capture the individual's perception of their ability to perform tasks (Baum & Locke, 2004; Vancouver *et al.*, 2001; Utsch & Rauch, 2000; Cervone & Wood, 1995; Bandura & Jourden, 1991; Powers, 1991). Some other researchers have emphasized the importance of using domain specific measurement in entrepreneurship research (Urban, 2006; McGee *et al.*, 2009; Bandura, 2005; Drnovsek & Glas, 2002; De Noble *et al.*, 1999; Zhao *et al.*, 2005).

Urban (2006) proposed that the general and the entrepreneurial self-efficacy are not independent from each other. The findings were based on the result of a study in South African postgraduate students in different ethnic groups. He made a psychometric evaluation of the entrepreneurial self-efficacy and general self-efficacy measures and further indicated that domain specific self-efficacy was good in understanding the concept among different ethnic groups. McGee *et al.* (2009) suggested the suitability of entrepreneurial self-efficacy for future research because it has increased the predictive power in past studies. Bandura (2005) posited that self-efficacy belief is not a global trait but it should be differentiated in different domain of functioning and it tends to increase the reliability of the measure.

The literature review further reveals that the most of the previous studies have focused on the role of self-efficacy in intention to start a business (Hmieleski & Baron, 2008b). A few researchs has been conducted at firm level outputs. In addition, some researchers have emphasized the need of more attention on the role of self-efficacy at firm level performance (Hmieleski & Baron, 2008b; McGee *et al.*, 2009; Drnovsek *et al.*, 2010; Anyster *et al.*, 2006). Hmieleski and Baron (2008b) posited that most of the self-efficacy studies in entrepreneurship have focused the intention to start a new business as the dependent variable and more future researches should be focused on firm performance. McGee *et al.* (2009) suggested that future research is needed to explore the role of self-efficacy in the firm level performance because still there is a limited understanding in the role of self-efficacy in venture performance after start-up.

According to Drnovsek *et al.* (2010), most of the self-efficacy studies have investigated the effect of entrepreneurial self-efficacy on individual's intention to start a new business venture. However, the role of entrepreneurial self-efficacy on firm performance should be further investigated because it may vary depending on the goals of the entrepreneur. They further emphasized that literature on self-efficacy would not be sufficiently growing unless further studies would not clarify the role of self-efficacy in the entrepreneurship research. Anyster *et al.* (2006) emphasized that the organizational applications of entrepreneurial self-efficacy has been neglected though the strong and impressive empirical evidences are available for supporting the self-efficacy-performance relationship.

Another insight provided by previous literature is that most of the researchers have conducted their studies among university students rather than practicing entrepreneurs (Wilson *et al.*, 2007; Barbosa, Gerhardt, & Kickul, 2007; Baughn,

Cao, Lim, & Neupert, 2006; Zhao *et al.*, 2005; Drnovsek & Glas, 2002; Krueger, Reilly, & Carsrud, 2000; Begley & Tan, 2001; De Noble *et al.*, 1999; Chen *et al.*, 1998). McGee *et al.* (2009) stated that most of the researchers seem to be relied on university student populations for the reason of convenient access to a large population. They further emphasized that this situation may impede the development of research in the area and it needs to test the relationship among practicing entrepreneurs.

It was also evident that many of the studies related to self-efficacy and performance have been conducted in the developed countries though the concept has more relevance to the developing countries (Luthans & Ibrayeva, 2006; Li, 2008; Kumar & Uz Kurt, 2008). Luthans and Ibrayeva (2006) argued that individual variables such as entrepreneurial self-efficacy especially relevant to the developing countries where most of the SMEs are relatively small and owner managed. They emphasized that the entrepreneurs in these countries face many obstacles because of the political interference, the economic instability, the insufficient infrastructure facilities, the lack of capital sources, the rigorous competition, and unfavourable market conditions. Therefore, entrepreneurs in these countries need the ability to face such obstacles. Li (2008) emphasized that entrepreneurial development of developing countries may be supported by improving their self-efficacy level. Kumar and Uz Kurt (2008) also emphasized the significance of studying entrepreneur's self-efficacy in developing countries since it has the ability to lead the organizations in global competitiveness.

Finally, it can be observed that self efficacy-performance relationship has firmly been established by the social cognitive theory and repeatedly confirmed by many studies. The role of self-efficacy measured in entrepreneurial specific domain and its

relation to the firm performance in the sample of practicing entrepreneurs in developing countries has not been well established.

### **3.8 Achievement Motivation and Self-efficacy**

The social cognitive theory assumes a relationship between motivation and self-efficacy. Motivation plays an important role in self-efficacy and performance. The intrinsic interest is developed through self-efficacy mechanism. The theory further indicates that self-motivation comes under different names and achievement motivation is such a phenomenon. People with high achievement motivation tend to make self-satisfaction and attain high self-efficacy. Impact of motivation on perceived self-efficacy should be understood by the interrelationship between these two concepts (Bandura, 1986).

People show an enduring self-motivation for activities that they have higher self-efficacy (Bandura, 1982). Bandura and Cervone (1986) indicated that effects of internal standards on motivation are mediated through self-efficacy mechanism. Matsui, Okada, and Kakuyama (1982) indicated that achievement motivation influences performance indirectly through self-efficacy. Luthans and Ibrayeva (2006) tested a model in two Asian countries with transition economies. Self-efficacy was included as a mediating variable and achievement motivation and locus of control were the cognitive antecedents to self-efficacy. The results proved that the structural paths between cognitive factors (locus of control and need for achievement) and self-efficacy are significant. They have further stated that in the absence of dispositional antecedents such as achievement motivation, it is difficult to imagine the existence of entrepreneurs with high self-efficacy. They emphasized that this situation is applicable to the entrepreneurs in developing countries because they have to face

frustrations and many obstacles while much dedication is essential in the face of such obstacles.

By proposing a research model based on entrepreneurial self-efficacy, Li (2008) has emphasized the importance of cognitive characteristics in developing countries as they face economic, social, political, and market instability and uncertainty compared to developed countries. Phillips and Gully (1997) found an insignificant positive relationship between achievement motivation and self-efficacy. Roberts and James (2005) found a significant positive correlation between motivation and self-efficacy. Prat-Sala and Redford (2010) found a positive correlation between motivation and self-efficacy in a study of student population. Accordingly, it was revealed that majority of previous studies have proved a positive relationship between motivation and self-efficacy. Furthermore, they have emphasized the importance of the two concepts in the contexts of developing countries (Li, 2008; Luthans & Ibrayeva, 2006).

### **3.9 Goal Setting and Self-efficacy**

Goals are prominent in developing self-efficacy of individuals in addition to providing a direction and creating incentives for actions (Bandura, 1986). Proximal sub goals affect more in developing self-efficacy (Bandura & Schunk, 1981). In an experimental study conducted in a sample of under graduate students, Phillips and Gully (1997) argued that personality factors could be assumed to have a significant effect on self-efficacy. They further found that goal orientation positively affect self-efficacy. Knight *et al.* (2001) conducted a study among group of students and found that goals are positively related to the team efficacy. Anyster *et al.* (2006) found that performance goals built self-efficacy belief in a qualitative inquiry of fifteen

employees. The effects of goals outcomes are mediated through self-efficacy mechanism as per the study conducted by Bandura and Cervone (1983).

Seijts *et al.* (2004) tested the hypothesis that self-efficacy mediates the effect of goals on performing a complex task in an experiment among sample of students. The results indicated that self-efficacy fully mediate the relationship. The study further found that specific goals significantly affect both self-efficacy and performance Locke and Latham (1990, 2002) integrated the self-efficacy construct into the goal setting theory and stated that goals affect performance through self-efficacy. Locke and Latham's (1990) model demonstrate the relationship among assigned goals, personal goals, and self-efficacy (see figure 3.1).

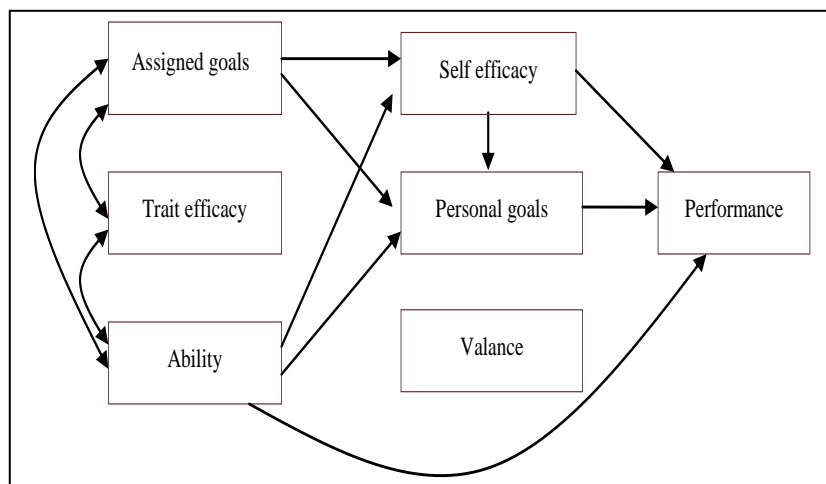


Figure 3.1  
*Locke & Latham's (1990) model*  
Source: Early & Lituchy (1991)

As per the model, relationship between personal goals and performance is mediated by self-efficacy. Eden (1988) formulated another model incorporating the relationship among performance, self-efficacy, and personal goals (see figure 3.2). The model assumed that the relationship between personal goals and performance is

mediated by self-efficacy and the relationship between personal goals and self-efficacy is reciprocal.

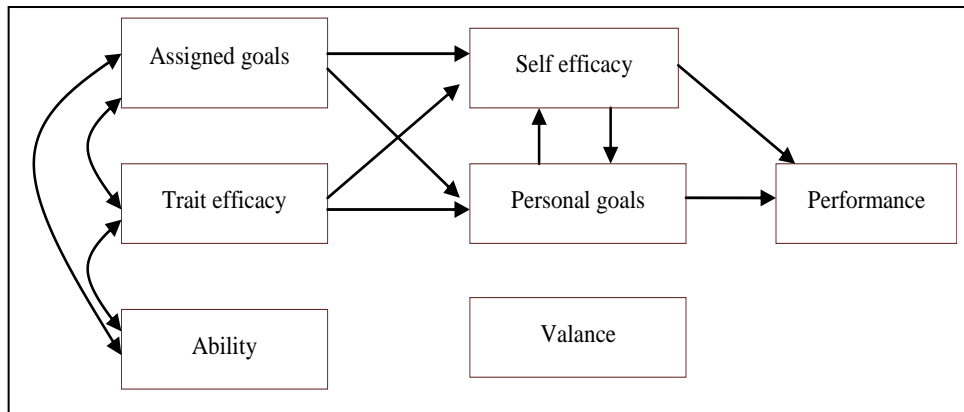


Figure 3.2  
 Eden (1988) Model  
 Source: Early and Lituchy (1991)

The model emphasized that difficult personal goals are strengthened by high level of self-efficacy and vice versa. In addition, self-efficacy and personal goals have direct effect on performance.

Garland (1985) presented a cognitive mediation model and examined the behavior of performance, personal goals, and self-efficacy. The model indicated that self-efficacy mediates the relationship between personal goals and performance (see figure 3.3)

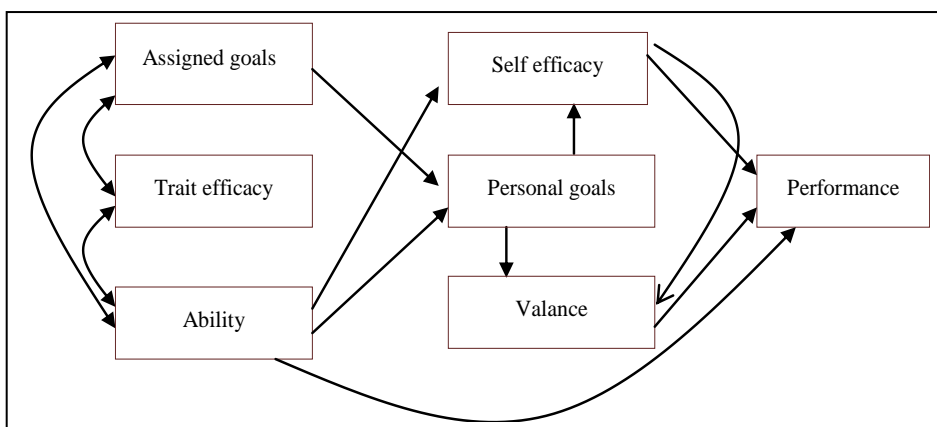


Figure 3.3  
 Garland's (1985) model  
 Source: Early & Lituchy (1991)

Similar to Eden's (1988) research model, Garland also argued that self-efficacy plays a mediating role in performance. In a comparison of these three models, it can be demonstrated that goal-efficacy relationship has slightly differently interpreted in these three models. In Locke and Latham's (1990) model, self-efficacy is considered as an antecedent to personal goals. Eden's (1988) model stated that self-efficacy and performance has reciprocal relationship. According to the Garland's (1985) model personal goals are antecedents to self-efficacy. Early and Lituchy (1991) validated these three models and found different levels of validity for each model. Locke and Latham (1990) model proved parsimonious while Eden's (1988) and Garland's (1985) models also provided a good fit.

Applebaum and Hare (1996) found a mediating role of self-efficacy indicating that goals lead to self-efficacy beliefs while performance is influenced by self-efficacy. Latham and Locke (2007) found that self-efficacy has played a significant mediating role in goal setting and feedback. Noel and Latham (2006) found that learning goals remain longer in a simulation study. Furthermore, they indicated that people do not decrease their effort to minimize the positive discrepancy between goals and performance after attaining goals. This may lead someone to argue that self-belief may be mediating the relationship between goals and performance. Anyster *et al.* (2006) found that personal performance goals are good self-efficacy builders in a study at South African fruit export organization.

Literature on the relationship between goal setting and self-efficacy reveals that some of the studies have investigated the direct effect of goals on self-efficacy while other studies have examined the mediating role of self-efficacy in the relationship between goal setting and performance. It is also evident that most of the studies that tested the



self-efficacy as an independent variable or mediating variable have focused the individual level performance.

### **3.10 Mastery Experience and Self-efficacy**

The social cognitive theory indicates that self-efficacy is strengthened by acquiring knowledge through direct experiences which is known as mastery experience. The theory explains that the extent to which individuals increase or decrease their self-efficacy through mastery experiences. It depends on the factors such as amount of the external aid they received, the amount of effort exert on, and the difficulty of the task. In addition, mastery experience in difficult activities sends the new information that enhances the self-efficacy. The mastery experience is considered as the most powerful and most influential source of self-efficacy as it is based on the hand-on experience of the individual. The previous experiences and way of interpreting the results of their previous experiences help developing the perceptions of their capabilities (Bandura, 1986).

Individuals involved in a particular action interpret the results of that action. They use these interpretations to develop their perceptions on their abilities to engage in subsequent activities. If they interpret their experiences as successful, it raises the efficacy while those interpreted as unsuccessful lower the efficacy (Bandura, 1986; Bandura, 1997; Wood & Bandura, 1989). Mueller and Goic (2003) pointed out that self-efficacy in entrepreneurial domain will be improved through experience and role modeling. Wilson *et al.* (2007) have shown that targeted direct experience through education can develop the individual's self-efficacy.

The size and patterns of direct experiences provide good information in deciding self-efficacy. For example, people who experience occasional failure but improve

continuously may perceive higher self-efficacy. The way of success experiences are interpreted by individuals will also affect self-efficacy. Some experiences are closely observed and frequently remembered but self-efficacy may be reduced if they repeatedly recall negative experiences (Bandura, 1986).

According to Chowdhury *et al.* (2002), strong experiences create strong self-efficacy while weak sources of experience weaken the self-efficacy. Anyster *et al.* (2006) found that employees derive efficacy information primarily through direct experiences. The study was conducted in the employees of a fruit marketing company. They further stated that this source of experiences is stronger than information derived from any other source.

Smith (2002) has indicated that the strongest source of self-efficacy is mastery experiences because mastery experience is based on direct and personal experiences of the individual. Debowski *et al.* (2001) investigated the relationship between mastery experiences and self-efficacy and found a significant positive relationship. Wise and Trunnell (2001) coupled the vicarious experience and social persuasion as sources of self-efficacy in a single factor repeated measure experimental design and found significant results. Dawes *et al.* (2000) reported insignificant impact of mastery experience on the self-efficacy. Zhao *et al.* (2005) reported that entrepreneurial experience is a good source of entrepreneurial self-efficacy. Joet *et al.* (2011) found that mastery experience is the strongest source of self-efficacy among other sources.

Accordingly, the social cognitive theory has provided a base for the relationship between self-efficacy and mastery experiences (Bandura, 1986). In addition, many other studies have proven that the mastery experiences are the strongest source of

self-efficacy (Mueller & Goic, 2003; Wilson *et al.*, 2007; Zhao *et al.*, 2005). Only one study proved an insignificant relationship between two variables (Joet *et al.*, 2011).

### **3.11 Mediatory Role of Self Efficacy**

Applebaum and Hare (1996) found that the relationship between goal setting and performance is mediated by self-efficacy. Baum *et al.* (2001) found a significant mediating role of self-efficacy in the relationship between personality traits and performance. Locke (2001) confirmed the mediating role of self-efficacy in the same relationship.

Zhao *et al.* (2005) found significant results in an investigation of the mediating effect of entrepreneurial self-efficacy in students' intention to become entrepreneurs. Luthans and Ibrayewa (2006) found that the relationship between need for achievement and firm performance is mediated by self-efficacy. Locke and Latham (1990) found that self-efficacy mediates the relationship between goals and individual performance. Eden (1988) proved a mediating effect of self-efficacy in the relationship between personal goals and performance. Garland (1985) found a significant mediating role of self-efficacy in personal goals and individual performance. The social cognitive theory also proved self-efficacy as a strong mediating mechanism in individual performance. As the theory states, many factors that affect the performance extend their influence through cognitive mechanism of self-efficacy (Bandura, 1986). Noel and Latham (2006) found that mediating role of self-efficacy is reciprocal in a simulation study on entrepreneurial behavior and performance. Vancouver and Kendall (2006) rejected the role of self-efficacy as a mediator to performance.

Available literature reveals that many studies have confirmed the role of self-efficacy as a mediating mechanism in individual level performance (Bandura, 1986; Applebaum & Hare, 1996; Locke, 2001; Zhao *et al.*, 2005). There were only one study rejected the mediating effect of self-efficacy (Vancouver & Kendall, 2006).

### **3.12 Strategic Orientation and Performance**

Strategic orientations are interpreted in different perspectives such as resources, dynamic capabilities and elements of the organizational culture. As an organizational resource, it is instrumental to the organizational success (Barney, 1991; Hoq & Chauhan, 2011). Such resources help exploiting other organizational competencies (Teece *et al.*, 1997; Zhou *et al.*, 2005). As elements of the organizational culture, the concept is characterized as a set of attitudes, values and behaviours of the organization (Nobel *et al.*, 2002).

Venkatraman (1989) conceptualized strategic orientation as a concept with six dimensions namely, strategic aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness. He further suggested that the concept could be operationalized by manager's perceptions on the six dimensions. This operationalization of the variable is based on the key features of the business level strategy. Gatignon and Xuereb (1997) posited that strategic orientation represents different mechanisms of organizational adaptation. They defined the concept as "The principles that direct the organizational activities and behaviours essential for the performance of the firm". Based on this definition, Hakala, (2010) configured strategic orientation as a constellation of market orientation, entrepreneurial orientation, learning orientation, and technology orientation.

Narver and Slater (1990) defined market orientation as “The organizational culture that generates the necessary behaviours for the creation of superior value which in turn, increase the performance”. Kohli and Jaworski (1990) defined the concept as “The generation of market intelligence, dissemination and responsiveness to them”. They also consider the concept as “The implementation of the market philosophy”. These definitions give emphasis on three basic dimensions in market orientation as inter-functional coordination, competitor orientation, and customer orientation. Deng and Dart (1994) added another dimension to market orientation as profit orientation and developed a four-factor concept.

Entrepreneurial orientation is considered as a strategic element that covers the entrepreneurial aspects of the firm (Wiklund & Shepherd, 2005; Covin & Selvin, 1991; Hult *et al.*, 2004; Bhuian, Menguc, & Bell, 2005). The concept encompasses three dimensions as proactiveness, innovativeness, and risk taking (Miller, 1983; Covin & Selvin, 1991). Lumpkin and Dess (1996) conceptualized the concept with five dimensions namely, competitive aggressiveness, proactiveness, risk taking, innovativeness, and autonomy. They further posited that these dimensions might vary independently depending on the organizational context. Many researchers argue that entrepreneurially oriented firms are capable of easily adjusting to the dynamic environmental conditions (Lumpkin & Dess, 1996; Covin & Selvin, 1991).

Learning orientation is defined as a “Set of organizational values that influence the propensity of the firm to learn” (Sinkula *et al.*, 1997). It is an organization’s basic attitude towards learning and associated with proactive learning (Celuch, Kasouf, & Peruvemba, 2002). The construct has been conceptualized into three dimensions as shared vision, commitment to continuous learning, and open-mindedness (Sinkula *et*

*al.*, 1997). Calantone, Cavusgil, and Zhao (2002) posited that learning orientation enables the organizations to adapt in environmental changes.

It was found that product innovative performance of SMEs is directly influenced by high level of entrepreneurial orientation and market orientation (Atuahene-Gima & Ko, 2001). Appaiah and Singh (1998) studied market orientation and innovation orientation in manufacturing and service SMEs in the United Kingdom. They found that both orientations affect organizational success. Baker and Sinkula (2009) examined the direct effect of market orientation and entrepreneurial orientation on profitability. They also investigated indirect effect of market orientation through innovativeness. The study was conducted in a sample of SMEs in the United State of America. The results indicated that both orientations affect indirectly through innovativeness. Based on the results, they further emphasized that entrepreneurial orientation is independent from market orientation and complement each other.

Barrett, Balloun, and Weinstein (2005b) found that market orientation, learning orientation, and entrepreneurial orientation positively related to performance while they correlate with each other. The study was conducted in 23 non-profit organizations in US. They further found that market orientation positively correlates with creativity and organizational flexibility. Ledwith and Dwyer (2009) found that the market orientation is not a consistent predictor of new product performance and organizational success. This study was conducted among 106 small firms in Ireland. Becherer and Maurer (1997) empirically tested how entrepreneurial orientation and market orientation affect performance and the moderating effect of environment in a sample of entrepreneur-led United State SMEs. The results indicated that market orientation and entrepreneurial orientation positively related to performance.

A study conducted by Bhuian *et al.* (2005) in non-profit oriented hospitals investigated the extent to which entrepreneurial orientation moderates the relationship between market orientation and performance. The results suggested that a higher level of effect of market orientation exists at moderate level of entrepreneurial orientation. Chen and Hsu (2013) found that the dimensions of entrepreneurial orientation make inverted U-shaped relationship on firm performance. They further proved that the relationship becomes linear when the market intelligence generation and responsiveness are at a high level.

Farrel and Oczkowski (2002) found that both entrepreneurial orientation and learning orientation affect the performance of manufacturing firms in Australia. Wang and Wei (2005) investigated the importance of market orientation, entrepreneurial orientation, and quality orientation on total quality management. The sample was selected from software firms in Taiwan. The study proved that all the three types of orientations simultaneously affect the firm's competitive advantage.

In Spanish SMEs, Santos-Vijande, Sanzo-perez, Alvarez-Gonzalez, and Vazquez-casielles (2005) investigated the level of market orientation and learning orientation and their impact on organizational learning and performance. The results indicated that the organizational performance was influenced only by market orientation. Learning orientation affects the long-term customer relationships. Aziz and Yassin (2010) studied the effect of market orientation on the business success of small-scale agro-food organizations. The results suggested that sustainable competitive advantage and performance outcomes could be obtained through higher level of market orientation. Lechner and Gudmundsson (2014) studied the effect of dimensions of entrepreneurial orientation on small firm performance and found positive relationships.

Wang (2008) found that organizational performance is positively influenced by entrepreneurial orientation. In addition, learning orientation mediates the relationship between entrepreneurial orientation and performance. The study was conducted in a sample of medium and large-scale firms in United Kingdom. Frishammar and Horte (2007) conducted a study in a sample of medium scale manufacturing firms in Sweden. The study investigated the effect of entrepreneurial orientation and market orientation on new product performance. The results proved that market orientation significantly and positively affects new product performance. Only innovation dimension of entrepreneurial orientation is positively related to new product performance.

Lee and Tsai (2005) tested the relationship among market orientation, learning orientation, Innovativeness, and performance in Taiwan manufacturing firms. As per the findings, market orientation and learning orientation directly influence performance. In addition, innovativeness was found to be a mediator to the relationship. Li (2005) studied the mediating role of managerial networking in the relationship between market orientation, technology orientation, entrepreneurial orientation, and performance. The study was conducted in Chinese foreign invested firms. He found that all the three independent variables have positive effects on managerial networking and in turn increase the firm performance. Ampasri and Nanthaphat (2013) proved that entrepreneurial orientation and learning orientation positively affect firm performance.

Li *et al.* (2006) studied the strategic orientation and its relationship with new product development performance in a sample of Chinese enterprises. Positive effect of entrepreneurial orientation on new product performance was confirmed. However,



market orientation has shown no effect. They further suggested that market orientation might even hinder the new product performance. The entrepreneurial orientation of Chinese small-sized ventures moderate the relationship between market orientation and firm performance. In addition, market orientation has a positive relationship with firm performance. Furthermore, this relationship will be strengthening when market orientation is combined with innovativeness and proactiveness dimensions of entrepreneurial orientation (Li *et al.*, 2008).

Atuahene-Gima, Slater, and Olson (2005) studied the simultaneous influence of proactive market orientation and responsive market orientation on new product development performance in United State firms. The results confirmed that both types of market orientation have a higher influence on performance of the firm. Baker and Sinkula (1999a) investigated the synergetic effect of market orientation and learning orientation on organizational performance. The study was conducted in large-scale firms and results indicated that both variables have an effect on organizational performance while learning orientation improves market orientation. Baker and Sinkula (1999b) investigated learning orientation and market orientation of large-scale firms to determine their effect on innovation and organizational performance. The direct effect of learning orientation on firm performance was found in the study. Further, they found that the relationship is mediated by innovation indicating an indirect effect. Baker and Sinkula (2002) developed a conceptual model on the interaction among market orientation, learning orientation, and innovation performance. They argued that both learning orientation and market orientation is instrumental to the innovation.

Salavou, Baltas, and Lioukas (2004) studied effect of competitive structure, market orientation, and learning orientation on innovation performance of manufacturing sector SMEs in Greece. The findings supported the proposition that innovation performance of SMEs is affected by high level of market orientation and learning orientation. Xiaohua, (2013) found that entrepreneurial orientation and organizational learning positively related to the performance of Chinese high-tech firms.

Salavou (2005) investigated the direct effect of market orientation and technology orientation on product development performance at SMEs in Greece manufacturing sector. The model also examined the indirect effect of market orientation and technology orientation through learning orientation. The study found empirical evidences supportive for a combined effect of learning orientation, market orientation, and technology orientation on new product performance. Liu, Luo, and Shi (2002) conducted a study in a sample of Chinese state-owned companies. They investigated the relationship among market orientation, entrepreneurial orientation, learning orientation, and corporate entrepreneurship. The findings indicated that the higher level of performance is likely to be achieved by the firms with high level of learning orientation, and market orientation. Liu, Luo, and Shi (2003) found that the high level of learning orientation, entrepreneurial orientation, and market orientation increase the competitive advantage of the Chinese state owned companies. In addition, the companies with simultaneous effect of three orientations achieve better performance.

Based on a comprehensive literature review, Foley and Fahy (2004) developed a conceptual framework that assumed a positive effect of learning orientation and

market orientation on organizational performance. Farrell (2000) studied the effect of market orientation and learning orientation on performance in a sample of top ranked manufacturing firms in Australia. The evidences proved that learning orientation has higher effect on organizational success. Aragon-Sanchez and Sanchez-Marin (2005) empirically tested the direction and the extent to which strategic orientation is related to firm performance of Spanish SMEs. The evidences proved a positive relationship between two constructs. Mthanti and Urban (2014) found that entrepreneurial orientation and firm performance are positively related and effectuation moderates the relationship. Van, Jansen, Vanden, and Volberda (2013) proved positive relationship between entrepreneurial orientation and firm performance.

Contingent value of strategic orientation in Chinese firms was studied by Gao, Zhou, and Yim (2007). The study also considered the effect of demand uncertainty, technological turbulence, and competitive intensity on the above relationship. The study focused on the link among learning orientation, customer orientation and technology orientation, and performance of the Chinese firms at varied levels of demand uncertainty. The results found that the positive effect of market orientation exists at low level of demand uncertainty. The organizational performance may even be hindered by market orientation at high level of demand uncertainty. Kurtinaitiene (2005) developed a measure of market orientation and investigated the relationship among market orientation, learning orientation, and firm performance. The study was conducted in a sample of mobile telecommunication businesses in European Union. Firm performance was found to be positively related to market orientation and learning orientation. Pulendran, Speed, and Widing (2003) conducted a study on the relationship among marketing planning, market orientation, and business

performance. It was found that business performance is positively influenced by market orientation.

Hult *et al.* (2004) conducted a study in large-scale industrial firms in United State. An investigation was conducted on the relationship among market orientation, entrepreneurial orientation, learning orientation, innovation, and performance. The results proved that effect of market orientation on performance is greater than the effect of other independent variables. Entrepreneurial orientation and learning orientation also positively related to innovation performance. Kropp, Lindsay, and Shoham (2006) conducted a study in a sample of entrepreneurs and managers in international entrepreneurial business ventures in South Africa. The study investigated the effect of entrepreneurial orientation, learning orientation, and market orientation on venture performance. According to the results, international ventures experience lower performance due to strategic orientations in early stages of the business life cycle. Kropp, Lindsay, and Shoham (2008) studied the effect of dimensions of entrepreneurial orientation on decision to start international venture. The results found that risk taking and proactiveness dimensions positively related to start-up decision. Jeong, Pae, and Zhou (2006) searched for empirical evidences to clarify the role of technology orientation and customer orientation on new product development performance. Evidences were found for positive relationships.

Knotts, Jones, and Brown (2008) studied the influence of market orientation on survival rate of SMEs. The study was conducted in small-scale manufacturing firms. The results proved that production orientation is central to the surviving organizations and non-survivors have more focus on market orientation. Keskim (2006) conducted a study in the context of developing country. The focus of the

study was nomological relations among market orientation, learning orientation, innovativeness, and performance in a sample of SMEs in Turkey. According to the findings, a direct effect exists among market orientation, learning orientation, innovation, and performance. Alegre and Chiva (2013) found that the positive link between entrepreneurial orientation and firm performance could be boosted by high level of organizational learning capability.

Ruokonen and Saarenketo (2009) conducted a case study in a sample of small-scale Finnish software firms. They studied strategic orientation and internationalization of firms. It was proved that there is a high influence when entrepreneurial orientation is combined with strong learning orientation and market orientation. Boso, Story, and Cadogan (2013) investigated the effect of entrepreneurial orientation and market orientation on business performance of entrepreneurial firms in Ghana. They found that the high levels of both orientations improve the performance.

In a study conducted among marketing and other senior managers, Luo, Sivakumar, and Liu (2005) found that entrepreneurial orientation and market orientation affect organizational performance of Chinese SMEs. In addition, global product sourcing further strengthened the effect of entrepreneurial orientation on organizational performance. In South Korean technology intensive firms, learning orientation moderate the relationship between market orientation and innovation performance. Learning orientation moderates the relationship between entrepreneurial orientation and innovation performance. In addition, learning orientation directly influence innovation performance which in turn improve the organizational performance (Rhee, Park, & Lee, 2010).

Nobel, Sinha, and Kumar (2002) studied the effect of market orientation, competitor orientation, and selling orientation on performance in a longitudinal investigation. The study found that the high level of customer orientation and selling orientation increase organizational performance. Paladino (2009) investigated the effect of market orientation and resource orientation on financial performance and innovation performance. The results proved that higher level of market orientation and resource orientation increase the financial performance while higher resource orientation and low market orientation improve innovations. Zhou, Yim, and Tse (2005) tested a research model that includes the dimensions of strategic orientations innovation and firm performance among Chinese managers in consumer product industry. The results confirmed that market orientation and technology orientation increase the technology based innovations. Technology orientation did not have an effect on market based innovation performance. Entrepreneurial orientation improve both technology based and market based innovation performance. Spillan, Kara, King, and McGinnis (2013) found that market orientation and performance of Ghanaian micro enterprises are positively related.

In a conceptual model, Schindehutte, Morris, and Kocak (2008) assumed that technology orientation, entrepreneurial orientation, and market orientation would explain the variance of firm performance. Zehir and Eren (2007) found positive effects of entrepreneurial orientation and customer orientation on firm performance in medium and large-scale automotive firms in Turkey. Moreover, empirical evidences strongly supported for a positive effects of customer orientation and learning orientation on new business venturing. The German companies in United Kingdom with higher levels of product orientation and market orientation are more successful compared to other companies (Shaw, 2000). The findings of an empirical

investigation proved that the organizations that have non-for-profit goals show less important of being market oriented. In addition, the type of measurement of firm performance is influenced by different orientations. These findings were produced in a study conducted by Voss and Voss (2000) to investigate the role of strategic orientation in the performance of the non-for-profit professional organizations.

Slater and Narver (2000) studied the effect of market orientation on profitability of a sample of small firms. They found that market orientation is essential for small-scale firms to achieve a higher level of profitability. Tzokas, Carter, and Kyriazopoulos (2001) studied the relationship between market orientation, entrepreneurial orientation and organizational competencies in small-scale manufacturing firms in Greece. They concluded that entrepreneurial orientation and market orientation improve the operational competencies of SMEs. Tajeddini (2010) investigated the effect of innovativeness, customer orientation and entrepreneurial orientation on performance of hotel industry in Switzerland. He concluded that the combined effect of entrepreneurial orientation, customer orientation and innovativeness on the success of hotel and restaurant sector is significant. The results further emphasized that customer orientation has no effect on innovation performance.

Barrett, Balloun, and Weinstein (2005a) investigated the complex relationships among firm performance, entrepreneurial management style, organizational flexibility, learning orientation and market orientation. The investigation was conducted in the United State's organizations in health care and education sector. It was concluded that the effect of three different orientations (entrepreneurial orientation learning orientation, and market orientation) depend on the characteristics of the industry and market. The findings related to the high-tech firms in United

Kingdom confirmed that moving to market orientation from technology orientation cause gradual increase in the success of the firms (Berry, 1996).

Herath and Mahmood (2012, 2013a, 2013b) have proposed conceptual models with learning orientation, entrepreneurial orientation, and market orientation as independent variables to firm performance. Aloulou and Fayolle (2005) proposed a conceptual model that combined entrepreneurial orientation, market orientation, stakeholder orientation, and technology orientation. Celuch, Kasouf, and Peruvemba (2002) found that both market orientation and learning orientation increase the organizational capabilities. Jimenez-Jimenez and Cegarra-Navarro (2007) found a mediating effect of learning in the relationship between market orientation and intelligence dissemination. It was also found that multiple orientations (market orientation and entrepreneurial orientation) are important in the performance of non-for profit organizations (Morris, Coombes, Schindehutte, & Allen, 2007).

Morris and Gordon (1987) reported that firms with high level of entrepreneurial orientation are inclined to have high level of market orientation. Zahra (2008) found that interrelationship between market orientation and entrepreneurial orientation is higher in high technology firms. Marinov, Cox, Avlonitis, and Kouremenos (1993) studied marketing approaches of Bulgarian firms. Pearson (1993) proposed a conceptual model with multiple orientations. Shipley, Hooley, Beracs, Fonfara, and Kolos (1995) found that production orientation is a barrier for improving market orientation. Suh (2005) posited that innovation orientation affects e customer service. Zaharieva, Gorton, and Lingard (2004) studied the movement of production orientation towards market orientation in Bulgarian wine industry. Ihnmoyan and



Akinyele (2011) found that dimensions of market orientation affect innovative performance of the firm.

An appropriate fabric of organizational orientations should be decided by taking the nature of complex environmental conditions into consideration. This conclusion was drawn in a study conducted by Berthon, Hulbert, and Pitt (2004) among executive officers in United State firms. A study conducted in South African firms also concluded that the various composition of organizational orientations claim different effects on organizational outputs (Berthon, Pitt, Abratt, & Nel, 2008). Management success of the corporate level is strongly influenced by employee orientation, cost orientation, and market orientation. The conclusion was made in a study on overall corporate success of industrial firms in Germany (Fritz, 1996). Izquierdo and Samaniego (2007) conducted a study in Spanish firms. The study investigated effect of market orientation, selling orientation, and product orientation on social effectiveness of non-for profit organizations. The results indicated that different organizational orientations make varied influences on social effectiveness depending on the nature of the organizational goal.

Kaya and Seyrek (2005) investigated the relationship among customer orientation, technology orientation, entrepreneurial orientation, and organizational performance in manufacturing firms in Turkey. The results show that level of entrepreneurial orientation and technology orientation should be selected based on the level of market orientation. Customer orientation may even harmful to the firm performance. Erlend (2012) found that learning orientation positively affects the financial performance of traditional manufacturing firms. Hermann, Alexander, Gerald, and

Daniela (2012) indicated that learning orientation of SMEs affect firm performance in both the dynamic and the hostile environments.

Mavondo, Chimhanzi, and Stewart (2005) studied the learning orientation, market orientation and organizational outcomes They found that market orientation affects different types of innovation performance. Merlo & Auh (2009) examined the effect of entrepreneurial orientation, market orientation and marketing sub units on firm performance. They concluded that market orientation has positive influence on performance and this positive relationship is affected by marketing sub units. Miles and Arnold (1991) studied the dependency among organizational orientations and concluded that market orientation and entrepreneurial orientation are not dependent on each other. Frishammar and Andersson (2008) investigated the international performance of SMEs in a sample of Swedish enterprises to determine the extent to which different organizational orientations affect international performance. They found that there exists a very limited effect. Lin, Peng, and Kao (2008) examined the mediating role of learning orientation between market orientation and entrepreneurial orientation. In addition, the study investigated direct influence of market orientation and entrepreneurial orientation on innovativeness and performance of the firm. The results confirmed the existence of full mediation in direct relationship between proposed independent and dependent variables.

Hakala (2010) introduced a new configuration of strategic orientation combining four different orientations namely, learning orientation, technology orientation, entrepreneurial orientation, and market orientation. This configuration suggested three dimensions to strategic orientation. The organizational internal precedence such as technology development (technology orientation) is the first dimension. The

second represents the exogenous impacts from markets (market orientation) while the third dimension is processes that previous two dimensions are combined (learning orientation and entrepreneurial orientation). Hakala (2010) further argued that technology orientation represents organizational resources and market orientation represents organizational position. Learning orientation and entrepreneurial orientations represent the processes of exploiting and exploring respectively. The continuous process of exploring and exploiting of organizational positions and resources may lead the organization to achieve the competitive advantage.

Spillan, Li, Totten, and Mayola (2009) emphasized that further clarification of different organizational orientations are essential in SMEs in developing countries since due attention on the concept has not been paid. Dharmasiri (2009) conducted study in the commercial banks in Sri Lanka, India, Pakistan, and Bangladesh. The study investigated the level of human resource managers' strategic orientation. The importance of strategic orientation of managers for developing countries was emphasized in this study. The SMEs operating in the hostile environments claim more importance in market orientation and entrepreneurial orientation in achieving the firm performance. The conclusion was made in a study conducted by Hoq and Chauhan (2011) in Bangladesh.

Reijonena and Komppulab (2010) conducted a study on the adoption of market orientation in SMEs in Eastern Finland. The results showed that the market orientation and its dimensions are critical for the success of SMEs. Chandrakumara, De Zoysa, and Manawaduge (2011) investigated the level of entrepreneurial orientation and managerial orientation and their effect on the performance of Sri

Lankan SMEs. The evidences were found for less effect of entrepreneurial orientation on the performance of medium-scale firms. The effect is higher in smaller firms compared to medium scale firms. Fauzul, Takenouchi, & Yukiko (2010) investigated the effect of entrepreneurial orientation on firm performance in Sri Lankan SMEs. The study found that entrepreneurial orientation and firm performance are strongly and positively related to each other.

Previous literature on strategic orientations and firm performance revealed that different combinations of strategic orientations have been used as independent variables. Different orientations have been configured into a single concept by some of the authors and found their effect on firm performance (Hakala, 2010, 2011). Table 3.2 shows a summary of studies that used more than one orientation as independent variables from 1987 to 2013.

As the table indicates, twelve studies have used the combination of entrepreneurial orientation, market orientation, and learning orientation in performance studies. Among those studies, three studies have proposed conceptual models and no empirical evidences were found (Herath & Mahmood, 2012, 2013a, 2013b).

Two studies have investigated the corporate entrepreneurship in state-owned companies (Liu *et al.*, 2002, 2003). Another two studies have been conducted in small sample of non-for-profit organizations (Barrett *et al.*, 2005a, 2005b). Hult *et al.* (2005) and Zehir and Eren (2007) have conducted their studies in the samples of large-scale firms. The other two studies have investigated the effect of three orientations on new venture performance and internationalization of international companies (Ruokonen & Saarenketo, 2009; Kropp *et al.*, 2008). Rhee *et al.* (2010) have investigated the innovation performance of technology intensive firms.

Accordingly, among those twelve studies, no study has investigated the effect of three orientations on the firm level performance of small and medium scale enterprises.

Table 3.2  
*Summary of Literature on Strategic Orientations*

Combination of Orientations	Studies
technology orientation / market orientation	Zaharieva <i>et al.</i> (2004); Voss and Voss (2000); Suh (2005); Shipley <i>et al.</i> (1995); Shaw (2000); Pearson (1993); Paladino (2009); Marinov <i>et al.</i> (1993); Knotts <i>et al.</i> (2008); Jeong <i>et al.</i> (2006); Izquierdo and Samaniego (2007); Gao <i>et al.</i> (2007); Fritz (1996); Berthon <i>et al.</i> (2008), (2004), Berry (1996); Appiah-Adu and Singh (1998)
entrepreneurial orientation / market orientation	Zahra (2008); Tzokas <i>et al.</i> (2001); Tajeddini (2010); Slater and Narver (2000); Schindehutte <i>et al.</i> (2008); Morris and Gordon (1987); Morris <i>et al.</i> (2007); Miles and Arnold (1991); Merlo and Auh (2009); Luo <i>et al.</i> (2005); Li <i>et al.</i> (2006), Li <i>et al.</i> (2008); Frishammar and Horte (2007); Bhuian <i>et al.</i> (2005); Becherer and Maurer (1997); Baker and Sinkula (2009); Atuahene-Gima and Ko (2001);
learning orientation / market orientation	Wang and Wei (2005); Santos-Vijande <i>et al.</i> (2005); Salavou <i>et al.</i> (2004); Mavondo <i>et al.</i> (2005); Lee and Tsai (2005); Kurtinaitiene (2005); Keskim (2006); Jiménez-Jiménez and Cegarra-Navarro (2007); Foley and Fahy (2004); Farrell and Oczkowski (2002); Farrell (2000); Celuch <i>et al.</i> (2002); Baker and Sinkula (1999a), (1999b), (2002); Atuahene-Gima <i>et al.</i> (2005);
learning orientation / Entrepreneurial orientation	Wang 2008.
entrepreneurial orientation / technology orientation / market orientation	Li (2005); Kaya and Seyrek (2005); Aloulou and Fayolle (2005)
learning orientation / entrepreneurial orientation / market orientation	Zehir and Eren (2007); Ruokonen and Saarenketo (2009); Rhee <i>et al.</i> (2010); Liu <i>et al.</i> (2002), (2003); Kropp <i>et al.</i> (2006); Hult <i>et al.</i> (2004); Barrett <i>et al.</i> (2005a), (2005b); Herath and Mahmood (2012), (2013a), (2013b),
learning orientation / technology orientation / market orientation	Salavou (2005); Noble <i>et al.</i> (2002)
learning orientation / entrepreneurial orientation / technology orientation / Market orientation	Zhou <i>et al.</i> 2005.

Source: Author constructed based on Hakala, (2011) and literature review

Moreover, the previous studies have used different forms of organizational outputs such as new product development performance (Salavou, 2005; Liu *et al.*, 2002), innovation performance (Baker & Sinkula, 2002; Salavou *et al.*, 2004), profitability (Baker & Sinkula, 2009), total quality management (Wang & Wei, 2005), corporate management success (Berthon *et al.*, 2008) and firm performance (Chandrakumara *et al.*, 2011; Lin *et al.*, 2008). Mediating and moderating effects of variables such as, innovativeness, learning orientation, networking, and firm size have been investigated in some of the studies (Baker & Sinkula, 1999b; Lee & Tsai, 2005; Wang, 2008).

### **3.13 Absorptive Capacity and Performance**

Cohen and Levinthal (1989) introduced the concept of absorptive capacity as a key learning process which includes acquiring, assimilating, and exploiting knowledge. The concept was defined as “The ability of a firm to recognize new external information, assimilate it and apply it to commercial ends”. Zahra and George’s (2002) re-conceptualization identified two major dimensions of the concept. One dimension is potential absorptive capacity which is divided into two sub dimensions namely, acquisition and assimilation. The other dimension is realized absorptive capacity which includes knowledge transformation and exploitation. Accordingly, absorptive capacity is a concept with four sub dimensions.

According to Cohen and Levinthal (1990), absorptive capacity helps generating competitive advantage of the firm. Deeds (2001) investigated the role of absorptive capacity, technical development, and research and development intensity in creating entrepreneurial wealth in high technology firms. In this study, absorptive capacity was measured in terms of the firm’s scientific publications and found that firm’s wealth creation is positively influenced by absorptive capacity. A positive partial

relationship between absorptive capacity and performance was found by George *et al.* (2001) in a study conducted in biotechnology firms.

Lane *et al.* (2001) in a study on international joint ventures found that assimilation of knowledge has no significant effect on firm performance. However, knowledge exploitation is positively related to the performance. Hayton and Zahra (2005) investigated the human capital and absorptive capacity of small-scale technology firms. The findings concluded that top management is an important source of knowledge and therefore positively affect both absorptive capacity and skills of acquiring more resources. Yeoh (2009) found that the level of realized absorptive capacity of the supplying firms directly influences strategic performance.

Lane, Koka, and Pathak (2006) conducted a study with a detailed analysis on 289 research papers published on absorptive capacity from 1991 to 2002. They concluded that the level of absorptive capacity of the firm could invigorate the firm's base of knowledge. It is also instrumental to the long-term survival and firm performance. Muscio (2007) investigated the relationship between absorptive capacity and SME collaborations with other firms, universities, and technology-transfer institutions. Absorptive capacity in this study was measured based on research and development intensity and human resources. The results confirmed that absorptive capacity enhances the collaboration with external organizations that may finally lead to growth of the firm. Parida (2009) found that innovative performance of the firm and absorptive capacity show a positive relationship and the performance is moderated by entrepreneurial orientation.

Lichtenthaler (2009) proved that absorptive capacity in the forms of exploratory learning and exploitative learning enhances the organizational success. Bergh & Lim

(2008) studied the absorptive capacity and financial performance of the firms with more experience and high sell-offs. A positive relationship between two variables was confirmed. Sher and Lin (2006) concluded that absorptive capacity has a positive effect on the success of the firm in a study of a sample of SMEs. Gray (2006) concluded that the ability for absorbing and using new knowledge is dependent on the firm's employees. This conclusion was made by a study in entrepreneurial small firms which employed more than fifteen employees with higher educational levels and clear growth objectives. The findings further confirmed that such organizations are more capable of absorbing and using new knowledge.

Huang and Rice (2009) studied manufacturing SMEs in Australia to investigate the role of absorptive capacity and innovativeness of the firm. The findings concluded that it is not possible to obtain direct returns of innovation in a short period through investments in absorptive capacity. Jolly and Therin (2007) investigated the influence of absorptive capacity on learning attitude and past performance of the firm. The study found positive relationships and further confirmed that assimilation of knowledge leads to innovation development of the firm.

Mckelvie, Wicklund, and Short (2007) proved that the mechanisms for acquiring and exploiting knowledge have the most influence on absorptive capacity of the firm. Liao, Welsch, and Stoica (2003) conducted a study in sample of growth-oriented SMEs. The results proved that responsiveness of the growth-oriented firms is influenced by knowledge acquisition. In addition, positive relationship exists between internal dissemination of knowledge and responsiveness of SMEs. Astrid, Cristina, and Ruzana, (2008) emphasized the benefits of absorptive capacity to use external knowledge for the success of the firms in developing countries. Najafi,



Sharifi, Soleimanof, and Najmi (2013) found absorptive capacity affects both financial and non-financial performance the firm.

Lin-Van, De-Van, and Yun-Horng (2010) investigated the relationships among innovative performance, knowledge acquisition, and absorptive capacity. The study was conducted in SMEs of the bicycle industry in Taiwan. It was concluded that no moderating effect of absorptive capacity exists in the relationship between acquisition of knowledge and performance. However, a positive direct correlation exists between absorptive capacity and performance. They further emphasized that this insignificant moderating effect may be because of small sample size. Hou (2008) argued for a conceptual model which included mediating paths of absorptive capacity and other dynamic capabilities. Mediating paths led to the relationship between firm performance and market orientation. Zhang (2009) examined the mediating role of absorptive capacity in the association between strategic orientation and performance outcomes. The mediating effect was confirmed by the results. Contrast to the existing findings, Brettel, Greve, and Flatten (2011), argued for a curvilinear association between potential absorptive capacity, realized absorptive capacity, and firm performance. This study conducted in a sample of German firms has reported only ten percent of response rate. The association between innovation performance and knowledge properties and the moderating effect of absorptive capacity on the same relationship was examined in Chinese SMEs. The results indicated that the relationship is more pronounced when the firm possesses higher level of absorptive capacity (Wang & Han, 2011). Zahra and George (2002) argued that the firms should simultaneously manage all dimensions of absorptive capacity to ensure the success of the firm.

Potential absorptive capacity which includes acquiring and assimilating external knowledge would help the firm to create a new knowledge stock. However, only the potential absorptive capacity does not enhance the performance, unless the new knowledge is transformed and exploited (Murray & Peyrefitte, 2007; Morgan & Turnell 2003). Flatten, Greve, and Brettel (2011) examined both the overall effect of absorptive capacity and its dimensions on firm performance by using the multidimensional scale and proved that the relationship is significant. According to the results of a study conducted by Ng (2011), absorptive capacity exhibits diminishing but positive relationship to the new product performance in agro-based industry. Wales, Parida, and Patel (2013) found inverted-U shaped relationship between absorptive capacity and financial performance of technology-based small and medium scale enterprises.

Harvey, Skelcher, Jas, and Walshe (2010) investigated the applicability of the knowledge absorptive capacity into the public service organizations. They found that the concept is applicable to the service industry. Innovative performance in Taiwan manufacturing industry is positively related to market orientation. This relationship is moderated by the absorptive capacity of the firm (Yang-Chao, Shun-Lin, Lin-Cheng, & Chia-Liao, 2011). Absorptive capacity shows a moderating effect in the association between organizational resources and performance of international joint ventures (Kim, Zhan, & Erramilli, 2011).

As past literature reveals, dependent, independent mediating and moderating relationships of absorptive capacity of the firm had been investigated in prior studies. A summary of findings is given in the table 3 .3.

Table 3.3  
*Summary of Literature on Absorptive Capacity*

Study	IV	DV	MEV	MOV
Cohen and Levinthal (1990)	absorptive capacity	Competitive advantage		
Deeds (2001)	absorptive capacity	entrepreneurial wealth		
George <i>et al.</i> (2001); Yeoh (2009), Lane <i>et al.</i> (2006); Parida (2009); Lichtenthaler (2009); Bergh and Lim (2008); Sher and Lin (2006); Jolly and Therin (2007); Brettel <i>et al.</i> (2011); Zahra and George (2002); Flatten <i>et al.</i> (2011); Murray and Peyrefitte (2007); Ng (2011)	absorptive capacity	performance		
Lane <i>et al.</i> (2001)	knowledge exploitation	performance		
Hayton and Zahra (2005)	human capital	absorptive capacity		
Muscio (2007)	absorptive capacity	collaboration with other organizations		
Huang and Rice (2009)	absorptive capacity	innovativeness		
Lin-Van <i>et al.</i> (2010)	Acquisition of knowledge	performance		absorptive capacity
Wang and Hang (2011)	Knowledge properties	performance		absorptive capacity
Yang-Chao <i>et al.</i> (2010)	Innovative performance	market orientation		absorptive capacity
Kim <i>et al.</i> (2011)	organizational resources	performance		absorptive capacity
Zhang (2009); Hou (2008)	market orientation and learning	performance	absorptive capacity	

Source: Author constructed based on literature review

As the table indicates, a number of studies have investigated absorptive capacity as a predictor variable of firm performance. Four studies have tested the moderating role of absorptive capacity in different relationships. The moderating effect of the variable have not been previously tested in the relationship between strategic orientation and firm performance.

### **3.14 Underpinning Theories**

The research model tested in this study was underpinned by social cognitive theory and few other theories. The following sections provide a brief description of each theory.

#### **3.14.1 Social Cognitive Theory**

Bandura (1986) introduced the social cognitive theory in his publication “Social foundations of thought and action: a social cognitive theory”. The theory mainly focuses on role of cognitive mechanism, self-efficacy, in individuals’ thoughts and actions. The social cognitive theory introduced the concept of reciprocal determinism that explains the “triadic reciprocity” among cognitive factors, environmental factors, and behavior. Before introducing triadic reciprocal determinism, causes of human behavior was explained through the view of unidirectional determinism. For example, dispositional and environmental causes of human behavior were viewed as unidirectional personal and environmental determinism. In the unidirectional determinism, the cause and behavior was considered as two independent entities. Instead, Bandura’s triadic reciprocity determinism explains human behavior functioning because of interaction among cognitive, environmental, and behavioural factors which influence each other. For example, the pattern of behavior is influenced by environmental and cognitive factors and behavior in turn influence the environmental and cognitive factors (Bandura, 1986). This triadic reciprocity is shown by the figure 3.4

According to Bandura (1986), this reciprocal relationship may not occur in equal strengths. The relative influence of triadic factors may vary in different activities, individual or situations. One type of factors may be stronger or weaker compared to others depending on the situation.

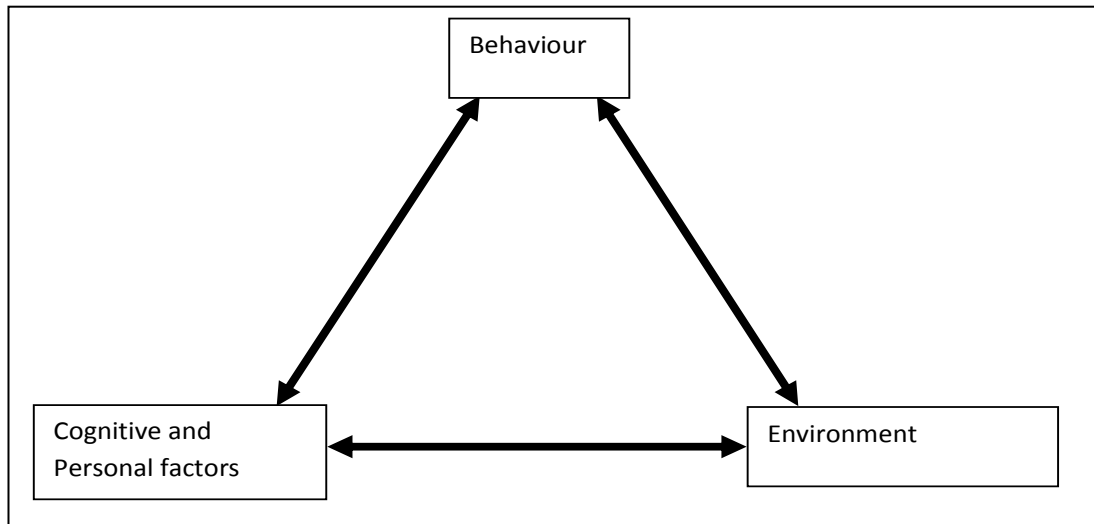


Figure 3.4  
*Triadic Reciprocity among Cognitive, Environmental and Behavioural Factors*  
 Source: Bandura 1986

Therefore, the bidirectional influences of three set of factors are not symmetrical. For example, in one situation environmental factors may be weak while cognitive factors have predominant influence. In another situation, environmental factors may have the predominant influence. However, influence of triadic factors is interdependent. The social cognitive theory also emphasized the possibility for analytic decomposition of triadic reciprocity, which means that researchers can inquire on selected segments of this total reciprocal relationship. For example, those who are interested in thought and action can examine how belief, self-precepts, and selected environmental factors influence behaviour.

Behavior is a result of both external and self-regulated sources of influence. Most of the external influences affect behavior through cognitive processes. Cognitive factors influence selecting environmental events to be observed interpreting observed events, nature of the effects, valance, and efficacy that they have. Information obtained from enactive and vicarious learning generates new knowledge. The knowledge is considered for the heavy use, informing judgments, and electing

courses of actions (Bandura, 1986). The relationship between environment and peoples' actions and outcomes are influenced by knowledge. The success of tasks will depend on the extent to which individuals are provided with cognitive and social skills and the self-belief of efficacy required performing effectively. In the social cognitive triadic reciprocity, cognition and environmental factors act together to make a behavioral change.

Self-incentives are better motivators than external motivators are. Individuals obtain self-motivation through internal standards. In behavior regulation, self-motivation operates as interrelated rather than separate mechanism in people. Bandura (1986) indicated that self-motivation is important. This self-motivation comes under different names and achievement motivation is such a phenomenon.

People with high achievement motivation tend to make self-satisfaction and attain challenging goals. Achievement motivation influence performance indirectly through goal setting and self-efficacy. The personal goals predict performance level through self-satisfaction and self-efficacy better than achievement motivation. Individuals with high self-efficacy are more likely to set challenging goals through which they increase their self-motivation and consequently increase their sense of self-efficacy. In addition, Bandura and Cervone (1986) indicated that effects of internal standards on motivation are mediated through self-efficacy mechanism. Impact of motivation on goals and perceived self-efficacy should be understood by considering the dynamic interplay among those concepts (Bandura, 1986).

Self-efficacy contributes to the quality of psychological functioning in different ways. Choice behavior is one such factor being influenced by self-efficacy. In day-to-day lives, people have to take decisions on what course of action to be pursued

among available alternatives. The choices are partly determined by the judgment of self-efficacy. People are most likely to undertake and perform activities that they believe that they are capable of handling. They avoid tasks that they believe beyond their capabilities. The effort made and persistence is another functioning. Self-efficacy belief will determine how much effort will be made on a task and how long people persevere in difficulties. In addition, thought patterns and emotional reactions are also influenced by self-efficacy belief. People with low level of self-efficacy judgment are likely to estimate potential difficulties more formidable than they really exist. People who underestimate or overestimate their self-efficacy may get themselves into difficulties such as undermining their credibility and self-limiting. Self-efficacy determines the action and self-efficacy-action relationship is affected by a number of factors. However, self-efficacy affects the motivation and actions. The expected performances will not be produced when necessary sub skills are lacking. The low level of judgment in self-efficacy may retard the development of sub skills. It means that perceived self-efficacy contributes to the development of sub skills. The time spent between assessment of self-efficacy and action will affect the self efficacy-action relationship. The faulty assessment of self-efficacy or performance, miss weighting of necessary sub skills, performance ambiguity, and faulty self-knowledge are among other factors that influence efficacy-action relationship (Bandura, 1986).

According to the social cognitive theory, goal intentions play a prominent role in the self-regulation of individual behavior. Bandura (1986) indicated the intention as the determination to perform certain activities or bring about a certain future state of affairs. According to Bandura (1986), intention of individuals operates through two cognitive based sources of motivation. First, it operates through forethought which is

the capacity to represent the future consequences in thoughts. It can generate the current motivators for the courses of action. The second is goal setting and self-evaluative reactions to individual's behavior. It sets standards for evaluating performance. When self-standards are set, individuals create their own incentives to persist in their effort until performance match their internal standards. People motivate themselves by setting greater challenges (Bandura & Cervone, 1986). According to Bandura (1986), goals not only provide directions and incentives for action but also contribute to the development of self-efficacy of individuals. Without standards against which their performance is matched, it is difficult for people to measure their capabilities.

Bandura (1986) emphasized that self-efficacy for goal attainment increases the level of goals for enhancing the performance. Goals do not linearly relate to performance attainment. The social cognitive theory identifies two types of goals as the end goals and the proximal sub goals. The end goals provide general direction while sub goals are more specific and show immediate choice of activities of individuals. The proximal sub goal attainment provides more self-efficacy information that sustains persistence, which eventually leads to performance. The personal goals predict performance level through self-satisfaction and self-efficacy.

### **3.14.2 Goal Setting Theory**

Goal setting was linked to performance from the end of 19th century to the first half of the 20<sup>th</sup> century. Initially, this link was tested with ad hoc studies and was not guided by theoretical frameworks. With the introduction of Locke and Latahm's (1990) goal setting theory, thousands of studies have been conducted on goal setting-performance relationship in the latter part of the 20<sup>th</sup> century. The theory of goal



setting was based on Ryan's (1970) premise that goals affect action and goal is the aim of an action (Locke & Latham, 2002). The basic assumption of the goal setting theory and other related research is that the goals are immediate regulators of human action. The theory comes under the domain of cognitive psychology. In addition, the goal is an important component of the Bandura's (1977b) social learning theory (Locke *et al.*, 1981). The social learning theory was the basis for the Bandura's (1986) social cognitive theory and the concept of self-efficacy. Goal is what an individual is trying to accomplish. The goal setting theory more specifically defines a goal as attaining specific standard of proficiency on a task usually within a specified time limit. Moreover, specific challenging goals lead to higher performance than a vague goal such as "do your best" (Locke & Latham, 1990).

According to the theory of goal setting, there is a positive linear relationship between specific goals and performance. Goals play a causal role in actions. Some people perform better than others do, because they have different goals. The concept of goal-directed action can be observed at all levels of life of people. There are two categories of goal directed actions namely, non-conscious goal directed action and conscious or purposeful goal directed action. The goal setting theory is based on conscious or purposeful goal directed action. In purposeful goal directed action, individual's idea or desire for the goal causes the action. People set few goals or many goals, clear goals or vague goals according to quality of their thinking. People have the choice of setting goals or not, and the choice on the types of goals. The main assumption behind the goal setting theory is that the human action is directed by conscious goals. The goal setting theory does not assume that all the human actions are guided by the conscious control. Once an individual accepts a goal, it will remain in the periphery of consciousness.

The goal setting theory does not assume that every aspect of an action is consciously intended. The end-result may be intended but not all the aspects of the end-results. Although some actions are consciously initiated, it may not achieve the desired goal due to reasons such as lack of knowledge, lack of abilities, external barriers, or changed circumstances.

Table 3.4  
*Classification of Goal- related Concepts*

Type of concept	Conscious aspect Stressed; external aspect implied	Borderline	Non-conscious (external or physiological) aspect Stressed; conscious aspect implied
Emphasis on behavior or action	Intent, intention	Norm	Task
Emphasis on the end or aim of action	Level of aspiration	Goal(personal goal) Aim End Objective	Budget Deadline Bogey Assigned goal Quota
Emphasis on motivational elements underline goals	purpose ↑ ↓ purpose value motive desire wish attitude	Standard	Drive Need Instinct

Source: Locke and Latham (1990)

Moreover, the goal setting theory does not assume that every performance and consequences are consciously foreseen but it assumes that individuals' goals on a task influence what they do and how they perform. Mainly, the goal setting theory specifies the factors that affect goals and goals relationship with performance. The theory distinguishes the goals from other related concepts such as the intention, the norm, and the task aspiration, the end purpose, the objective, the standard, the deadline, the value, the motive, the desire and the wish. Table 3.4 shows the classification of goal-related concepts.

The intention is often referred to a determination to take a certain action. The norm refers to an appropriate or desirable way of acting shared by a group of people. The task is a piece of work to be accomplished. The aspiration is the level of performance one is trying to attain on a task. The purpose refers to conscious goal but it also refers to the motive that underlines a goal. The end and the objective emphasized on the end-results of a planned effort. The standard is a measure to evaluate things and it refers to an external criterion. The deadline refers to a time by which a task is supposed to be completed. The Terms value, motive, desire, and wish are viewed as concepts that underlie an individual's choice of a goal. The goal setting theory defines goal as attaining a specific standard of proficiency on a task usually within a specified time limit.

The goal setting theory provides three levels of explanations of actions. The immediate or the first level explanation of action is goals. The second level explanation is the sources of goals and the third level is individuals' values, motives and personality. The high-level factors (first and second) affect through the lower levels (Locke & Henne, 1986). These three levels are represented by different theories. For example, the goal setting theory, the social cognitive theory and the turnover intention theory explain first level relationships while the theory of need for achievement explain the human action in second level. Locke and Henne (1986) stated that the lower level theories explain human action than the higher-level theories. The goal setting theory confined only to the first level explanation of human action and goes into the second level. As the goal setting theory represents the first level, the theory tries to answer the questions such as what is the relationship between goals and human actions and performance, and what factors affect this relationship?

According to the goal setting theory, goals have two dimensions namely the goal content and the goal intensity. The goal content refers to object or result being sought. The goal intensity refers to the factors such as scope of the goal setting process, the effort required to form the goal, place of the goal in the individual's goal hierarchy, individual's commitment to the goal, and importance of the goal. The content of goal may vary qualitatively or quantitatively. Qualitatively, individuals may have career goals or personal life goals such as goals in hobby or sports. Quantitatively, they may have few or many goals, proximal or distal goals, easy or difficult goals. The theory also distinguished between the goal difficulty and the task difficulty. The task is something to be accomplished. The difficult task is one that is hard to do because of task complexity. The goal difficulty specifies a certain level of task proficiency measured against a standard. A difficult goal has to be achieved by making a large effort. However, the theory states that two goal dimensions, the goal content and the goal intensity are not always easy to separate.

The basis of the goal setting theory is that goals are immediate regulators of the human action. The theory assumes that there is a linear relationship between goal setting and performance. Accordingly, the researchers of the goal setting studies have studied many aspects of goal setting and performance. The goal setting theory links personal goals to self-efficacy and performance. The goal setting theory indicates a three-way relationship among those three constructs. According to the three-way relationship, self-efficacy affects self-set goals while self-efficacy and self-set goals independently affect performance (Bandura, 1986). Figure 3.5 depicts the three-way relationship.

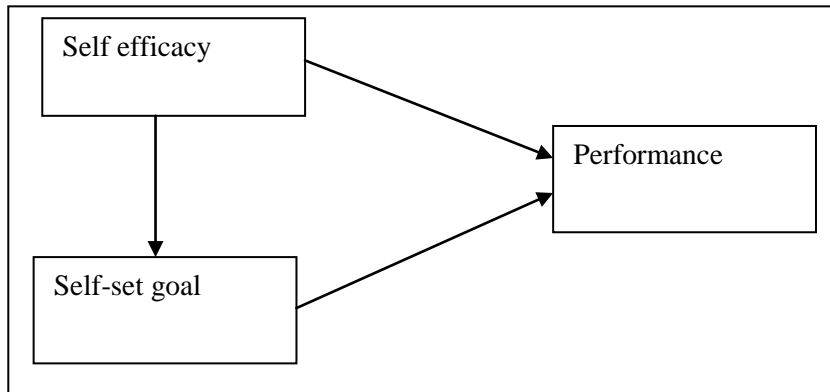


Figure 3.5  
*Relationship between self-efficacy, personal goals and performance*  
 Source: Locke and Latham (1990)

The goal setting theory explains three direct primarily motivational goal mechanisms through which goals affect performance. These are the arousal/intensity and the choice/direction or duration. Goals affect the arousal by regulating the intensity of effort the individual spend on the task. Goals affect choices by leading people’s direct attention to goal relevant activities. Goals affect duration by leading people to persist in their actions until the goal is achieved.

### 3.14.3 Theory of Need for Achievement

Based on Murray’s (1938) idea of “Need to achieve” as a personality characteristics, David C McClelland built the theory of need for achievement in 1960s. McClelland (1961) introduced the theory with his publication “The achieving society”. The theory states that need for achievement directly influence individual performance. It is believed that the motives to achieve are unconscious. The theory also posits that the people with higher achievement motivation exert higher effort, involve in innovative tasks and they are energetic than the people with low need for achievement. McClelland (1961) argued that people with higher achievement motivation prefer involving in tasks that need specific skills and efforts. They also prefer to receive the performance feedback for what they have accomplished. He also

argued that people who engage in entrepreneurial positions have higher achievement motivation than others.

#### **3.14.4 Resource Based Theory**

The resource-based theory of the firm is based on the view of the firm as a bundle of productive resources (Penrose, 1959). This is one of the widely used theories in management researches (Beard & Sumner, 2004). Theory states that the competitive advantages for the firm are generated from the unique resources that firms own (Barney, 1991; Peteraf, 1993). According to Barney (1991), the theory is based on two assumptions. Firstly, the organization is a collection of resources and resources are different from organization to organization. This is identified as the resource heterogeneity. Secondly, these resources are not easy to copy and the supply is inelastic. That assumption is identified as resource immobility. The organizational resources are two types as tangible and intangible. The capital and the fixed assets are examples for tangible resources and intangible resources are skills, knowledge, goodwill, etc. According to the resource based view, the main reasons for the success of the firm lie inside the firm. The firms with superior resources have the basis for achieving sustainable competitive advantage (Peteraf, 1993).

According to Miller and Shamsie (1996), general resource availability is not sufficient for achieving the competitive advantage but the organizations should have some capabilities. The difference between the resources and the capabilities has been identified. The resources are considered as inputs to the organization's production process (Grant, 1991; Beard & Sumner, 2004). The capability represents a capacity to perform a task or an activity (Hitt, Ireland, & Hoskisson, 2003). The resource-based view indicates that firms are continuously increasing resources and capabilities while rival firms are continuously imitating and improving their resources and capabilities.

### **3.14.5 Knowledge Based View**

In the last decades, the importance of knowledge as a driving force of economic growth has increased and this situation led to the development of a knowledge-based view of the firm. Grant (1996, 1997) considers the knowledge-based theory of the firm as an ‘outgrowth’ of the resource based theory because knowledge is perceived as the strategically most important resource. Grant (1996) indicated that, to create value, a firm has to possess knowledge with certain characteristics such as transferability, capacity of aggregation, appropriateness, specialization in knowledge acquisition, and knowledge requirements of production and processes. Cohen and Levinthal (1990) addressed the importance of absorptive capacity for a firm which indicates the ability to identify, assimilate, and exploit knowledge from the environment. This knowledge-based view is quite important today in relation to the firm performance. Within the knowledge-based view, academics and practitioners have increasingly realized the role of knowledge in performance, innovation in products, and organizational processes. The Organization for Economic Co-operation and Development (1999), European Commission (2000), and Smith (2000) have investigated the role of knowledge in innovation and its impact on competitive advantage and organizational competitiveness. Accordingly, the knowledge has become the dominating resource for the performance in organizations.

### **3.15 Summary**

The researchers have extensively explored SME performance over the years. The results of such explorations have emphasized the importance of SME performance to any nation or economy. Factors affecting performance have been identified as a prominent area researched by many scholars in different disciplines. Among such factors, cognitive factors organizational and extra organizational factors have

received more attention of researchers but none of them has completely explained the phenomenon. Cognitive factors and strategic orientations have been revealed possible predictors of criterion variable but have never been investigated in a single research model. In addition, self-efficacy shows a possible role of a strong mediator in the organizational level. Absorptive capacity displays features of a good moderator to the relationship.



## **CHAPTER FOUR**

### **THEORETICAL AND HYPOTHESES DEVELOPMENT**

#### **4.1 Introduction**

This chapter presents the theoretical framework, which the research model of the current study is based on. The first part of the chapter describes the background for developing the theoretical framework. The next sections present the direct, indirect, mediating and moderating relationships incorporated in the research model. The latter part of the chapter presents the graphical representation of the research model and the formulation of the hypotheses.

#### **4.2 Background for Developing Theoretical Framework**

The literature review on SME performance reveals that the predictors of SME performance and their complex relationships have been studied in various fields of studies such as economics, entrepreneurship, and strategic management. Consequently, many of the researchers have been focusing their attention on the relationship between the firm performance and the factors such as entrepreneur's cognitive characteristics, resources, process, capabilities, environmental variables, and market related variables (March & Sutton, 1997; Mitchell *et al.*, 2002; Low & MacMillan, 1988; Rumelt, 1987; Schumpeter, 1934).

The majority of the past studies that have investigated the issue have been conducted in the developed countries while it seems that they have been neglected in the developing countries. The SME sector plays a critical role in their economic development and the importance of a strong and highly performed SMEs for developing economies is increasing day-by-day due to the globalized environment. They face highly competitive environment and demand more attention on turning

them into strategic, well performing sectors with sustainable growth (Emine, 2012; Panday, 2012). On the other hand, the SME sector in developing countries faces many constraints compared to the developed countries and they need an extra vigour for overcoming such constraints (Asian Productivity organization, 2006; Dasanayaka, 2011). Therefore, the phenomenon has attracted the attention of the current researchers. However, the previous research studies have failed in explaining the phenomenon completely and it remains inconclusive. Based on these grounds, many previous researchers have suggested the need of investigating research models for reexamining the performance of SMEs with special reference to the developing countries (Collins *et al.*, 2004; Ryan *et al.*, 2011; Emine, 2012; Panday, 2012). Having motivated by such factors, the review of literature was conducted and it found some avenues for an in-depth investigation of the phenomenon.

The concept of “reciprocal determinism” in the social cognitive theory explains the triadic reciprocity among cognitive variables, environmental factors, and performance behavior. The theory emphasizes that the individual performance is an outcome of interaction among cognitive, environmental, and behavioural factors that influence each other. This reciprocal relationship may not occur in equal strengths. The relative influence of three sets of factors may be varying in different contexts and situations. The theory also emphasizes the possibility for analytic decomposition of triadic reciprocity. It means that the selected segments of this total reciprocal relationship can be studied depending on the contextual importance (Bandura, 1986). However, this triadic reciprocity has not been tested at the firm level. A possible assumption can be establish on the applicability of the concept to the SME firm level because the SMEs are considered as the extention of the individual entrepreneur

(Lumpkin & Dess, 1996). Therefore, cognitive factors together with environmental factors are expected to be good predictors of SME performance.

Therefore, the study extended the literature review for further exploration of the cognitive factors and environmental variables in firm performance models. The extended literature review found out the existing gaps related to both types of factors. Based on the gaps the research model was built up with possible independent, mediating, and moderating structural paths.

#### **4.3 Developing Hypotheses on Cognitive Factors and Performance**

The cognitive characteristics and venture performance have been the focus of different domains such as psychology, sociology, and economics. They have been identified as critical factors for the success of smaller dynamic entrepreneurial ventures (Kropp *et al.*, 2008; Lumpkin & Dess, 1996; Covin & Selvin, 1989). Sirec and Mocnik (2010) also pointed out that the entrepreneurs' cognitive characteristics are very important because many decisions of SMEs depend on the entrepreneur. Shane *et al.* (2003) have pointed out that the role of human agency in entrepreneurial performance has been neglected in recent research but trait based research is still important though the sociologists have argued against. The existing literature also suggests that cognitive characteristics play a major role in firm's performance and they cannot be ignored in a research model for explaining the firm performance.

However, the previous studies have not explained the phenomenon completely. The majority of the studies were not able to prove consistent findings on the relationship between two variables. Some of the researchers have argued that this reported inconsistency is not a reasonable fact for ignoring the cognitive factors because the

inconsistency exists due to few possible reasons (Sirec & Mocnik, 2010; Agrawal, 2007; Sandberg & Hofer, 1987).

Firstly, some researchers have pointed out that the recent studies have ignored the role of the human agency by giving more focus to the other factors (Shane *et al.*, 2003; Agrawal, 2007; Davidson & Wiklund, 2001; Low & McMillan, 1988). Low and McMillan (1988) and Davidson and Wiklund (2001) indicated that the early studies have attempted only to list cognitive characteristics rather than investigating causal relationships. They have further shown that it is important not only the documenting cognitive characteristics but also linking them to organizational level outputs. Shane *et al.* (2003) argued that the cognitive factors have been ignored in SME performance models but this negligence has not been justified with adequate empirical evidences. Agrawal (2007) pointed out that the effect of entrepreneurial human capital has been neglected by the overemphasis on the synergetic effects of variables such as industry structure and strategies. In addition, a number of other researchers have emphasized the importance of human capital and cognitive factors for the success of SMEs (Shane *et al.*, 2003; Kirkaldy *et al.*, 2001; Olusola, 2011; Luthans & Ibrayeva, 2006; Ryan *et al.*, 2011).

Secondly, the others have argued that this inconsistency may be because of the inclination of the previous studies to confine research models for testing only the direct relationships rather than introducing the possible mediating and moderating variables (Herron & Robinson, 1993; Agrawal, 2007). According to Agrawal (2007), the research models using appropriate mediating and moderating paths have obtained more reliable findings than the studies investigated only the direct effect relationships. The failure to introduce strong mediating and moderating paths may have led to the insignificant findings. Herron and Robinson (1993) also suggested

that cognitive factors have not displayed robust linear relationships with firm success. However, the relationship is likely to be moderated and mediated by the variables such as abilities and skills of the human resource.

Thirdly, many of the researchers have pointed out that cognitive factors alone are not very good predictors of firm performance models. However, together with other possible variables, they may be better predictors, (Davidson & Wiklund, 2001; Collins *et al.*, 2004; Baum *et al.*, 2001). Davidson and Wiklund (2001) have also emphasized that the cognitive characteristics together with the other factors should be tested as predictors of venture performance for better results. Collins *et al.* (2004) indicated that cognitive factors represent only one side of firm performance because many other factors may involve in it. They further stressed that cognitive factors alone do not yield good results and it needs further research to clarify their role in multivariate models of firm performance. Baum *et al.* (2001) stated that cognitive factors with other possible variables should be incorporated into the models because many factors such as environmental factors, business strategies, skills, vision, self-efficacy, goals, and personality traits share the variance in venture performance. Stewart and Roth (2007) have emphasized the need of testing comprehensive models for better understanding of the firm performance because the firm's success is a balanced alignment of cognitive characteristics and environmental opportunities.

Fourthly, many researchers have argued that less research has been conducted related to cognitive factors in the context of developing countries. They need further investigation because cognitive factors are more important for the SMEs in the developing countries than those in the developed countries (Collins *et al.*, 2004; Ryan *et al.*, 2011). Begly and Boyd (1987) found that personal characteristics are important for the performance of small business in the developing countries. Luthans

and Ibrayeva (2006) have argued that individual level variables are especially relevant to the developing countries with transition economies where most of the SMEs are relatively small and owner managed. Stewart and Roth (2007) have also claimed the importance of cognitive variables as predictors of venture performance in the developing countries.

Fifthly, some researchers have argued that the inconsistency of previous findings shows a disagreement with the well-established premise that the entrepreneurial human capital critically influence the firm performance. They also have demonstrated the importance of further investigations of the phenomenon (Agrawal, 2007; Sandberg & Hofer, 1987; Miller, 1983). Therefore, the literature review provides the basis for the argument that cognitive factors with appropriate mediating and moderating relationships may well explain the variance in firm performance.

The theory of need for achievement strongly claims that achievement motivation is positively related to the performance at an individual level (McClelland, 1961). The goal setting theory and the social cognitive theory have also supported this relationship (Locke & Latham, 1990; Bandura, 1986). The entrepreneurship studies that have investigated achievement motivation have extended into two main areas. One area is to compare the existence of the achievement motivation among entrepreneurs and non-entrepreneurs (Nandy, 1973; Lachman 1980; Durand & Shea, 1974; Hines, 1973). The other is to investigate the achievement motivation as a predictor of entrepreneurial and firm performance (Sirec & Mocnik, 2010; Swierczek & Thanh ha, 2003).

The majority of the previous studies have focused the individual performance in achievement motivation research. Although a few studies provide evidences for the

positive relationship between achievement motivation and firm performance, findings are not consistent. This inconsistency is higher in developing countries where less research has been conducted (Ryan *et al.*, 2011; Luthans & Ibrayeva, 2006). Ryan *et al.* (2011) indicated that the relationship between achievement motivation and entrepreneurs' performance is still unclear though there are a number of research contributions. They further elaborated on the ambiguity of the relationship in different contexts. Some of the other previous researchers have emphasized the need for further investigation of achievement motivation in firm performance in developing countries because the SMEs in such countries face many obstacles and economic conditions that are not relatively stable (Ryan *et al.*, 2011; Collins *et al.*, 2004).

Luthans and Ibrayeva (2006) have also argued that need for achievement is especially relevant to the developing countries with transition economies. Kirkaldy *et al.* (2001) and Olusola (2011) have suggested that achievement motivation is particularly important for the entrepreneurs in the developing countries and essential for the optimal productivity. According to Ryan *et al.* (2011), most of the studies in need for achievement have been conducted in the developed countries and there is a need of testing it in the developing countries that faces many challenges in promoting the entrepreneurship. Furthermore, achievement motivation has not been previously studied in the context of Sri Lankan hotel and restaurant industry.

The goal Setting Theory has proven a strong positive relationship between goal setting and performance in the individual level (Locke & Latham, 1990). The theory identifies three types of goal settings as assigned goals, participativey-set goals, and personal goals (Latham & Marshall, 1981). Among these three types of goals, personal goals can be assumed to have a special importance in the contexts where

individuals' personality is decisive for performance (Latham & Marshall, 1981; Locke *et al.*, 1981; Segal & Rimler, 2011). In SME context, the role of the entrepreneur and other employees is decisive and their goals and ambitions are important for the organizational success (Herri, 2011; Jones *et al.*, 2010).

Most of the previous studies in goal setting have been conducted at an individual level in laboratory settings (Locke *et al.*, 1981; Knight *et al.*, 2001; Locke & Latham, 1990). The relationship between goal setting and SME performance has been previously tested only in two studies. Segal and Rimler (2011) have tested the effect of goal setting on SME performance but the study has considered performance goals. Fu *et al.* (2009) have examined the effect of goal setting on new product sales. According to some researchers, the importance of the personality of the entrepreneur is more significant in developing countries where relatively turbulent environmental conditions exist (Luthans & Ibrayeva, 2006). Applebaum and Hare (1996) have also suggested that interaction between goals, and performance is an area of importance for further research.

The social cognitive theory claims a strong positive relationship between mastery experience and individual performance (Bandura 1986). Many other studies have proven this relationship at an individual level. On the other hand, entrepreneurial experience has been studied as a predictor of SME performance and yielded mixed results (Inmyxai & Takahashi, 2009; Fitzsimmons & Douglas, 2005; Bird, 1988). Morris *et al.* (2012) noted that entrepreneurial experience is a complex variable that needs further attention of SME researchers in a broader perspective. They further emphasized that it is worth investigating whether the positive experience of the entrepreneurs lead to positive organizational performance and negative experiences lead to negative performance.



Mastery experience in the social cognitive theory has been defined in a broader sense including the organization's experience in past successes and failures. Therefore, the concept mastery experience is broader than entrepreneurial experience investigated in many of the previous studies. However, mastery experience has not been investigated previously in SME performance research. Baron and Ensley (2006) conceptualized entrepreneurial experience as total outcome of previous entrepreneurial activities. Though the definition is somewhat similar to the mastery experience in the social cognitive theory, it has not been tested as a predictor of SME performance. Some other researchers have suggested that entrepreneurial experience is a kind of mastery experience (Zhao *et al.*, 2005).

Accordingly, achievement motivation, goal setting, and mastery experience as predictors of individual performance have strong theoretical background from the theory of achievement motivation, the goal-setting theory, and the social cognitive theory. Goal setting and mastery experience have never been studied in predicting SME performance. Though achievement motivation has been studied previously in few studies, its role as a predictor of SME performance is not clear and it is well worth reinvestigating at the firm level. Accordingly, a research model with these three cognitive factors would possibly be strong predictors of firm performance because it may consider the effect of three well-established theories in a single performance model. However, the collective effect of those factors on firm performance has not been tested previously. In addition, the relevancy of these factors to the SMEs in the developing countries has been sufficiently justified in the literature.

As far as the Sri Lankan SME sector is considered, it also faces the constraints that are common in the developing countries. Hence, achievement motivation, goal

setting, and mastery experience qualify as independent variables of a research model which is designed to explain the performance of SMEs in Sri Lanka. The direct positive effects of these three cognitive factors on SME performance could be reasonably assumed and therefore the following hypotheses were formulated.

H<sub>1a</sub>: there is a positive and significant relationship between achievement motivation and firm performance,

H<sub>1b</sub>: there is a positive and significant relationship between personal goal setting and firm performance, and

H<sub>1c</sub>: there is a positive and significant relationship between mastery experience and firm performance.

#### **4.4 Developing Hypotheses on Mediating Relationships**

The social cognitive theory has very strongly proven that the self-efficacy is positively related to individual level performance. In addition, many other studies have supported this relationship (Bandura, 1986). While self-efficacy has been proven as a predictor of performance, it shows positive relationships with three cognitive factors namely, achievement motivation, goal setting, and mastery experience (Bandura, 1986; Luthans & Ibrayeva, 2006; Early & Lituchy, 1991; Garland, 1985; Joet *et al.*, 2011). The social cognitive theory and many other researchers support the positive relationship between motivation and self-efficacy (Bandura, 1986; Luthans & Ibrayeva, 2006; Li, 2008). The social cognitive theory also suggests positive relationship between personal goal setting and self-efficacy (Bandura, 1986). Other three research models namely, Locke and Latham (1990), Eden (1988), and Garland (1985) posited similar relationships among performance, goal setting and self-efficacy. In addition, the social cognitive theory and many other

studies have very strongly proven the positive relationship between mastery experience and self-efficacy (Bandura, 1986; Joet *et al.*, 2011; Zaho *et al.*, 2005; Mueller & Goic, 2002).

Accordingly, the literature reveals that achievement motivation, goal setting, and mastery experience positively related to both self-efficacy and performance. This pattern of relationships provides an ample justification for assuming mediatory role of self-efficacy in the relationship between these three cognitive factors and SME performance (see Barron and Kenny, 1986). Barron and Kenny (1986) posited that when a third variable is associated with both independent and dependent variables and if the relationship between dependent and independent variable become no longer significant when the third variable is controlled, it qualifies as a mediator variable.

The social cognitive theory has also emphasized the role of self-efficacy as mediating mechanism in performance (Bandura 1986). Some other entrepreneurship researchers have investigated the mediating role of self-efficacy in several entrepreneurship research (Hmieleski & Corbett, 2006; Zhao *et al.*, 2005; Markman, Baron, & Balkin, 2005; Krueger *et al.*, 2000). A few studies have been conducted for investigating the mediating role of self-efficacy in the relationship between cognitive factors and individual entrepreneurial performance (Luthans & Ibrayeva, 2006; Zhao *et al.*, 2005). None of the previous studies has examined the mediating role of self-efficacy in the relationship between achievement motivations, goal setting, mastery experience, and firm level performance.

The past researchers have also suggested the importance of introducing possible moderating and mediating paths to the relationship between cognitive factors and

firm performance for better results (Zhao *et al.*, 2005; Luthans & Ibrayeva, 2006; Stewart & Roth, 2007; Li, 2008). Zhao *et al.* (2005) suggested the need of further investigation of mediatory role of entrepreneurial self-efficacy in the relationship between firm performance and its antecedents. Luthans and Ibrayeva (2006) emphasized the importance of studying self-efficacy as a mediator between antecedent variables and firm performance in developing countries. They further pointed out that the mediating role of self-efficacy in firm performance has been neglected though the importance of the construct is widely accepted. Stewart and Roth (2007) advocated using fully specified models with potential mediating variables such as cognitive factors for better understanding of venture performance. Li (2008) also has emphasized the importance of using self-efficacy and other dispositional characteristics as mediating variables especially for explaining firm performance in the developing countries. Accordingly, self-efficacy was incorporated as a mediating variable in the current study and the following hypotheses were formulated.

H<sub>2a</sub>: Self-efficacy mediates the relationship between achievement motivation and firm performance,

H<sub>2b</sub>: Self-efficacy mediates the relationship between personal goal setting and firm performance, and

H<sub>2c</sub>: Self-efficacy mediates the relationship between mastery experience and firm performance

#### **4.5 Developing Hypotheses on Strategic Orientation and Performance**

Existing literature reveals that some researchers have been focusing their attention on the multivariate models of SMEs performance. Such models have been included cognitive factors, organizational factors, environmental factors, and market related

factors etc. Any combination of factors from various fields has not been capable of solving the issue of explaining the SME performance (Sirec & Mocnik, 2010; Agrawal, 2007; Herri, 2002; Adams & Hall, 1993; Hay, 1992; Gibb & Davis, 1990). Moreover, strategic orientations such as entrepreneurial orientation, market orientation, learning orientation, technology orientation, and competitor orientation have been used in prior studies to explain the performance of SMEs. Among these strategic orientations, market orientation, entrepreneurial orientation and learning orientation have widely been researched in SME context (Atuahene-Gima & Ko, 2001; Barret *et al.*, 2005b; Frishammar & Horte, 2007; Wang, 2008). However, many of the previous studies have investigated the effect of these strategic orientations separately or as a combination of one or two orientations (Hakala, 2010; Hakala, 2011; Hakala & Kohtamaki, 2010; Ledwith & Dwyer, 2009; Li *et al.*, 2008; Gao *et al.*, 2007; Kropp *et al.*, 2006; Santos-Vijande *et al.*, 2005).

Some researchers have also emphasized that adhering to a single orientation tends to create poor performance in long run (Pearson, 1993). Majority of the past studies has reached to the conclusion that the role of different organizational orientations is inevitable in achieving the sustainable competitive advantage of organizations (Hult *et al.*, 2004). According to Nobel *et al.* (2002) and Bhuian *et al.* (2005), better performance can be expected from the firms that maintain good balance among different strategic orientations. Some other recent studies have suggested investigating the combinations of strategic orientations that firms follow in different circumstances (Grinstein, 2008; Li *et al.*, 2008; Aloulou & Faypille, 2005). It is also evident that strategic orientations are very important for the organizations in developing countries (Keskim, 2006). Dharmasiri (2009) emphasized the importance of strategic orientations for the success of the organizations in South Asian countries.

Chandrakumara *et al.* (2011) have also suggested further investigations of the impact of mixed orientations on firm performance in Sri Lankan SMEs.

Hakala (2010) configured market orientation, entrepreneurial orientation, learning orientation, and technology orientation as dimensions of strategic orientation. This configuration considers strategic orientation as an organizational positions and resources. He further argued that entrepreneuring explores the opportunities while learning exploits the resources. The market indicates the positions of the organizations. Some scholars have argued that the positions and resources lead the organizations to perform well by adjusting continuously to the dynamic environment, adapting new internal and external conditions, and responding customer needs and challenges from competitors (see Sinkula, Baker, & Noordewier, 1997; Lumpkin & Dess, 1996; Narver & Slater, 1990; Covin & Selvin, 1989). Amit and Schoemaker (1993) and Barney (1991) indicated that the valuable and unique resources are the source of the competitive advantage of the firm. Achieving competitive advantage through widening markets by using learning and economies of scale are hindered by the lack of organizational resources. (Barney, 1991; Grant, 1991; Inmyxai & Takahashi, 2009; Hoq & Chauhan, 2011). The dimensions of market orientation, entrepreneurial orientation, and learning orientation cover vast array of behaviours, positions, and resources such as customer needs, competitive situations, shared vision, and open-mindedness, risk taking behavior, commitment to continuous learning, innovativeness, and proactiveness.

Therefore, it is reasonable to assume that this configuration of strategic orientation may be stronger in explaining the performance of the firms. However, the dimension of technology orientation can be excluded from a research model to be tested in a service industry because it shows relatively less relevance.

In addition, the cognitive factors paired with strategic orientation have never been investigated previously in a single research model. Based on the concept reciprocal determinism in the social cognitive theory, it can be assumed that strategic orientation together with cognitive factors would be stronger in predicting the SME performance. The dimension, technology orientation was excluded from the this study, as it makes no much influence to the hotel and restaurant industry. Therefore, the following hypotheses were formulated.

H<sub>3a</sub>: there is a positive and significant relationship between entrepreneurial orientation and firm performance,

H<sub>3b</sub>: there is a positive and significant relationship between market orientation and firm performance, and

H<sub>3c</sub>: there is a positive and significant relationship between learning orientation and firm performance.

#### **4.6 Developing Hypotheses on Moderating Relationships**

Strategic orientation represents positions and resources in organizations (Barney, 1991; Hakala & Kohtamaki, 2010). Grant (1996) claimed that the firms with stronger dynamic capabilities are capable of exploiting available bulk of organizational resources. Today dynamic capabilities are considered as indispensable for organizations in achieving the competitive advantage (Teece *et al.*, 1997; Teece & Pisano, 1994). Ucbasaran *et al.* (2001) posited that knowledge based dynamic capabilities are critical for the success of organizations. The knowledge acquisition and absorption are key features of exploiting opportunities (Frishammar & Andersson, 2008). Firm performance and behaviours are influenced by the way of absorbing and accumulating the knowledge (Klette & Johansen, 1998). Zonooz *et al.*

(2011) posited that not only the success of larger firms but survival of SMEs also depends on the successful knowledge absorption. Newbert *et al.* (2008) reported that the higher level of firm's internal capacities of leveraging resources leads the firms to outperform their rivals with low level of such capacities. Internal organizational capabilities are essential features of organizations since they are highly instrumental in achieving the maximum use of available resources. Therefore, it can be reasonably assumed that the existence of dynamic capabilities that can exploit the resources would make the relationship between strategic orientation and firm performance stronger and directional.

Absorptive capacity introduced by Cohen and Levinthal (1989) has been studied as a predictor of SME performance. Zahra and George (2002) re-conceptualized absorptive capacity and subsequently modified by Todorova and Durisin (2007). This re-conceptualization considers absorptive capacity as a dynamic capability. According to Sun and Anderson (2010), absorptive capacity plays a pivotal role among other dynamic capabilities in exploiting the prevailing bulk of organizational resources. Hou (2008) also argued that absorptive capacity is one of the most important significant capabilities for achieving firm performance.

According to the past research, the small-scale firms as well as the larger organizations are highly beneficial by having higher level of absorptive capacity (Gray, 2006; Hayton & Zahra, 2005; Zhara & George, 2002; George *et al.*, 2001; Cohen & Levinthal, 1990). Talebi, Pour, and Irandust (2011) also posited that the importance of absorptive capacity for any organization is beyond doubt since it is a major source of innovation. The organizations in the developing countries have reported a low level of absorptive capacity although it is a crucial factor for their success (Astrid *et al.*, 2008). The researchers who paid the attention for the role of



absorptive capacity in SMEs have suggested the need for further investigation to clarify its role (Sun & Anderson, 2010; Zhou & Li, 2010). Zhou and Li (2010) claimed that absorptive capacity deserves receiving further attention of the researchers among other dynamic capabilities. According to Lane *et al.* (2001), the role of absorptive capacity has not been clearly established in SME performance and yet to be researched. Some of them have emphasized the worth of further investigation of absorptive capacity in the service industry (Harvey *et al.*, 2010) and in the developing countries (Astrid *et al.*, 2008). Accordingly, it can be assumed that absorptive capacity will strengthen the relationship between strategic orientation and firm performance.

Although the possibility of absorptive capacity to be a moderator to the relationship, it has not been previously investigated in SME context to the best of the knowledge of the researcher. It has never been investigated previously in the Sri Lankan SME sector. Consequently, absorptive capacity qualifies as a moderating variable in a study of performance in SME hotel and restaurant industry in Sri Lanka. Therefore, the following hypotheses were tested in this study

H<sub>4a</sub>: absorptive capacity moderates the relationship between market orientation and firm performance,

H<sub>4b</sub>: absorptive capacity moderates the relationship between entrepreneurial orientation and firm performance, and

H<sub>4c</sub>: absorptive capacity moderates the relationship between learning orientation and firm performance.

#### **4.7 Formulation of the Research Model**

According to past studies, a wide array of variables have influenced SME performance (Gibb & Davies, 1990; Adams & Hall, 1993; Collins *et al.*, 2004; Herri,

2011; Beneki & Papastathopoulos, 2011). A few studies provide empirical evidences for the positive relationship between achievement motivation and firm performance but the findings are not consistent (Johnson, 1990; Lee & Tsang 2001; Collins *et al.*, 2004; Ryan *et al.*, 2011). Goal setting and mastery experience are also positively related to individual performance. However, the two variables have not been tested in the firm level performance (Locke & Latham, 1990; Bandura, 1986; Segal & Rimler, 2011; Kleingeld *et al.*, 2011). The researchers have suggested that the cognitive factors are more important in developing countries where there are political and economic instabilities and many obstacles to the entrepreneurs (Luthans & Ibrayeva, 2006; Li, 2008; Ryan *et al.*, 2011). Therefore, achievement motivation, goal setting, and mastery experience were incorporated into the research model leading three direct paths to the dependent variable, firm performance.

In addition, these three cognitive variables show direct, positive relationship to self-efficacy. Self-efficacy has also been a strong predictor of performance (Bandura, 1986). Therefore, self-efficacy is assumed to be a possible mediator to the relationship between cognitive factors and firm performance (see Barron & Kenny, 1986). Moreover, a number of researchers have suggested the need of introducing possible mediating and moderating variables to the relationship since it may be one of the reasons for the inconsistent findings (Sandberg & Hofer, 1987; Agrawal, 2007). Therefore, self-efficacy is incorporated as a mediating variable to the research model specifying three indirect paths between cognitive factors and firm performance.

In addition, the existing literature reveals that the configuration of strategic orientation with the dimensions of entrepreneurial orientation, market orientation, and learning orientation has not been previously investigated as predictors of firm

performance. These dimensions have previously investigated separately of with other contingent variables (Hakala, 2010). Therefore, three direct paths from the dimensions of strategic orientation to the firm performance were incorporated into the model.

The dynamic capabilities play a major role in achieving firm performance and competitive advantage. (Cohen & Levinthal, 1990; Teece *et al.*, 1997; Deeds, 2001; Hayton & Zahra, 2005; Yeoh, 2009). The resource based theory and the knowledge-based view of the firm provide strong theoretical background for the premise that the dynamic capabilities are indispensable in exploiting the organizational resources (Barney, 1991; Grant, 1996). The absorptive capacity of the firm is a very important dynamic capability that can that can exploit organizational resources. (Zahra & George, 2002; Gray, 2006; Hayton & Zahra, 2005; Talebi *et al.*, 2011). However, the role of this variable in firm performance has not been widely researched. Therefore, knowledge absorptive capacity is included in the research model as a moderating variable. Three moderating paths from absorptive capacity to the relationship between strategic orientations and firm performance have been established. Accordingly, this study designed a research model with one dependent variable, six independent variables, one mediating variable and one moderating variable. The model establishes twelve structural paths to be estimated. The conceptual diagram of the research model is depicted in the figure 4.1.

The research model was mainly underpinned by the social cognitive theory. The concepts of triadic reciprocity and decomposition of triadic factors is the base for selecting cognitive factors and strategic orientations as independent variables (Bandura, 1986). In addition, the structural paths that lead from three cognitive factors to firm performance are supported by three cognitive theories.

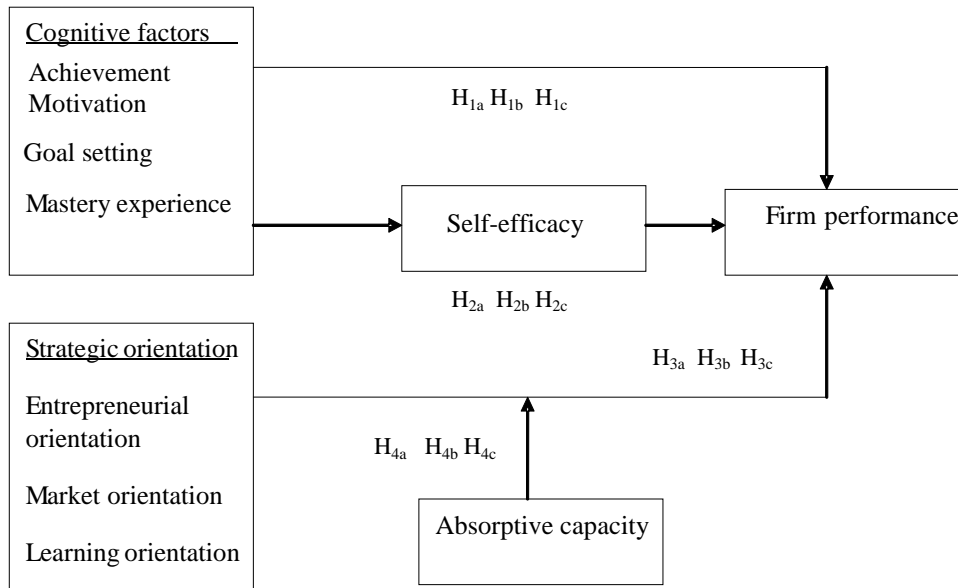


Figure 4.1  
Research Model

The direct path between achievement motivation and firm performance is underpinned by the theory of achievement motivation (McClelland, 1961). The goal setting theory underpins the direct relationship between goal setting and performance (Locke & Latham, 1990). The social cognitive theory provides the basis for the direct path between mastery experience and firm performance. The structural paths in the research model for investigating the mediating effect of entrepreneurial self-efficacy in the relationship between cognitive factors and firm performance is firmly underpinned by the social cognitive theory (Bandura, 1986). The resource-based view is the basis for the paths to denote the direct association between strategic orientation and firm performance. Moderating path of knowledge absorptive capacity in the model is underpinned by the resource-based theory and the knowledge-based view of the firm.

#### 4.8 Summary

This study formulated a research model that includes six direct relationships between cognitive factors, strategic orientations and firm performance establishing six direct

effect hypotheses. Cognitive factors are achievement motivation, goal setting and mastery experience while strategic orientation included the dimensions of entrepreneurial orientation, market orientation and learning orientation. Self-efficacy and absorptive capacity were incorporated as the mediating and the moderating variables respectively. The total number of paths in the research model is twelve including indirect relationships.

## **CHAPTER FIVE**

### **METHODOLOGY**

#### **5.1 Introduction**

This chapter presents the research methodology used in this study. The chapter commences with a description on research design, population and sampling. Then, the data collection procedure, measuring the non-response bias and the common source bias have been briefly described. The data analysis procedure which includes univariate, bivariate, and multivariate analysis of structural equation model testing followed by a description of the application of each step in data analysis has been presented in the latter part of the chapter.

#### **5.2 Research Design**

The study used the survey research design. Its appropriateness for the current study can be justified by few important inherent characteristics of the survey design. It provides a convenient way of data collection from a large sample within a short period. The method is relatively inexpensive (Spector, 2001). The survey design also provides basic procedures to obtain information from people in the natural environment (Graziano & Ravlin, 1997). This method is suitable when the survey is conducted with an intention to generalize the results to a population (Girden, 2001; Kerlinger, 1986). It can also be expected a higher validity by using the survey method because questions can be directly posed to the respondents to measure the variables (Lyon, Lumpkin, & Dess, 2000). The strength of the survey as a primary data collecting approach is high because it does not require a visual or other objective perception of the information sought. The data were collected at a single

point of time and hence the time horizon of the study was cross sectional. Considering all those factors, the survey research design was used in this study.

### **5.3 Population**

This study was conducted in the small-scale hotel and restaurant industry in Sri Lanka. Therefore, the population was all small and medium-scale, owner-managed hotels and restaurants located in the country. According to the registered list in the tourism development authority and relevant village councils, there are 1099 small and medium-scale hotels and restaurants (Ministry of Economic Development, Sri Lanka, 2011). The population spreads in five geographical areas in the country including the Colombo city, the South coast, the East coast, the up country, and the ancient cities. The Northern coast of the Island was excluded from the study, as there were no significant number of hotels and restaurants established in the area after the civil war. Therefore, this exclusion has not adversely affected the generalization of the findings.

### **5.4 Sample**

The current study is based on a sample selected from the population of small and medium-scale hotel and restaurant industry in Sri Lanka. The sample of this study was limited only to the owner-managed firms because the research model tested in this study has incorporated four cognitive factors. It is considered that the SME is an extension of the entrepreneur and therefore his/her cognitive dispositions are critical for the success (Lumpkin & Dess, 1996).

#### **5.4.1 Sampling Frame**

The sampling frame for the study is small and medium scale hotels and restaurants registered in the Sri Lankan Tourism Development Authority and relevant village

councils. They are from five selected areas namely the Colombo city, the South coast, the East coast, the up country, and the ancient cities. As per the registered lists from the Sri Lanka Tourism Development Authority and relevant village councils for the year 2011, there were 1099 total number of entities.

#### **5.4.2 Sample Size**

The minimum sample size required for the study was 285 respondents as per the guidelines provided by Krejcie and Morgan (1970). Bartlett, Kotrlik, and Higgins (2001) also justify the same sample size for a total population of 1100 and for categorical data assuming 0.5 significant level. In this sector, previous researchers have not reported the response rate up to the knowledge of the researcher. However, in the Sri Lankan SME sector, it has been reported around 45% (Chandrakumara *et al.*, 2011). The minimum sample size was adjusted for the reported non-response rate (Bartlett *et al.*, 2001).

The researcher faced another practical problem in selecting the number of respondents to whom the questionnaire should be administered because the number of existing owner-managed firms are not recorded anywhere. Generally, it is believed that 90 percent of the small businesses in Sri Lanka are owner-managed (Priyanath, 2006). By taking 10 percent of non-owner managers and 55% percent of non-response rate into account, the questionnaires were mailed to 800 ( $285/.35 = 800$  approximately) randomly selected sample members with the purpose of receiving at least 290 completed questionnaires for the final data analysis.

#### **5.4.3 Sampling Method**

The sample for this study was selected using the proportionate stratified random sampling method. This method is appropriate for the current study because of few



reasons. The population of this study dispersed over five main geographical areas and therefore five distinct sub populations can be identified based on geographical dispersion of the population. The stratification could be used to decrease the variances of the sample estimates. Based on the stratification, different statistical methods and procedures can be applied depending on the diverse nature of the elements in the different parts of the population. The various sub populations can be used as different domains of study if a need arise. The different parts of the population were appropriately represented in the sample because the sampling fraction in each stratum is made equal to the sampling fraction for the population as a whole (Kish, 1995).

#### 5.4.4 Sampling Procedure

The proportionate stratified random sampling method was used to select the sample size from the strata on a random basis. The population of the study is 1099 and the sample size adjusted for the non-response rate and the percentage of the non-owner managed firms were 800 sample members.

Table 5.1  
*Sample selection*

Stratum	Colombo city	South coast	Ancient cities	Up country	East cost	Total
population	429	385	209	66	10	1099
Stratum proportion	.39	.35	.19	.06	.01	1
Sample size	312	280	152	48	8	800

Accordingly, sampling fraction in each stratum was  $800/1099 = 0.73$ . The sample size was selected from different strata by applying this sampling fraction. The summary of selection of the sample by using this procedure is shown in the table 5.1.

### **5.5 Unit of Analysis**

The unit of analysis involves determining whether the constructs in the structural model are considered at individual level, organizational level or any other level of analysis. The unit of analysis for this study is the organization. All variables in the structural model were measured at the organizational level.

### **5.6 Data Collection**

The questionnaire method was used for the data collection for this study. The standard questionnaires were used for collecting data on all the dependent, the independent, the mediating, and the moderating variables. The instruments were translated into the native “Sinhala” language by a professional translator by using the back-to-back method for better understanding of the questions to the respondents. The questionnaire was composed of two main parts. The first part was designed for obtaining the demographic information of the respondents such as age, marital status, level of education, and the number of years in the business. The second part of the questionnaire included question items for measuring the variables in the research model. The answers for the questions were obtained to the five-point likert-type scale. The five-point scale was suitable particularly for this study because the majority of the sample members were in the average level of education and wider scale might confuse them and finally generate the unreliable data.

The study employed a mail survey to access the respondents. The mail survey was appropriate for this study as the study covered large number of respondents from various geographical areas located in five provinces of Sri Lanka. Moreover, the self-administered questionnaires eliminate the interviewer bias, it is not time consuming, and inexpensive compared to getting individual access to the all respondents (Snow & Thomas, 1994; Jobber, 1991).

## **5.7 Response Rate**

Questionnaires were posted to the selected respondents and after four weeks, 258 completed questionnaires were received. The first reminder was sent in the fourth week to those who did not return the completed questionnaires. Another 174 questionnaires were received within four weeks making the total received 432. The second reminder was sent in the eighth week but no questionnaires were received thereafter. Therefore, the response rate for the current study was 54 percent. Out of the total 432 received, 46 were from the non-owner managed firms and excluded from the analysis. The test of outliers revealed that there were 36 total outliers that contained 23 and 13 univariate and multivariate outliers respectively ( $23+13= 36$ ). Consequently, the total number of cases excluded was 82 ( $46+36 =82$ ) making 350 ( $432-82= 350$ ) questionnaires available for the final analysis. Out of these 82 excluded, 48 and 32 cases represented early respondents and late respondents respectively. As the minimum sample size estimated was 285, the remaining 350 questionnaires were sufficient for the final analysis.

## **5.8 Non-Response Bias**

The time spent by this study for the data collection process was eight weeks and therefore, there was a time gap between the early respondents and the late respondents. This time gap might lead to a non-response bias that may pose a threat for the generalizability of the findings of the study (Sax, Glimortin, & Bryant, 2003). The study used the extrapolation method and the mean different test between early and late respondents for assessing the non-response bias. The extrapolation method is one of the most commonly used in the mail survey research (Sax *et al.*, 2003; Armstrong & Overson, 1977). This method is based on two basic assumptions. One assumption is that the late respondents are more likely to represent non-respondents.

The other assumption is that non-response bias of a survey can be estimated by comparison of the two groups for testing the difference of mean values of the variables. The following formula presented by Chandhok (2008) was used to calculate the non-response bias for this study.

$$\text{Bias}(\bar{y}_r) = Nnr / N(\bar{y}_r - \bar{y}_{nr})$$

$\text{Bias}(\bar{y}_r)$  = Non- response bias for Y

$Nnr$  = Number of non-respondents

$N$  = Population

$\bar{y}_r$  = Mean for respondents

$\bar{y}_{nr}$  = Mean for non-respondents

The formula calculates the product of non-response rate and the mean difference between respondents and non-respondents. The non-response bias value greater than 2 was considered as indicator for the existence of non-response bias. In addition, the mean difference between the early respondents and the late respondents was estimated. If the mean difference between two groups is not significant, the non-response bias is not existent.

### **5.9 Common Source Bias**

The common source bias is a serious concern in the survey research because it adversely affects the research findings. It depends mainly on the data collection methods used in a study (Kovjanic, Schuh, Jonas, & Quaquebeke, 2012) and may exist when data for all variables (independent, dependent) are collected from the same source (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The common source bias might exist and affect adversely for the validity of the findings because this

study collected data from the owner-managers for all variables. Therefore, the common source bias was estimated by using the confirmatory factor analysis marker variable technique which is commonly used with structural equation modeling (Williams, Hartman, & Cavazotte, 2010). The common source bias was estimated through the following six-step process suggested by Williams *et al.* (2010).

1. Estimating full measurement model allowing all parameters to be estimated freely. This model represents the confirmatory factor analysis model
2. Estimating the baseline model including a marker variable (method variable) of which the factor loadings and the error variances are fixed to the values of the confirmatory factor analysis model. The model should be free from paths for covariance between the marker variable and the substantive variables. The assimilation dimension of absorptive capacity was selected as the marker variable which shows the minimal correlations with other variables (Williams *et al.*, 2010).
3. Estimating the method C model that is similar to the baseline model but the additional paths from the marker variable to the indicators of all the other variables are fixed to the equal values
4. Estimating the method R model similar to the model C but only the covariances of the substantive factors were constrained to the corresponding values of the baseline model.
5. Comparing the Chi-square values of the method R model and the method C model to decide the existence and the magnitude of the common method bias
6. Interpreting the common source bias, The common source bias exists when there is no significant difference between the Chi-square values of the method R model and the method C model (Williams *et al.*, 2010).

### **5.10 Data analysis**

The data analysis of the current study was conducted in few stages that includes the preliminary data analysis, the univariate analysis, the bivariate analysis, and the multivariate analysis. The sample background analysis was conducted in the preliminary stage of data analysis. Then the study used the univariate analysis to analyze the single variables. The bivariate and the multivariate data analysis stages were conducted for analyzing the relationships between two variables and more than two variables respectively.

### **5.11 Sample Background Analysis**

Understanding of the background of the sample is a preliminary requirement of the data analysis. It is helpful in understanding the nature of the respondents and ensuring whether there is a sample bias in different aspects. For this purpose, sample characteristics such as gender, age, marital status, education level, and the number of years in the business operation were analyzed by using the cross tabulation and the percentage analysis.

### **5.12 Univariate analysis**

The univariate analysis refers to the analysis of the single variables for understanding their behaviour and the patterns of distribution. Under the univariate analysis, the descriptive statistics were calculated for measuring the central tendency and the dispersion of the variables. In this study, the central tendency was measured by calculating the mean, the mode, the median, the standard deviation, the skewness, and the kurtosis. The dispersion of the variables was measured by estimating the lower/ upper limits, the frequencies, the variance, and the range.

### **5.13 Bivariate analysis**

The bivariate analysis refers to the analysis of relationships between two variables. It is important in understanding the direction and the magnitude of such relationships. The bivariate analysis provides the basis for the multivariate analysis on which the hypotheses testing is based. In this study, the Pearson correlation and the covariance between variables were estimated for the understanding of the bivariate relationships.

### **5.14 Multivariate analysis**

Multivariate analysis is analyzing the relationships between more than two variables. The model hypothesized complex relationships among nine variables making the analysis impossible with any technique other than the multivariate techniques. The alternative multivariate analytical methods that could have been used in this study for achieving the established objectives were the multiple regression analysis and the structural equation modeling. The structural equation modeling was preferred in this study because few advantages could be obtained over the other conventional multivariate techniques such as the multiple regression analysis.

The structural equation modeling is a multivariate data analysis technique that possesses the characteristics of the both dependence and interdependence analysis method because it is a combination of multiple regression analysis and the confirmatory factor analysis (Hair, Black, Babin, & Anderson, 2010). This method was suitable for testing complex relationships of the current study because it provides the facility for testing both confirmatory factor analysis and multiple regression analysis simultaneously. It has the higher accuracy in assessing the measurement error while taking the effect of both observed and latent factors into consideration (Byrne, 2010). The validity of the measurements could be verified through the measurement model because the latent constructs which have not been

directly measured were incorporated into the research model of this study. This method has the ability to estimate a series of separate but interdependent multiple regression equations simultaneously through the structural model. Therefore, it is more effective in analyzing the multiple relationships. The current research model has six direct paths from the independent variables to the dependent variable. In addition, one mediator variable which mediates the relationship between three independent variables and the dependent variable has been incorporated into the model. It includes three moderator relationships. Accordingly, the proposed research model involved multiple relationships including mediating and moderating variables and consequently interdependency among variables exists. In addition, in assessing the moderating effects, the structural equation modeling shows relatively a lower level of bias in compounding the measurement error and the interaction term (Holmbeck, 1997).

The structural equation modeling can also use two or more sets of independent variables to ascertain the predictive power of each variate (Frazier, Tix, & Barron, 2004). The one of the objectives of this study is to maximize the predictive power of the independent variables in the variate. Therefore, the structural equation modeling provides a number of advantages over the other multivariate methods and it was appropriate for this study.

### **5.15 The Process of Structural Equation Model Testing**

Estimating the research models by using the structural equation modeling is a complex process which involves few sequential steps. Adherence to these logical steps is essential for an effective testing of a complex research model (Kline, 2011; Hair *et al.*, 2010). The study followed the six-step process presented by Hair *et al.* (2010) for testing research models. This process is straightforward and all-inclusive



(Hair *et al.*, 2010). Therefore, it is appropriate for testing the complex model of this study with multiple relationships. The main sequential steps of the process are given in the figure 5.1 below.

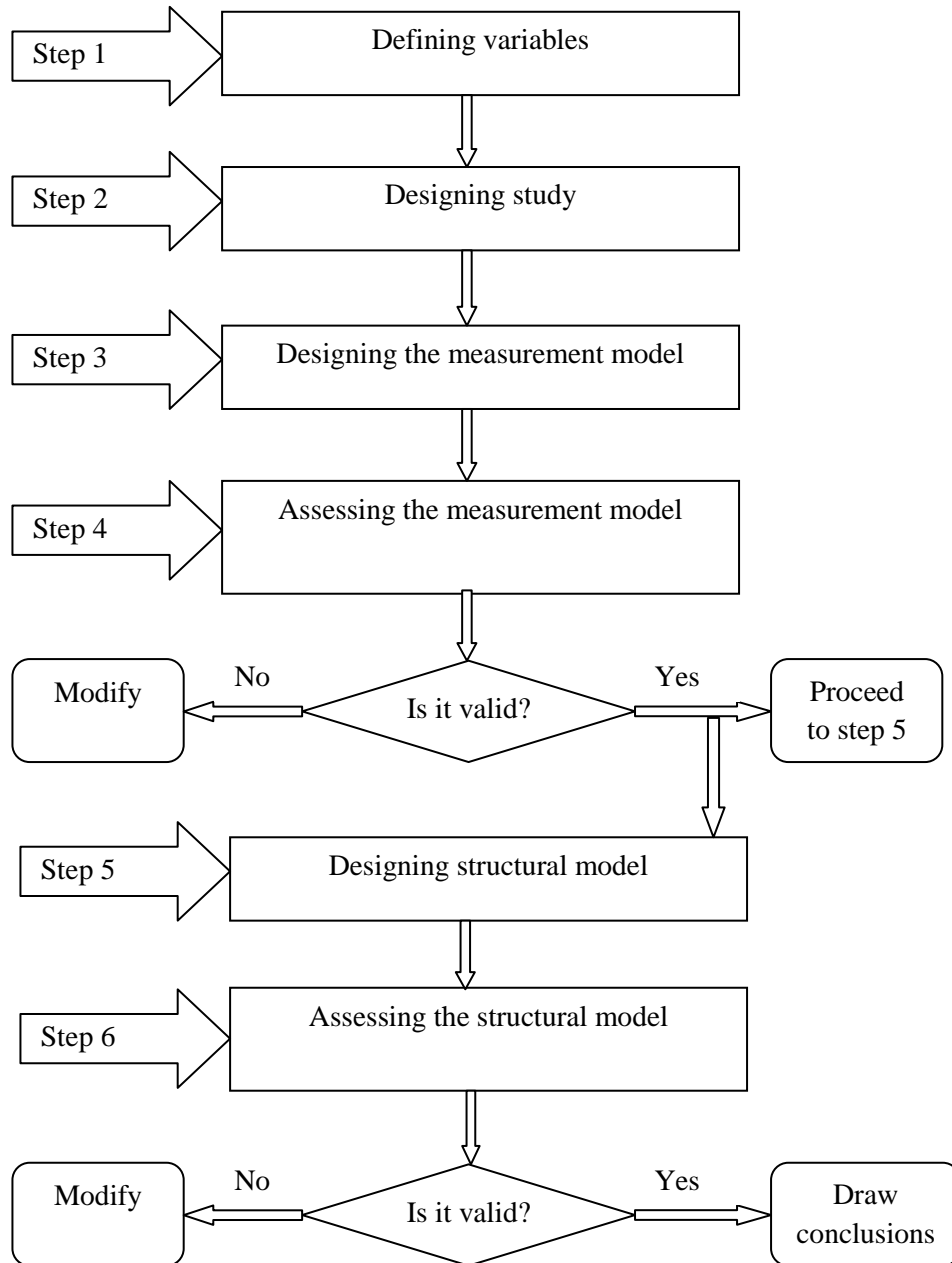


Figure 5.1  
*The Process of Structural Equation Model Testing*  
 Source: Hair *et al.* (2010)

### 5.16. Measuring Variables

A good measurement theory is mandatory for a successful model testing with structural equation modeling. Therefore, well-established and reliable measurement

scales should be used in collecting data in the survey research. As Hair *et al.* (2010) indicates, assuring the appropriateness of measures is essential though the standard measures are adopted from the various sources. A poor measurement theory would create invalid results in the structural relationships. The all variables in this study were measured by using the scales adapted from the standard, well-established measures of which many previous researchers have already done the scale validation in different contexts.

### 5.16.1 Achievement Motivation

The researchers have used more than 20 different instruments for measuring the variable, achievement motivation (Stewart & Roth, 2007; Johnson, 1990). The table 5.2 below presents a summary of commonly used achievement motivation measures in entrepreneurship research.

Table 5.2  
*Measures of Achievement Motivation*

Measure	Type of the measure
McClelland's (1955) Thematic Apperception Test (TAT)	projective imaginative stories
Edwards' (1959) Edwards' Personal Preference Schedule (EPPS)	comprehensive personality schedule with 225 item inventory,
Mehrabian's (1968) Mehrabian Achievement Scale (MAS)	questionnaire with 26 items,
Mukjerhee's, (1968), Sentence Completion Test (SCT)	forced-choice questionnaire with 50 items,
Lynn's (1969) Lynn Achievement Motivation Questionnaire (LAMQ)	8 yes, no questions,
Jakson's (1974) Personality Research Form-E (PRF-E)	measure 20 personality traits
Spence and Helmreich (1978) Work and Family Orientation Inventory (WOFO)	three achievement scales,
Miner's (1985) Miner's Sentence Completion Scale Form T (MSCS- form T),	projective sentence completion with 40 sentence stems,

Source: Adapted from Johnson (1990)

Some researchers have categorized those measures as the projective measures and the questionnaire measures but they found no significant difference across these two measures of achievement motivation (Collins *et al.*, 2004). Stewart and Roth (2007) have categorized them as the objective instruments and the projective instruments. They found that the projective measures are associated with greater achievement motivation difference than the objective measures.

The two projective measures, Thematic Apperception Test and Miner's sentence completion scale form-T consider achievement motivation as an unconscious concept. Personality research form-E and Edward's personal preference schedule treat achievement motivation as conscious variable and they are personality sub scales. Lynn achievement motivation questionnaire, Mehrabian achievement scale, sentence completion test, and the work and family orientation inventory are questionnaires for measuring achievement motivation. They assume that it is a conscious variable. McClelland's Thematic Apperception Test is a widely used measure in entrepreneurship research. However, Thematic Apperception Test has been criticized for the low predictive validity and the test-retest reliability (Johnson, 1990). This study used the Ray's (1979) achievement motivation scale that includes 14 items covering five dimensions. This measure is a questionnaire measure and most researchers currently rely on questionnaire measures. The measure also considers achievement motivation as a conscious variable (Ray, 1979).

### **5.16.2 Goal-setting**

Most of the goal setting studies has been conducted in the form of laboratory experiments and the use of the questionnaire measurements was limited. Locke and Latham (1984) developed a scale for goal setting. The researchers have used this scale and validated it in different contexts (Lee, Bubo, Early, and Locke 1991). This

study adapted widely used questionnaire measure developed by Locke and Latham (1984).

### **5.16.3 Mastery Experience**

Most of the self-efficacy studies have used non-questionnaire scales for measuring mastery experience in laboratory settings. The entrepreneurship studies usually have not considered past performance in measuring experience and have used measurements such as number of years in business rather than measuring experience as a wide concept. Morris *et al.* (2012) have emphasized the need of defining experience in a wider perspective including past performance. The measurement scale developed by Anderson and Betz (2001) for measuring mastery experience includes past performance and the study adapted the measure from the same source.

### **5.16.4 Self-efficacy**

Self-efficacy has been measured as general self-efficacy or domain specific self-efficacy (Bandura, 1986). The previous entrepreneurship researchers have used both general self-efficacy (Markman *et al.*, 2005; Baum & Locke, 2004; Bradley & Roberts, 2004; Baum *et al.*, 2001; Scherer, Adams, Carley, & Wiebe, 1989) and entrepreneurial self-efficacy (Wilson *et al.*, 2007; Tominc & Rebernik, 2007; Kolvereid & Isaksen, 2006; Zhao *et al.*, 2005; Drnovsek & Glas, 2002; Chen *et al.*, 1998). According to Bandura (2005, 1997), self-efficacy belief system is not a global trait. It should be differentiated in distinct domains of functioning for increasing the validity of the measurement. In the entrepreneurship research, the domain specific measure has been identified as entrepreneurial self-efficacy. The researchers argue that the domain specific entrepreneurial self-efficacy is more appropriate in entrepreneurship research than general self-efficacy (McGee *et al.*, 2009; Urban,

2006; Gist, 1987). Therefore, the current study decided to use domain specific entrepreneurial self-efficacy measurement.

Some scholars have developed several scales to measure the entrepreneurial self-efficacy. Chen *et al.* (1998) developed an entrepreneurial self-efficacy measurement including 22 items. Drnovsek and Glas (2002) constructed a measure with 19 items. Florin, Karri, and Rossiter (2007) used another measurement for entrepreneurial self-efficacy with eight items. McGee *et al.* (2009) refined the entrepreneurial self-efficacy measure using a sample of nascent entrepreneurs. In refining the measure, they emphasized the importance of using multi dimensional measures because self-efficacy has been conceptualized as a multidimensional construct.

DeNoble *et al.* (1999) developed a measure of entrepreneurial self-efficacy and the measure included 23 items which cover six dimensions. This study used the questionnaire adapted from the DeNoble *et al.* (1999) to measure the self-efficacy in entrepreneurial specific domain.

#### **5.16.5 Market Orientation**

The previous researchers have used different approaches to operationalize market orientation. Narver and Slater (1990) considered market orientation in a cultural perspective. Their operationalization includes three dimensions namely customer orientation, competitor orientation and inter-functional coordination. Deng and Dart (1994) added another dimension and developed a four-factor measurement. Kohli and Jaworski (1990) have operationalized the concept into three dimensions namely, market intelligence generation, dissemination, and responsiveness. Gray, Sheelagh, Boshoff, and Matheson (1998) developed a five-factor measurement by combining Kohli and Jaworski's (1990) and Narver and Slater's (1990) dimensions. It includes

inter-functional coordination, profit emphasis, competitor orientation, customer orientation, and responsiveness. Deshpande, Farley, and Webster (1993) challenged both approaches with the argument that market orientation could be represented only by customer orientation and competitor orientation.

This study adapted Narver and Slater's (1990) measurement scale, which includes three dimensions namely, customer orientation, competitor orientation, and inter-functional coordination. Many researchers have proved the reliability of this measure (Hult, Ketchen & Slater, 2005; Zhou *et al.*, 2005). Matsuno, Mentzer, and Rentz (2005) have demonstrated that this measurement scale captures market orientation slightly better than other scales. This study considered only the customer orientation and competitor orientation dimensions because inter-functional coordination would overlap some of the other variables. In addition, customer orientation and competitor orientation are more relevant for small-scale business enterprises (Hakala & Kohtamaki, 2010; Jones, Hecker, & Holland, 2003).

#### **5.16.6 Entrepreneurial Orientation**

Covin and Selvin (1989) developed a measurement scale for entrepreneurial orientation by conceptualizing three dimensions namely, innovativeness, proactivity, and risk taking. Lumpkin and Dess (1996) conceptualized the concept with five dimensions including autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness. The measurement developed by Covin and Selvin (1989) was more appropriate for this study because some of the dimensions such as competitive aggressiveness in Lumpkin and Dess's (1996) measurement overlapped the dimensions of market orientation.

### 5.16.7 Learning Orientation

Argyris and Schon (1978) conceptualized learning orientation as a set of values that affect the satisfaction of the organization. Geus (1998) considered learning as a mental model. According to Bettis and Prahalad (1995), learning orientation is a mechanism that challenges the old assumptions and it will facilitate knowledge, methodologies, and techniques. Sinkula *et al.* (1997) developed a measure with 11 items covering three dimensions namely, commitment to learning, open-mindedness, and shared vision. Hakala (2010) refined the measure by adding one more item for measuring open-mindedness. He argued that the dimension, open-mindedness in the refined measure would consider strategic knowledge at more generic level rather than merely a piece of customer information. This study used Sinkula *et al.* (1997) measure refined by Hakala (2010) with 12 items for measuring learning orientation.

### 5.16.8 Absorptive Capacity

Most of the early studies have used proxies to measure absorptive capacity. A summary of using such proxies in the previous studies is presented in the table 5.3. Those indirect measures were not successful in grasping the construct and the need of multi dimensional measures were emphasized by scholars (Volberda, Foss, & Lyles, 2010).

Table 5.3  
*Measures of Absorptive Capacity*

Type of proxy	Studies used
Research and Development intensity	Belderbos, Carree, Diederer, Lokshin and Veugelers (2004); Meeus, Oerlemans and Hage (2001); Oltra and Flor (2003); Tsai (2001)
Number of patents	Ahuja and Katila, (2001); Mowery, Oxley, and Silverman, (1996)
Number of academic Publications	Cockburn and Henderson (1998)
Flow of information	Lenox and King (2004)
HR management	Vinding (2006)

Source: Author constructed based on literature review

Flatten, Brettel, Engelen, and Greve (2011) developed and validated a measurement scale with 14 items measuring four dimensions namely acquisition, assimilation, transformation, and exploitation. In this multi dimensional measure, seven items measure the potential absorptive capacity and other seven items measure the realized absorptive capacity. According to Flatten, Brettel, Engelen, and Greve (2011), the multidimensional measurement avoids the shortcomings of the proxy measurements of absorptive capacity. It also helps in grasping the complexity of dimensions of the construct. This study used the same measurement scale for measuring absorptive capacity.

#### **5.16.9 Firm Performance**

The previous researchers have used the subjective and the objective instruments to measure the organizational performance. The objective measures consider actual figures as the indicators of performance. The subjective instruments measure the respondents' perception on the dimensions of performance (Dess & Robinson, 1984; Gupta & Govindarajan, 1984). Some studies have shown that there is a high correlation between the subjective measures and the objective measures (Murphy & Callaway, 2004; Dawes, 1999).

Using a subjective measure is appropriate for this study because collecting data on objective performance is difficult in SMEs as the entrepreneurs consider that such information is confidential. The objective measures might finally lead to unreliable data (Covin & Selvin, 1989; Fiorito & Laforge, 1986). Moreover, organizational performance is considered as a multi-dimensional concept which includes three main types of organizational outcomes namely, the financial outcomes, the marketing outcomes, and the shareholder return (Richard, Devinney, Yip, & Johnson, 2009). Therefore, this study used the subjective measure with five items adapted from



Venkataraman (1989). It measures owner managers' satisfaction with the return on corporate investment, the net profit position relative to competitors, the return on investment position relative to competitors, the satisfaction with return on sales, and the financial liquidity position relative to competitors.

### 5.17 Operationalization of Variables

A summary of the operationalization of all the variables are shown in the table 5.4.

Table 5.4  
*Operationalization of variables*

Variable	Dimensions	Source	Question items
Achievement motivation	<ul style="list-style-type: none"> <li>• Task orientation</li> <li>• Success orientation</li> <li>• Need for achievement</li> <li>• Achievement orientation</li> <li>• Actual achievement</li> </ul>	Ray (1979)	Q1 - Q14
Goal setting	<ul style="list-style-type: none"> <li>• Specificity</li> <li>• Difficulty</li> </ul>	Locke and Latham (1984)	Q15 – Q18
Mastery experience	<ul style="list-style-type: none"> <li>• Past successes</li> <li>• Past failures</li> </ul>	Anderson and Betz (2001)	Q19 - Q22
Entrepreneurial self efficacy	<ul style="list-style-type: none"> <li>• Developing new product and market opportunities</li> </ul>		Q23 - Q29
	<ul style="list-style-type: none"> <li>• Building an innovative environment</li> </ul>		Q30 – Q33
	<ul style="list-style-type: none"> <li>• Initiating investor relationships</li> </ul>		Q34 – Q36
	<ul style="list-style-type: none"> <li>• Defining core purpose</li> </ul>	De Nobel <i>et al.</i> (1998)	Q37 – Q39
	<ul style="list-style-type: none"> <li>• Coping with unexpected challenges</li> </ul>		Q40 – Q42
Market orientation	<ul style="list-style-type: none"> <li>• Developing critical human resources</li> </ul>		Q43 - Q45
	<ul style="list-style-type: none"> <li>• Customer orientation</li> <li>• Competitor orientation</li> </ul>	Narver and Slater (1990)	Q46 – Q49 Q50 - Q54

Table 5.4 continued

Entrepreneurial orientation	• Innovativeness	Covin and Slevin (1989)	Q55 – Q58
	• Risk taking		Q59 – Q62
	• Proactiveness		Q63 – Q66
Learning orientation	• Shared vision	Sinkula <i>et al.</i> (1997)	Q67 – Q70
	• Commitment to learning		Q71 – Q74
	• Open-mindedness		Q75 – Q78
Knowledge Absorptive capacity	• Acquisition		Q79 – Q81
Potential absorptive capacity	• Assimilation	Flatten, Brettel, Engelen, and Greve (2011)	Q82 – Q85
	• Transformation		Q86 – Q89
Realized absorptive capacity	• Exploitation		Q90 – Q92
Firm performance	• Return on corporate investment	Venkataraman (1989)	Q93
	• Net profit position relative to competition		
	• ROI position relative to competition		
	• Return on sales		
	• Financial liquidity position relative to competition		

Source: Author constructed

The table shows the variable name, dimensions, source of the instrument, and the question items that measure the relevant dimensions.

### 5.18 Pre-Test

The researchers have emphasized the necessity of pretesting of the instruments for ensuring that the words, the phrases, and the sequence of questions are comprehensible for the respondents (Sekaran, 2003). All the measures in this study were adapted from the standard questionnaires designed for and validated in different contexts. Therefore, the pre-testing was useful for ensuring the comprehensibility of

respondents in semantics and questionnaire as a whole. Prior to the mainstream data collection, a pre-test was conducted for assessing the instruments in terms of errors in questions, sequence of questions, and their direction (Cooper & Schindler, 2006). The questionnaires with a blank space next to each question were self-administered among fifteen selected respondents. The completed questionnaires were collected within one week and scrutinized for further improvements. As per the comments of the respondents, some questions were re-phrased for further improvement. For instance, item number seven which was initially a reverse question for measuring achievement motivation, was changed into positive form after the suggestions from the respondents. Moreover, the item 44 measuring entrepreneurial self-efficacy was re-phrased for the better understanding of the respondents.

### **5.19 Pilot Test**

The researchers have indicated the importance of a pilot test as a trial data collection for understanding the problems in questionnaire design and its suitability for mainstream data collection (Tabachnick & Fidell, 2007; Cooper & Schindler, 2006). A pilot study was conducted for understanding the scaling, the psychometric properties of the instrument, and the appropriateness of the measurement as a whole. The questionnaire improved with the inputs from the pre-test was distributed among forty randomly selected owner-managers in Sri Lankan SME sector. After few days, all duly filled questionnaires were collected. The respondents' feedback indicated that 20 minutes on average were spent on answering the questionnaire and they suggested some improvements for few items. The reliability of the instruments was also assessed with the results of the pilot study.

## **5.20 Data Screening**

Prior to commencing the main data analysis process, it is essential to obtain a basic understanding of the data set and the relationships among variables. Such an understanding is a prerequisite for using structural equation modeling for model testing in social research. It needs a close examination of the data set to ensure the appropriateness of the collected data for multivariate analysis. This process involves cleaning and transforming data for avoiding hidden effects which may be easily overlooked in the analysis. The hidden effects may finally lead to the distortion of the results (Hair *et al.*, 2010). In the process of data screening, the study conducted the missing value analysis and the outlier analysis.

### **5.20.1 Missing Value analysis**

The availability of the missing data points in the data set is an unavoidable issue in the social research. The missing data may impact the results by reducing the sample size available for the analysis. They would generate biased results if the missing data pattern is non-random. Consequently, identifying and taking necessary remedial measures for the availability of missing data is an essential part of the study. In this process, the data set was carefully observed case-wise and variable-wise in order to determine the number of available missing data points. If the missing value points count less than 5 percent, they may not cause adverse effects on the results and are ignorable (Hair *et al.*, 2010; Little & Rubin, 2003; Schafer, 1997).

Then the patterns of missing data were checked to identify the randomness of the missing data process, which is a basic requirement for deciding the type of remedies. Two types of tests were conducted for checking whether the missing data process is missing at random (MAR) or missing completely at random (MCAR) (Little & Rubin, 2003; Graham, 2008). The first test checked the difference in the missing data

patterns between the groups formed based on predetermined characteristics of the sample. The study formed the groups based on gender, age, and education. The significant difference between groups indicates that the missing value pattern was non-random. The second test checked the overall randomness of missing data. Little's (1988) missing completely at random test was conducted for this purpose. If the results are not significant, missing values are completely at random and no influence make on the findings. The study used the AMOS regression imputation method to manage the missing values.

### **5.20.2 Outlier Analysis**

The outliers are the observed values that are distinctly different from the rest of the observations. The extreme observed values for one variable are univariate outliers and extreme values for more than one variable are multivariate outliers (Kline, 2005). The both types may cause problems in social research by distorting the findings of the empirical analysis. Therefore, the outliers should be detected and the problematic cases should be treated prior to the data analysis.

The both types of outliers were detected in this study. The box plots were used to detect the univariate outliers for each variable. The extreme values of 1.5 quartiles away from whiskers were identified as univariate outliers. The multivariate outliers were detected by estimating Mahalanobis ( $D^2$ ) distance. It estimates the distance of a case from the means of all the variables (Byrne, 2010; Tabachnick & Fidell, 2007). Division of  $D^2$  by the degree of freedom ( $D^2/df$ ) approximate the distribution of  $t$  value for determining the extreme values. The p value less than .001 was considered as the threshold point for detecting multivariate outliers. The extreme cases detected were evaluated for identifying whether they are problematic for the continuation of the analysis. The mean values of the outliers were separately compared with that of

the other observations to decide whether they are too extreme to remain for further analysis. If the mean values of the outliers are extremely different from the others, they were considered as problematic cases. The problematic cases were remedied by deleting them from the analysis.

## **5.21 Testing Multivariate Assumptions**

The testing of research models with structural equation modeling demands the satisfaction of several multivariate assumptions which are common in many multivariate techniques. This study tested the basic assumptions of the normality, the linearity, the multicollinearity, and the homoscedasticity. When these assumptions are violated, taking suitable statistical remedies or/and moving to more appropriate analytical tools are essential for reliable findings. The study tested above four assumptions specially required in using structural equation modelling.

### **5.21.1 Normality**

The normality is one of the most fundamental assumptions to be satisfied in the structural equation modelling. The non-normal distributions will generate the invalid results in the analysis (Arbuckle, 2007; Byrne 2010; Hair, *et al.*, 2010). The violation of any normality assumption in structural equation model testing may generate excessively higher  $\chi^2$  value which demands repeated modification of the model (DeCarlo, 1997; West, Finch, & Curran, 1995). Therefore, it is essential to ensure that the all the variables approximate the univariate and multivariate normal distribution. This study satisfied this requirement by testing both the univariate normality and the multivariate normality.

The univariate normality of the variables was tested by calculating the skewness, the kurtosis and the critical ratio. The skewness describes the symmetry while the

kurtosis represents the peakedness of the distribution (Byrne, 2010). The skewness value greater than 1 indicates departure from the normality and the kurtosis statistic greater than 7 indicates the deviation from the normality (Curran, West, & Finch, 1996; Hu & Bentler, 1995; west *et al.*, 1995; Byrne, 2010).

The kurtosis value and the critical ratio are the most reliable indicators of the multivariate normality because the structural equation model testing is based on covariance structure (Byrne, 2010). The critical value less than five was considered as the threshold point for this study. It indicates that the distribution approximates the multivariate normal distribution (Bentler, 2005).

### **5.21.2 Multicollinearity**

The multicollinearity exists when the independent variables are highly correlated with each other and the variation of one independent variable is highly explained by another independent variable. The existence of the multicollinearity adversely affects the statistical significance of the regression coefficients and therefore, it needs remedial measures (Hair *et al.*, 2010; Kline, 2011; Bordens & Abbott, 2008).

The degree of multicollinearity among independent variables was assessed by observing the correlation matrix. The multicollinearity exists between two independent variables when the correlation reports greater than .9 (Hair *et al.*, 2010). The other two common measures namely, the tolerance and the Variable Inflation Factor (VIF) were calculated for assessing the impact of multicollinearity. The tolerance factor assesses the amount of the variance unexplained by the other independent variables. Therefore, the tolerance is calculated as  $1 - R^2$  and the higher the value the lower the multicollinearity. The cut off mark for the tolerance was considered as .1. The variable inflation factor is calculated as the inverse of the

tolerance factor. The high VIF values indicate existence of multicollinearity. The VIF values greater than 5 were considered as variables with multicollinearity (Hair *et al.*, 2010; Byrne, 2010).

### **5.21.3 Linearity**

Another important assumption associated with the structural equation modelling is linearity because the method is based on the covariance structure. Any deviation from linearity would affect the correlation among variables as well as the results of the analysis (Hair *et al.*, 2010; Kline, 2005; Tabachnick & Fidell, 2007). This study used the scatter plot matrix to test the linearity among variables. Displaying of the scatter plot matrix for all observed variables is practically not possible. Therefore, the means of the item parcels were taken as observed variables and obtained the scatter plot matrix for all the variables. The directions of the relationships for each pair of variables were observed for the assessment of the existence of linearity.

### **5.21.4 Homoscedasticity**

The homoscedasticity is relatively equal dispersion of the values of dependent variable with independent variables. It would be heteroscedastic with unequal distributions. If the variables are homoscedastic, it is desirable for structural equation analysis because the heteroscedasticity adversely affects the final results (Hair *et al.*, 2010). This study used the Box's M test which is one of the most common in the multivariate analysis for assessing the homoscedasticity. This test assesses the dispersion of equal variance. The Box's M statistics that is not significant at .001 probability level indicates a compliance with homoscedasticity between the independent and the dependent variables (Meyers, Gamst, & Guarino, 2006).



## **5.22 Designing the Measurement Model**

The measurement model specifies the measurement theory on which the research model is based. At this stage, the latent constructs and their relationships with items that measure the variable are to be specified. The measurement model represents the confirmatory factor analysis part of the full structural equation model. The designing of the model needs special attention on the unidimensionality and the number of indicators per construct (Hair *et al.*, 2010).

### **5.22.1 Unidimensionality**

The unidimensionality of a measure exists when a set of indicators of a construct describe only that construct. It is very important in survey research to ensure the validity of the measurement theory. Therefore, the unidimensionality should be given the due attention though the scales used in a study are well established. There are two concerns in securing the unidimensionality of measures (Hair *et al.*, 2010).

- (i) Linking particular set of indicators to only one construct

The entire cross loadings are to be fixed at zero although the free cross loadings improve the  $\chi^2$  statistic.

- (ii) Designing a single measurement model for all variables of the study

Hair *et al.* (2010) emphasized on a poor practice followed by the researchers to design separate measurement models for each construct. This is not appropriate though the model fit of separate measurement models can easily improve the model fit compared to a single model with all variables. The construct validity is also problematic in the separate models.

This study designed a single measurement model for all the variables and fixed the all cross loadings at zero for ensuring the unidimensionality of measures.

### **5.22.2 Number of Indicators per Construct**

The number of indicators for measuring a latent construct is an important concern in designing the measurement model. The optimal number of indicators should be selected because more or less indicators may create problems in the analysis. A large number of indicators per construct may improve the reliability but reduce the parsimony of the model. It also does not produce unidimensionality and demands large samples for the analysis. Less than three indicators per construct may result in under identified or just identified models which do not test a theory. In any measurement model, a feasible solution can be found only through an over identified model with a positive degree of freedom  $\{df = (p) (p+1)/2 - k$ , where  $P$  = number of indicators,  $k$  = number of estimated parameters}. Therefore, at least, three to four indicators per construct are recommended for statistical identification of the model (Hair *et al.*, 2010). Practically, there are a large number of indicators per construct in many of the standard measures used in the survey research. The item parcelling is more common in structural equation modeling for reducing the number of items per construct to an optimal number. The item parcelling is taking the average of the selected items as one factor (Sterba & MacCallum, 2010). This method is more advantageous than using all items. Williams and O'Boyle (2008) justified using the item parcelling because of few reasons mentioned below.

- (i) Having more intervals between scale points in the parcels
- (ii) The ability to use even in small samples
- (iii) Appropriateness in estimating parameters in complex relationships
- (iv) Successfully used in many studies (Badalos & Finney, 2001)

The questionnaire for this study included 93 indicators measuring nine latent constructs. This is relatively high in number and may be problematic in the structural equation model testing (Kovjanic *et al.*, 2012). Therefore, the study used the item-parcelling method for reducing the indicators to an optimal number. The items were parcelled by combining the items across the facets of variables after evaluating the effect of the original items. Having parcelled, there were four items per each variable except the dependent variable. For the dependent variable, the original measure with five indicators was taken without any change. All together, 37 item parcels measuring nine latent construct remains for the final analysis.

### **5.23 Assessing the Measurement Model**

The assessment of the measurement model was conducted in two steps in the study. Firstly, the overall model fit of the measurement model was evaluated. Secondly, the validity and the reliability of the model were assessed (Byrne, 2010; Hair *et al.*, 2010).

#### **5.23.1 Overall Model Fit of the Measurement Model**

Assessing the overall model fit refers to the goodness-of-fit or how well the measurement theory fit the hypothesized measurement model. The AMOS produces number of goodness-of-fit indices that have been divided into three categories namely, the absolute fit indices, the incremental fit indices, and the parsimony-fit indices. The absolute fit indices directly measure how well the hypothesized model fit the observed data (Kenny & McCoach, 2003). The incremental fit indices compare the hypothesized model fit against alternative models (Hair *et al.*, 2010) while the parsimony-fit indices provide information on the best model among the competing models (Marsh & Balla, 1994). A summary of all the model fit indices is given in the table 5.5 below. Using such an extensive range of goodness-of-fit

indices for deciding the model fit is very complex. Hair *et al.* (2010) indicated that the adequate evidences of model fit are provided by three to four indices.

Table 5.5  
*Summary of Model fit indices*

Index	What is measured	Cut off figures	Source
<b>Absolute fit indices</b>			
CMIN = $\chi^2$ statistic	Discrepancy between restricted covariance matrix and unrestricted covariance matrix	$\chi^2$ approximate degree DF, higher the p value, higher the model fit	Byrne (2010); Bollen (1989)
CMIN/ DF	$\chi^2$ , degree of freedom ratio	Less than 2	Byrne (2010)
RMR	Average residual value derived from the hypothesized model	Less than .5 for well fitting model	Hu and Bentler (1995)
GFI	Measure the relative amount of variance and covariance	Value closer to 1 indicate good fit (.8 or higher)	Byrne (2010); Joreskog and Sorbom, 1993
AGFI	Similar to GFI except adjusted for DF	Value closer to 1 indicate good fit (.8 or higher)	Byrne (2010); Joreskog and Sorbom, 1993
PGFI	Address the issue of parsimony in SEM	As GFI but slightly lower values are acceptable	Byrne, (2010)
<b>Baseline comparisons</b>			
NFI, CFI	Comparison of hypothesized model with baseline model	.9 or higher for better fit	Byrne (2010)
RFI	Derivative of NFI	.9 or higher better fit Over .95 superior fit	Hu and Bentler (1999)
IFI	Similar to RFI parsimony, sample size and DF take into account	Similar to RFI	Bollen (1989); Byrne (2010)
TLI		Value closer to .95 for larger samples	Hu and Bentler (1999)
<b>Parsimony adjusted measures</b>			
PRATIO	Related to initial parsimony ratio		
NCP	Non centrality parameters	Value between low and high range	Byrne (2010)
RAMSEA	Assess the hypothesized model fit with population covariance matrix	value is less than .05 indicates good fit value between .08 to .10 moderate fit	(Browne and Cudeck, 1993); MacCallum, Brown and Sugawara (1996)

Table 5.5 (continued)

PCLOSE	Measure that RAMSEA is “good” in the population	P value greater than .5	Joreskog and Sorbom (1996)
AIC, CAIC	Parsimony in the assessment of model fit, compare two or more models	Smaller value indicate better fit	Akaike (1987); Bozdogan (1987); Hu and Bentler (1995)
BCC, BIC	Same as AIC and CAIC but impose more penalties on model complexity	Smaller value indicate better fit	Byrne (2010)
ECVI	Assess the discrepancy between covariance matrix of the sample expected covariance matrix of another sample of same size	Smaller values better not determine appropriate range	Browne and Cudeck,(1989); Byrne (2010)
MECVI	Identical to BCC except scale factor	Similar to BCC	Arbuckle, (2007)
HOELTER	Measure sample adequacy rather than model fit	Value greater than 200 indicates sample adequacy	Hoelter (1983); Hu and Bentler (1995)

Source: Author constructed based on literature review

According to Marsh, Hau, and Wen (2004), one incremental index with  $\chi^2$  and associated DF provides sufficient information of the model fit. Hu and Bentler (1999) and Marsh *et al.* (2004) suggested that the selection of fit indices should be different in different situations based on the sample size, the degree of error, and the model complexity. The guidelines provided by Hair *et al.* (2010) for a situation with  $N > 250$  and  $m > 30$  where  $N$ = sample size and  $m$ = number of observed variables are given in the table 5.6.

Table 5.6  
*Model fit indices and Cut-off values used in this Study*

Index	Cut off values
$\chi^2$ statistic	Significant p values
CFI or TLI	Greater than .90
IFI	Greater than .90
RMR	Less than .08
RMSEA	Less than .07 with CFI .90 or greater

Source: Adapted from Hair *et al* (2010)

The research model of the present study has 37 observed variables and the sample size equals 350. This situation comes under the above category and therefore the study followed the guidelines provided by Hair *et al.* (2010) in assessing the overall model fit.

### **5.23.2 Validity of the Measurement Model**

The validity is the extent to which a set of measures accurately represents the concept to be measured (Hair *et al.*, 2010). In the social science research, the constructs are measured indirectly. Therefore, ensuring the validity of the measures is essential because the invalid measures may create possible adverse effects on the research findings (Hair *et al.*, 2010; Chen & Rossi, 1987). To ensure the validity of a structural equation model, the content validity, the construct validity, and the convergent validity should be assessed (Camines & Zeller, 1990). The all types of validities were assessed in this study

#### **5.23.2.1 Content Validity**

The Content validity or the logical validity is the extent to which a measurement represents facets of the given construct. This study used questionnaires adapted from standard measurements and many researchers have tested their content validity in different contexts many times. Therefore, no need exists for testing the content validity of instruments for this particular study.

#### **5.23.2.2 Construct Validity**

The construct validity is the extent to which a set of items in an instrument represents the latent construct to be measured. It is the most important validity in the social science studies (Cronbach & Meehl, 1955). There are three main forms of the construct validity namely, the convergent validity, the discriminant validity, and the

nomological validity. If the measurement model shows an acceptable level of model fit, it is an evidence for the availability of construct validity (Hair *et al.*, 2010). In this study, the convergent validity and the discriminant validity were assessed by using the information generated by the measurement model.

### 5.23.2.3 Convergent Validity

The convergent validity exists when the indicators of a one concept converge or share a higher proportion of variance. The violation of the convergent validity adversely affects the findings. The assessments of the factor loadings, the average variance extracted, and the construct reliability assures the convergent validity of a model (Hair *et al.*, 2010).

The statistically significant factor loadings indicate that they converge on the latent construct. The standardized factor loadings greater than .7 are the ideal indicators. The loadings between .5 and .7 are good indicators. The statistically significant factor loadings less than .5 are acceptable but less preferable because the portion of the variance not explained is greater than the portion explained (Anderson & Gerbing, 1988). The average variance extracted is another important indicator of the convergent validity. It is calculated by dividing the sum of all the squared standardized factor loadings by the number of items as shown in the following formula.

$$AVE = \frac{\sum_{i=1}^n L_i^2}{n}$$

AVE = average variance extracted

$\sum_{i=1}^n L_i^2$  = sum of squared standardized factor loadings

n = number of items

The average variance extracted greater than .5 is considered as an indicator of the adequate convergence. Though the values less than .5 are acceptable, they are less preferable for the reason that the error variance is greater than the variance explained (Hair *et al.*, 2010).

The Construct Reliability (CR) values are another good indicators of the convergent validity in the structural equation models. It is computed by using the squared sum of the factor loadings and the sum of the error variance as shown in the following formula.

$$CR = \frac{(\sum_{i=1}^n Li^2)}{(\sum_{i=1}^n Li^2) + (\sum_{i=1}^n ei)}$$

CR = Construct Reliability

$(\sum_{i=1}^n Li^2)$  = Squared Sum of Factor loadings

$(\sum_{i=1}^n ei)$  = sum of the error variance of the construct

The construct reliability values between .6 and .7 are acceptable while the value greater than seven suggests a good convergent validity (Hair *et al.*, 2010).

#### **5.23.2.4 Discriminant Validity**

Discriminant validity is the extent to which a construct is different from other constructs (Hair *et al.*, 2010). It confirms that a set of indicators measuring a concepts is distinct from another set of indicators measuring the other concept (Chen & Rossi, 1987; Lo, Ramayah, & Run, 2009). The discriminant validity of the measurements was assessed in this study by using the  $\chi^2$  difference test between single and combined measurement models and comparing average variance extracted with squared correlations.



The all items measuring two constructs were considered as the items measuring a single concept and the overall fit of the single model as well as the two-construct model was evaluated. If the  $\chi^2$  difference test between single model and the combined-construct model is significant, the discriminant validity is supported.

As a more rigorous test of discriminant validity, the values of average variance extracted for the two constructs were compared with the squared correlation estimates between those two constructs. The discriminant validity is supported if the variance extracted is greater than the squared correlation coefficients (Fornell & Larcker, 1981).

#### **5.23.2.5. Reliability**

The reliability of an instrument is the degree to which a measurement is “error free”. The reliability should be measured in social researches to ensure that the measurements used in the study are error free to an acceptable level. Assessing of the reliability of measures is highly important because the unreliable measures adversely affect the findings of the study. The reliability of instruments is measured by using Cronbach’s Alpha reliability coefficient. It tests the individual differences in scoring and the consistency of the entire scale (Hair *et al.*, 2010; Cronbach, 1951). In addition, it represents the consistency of scores of a measurement over time (Babbie & Mouton, 2001). Since the measures used in this study have been adapted from the standard questionnaires, their reliability and validity have been tested and proved in different contexts. However, it has not been measured previously in the context of the current study. Therefore, this study used one of the widely used methods, the Cronbach’s alpha reliability coefficient, to estimate the reliability. The measures with alpha values greater than .7 were considered as reliable (George & Mallery, 2003; Robinson, Shaver, & Wrightsman, 1991).

#### **5.24. Designing Structural Model**

The structural model specifies the theoretical model on which the relationships of latent constructs and hypotheses of the study are based. The designing process of the structural model involves representing the hypothesized model by a visual path diagram. The path diagram should specify the exogenous and endogenous variables, the interactive relationships among them, and the hypotheses to be tested. Moreover, it should depict the fixed and the constrained paths of the model and the covariance among exogenous constructs. In this step, the structural paths are to be combined with the measurement model that was previously validated.

This study hypothesizes that achievement motivation, goal setting, mastery experience, market orientation, entrepreneurial orientation, and learning orientation are directly related to performance. In addition, the relationships between achievement motivation, goal setting, and mastery experience with performance are mediated by self-efficacy. Absorptive capacity is a moderator to the relationships between market orientation, entrepreneurial orientation, learning orientation, and performance. Consequently, the hypothesized model of this study has seven exogenous variables and three endogenous variables. It tests six direct relationships, three mediating relationships and three moderating relationships. The total number of hypotheses established in the model was twelve. The path diagram for the full research model (combination of the measurement model and the structural model) is depicted in the figure (5.2).

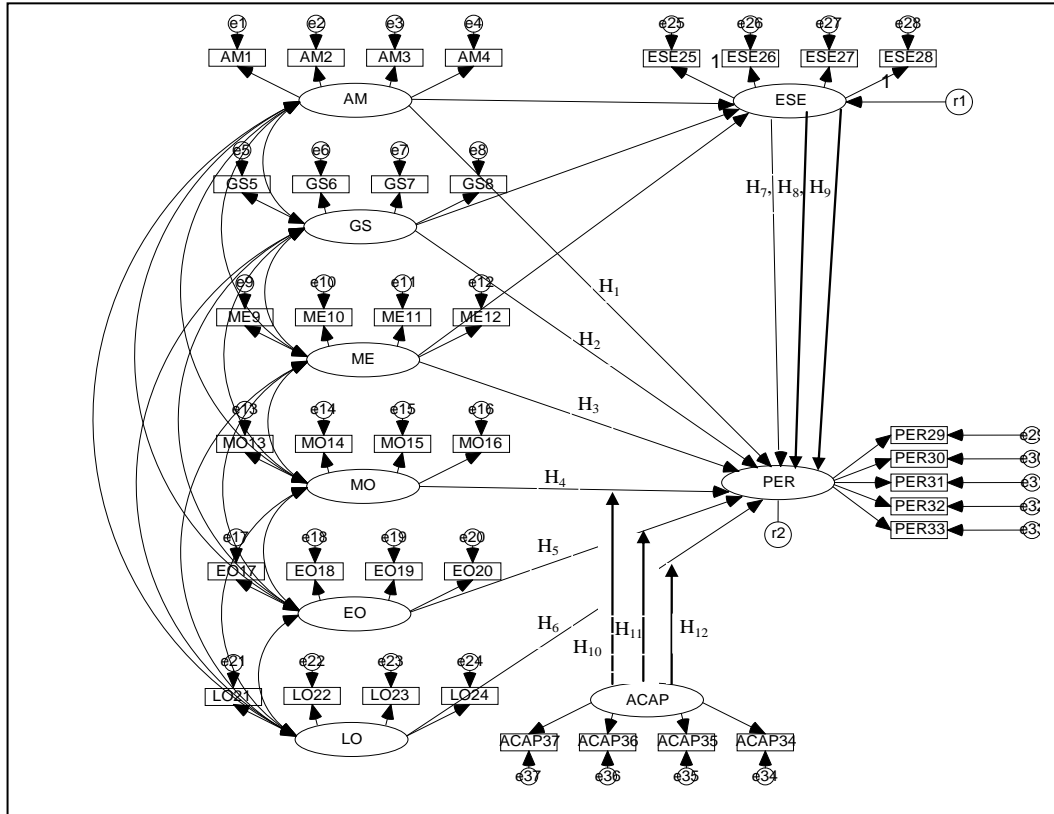


Figure 5.2  
Hypothesized Structural Equation Model

### 5.25 Identification of the Structural Model

The identification of the structural model is mandatory for a successful model testing. The under identified or the just identified models are not capable of testing the structural paths. The process of model identification is problematic when the model is non-recursive, the size of the sample is inadequate, and there are less than three items per construct (Hair *et al.*, 2010). This study does not use the constructs that are both cause and effect of other variables therefore the model is recursive. The sample size was 350, which is quite adequate for the structural equation analysis. The all constructs of the measurement model has more than three indicators.

### 5.26 Assessing the Structural Model

The validity of the model is essential for testing the theory specified in the structural model. The study used three methods for testing the validity. The estimation of the

overall model-fit indices, the evaluation of the parameters for structural relationships and the comparison of the alternative models are the three methods.

#### **5.26.1 Overall Model Fit of Structural Model**

The assessment of the overall model fit was done similar to the assessment of the measurement model in the step four of the data analysis. The absolute fit indices and the incremental fit indices such as CFI, TLI, IFI, RMR and RAMSEA with  $\chi^2$  value were evaluated as per the guidelines used in the measurement model (see table 5.6).

#### **5.26.2 Estimated Parameters for Structural Relationships**

The overall model-fit alone does not establish the validity of the model. For further verification of the validity, the parameter estimates for the established hypothetical paths, the magnitude, and their direction should be examined. The values should be significantly different from zero and the direction should be in compliance with hypothesized paths.

#### **5.26.3 Comparing Alternative Models**

The model fit of the structural model can further be assessed by comparing the structural model with the alternative models such as the measurement model and the nested model. The comparison of structural model with the measurement model provides a good source of information for testing the validity. The number of relationships in the structural model is always less than that of the measurement model as long as the hypothesized model remains recursive. Therefore, the  $\chi^2$  value for the measurement model should be higher than the structural model. When the  $\chi^2$  difference between the confirmatory factor analysis model and the structural model is not significant, additional paths specified in the structural model have not added a theoretical significance to the full research model (Hair *et al.*, 2010).

The nested models are the models with similar complexity and with the same number of constructs. Such a model can be formed by removing some selected paths from the structural model. The competitive model's fit should be less than that of the structural model to prove that the proposed model is the best (Bryne, 2010; Hair *et al.*, 2010). The study compared the structural model with the measurement model and one nested model for further assessment of the validity.

### **5.27 Testing Mediating Effects**

The mediation effect is available in a structural model when one variable intervenes the relationship between other two variables. In a mediating relationship, both direct and indirect effects exist. The testing for the mediating effects can be done by using three approaches namely, the Barron and Kenny approach (Baron & Kenny, 1986; Cohen & Cohen, 1983), the effect decomposition method (Williams, Vandenberg, & Edwards, 2009) and the parallel model testing (Holmbeck, 1997). This study used the Barron and Kenny approach and the effect decomposition method.

#### **(i) Barron and Kenny approach**

The structural model of the study hypothesized that the relationship between achievement motivation, goal setting, mastery experience, and performance are mediated by self-efficacy. The study pursued the following procedure specified by Cohen and Cohen (1983) to test and interpret the mediating relationships in the structural model.

- (a) To estimate the first model only with the direct effects between achievement motivation, goal setting, mastery experience, and performance
- (b) To estimate the second model with the mediating relationship of self-efficacy

Based on the estimated results, the existence of the mediation effect was assessed by using the following procedure.

- (a) If the relationships between achievement motivation, goal setting, mastery experience, and performance remain unchanged when self-efficacy is introduced into the model as a mediator, mediation effect does not exist.
  - (b) If the relationship between achievement motivation, goal setting, mastery experience, and performance is reduced but remains significant, when self-efficacy is introduced into the model as a mediator, a partial mediation exists.
  - (c) If the relationship between achievement motivation, goal setting, mastery experience, and performance is reduced and not longer significant, when self-efficacy is introduced into the model as a mediating variable, full mediation exists.
- (ii) Effect decomposition method

The effect decomposition method presented by Williams *et al.* (2009) was conducted for further verification of mediating effects. In this method, the relationships among the independent, the dependent and the mediating variables were decomposed into the direct, the indirect and the total effects. The presence of significant indirect effect proves the mediation effect.

### **5.28 Testing Moderating Effects**

The moderating effect is available in the structural model when the relationship between two variables is changed by another variable (Baron & Kenny 1986). The multi group analysis is commonly used in the structural equation modeling for assessing the moderating effects (Holmbeck, 1997). This study used the multi group

analysis procedure outlined by Holmbeck (1997) for assessing the moderating effect because of the following reasons.

- (i) The continuous variables as moderators can be tested in the structural equation modeling by converting them into the dichotomous variables (Williams *et al.*, 2009; Frazier *et al.*, 2004). The moderating variable, absorptive capacity can be converted into a dichotomous variable based on the high and the low absorptive capacity and the dichotomous analysis procedure can be applied (Holmbeck, 1997).
- (ii) This conventional method is appropriate because the relationship is not either moderated mediating or mediated moderating, (Kline, 2011).
- (iii) The method is commonly used by researchers for testing the moderating effects (Lavee & Katz, 2002; Lin & Ding, 2003).

In this study, the respondents were divided into two groups as the low absorptive capacity group and the high absorptive capacity group based on the high and the low mean values. The respondents with the mean for absorptive capacity greater than three were considered as the high absorptive capacity group while mean for absorptive capacity less than three were considered as the low absorptive capacity group. The process created the high absorptive capacity group and the low absorptive capacity groups with 155 and 195 respondents respectively.

Prior to conduct the multi group analysis, testing the measurement invariance across multi groups is a preliminary requirement (Chen, 2008; Fontaine, 2005). It assures that the measurements are not different across groups (Milfont & Fischer, 2010). For this study, the measurement invariance across the low absorptive capacity and the higher absorptive capacity groups was established by testing the measurement model as configural invariance model separately in two groups. If the difference of overall

model fit across the two groups is not significant, then the measurement invariance is established and no difference in measurement exists between the two groups and therefore they are suitable for the comparison (Schoot, Lugtig, & Hox, 2012).

Having assured the measurement invariance between the two groups, the multi group analysis for testing the moderating effects were conducted in two stages. Firstly, the configural/baseline model was estimated across the low and the high groups with all free path estimates. Secondly, another model with market orientation, entrepreneurial orientation, and learning orientation constrained to equal values were assessed across the two groups. Thirdly, the  $\chi^2$  difference between the configural (non-constrained) model and the constrained model were assessed. If the  $\chi^2$  difference is statistically significant, there exists a moderating effect.

The  $\chi^2$  difference indicates only the existence of a moderating effect. To determine the direction and the magnitude of the moderating effect, the regression weights and the squared multiple correlations were examined. If the regression weights for the moderating paths of the low absorptive capacity group are lower than that of the high absorptive capacity group, a higher level of moderating effect exists. Similarly, the higher squared multiple correlations for the higher absorptive capacity denotes a high level of moderating effects.

## **5.29 Summary**

The study is based on the survey design. The randomly selected sample of 350 SMEs was selected for the final analysis. The data were collected by using the standard questionnaires adjusted as per the results of the pre-test and the pilot test. For screening data, the outlier analysis and the missing value analysis were conducted. The multivariate assumptions such as the normality, the multicollinearity, the



linearity, and the homoscedasticity were tested for assessing the suitability of the data set for the multivariate analysis. The structural equation modeling with the AMOS 16<sup>th</sup> version was used for analyzing data. The moderating effects of the variables were tested by using the multi group analysis.

**CHAPTER SIX**  
**RESULTS AND DISCUSSION**

**6.1 Introduction**

This chapter presents the results of the data analysis. The chapter starts with a presentation of the background information of the sample followed by the results of the data screening techniques. Then it presents the results of the main analysis of the study, which includes the results of the structural equation model testing for the hypotheses testing.

**6.2 Non-Response Bias**

The effect of the non-response bias was estimated by using the extrapolation method to determine whether there was an adverse effect on findings. It was a matter of concern in this study because there was four weeks time lag in the data collection process (Amstrong & Overson, 1977; Chandhok, 2008). The results of the estimation of non- response bias are reported in the Table 6.1.

Table 6.1  
*Estimates of Non-Response Bias*

Variable	Respondents' Group	N	Means	Non-Response Bias	Non-Response Bias (%)
Achievement motivation	Early	210	3.88		
	Late	140	3.89	-0.004	-0.4%
Goal setting	Early	210	3.62		
	Late	140	3.60	0.008	0.8%
Entrepreneurial self-efficacy	Early	210	3.84		
	Late	140	3.83	0.004	0.4%
Mastery experience	Early	210	3.80		
	Late	140	3.84	-0.016	-1.6%
Market orientation	Early	210	3.58		
	Late	140	3.55	0.012	1.2%

Table 6.1 (continued)

Entrepreneurial orientation	Early	210	3.85		
	late	140	3.81	0.016	1.6%
Learning orientation	Early	210	3.61		
	Late	140	3.59	0.008	0.8%
Absorptive capacity	Early	210	3.71		
	Late	140	3.75	-0.016	1.6%
Performance	Early	210	4.66		
	Late	140	4.64	0.008	0.8%

The first and the second columns of the table 6.1 show the variable concerned and the type of the respondents respectively. The third column indicates the sample size for each group. The fourth column shows the means of each group. The last two columns indicate the non-response bias and the percentage of non-response bias respectively. The percentage of the non-response bias for all the variables remains less than two percent. These lower values indicate that the findings have not been affected by the non-response bias in this study. The mean difference for the early respondents and the late respondents indicates that it is not significant at .01 level for any variable. Accordingly, both tests provides no evidences for the existence of the non-response bias. The output for calculating the mean values for the early respondents and the late respondents are given in the appendix II.

### 6.3 Common Source Bias

The existence of common source bias in data set was examined in this study by using the confirmatory factor analysis marker variable technique (Williams *et al.*, 2010). The common source bias might be a problem in this study because the data for all the variables were collected from a single source, the owner managers of the SMEs. The results of the estimated common source bias is shown in the table 6.2.

Table 6.2  
*Estimates of Common Source Bias*

Type of the Model	$\chi^2$	Df
Measurement model (CFA model) with all parameters estimated freely	451.08	303
Baseline model with additional marker variable	455.3	303
Method C model with paths from marker variable to indicators of all the other variables	470.01	314
Method R model with substantive factor correlations were constrained to the values obtained from baseline model	412.4	285

The first column of the table shows the type of the models tested for examining the common source bias. The second and the third columns indicate the Chi-square values and the degree of freedom for each model. The results show that the Chi-square values of the method R model is significantly different from the model C ( $\Delta\chi= 58$ ,  $\Delta DF = 29$ ,  $p > .005$ ). Therefore, the common source bias has not distorted the findings of this study (Williams *et al.*, 2010). The graphical outputs for the confirmatory factor analysis model, the baseline model, the method C model, and the method R model are given in the appendix III.

#### **6.4 Sample Background Analysis**

The understanding of the background information of the sample is a pre-requisite of the data analysis process. Therefore, a basic analysis related to the sample was conducted. The following sections present a summary of the outcome of the analysis followed by a discussion of the results.

##### **6.4.1 Location of Businesses**

The sample of the current study spreads over five main areas of the country. It was essential to ensure whether the respondents reasonably represent all geographical segments. The results of geographical dispersion of respondents are shown in the table 6.3.

Table 6.3  
*Locations of Businesses*

Background information	Category	Frequency	Percentage	Cumulative percentage
	Western province	137	39.1	39.1
	South coast	124	35.6	74.7
	Ancient cities	63	18.1	92.8
Location of the business	Up country	22	6.1	98.9
	East coast	4	1.1	100

As the table 6.3 shows, 39.1 percent of the businesses are from the Western province. From the South coast and the ancient cities, it accounts for 35.6 percent and 18.1 percent respectively. Those three areas accounts for 92.8 percent of the total respondents. The low representation from the up country and the East coast is not because of the location bias in the sample and it is the representation of the true geographical dispersion of the population.

#### **6.4.2 Gender of Respondents**

The gender distribution of the sample was analyzed. A summary of the results of the analysis is given in the table 6.4 below.

Table 6.4  
*Gender of Respondents*

Background information	Category	Frequency	Percentage
Gender	Female	116	33
	Male	234	67

The males represented the majority of the sample accounting for 66.9 percent of the total respondents. The percentage of the female is 33.1 percent. The higher percentage of the male respondents shows the true profile of the population because the male entrepreneurs and the mail managers dominate the Sri Lankan SME industry. Therefore, there is no gender bias in the selected sample.

### 6.4.3 Age of Respondents

The age dispersion of the respondents was analyzed for ensuring the representation of the respondents from all age ranges. A summary of the age distribution among the respondents is shown in the table 6.5 below.

Table 6.5

*Age of Respondents*

Background information	Category	Frequency	Percentage	Cumulative percentage
Age (years)	18 - 25	61	17.4	17.4
	26 – 35	120	34.3	51.7
	36 – 45	93	26.6	78.3
	46 – 65	76	21.7	100

The results have shown that the age ranges from 26-35 years represents the highest percentage that is 34.3 percent. The lowest accounting for 17.4 percent is the younger group in the range of 18 – 25 years. The middle-aged group (26-45) represented more than one third of the total sample and accounts for 70 percent. In Sri Lankan SME sector, the majority of the entrepreneurs are from the middle-aged group. The younger generation has a less involvement in the business operations. Therefore, this is also a genuine representation of the population since the younger generation and the old-aged have less involvement in running the businesses.

### 6.4.4 Education of Respondents

The four major levels of education can be identified in the Sri Lankan education system namely the Ordinary Level, the Advanced Level, the graduate and the postgraduate levels. The sample was categorized into those four levels for understanding the level of education of the respondents. The results are given in the table 6.6 below.

Table 6.6  
*Education of Respondents*

Background information	Category	Frequency	Percentage	Cumulative percentage
Education	Up to GCE O/L	169	48.4	48.4
	GCE A/L	160	45.6	94.0
	Graduate	16	4.6	98.6
	Postgraduate	05	1.4	100

The sample consisted with almost equal portions from the GCE Ordinary Level (O/L) and the GCE Advanced Level (A/L) accounting for 48.4 percent and 45.6 percent respectively. Both categories which represented the lowest level of the education made 94 percent of the total. It shows that the majority of the sample consists of the respondents who finished their education at the school level. There were only six percent of the graduate and the postgraduate respondents in the sample. It is clear that the respondents are not from the diverse educational backgrounds.

#### **6.4.5 Marital Status of Respondents**

The table 6.7 below shows the marital status of the respondents. The results indicate that the majority of the sample respondents were married. The both categories of the married and the unmarried respondents represents are 70.3 percent and 29.7 percent respectively.

Table 6.7  
*Marital Status of Respondents*

Background information	Category	Frequency	Percentage
Marital status	Married	246	70.3
	Unmarried	104	29.7

These figures for the civil status are consistent with the age groups of the respondents because the sample consists of the majority of middle-aged respondents.

#### 6.4.6 Number of Years in Businesses

The experiences of the respondents in terms of the number of years in the business were analyzed. The number of years in the business were counted as the number of years of active running of the business. The summary of results of the analysis is given in the table 6.8 below.

Table 6.8  
*Number of years in Businesses*

Background information	Category	Frequency	Percentage	Cumulative percentage
Number of years in Business	0 – 5	106	30.2	30.2
	6 – 10	121	34.6	64.8
	11 – 15	58	16.6	81.4
	15 <	65	18.6	100

As the table 6.8 shows, the highest percentage represents 6-10 years of running the business followed by 0-5 year range. More than 60 percent of the businesses are in the range of 0–10 years. This situation is a reasonable representation of the population because the new venture start-up in the hotel and restaurant industry was increasing in the last few years because of the revival in the Sri Lankan tourism industry.

#### 6.5 Univariate Analysis

The univariate analysis was conducted for getting a basic understanding of the data set and the behavior of the individual variables. Such an understanding is a prerequisite of bivariate and multivariate analysis. Under the univariate analysis, descriptive statistics such as the minimum/maximum values, the mean, standard deviation, and variance were calculated. The table 6.9 presents the findings of the descriptive statistics. The columns of the table show the descriptive statistics for each variable.



Table 6.9  
*Descriptive Statistics*

Variable	N	Minimum	Maximum	Mean	S.D.	Variance
AM	350	2.00	5.00	3.84	.634	.402
GS	350	2.00	5.00	3.82	.618	.382
ME	350	2.00	5.00	3.61	.681	.465
EO	350	2.00	5.00	3.57	.791	.626
MO	350	2.00	5.00	3.82	.623	.389
LO	350	2.00	5.00	3.60	.765	.585
ESE	350	2.00	5.00	3.83	.575	.330
PER	350	2.50	6.25	4.65	.810	.656
ACAP	350	2.00	5.00	3.72	.692	.479

Achievement motivation has the mean value of 3.84 with the standard deviation of .634, and the variance of .402. Goal setting has the mean value of 3.82 with the standard deviation of .618. while the minimum and the maximum values are reported as 2 and 5 respectively. The variance for goal setting reports .382. The mean value of mastery experience is 3.61, with .618 of the standard deviation and .465 of the variance. It also reports 2.00 for the minimum and 5.00 for the maximum values for mastery experience. The mean value of entrepreneurial orientation is reported as 3.57 with the standard deviation of .791. The variable has 2 for the minimum and 5 for the maximum values while the variance is .626. Market orientation, learning orientation and self-efficacy records the mean values of 3.82, 3.60, and 3.83 and the standard deviation values of .623, .765, and .575 respectively. Market orientation has a .389 variance while learning orientation reports the variance of .585. For self-efficacy, the variance is .330. The mean value for absorptive capacity reports a value of 3.72 and the values of the standard deviation and the variance are .692 and .479 respectively. Further, absorptive capacity has the minimum/maximum values ranged from 2 to 5. Performance reports the highest of the means, the standard deviation and the variance

among the other variables recording 4.65, .810 and .656. The minimum/maximum values for performance remains in the range of 2 to 6.25. The variance and the standard deviation describe the the average distance from the mean. For all the variables, the standard deviation and the variance are less than 1 and it indicates that the mean for all the variables reflects a set of cases. Except performance, all the other variables reports the mean values range from 3.57 to 3.83. Performance shows the highest value of mean among all the other variables. The original SPSS output for the descriptive statistics is given in the appendix IV.

### 6.6 Bivariate Analysis

The bivariate analysis was conducted for understanding the relationships of two variables in pairs. The understanding of the behaviour of variables in pairs provides the insight for behaviour of the total data set and it is essential for continuing the multivariate analysis. Under the bivariate analysis, the Pearson correlation were calculated. The correlations reveal the extent to which one variable is related the other variables.

Table 6.10  
*Correlations*

	AM	GS	ME	MO	EO	LO	ESE	PER
AM	1							
GS	.476**	1						
ME	.601**	.543**	1					
MO	.499**	.408**	.485**	1				
EO	.368**	.299**	.677**	.496**	1			
LO	.356**	.384**	.358**	.473**	.465**	1		
ESE	.610**	.549**	.499**	.513**	.497**	.605**	1	
PER	.788**	.643**	.883**	.675**	.754**	.534**	.758**	1
ACAP	.424**	.391**	.579**	.499**	.471**	.526**	.534**	.650**

\*\*Significant at .001

A satisfactory level of correlation among variables is essential for continuing further analysis. The table shows the results of the correlation analysis for all the variables of the study. All the variables are positively related to each other at a statistically significant level with expected direction. The Pearson correlation coefficient for the variables are ranging from .299 (the lowest, between entrepreneurial orientation and goal setting) to .883 (the highest, between mastery experience and performance) indicating a satisfactory level of expected positive relationship among all the variables. It shows that the results of the bivariate analysis provide a firm basis for continuing further analysis.

The results of this correlation analysis also provided a fundamental requirement for the hypothesized mediating impact of self-efficacy on the relationship between cognitive factors and performance as well as the moderating impact of absorptive capacity on the relationship between strategic orientation and performance. The Pearson correlation coefficients of achievement motivation, goal setting, mastery experience with self-efficacy are .610, .549, .499 respectively. The correlation between self-efficacy and performance is .758 while achievement motivation, goal setting, mastery experience are positively related to performance with the correlation coefficients .788, .643, .883 respectively. These results provide a foundation for the expected mediating relationship in the study. The correlations of market orientation, entrepreneurial orientation, learning orientation with performance records positive in direction and the coefficients are .675, .754, and .534 respectively while absorptive capacity is positively related to performance with .650 of correlation coefficient. These results are also consistent with the hypothesized moderating relationship of the study. The original correlation output generated by the AMOS is given in the appendix V.

## 6.7 Multivariate Analysis

The multivariate analysis was conducted for testing the multivariate structural relationships specified in the research model of the current study. This study used the structural equation model testing technique with the AMOS. The six step-process specified by Hair *et al.* (2010) was followed for testing the hypothesized relationships in the research model.

## 6.8 Results of the Pilot Test

A pilot test was conducted with 40 respondents to ensure the appropriateness the measurements used in the study. For the data collected in the pilot test, the reliability of the measurements was estimated by calculating the Cronbach's alpha values for all the instruments. The results are shown in the table 6.11 below.

Table 6.11  
*Cronbach's Alpha Values for Measurements in Pilot Test*

Instrument	Cronbach's Alpha
Achievement motivation	.967
Goal setting	.854
Mastery experience	.961
Entrepreneurial orientation	.853
Market orientation	.728
Learning orientation	.871
Entrepreneurial self efficacy	.932
Absorptive capacity	.793
Performance	.792

The table 6.11 shows that the Cronbach's alpha values for all the instruments estimated based on the results of the pilot test are above .7. The alpha values for three variables exceed .9 and the values approximates .9 for the other three variables. These results indicate a satisfactory level of reliability for all the measurements.

## 6.9 Type of Data Used in the Analysis

The metric data were used in this study and the covariance structure was considered as the basis for testing the structural equation models.

## 6.10 Data Screening

The data screening process includes clearing and transforming data into a usable form. In this process, the missing value analysis and the outlier analysis were conducted and the results of both analyses are reported in the following sections.

### 6.10.1 Missing Value Analysis

The summary of the missing value analysis is presented in the table 6.12 below. The observation of the missing data reveals that there are only 18 case wise and variable wise missing data points.

Table 6.12

*Summary of missing value analysis*

Description	Results
Number of case-wise and variable-wise missing value points	18
Percentage of variables with missing values for each case	Less than 5%
Mean difference of non respondents between gender groups, age groups and educational groups	Not significant
Little's MCAR test	$\chi^2 = 127.189$ , DF = 143 p = .824 (not significant)
Type of missing data process	MCAR
Imputation method	AMOS regression imputation

The percentage of variables with missing data for each case and the percentage of cases with missing data for each variable is less than 5 percent. Therefore, the missing values does not make a significant impact on the results of the study (Kline, 2011). Though the extent of the missing data is at a lower level, the randomness was tested by comparing the gender groups of the respondents to identify the pattern of the missing data. The difference of the groups is not significant and found no

evidence for a non-random pattern. Moreover, Little's missing completely at random test was conducted for testing the overall randomness of the missing values and the result is not significant. The results of both tests proved that the missing data process can be considered missing completely at random and makes no impact on the analysis. Since the missing data process is completely at random, any imputation method could be used and the AMOS regression imputation was used in this study (Kline, 2011; Hair *et al.*, 2010).

### 6.10.2 Outlier Analysis

Both multivariate outliers and univariate outliers were detected and remedied by deleting them from the analysis. The total number of outliers is 36. Removing of 36 cases from the analysis makes no effect on the sample size since three hundred fifty observations remains for further analysis satisfying the minimum requirement. The results of detecting outliers are presented in the following sections.

#### 6.10.2.1 Multivariate Outliers

The multivariate outliers were detected with the AMOS outlier analysis. A summary of the results are shown in the table 6.13.

Table 6.13

*Multivariate Outliers*

Multivariate outliers	Mahalanobis distance	Significance	Action taken
347, 337, 345, 157, 211, 198, 323, 268, 117, 88, 314, 346, 182	125.846 – 73.774	p < .001	Deleted

The first column of the table 6.13 shows the case numbers that identified as the multivariate outliers. The second column indicates the highest and the lowest values of the Mahalanobis distance for multivariate outliers. The squared Mahalanobis ( $D^2$ )

shows observations farthest from the centroid. The cases with P value less than .001 was considered as the outliers (Byrne, 2010). Thirteen such extreme values were detected and the mean values of all are extremely different from the other cases. Therefore, all thirteen multivariate outliers were deleted from the analysis. the detailed output of the analysis is given in the appendix VI.

### 6.10.2.2 Univariate Outliers

The univariate outliers were detected by using the box plots. The analysis detected 23 cases with extreme values. The summary of the results of detecting the univariate outliers is given in the table 6.14.

Table 6.14  
*Univariate Outliers*

Variable	Univariate Outliers		
	Cases	No. of outliers	Action
Achievement motivation	265, 334, 350	03	Deleted
Goal setting	356, 262, 316, 240, 339, 312, 367,	07	Deleted
Mastery experience	338, 315, 362	03	Deleted
Entrepreneurial orientation	337, 299, 345, 326,	04	Deleted
Entrepreneurial self efficacy	285, 351, 330	03	Deleted
Absorptive capacity	346, 321, 363	03	Deleted
Total		23	Deleted

The first and the second columns of the table show the variable name and case numbers. The third column of the table indicates the number of outliers for each variable. Total outliers are 23 and the means of all 23 outliers are different from the means of the variable concerned. Therefore, all the cases were excluded from the analysis. Original output for box plots is given in the appendix VII.

## 6.11 Testing Assumptions for Multivariate Analysis

The multivariate techniques demand satisfying of some statistical assumptions for the reliable results and for making statistical inferences. The violations of such assumptions might distort the results of the analysis. Therefore, it is inevitable the testing of the multivariate assumptions in the social research (Hair *et al.*, 2010). In this study, four such assumptions were tested. The four assumptions are the normality, the multicollinearity, the linearity, and the homoscedasticity.

### 6.11.1 Normality

The univariate and the multivariate normality of the variables were measured in this study. The summary of the results is given in the table 6.15 below.

Table 6.15  
*Skewness and Kurtosis Values*

Variable	Items	Skewness	C.R.	Kurtosis	C.R
AM	AM1	-.596	-.455	-.086	-.328
	AM4	.742	-.566	1.250	4.770
GS	GS5	-.047	-.362	-.165	-.631
	GS8	-.230	1.400	-.423	-1.610
ME	ME 10	-.422	-3.220	.029	.109
	ME 12	-9.910	-7.730	1.790	6.830
MO	MO13	-.312	-2.370	-.181	-.692
	MO 16	-.535	-3.950	-.626	-2.390
EO	EO 17	-.525	-.400	.105	.402
	EO 20	-.633	-.593	.737	2.810
LO	LO 21	-.047	-.360	-.063	-.242
	LO 24	-.647	-.494	-.949	-.362
ESE	ESE 25	-.184	-.140	.238	.909
	ESE 28	-.722	-.551	.948	3.620
PER	PER29	-.213	-.162	-.280	1.100
	PER 33	-.706	-.539	-.638	1.680
ACAP	ACAP 34	-.477	-3.640	-.044	-.169
	ACAP 37	-.948	-7.240	1.180	4.530

The first and the second columns of the table show the variable name and the items for which the normality was assessed. The third has displayed the values for the skewness. The all skewness values are less than one indicating univariate normality



for all the items. The negative values indicate that the distributions are somewhat negatively skewed for some variables. The fifth column displays the kurtosis values. All the values are less than the threshold mark, seven indicating the univariate normality (West *et al.*, 1995). The last column displays the lowest and the highest values of the critical ratios of all the variables (see the detailed output given in the appendix VIII). The most important for the multivariate normality is the last column that provides the critical ratio for the relevant kurtosis values. The critical ratios for all the variables remain less than five indicating the multivariate normality for all the variables (Byrne, 2010). Accordingly, the assumptions of the univariate and the multivariate normality are satisfied in this study.

### 6.11.2 Multicollinearity

The multicollinearity among the independent variables was tested by examining the correlation among the independent variables, the tolerance value and the variable inflation factor (VIF). The correlation coefficients among independent variables are given in the table 4.8 and it shows that the highest correlation reported was .677 between mastery experience and entrepreneurial orientation.

Table 6.16  
*Tolerance and VIF Values*

Observed Variable	Tolerance Statistics	Variance Inflation Factor
AM 1, 2, 3, 4	.478 .619 .473 .590	2.09, 1.61, 2.11, 1.69
GS 5, 6, 7, 8	.396, .277, .298, .419	2.52, 3.60, 3.35, 2.38
ME 9, 10, 11, 12	.564, .488, .493, .539	1.77, 2.05, 2.02, 1.85
MO 13, 14, 15, 16	.510, .381, .318, .501	1.96, 2.62, 3.14, 1.99
EO 17, 18, 19, 20	.639, .496, .430, .541	1.56, 2.01, 2.32, 1.84
LO 21, 22, 23, 24	.436, .381, .442, .597	2.29, 2.62, 2.26, 1.67
ESE 25, 26, 27, 28	.391, .326, .388, .358	2.55, 3.06, 2.57, 2.79
PER 29, 30, 31, 32, 33	.408, .373, .401, .373, .388	2.44, 2.68, 2.49, 2.68, 2.57
ACAP 34, 35, 36, 37	.476, .401, .307, .455	2.10, 2.49, 3.25, 2.19

Therefore, the correlation coefficients do not display any sign of the existence of the multicollinearity among independent variables. In addition to the correlations, the existence of the multicollinearity was tested with the tolerance and the variable inflation factor values which are given in the table 6.16. The column 2 and 3 of the table present the tolerance values and the variable inflation factors for all the observed variables shown in the first column. It shows that the tolerance values for all the observed variables are greater than .10. Therefore, the tolerance values show non-existence of multicollinearity. The variable inflation factors for all observed variables are less than 5 indicating non-existence of the multicollinearity among independent variables (Kline 2011). Accordingly, all the three tests proved that the multicollinearity is not a problem for the current study. Appendix IX shows the original output for the tolerance values and the variable inflation factors.

### **6.11.3 Linearity**

The linearity among variables was tested with the scatter plot matrix. It was not practical drawing the scatter plots for all the observed variables and therefore they were depicted between latent constructs. The scatter plot matrix shown in the appendix X shows that the scatter plots between each pair of variables displays a positive dispersion. The pattern of plots indicates a satisfactory level of linearity between each pair of latent constructs and satisfies the linearity assumption for this study.

### **6.11.4 Homoscedasticity**

The homoscedasticity of the variables of this study were tested by calculating the Box's M statistic. The table 6.17 presents the results. The observed independent variables with the dependent variable were used for calculating the Box's M statistic.

Table 6.17  
*The Box's M Statistics*

Interdependent variables	Dependant variable (Performance)	
	Box's M statistic	P value
AM	2.74	.436
GS	1.08	.906
ME	.559	.783
MO	1.58	.666
EO	2.67	.448
LO	3.62	.307
ESE	.402	.940
ACAP	.844	.840

The first and the second columns of the table show the variable names and the values of Box's M statistic respectively for all independent variables. The third column displays the relevant probability values. The results show that none of the M statistics is significant at .005 level of probability indicating a satisfactory level of homoscedasticity for all the variables (Meyers *et al.*, 2006).

### 6.12 Unidimensionality

The measurement model of this study adhered to the rule of unidimensionality of the measures because the following conditions were satisfied in designing the research model.

- (i) The all sets of indicators were linked only to the relevant latent construct (no cross loadings were allowed).
- (ii) No paths were specified with the within-construct error variance or the between construct error variance.
- (iii) The measurement model was designed as a single measurement model including all the variables.

Therefore, the unidimensionality of latent constructs was assured in this study.

### 6.13 Number of Indicators per Latent Construct

The table 6.18 shows the latent constructs and number of item parcels for each construct.

Table 6.18  
*Number of Item Parcels per Latent Construct*

Latent construct	Number of item parcels
AM	04
GS	04
ME	04
MO	04
EO	04
LO	04
ESE	04
PER	05
ACAP	04

The dependent variable performance has five indicators the others have four each. Therefore, this study satisfies the minimum requirement of having more than three indicators per construct as specified by Hair *et al.* (2010).

### 6.14 Overall Model Fit of the Measurement Model

The overall model fit of the measurement model is a prerequisite for further analysis of the structural model because factor analysis is the basis for structural equation modelling. (Kovjanic *et al.*, 2012). The regression weights and the goodness of fit indices were used for assessing the overall model fit. The table 6.19 presents the regression weights and the overall model fit indices generated by the measurement model of the current study (The original AMOS output for the regression weights and the model fit indices are given in the appendix XI). As the table 6.19 shows, the measurement model for this study reports an adequate overall fit with  $\chi^2 = 999.167$ ,  $df = 593$  statistically significant at .001 level. CFI, TLI and IFI exceeds the cut of point .9 indicating values as CFI=.941, TLI = .934, IFI = .942.

Table 6.19  
*Regression Estimates and Model Fit Indices of Measurement Model*

Item Parcels and Latent Variable	Regression Weights
AM1 <--- AM	.747
AM2 <--- AM	.619
AM3<--- AM	.760
AM4 <--- AM	.602
GS5<--- GS	.782
GS6<--- GS	.884
GS7<--- GS	.870
GS8<--- GS	.729
ME9<--- ME	.660
ME10<--- ME	.723
ME11<--- ME	.713
ME12<--- ME	.674
MO13<--- MO	.654
MO14<--- MO	.804
MO15<--- MO	.880
MO16<--- MO	.715
EO17<--- EO	.588
EO18<--- EO	.704
EO19<--- EO	.819
EO20<--- EO	.681
LO21<--- LO	.763
LO22<--- LO	.814
LO23<--- LO	.765
LO24<--- LO	.584
ESE25<--- ESE	.778
ESE26<--- ESE	.835
ESE27<--- ESE	.786
ESE28<--- ESE	.804
PER29<--- PER	.731
PER30<--- PER	.753
PER31<--- PER	.731
PER32<---PER	.770
PER33<--- PER	.755
ACAP34<--- ACAP	.729
ACAP35<--- ACAP	.782
ACAP36<--- ACAP	.873
ACAP37<---ACAP	.703

Model fit indices:  $\chi^2 = 999.167$ ,  $df = 593$ , CFI = .941, RMSEA = .044,  
 TLI = .934, IFI = .942, RMR = .031

RMR is less than .08 (RMR = .031) while RAMSEA is less than .05 (RAMSEA = .044) with CFI value greater than .9 (CFI = .941) indicating a good overall fit for the measurement model. All the regression weights and the model fit indices supported

for a satisfactory level of model fit of the measurement model (see Hair *et al.*, 2010).

The graphical presentation of the output for the measurement model is shown in the figure 6.1. below.

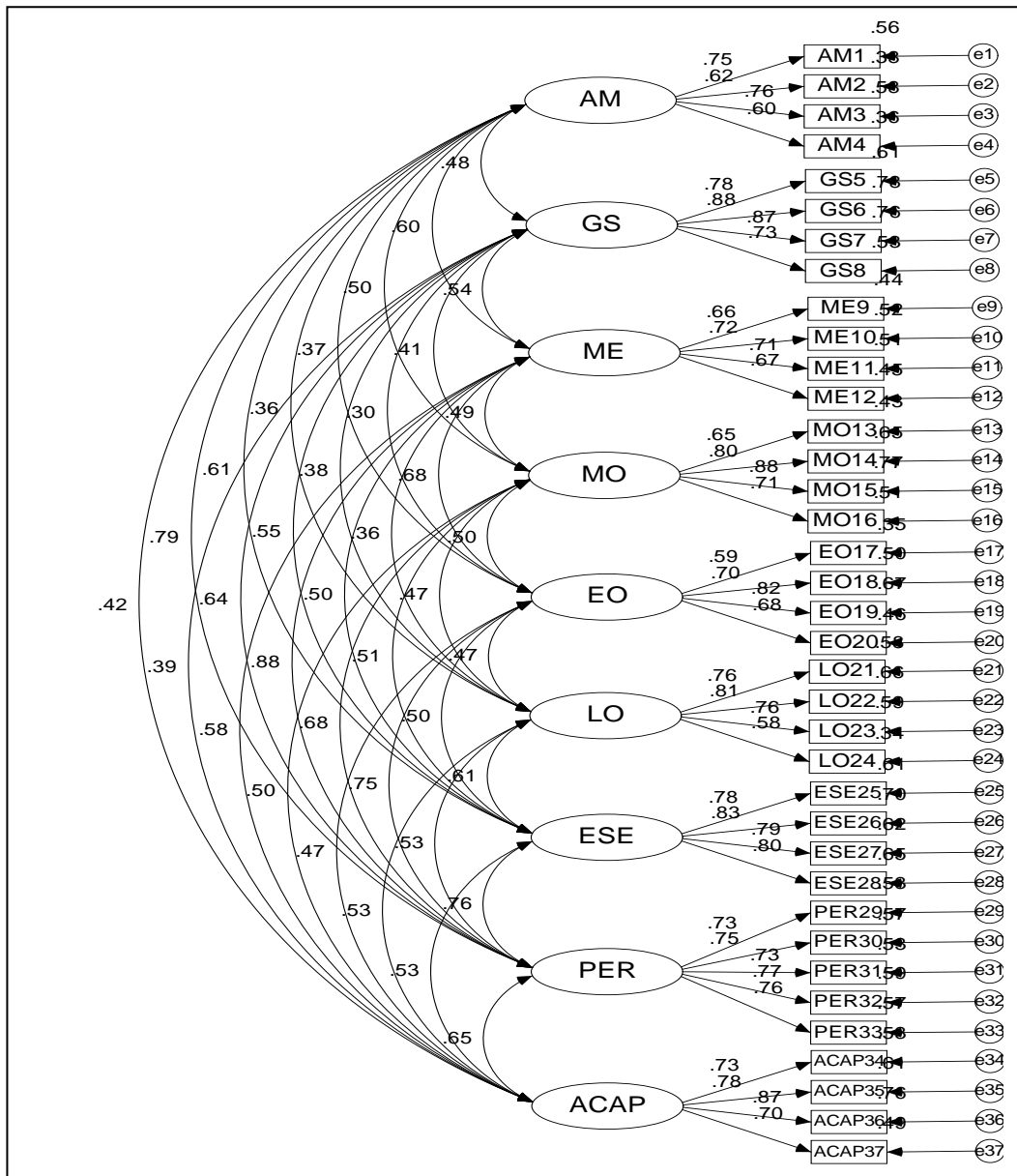


Figure 6.1  
Graphical Representation of Measurement Model

### 6.15 Validity of the Measurement Model

The validity of the measurement model was assessed by testing the convergent validity, the discriminant validity and the nomological validity of the measurement model. The subsequent sections present the results.

### 6.15.1 Convergent Validity

The convergent validity of the measurement model was assessed by calculating the factor loadings, the AVE and CR for all variables. The results of the all three indicators proved that the measurement model used in this study possessed the convergent validity at a satisfactory level permitting the continuation of the analysis.

The results of assessing the convergent validity are shown in the table 6.20.

Table 6.20  
*Standardized factor loadings, AVE and CR Values*

Item	AM	GS	ME	MO	EO	LO	ESE	PER	ACAP
AM1	.747								
AM2	.619								
AM3	.760								
AM4	.602								
GS5		.782							
GS6		.884							
GS7		.870							
GS8		.729							
ME9			.660						
ME10			.723						
ME11			.713						
ME12			.674						
MO13				.654					
MO14				.804					
MO15				.880					
MO16				.715					
EO17					.588				
EO18					.704				
EO19					.819				
EO20					.681				
LO21						.763			
LO22						.814			
LO23						.765			
LO24						.584			
ESE25							.777		
ESE26							.833		
ESE27							.788		
ESE28							.804		
PER29								.731	
PER30								.754	
PER31								.731	
PER32								.770	
PER33								.755	
ACAP34									.729
ACAP35									.782
ACAP36									.873
ACAP37									.703
AVE	47.3%	67%	48%	59%	50%	54%	64%	56%	60%
CR	.84	.93	.85	.86	.86	.83	.93	.91	.90

The table 6.20 presents the values of the standardized factor loadings, the average variance extracted, and the construct reliability for all the variables (see appendix XI for original AMOS output). The columns of the table indicate the factor loadings for all observed variables. The most of the factor loadings lies above the cut off value of .7 that indicates ideal convergent validity of measurements. The other few loadings (AM 4, ME 9, ME 12, MO 13, EO 20) lies between .6 and .7 that indicate a good validity level. There are only two loadings (EO 17 =.588, LO 24 =.584) less than six but the values approximate .6. The rest of the factor loadings of entrepreneurial orientation and learning orientation remains well above .6 indicating no effect on the overall validity of the variable.

The second row of the table reports the average variance extracted for all variables. The average variance extracted percentage values for seven variables are greater than 50 percent indicating a good reliability level. The value for achievement motivation (47.3%) and mastery experience (48%) are less than 50 percent but approximate the cut-off point. Accordingly, the average variance extracted values support for the satisfactory level of the convergent validity of the measurement model.

The third row of the table displays the construct reliability values for the latent constructs. The five variables exceed .8 and the four variables exceed even .9. All the values are well above the cut of value of .7 and therefore the measurement model of this study has shown a very good level of convergent validity in terms of the construct reliability values.



### 6.15.2 Discriminant Validity

The discriminant validity of measures was assessed in this study by using the Chi-square difference test and by comparing the average variance extracted values of variables with the squared correlations. The results of both tests indicate that the discriminant validity is available in the measurement model of this study and it has no effect on the findings. The Chi-square difference test between the measurement model for the single variable and the measurement model of two combined variables was conducted. The combined models were formed by pairing achievement motivation with goal setting, mastery experience with market orientation, entrepreneurial orientation with learning orientation, self-efficacy with performance and absorptive capacity with achievement motivation. Then the difference in the Chi-square values and degree of freedoms of the combined models were compared with those of the single models. The results are shown in the table 6.21 and the graphical outputs for the combined and the single models are given in appendix XII.

Table 6.21  
*Results of Chi Square Difference Test for Discriminant Validity*

Model	Combined models		Single models		$\Delta \chi$	$\Delta D/F$
	$\chi$	D/F	$\chi$	D/F		
AM/GS	309.87	20				
AM			3.98	2	305.89	18
GS			2.85	2	307.02	18
ME/MO	290.10	20				
ME			2.00	2	288.10	18
MO			1.10	2	289.00	18
EO/LO	300.60	20				
EO			1.30	2	299.30	18
LO			1.30	2	299.30	18
ESE/PER	244.23	27				
ESE			2.12	2	242.11	18
PER			30.6	5	213.63	15
ACAP/AM	322.61	20				
ACAP			9.60	2	313.01	18
AM			3.96	2	318.65	18

The first column of the table shows the single and the combined models for which the Chi-square difference test was conducted. The second and third columns indicate the Chi-square values and the degree of freedom (D/F) for combined models and single models respectively. The last two columns display the Chi-square difference and the difference for the D/F for the models. The results show that the Chi-square difference between all the combined models and the single models are statistically significant at .01 level indicating very good discriminant validity in all the measurements. As another rigorous measurement of the discriminant validity, the average variance extracted was compared with the squared correlations. For instance, the average variance extracted value of the variable achievement motivation was compared with squared correlations between achievement motivation and all the other variables. The results of the test are shown in the table 6.22.

Table 6.22  
*Results of Comparison of AVE Values and Squared Correlations*

	AM	GS	ME	MO	EO	LO	ESE	PER	ACAP
AM	<b>.473</b>								
GS	.166	<b>.67</b>							
ME	.216	.221	<b>.48</b>						
MO	.165	.149	.139	<b>.59</b>					
EO	.091	.066	.280	.165	<b>.50</b>				
LO	.080	.342	.090	.175	.139	<b>.54</b>			
ESE	.264	.506	.182	.237	.178	.271	<b>.64</b>		
PER	.418	.508	.525	.344	.401	.225	.462	<b>.56</b>	
ACAP	.142	.357	.237	.176	.157	.233	.233	.334	<b>.60</b>

The diagonal values of the table indicate the average variance extracted values for relevant variables. The values below the diagonal figures are the squared correlations. It shows that all the inter-variable squared correlations are less than the relevant average variance extracted values. Therefore, the result of comparison of the

average variance extracted values and the squared correlations supported the discriminant validity of the measurement model of the current study.

### 6.15.3 Nomological Validity

The nomological validity of the measurement model was tested by observing the correlations among constructs. All the correlations among constructs in the measurement model are at the expected direction (positive) and statistically significant (see table 4.8). Therefore, the nomological validity of the constructs is assured in this study.

### 6.16 Reliability of Measures

The reliability of the measures of all constructs was assessed by using the Cronbach's alpha reliability coefficient. According to George and Mallery (2003), the alpha coefficient greater than .7 indicates an acceptable level of reliability and the value greater than .8 shows a good reliability level. The table 6.23 shows the results of the reliability test. (see appendix XIII for the original output for reliability analysis).

Table 6.23  
*Cronbach's Alpha Reliability Values*

Instrument	Cronbach's Alpha	George and Mallery (2003)
AM	.774	Acceptable
GS	.886	Good
ME	.787	Acceptable
EO	.785	Acceptable
MO	.847	Good
LO	.809	Good
ESE	.926	Good
ACAP	.850	Good
PER	.860	Good

As the table 6.23 indicates, the alpha coefficients for achievement motivation, mastery experience, and entrepreneurial orientation approximate .8 which has shown an acceptable level of reliability. For goal setting, market orientation, absorptive capacity and performance, the values approximate to a good reliability level of .9. For entrepreneurial self-efficacy, the coefficient is over .9 and shows a very good reliability level (George & Mallery, 2003). In sum, it can be concluded that all the measures used in this study for the data collection are reliable instruments.

### **6.17 Assessing the Structural Model**

Since the validity and the overall fit of the measurement model were confirmed in the previous step, the subsequent step of assessing the structural model was permitted. Testing of the structural model with the hypothesized structural paths was the basis for testing the hypotheses specified in the study. In this process, the overall fit and the validity of the structural paths of the direct effect model, the mediating effect model and the moderating effects models were assessed. The following sections present the results of the analysis.

#### **6.17.1 Overall Model Fit of the Direct Effect Model**

The model with the direct effects of cognitive factors and strategic orientation on performance has proven a good overall model fit reporting  $\chi^2=589.640$ ,  $df = 356$ ,  $CMIN/df = 1.656$ ,  $TLI=.947$ ,  $CFI=.954$ ,  $IFI= .954$ ,  $RMR= 033$ , and  $RMSEA=.043$ . The all overall model-fit indices indicate that the observed data for the direct relationships fit well with the theory and the model could be utilized for testing the direct-effect hypotheses established in this study. The AMOS output for the model fit indices of the direct effect model is given in the appendix XIV.

### 6.17.1.1 Comparing with the Measurement Model

For further assessment of the goodness of fit of the direct effect structural model, the model was compared with the measurement model. The table 6.24 shows the results of the comparison of the two models.

Table 6.24

*Comparison of Model Fit between Measurement Model and Direct Structural Model*

	$\chi^2$	df	CMIN/df	CFI	RMSEA
Measurement model	999.167	593	1.685	.941	.044
Structural model with direct effects	589.640	356	1.656	.954	.043
$\Delta$	409.527	237	0.029	.013	.001

As the table 6.24 shows, all the model fit indices of the direct effect structural model has improved compared to the measurement model. The Chi-square ( $\chi^2$ ) has improved by 409.527 in the direct effect model. The Chi-square difference test shows that  $\chi^2$  of the measurement model is significantly different from that of the direct structural model at .005 significant level. In the direct effect model, df and CMIN/df have been reduced by 237 and 0.029 respectively compared to the measurement model. CFI has improved by .013 while RMSEA has slightly reduced from .044 to .043. The results of this comparison indicate that the direct effect structural model has achieved a better overall model fit than the measurement model. It provides an evidence for good fit of the direct structural model.

### 6.17.1.2 Comparing with Alternative Nested Model

The direct effect model was compared with the alternative nested model for further verification of the overall fit of the model. A nested model with similar complexity was constructed by removing the direct path from achievement motivation to performance. (see appendix XVI for the graphical presentation of the alternative

nested model). The table 6.25 below shows the results of the comparison of the direct effect model with the alternative model.

Table 6.25

*Comparison of Model-Fit between Nested Model and Direct Structural Model*

Model	$\chi^2$	df	CMIN/df	CFI	RMSEA
Nested model	626.797	357	1.756	.946	.047
Structural model with direct effects	589.640	356	1.656	.954	.043
$\Delta$	37.157	01	0.1	.008	.004

As the table shows, the  $\chi^2$  value for the nested model has increased by 37.157 compared to the direct effect model ( $\Delta\chi^2 = 626.797 - 589.640$ ). CMIN/df has increased from 1.656 to 1.756 in the nested model. CFI has decreased by .008 and RMSEA has increased by .004. All these information provide the evidences for better fit of the direct effect model than the alternative nested model.

### 6.17.2 Evaluating Structural Paths of the Direct Effect Model

The direct structural paths specified in the structural model were estimated. Based on the estimated direct effect paths, the direct hypotheses of the model were tested. The research model of this study hypothesized six direct positive relationships between achievement motivation, goal setting, mastery experience, market orientation, entrepreneurial orientation, learning orientation, and performance. The output for the direct effect shows that five direct effect relationships out of six are statistically significant and at the expected direction. The graphical output for the direct effect model is shown in the figure 6.2. The output for the direct effect model shows that all the hypothesized direct structural paths have proved the expected direction with the statistical significance. The original output of the standardized regression weights for the direct effect model is given in the appendix XIV.

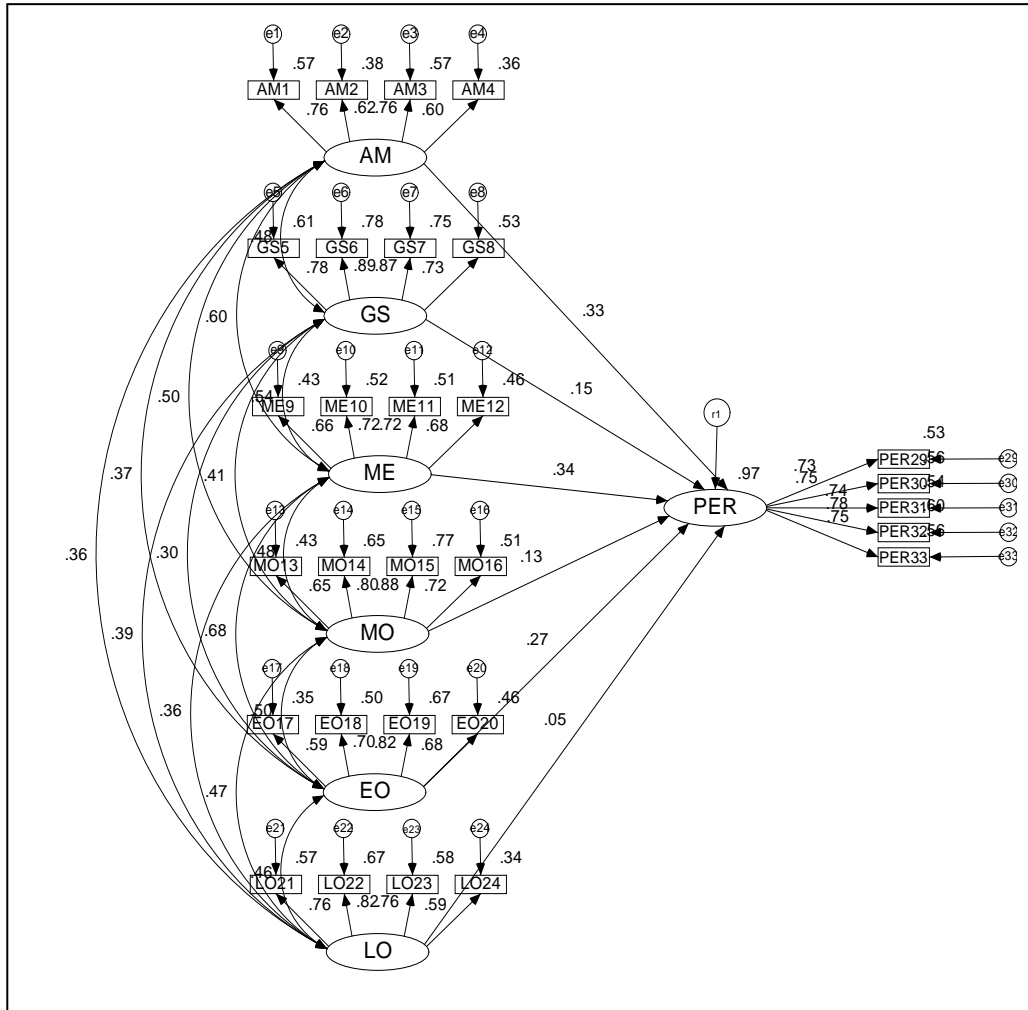


Figure 6.2  
Graphical output of Testing Direct Effects

The table 6.26 shows the direct relationships, the regression weights, the standard error, the critical ratio and the significance.

Table 6.26  
Standardized Regression Weights of Direct Effect Model

Relationship	Estimate	S.E	CR	P
AM <---> PER	.331	.046	6.22	.000
GS <---> PER	.148	.036	3.52	.000
ME <---> PER	.340	.078	4.61	.000
MO <---> PER	.127	.037	2.99	.003
EO <---> PER	.270	.071	4.35	.000
LO <---> PER	.052	.034	1.31	.190

The regression weights for all the relationships are positive values. The highest effect shows between mastery experience and performance while the lowest lies between learning orientation and performance. The second highest value lies between achievement motivation and performance. All the values except the weight for learning orientation-performance relationship are statistically significant at .005 level. This result indicates that five direct structural paths out of six have been proved the expected direction and the statistical significance.

### **6.17.3 Testing Direct-Effect Hypotheses**

The satisfactory level of overall model fit of the direct effect model provides the room for testing the direct effect hypotheses specified in the research model. To prove the direct effect hypotheses, two conditions should be met; (i)  $\beta > 0$  and (ii)  $p < .05$ . Based on the results of direct effect model, the following hypotheses was tested.

H<sub>1a</sub>: There is a positive and significant relationship between achievement motivation and firm performance.

For the relationship specified in H<sub>1a</sub>,  $\beta = .331$  and  $CR = 6.22$  ( $p < .001$ ) therefore, the hypothesis, H<sub>1a</sub> meets above two conditions and it can be accepted.

H<sub>1b</sub>: there is a positive and significant relationship between personal goal setting and firm performance.

For the relationship specified in H<sub>1b</sub>,  $\beta = .148$  and  $CR = 3.52$  ( $p < .001$ ) therefore, the hypothesis, H<sub>1b</sub> meets above two conditions and it can be accepted.

H<sub>1c</sub>: there is a positive and significant relationship between mastery experience and firm performance.

For the relationship specified in H<sub>1c</sub>,  $\beta = .340$  and  $CR = 4.61$  ( $p < .001$ ) therefore, the hypothesis, H<sub>1c</sub> meets both conditions and it can be accepted.



H<sub>3a</sub>: there is a positive and significant relationship between entrepreneurial orientation and firm performance.

For the relationship specified in H<sub>3a</sub>,  $\beta=.270$  and  $CR=4.35$ ,  $p<.001$  therefore, the hypothesis, H<sub>3a</sub> meets both conditions and it can be accepted.

H<sub>3b</sub>: there is a positive and significant relationship between market orientation and firm performance.

For the relationship specified in H<sub>3b</sub>,  $\beta=.127$  and  $CR=2.99$  ( $p<.005$ ) therefore, the hypothesis, H<sub>3b</sub> meets both conditions and it can be accepted.

H<sub>3c</sub> : there is a positive and significant relationship between learning orientation and firm performance.

For the relationship specified in H<sub>3c</sub>,  $\beta=.052$  and  $CR= 1.31$  ( $p>.05$ ) therefore, the hypothesis, H<sub>3c</sub> meets only one condition and it was rejected.

Table 6.27  
*Summary of Testing Direct Effect Hypotheses*

Research question	Hypothesis	$\beta$	P	Accepted/ Rejected
Are there significant relationship between cognitive factors and firm performance	H <sub>1a</sub> There is a positive significant relationship between AM and PER	.331	.001	Accepted
	H <sub>1b</sub> There is a positive significant relationship between GS and PER	.148	.001	Accepted
	H <sub>1c</sub> there is a positive significant relationship between ME and PER	.340	.001	Accepted
Are there significant relationship between strategic orientation and firm performance	H <sub>3a</sub> : there is a positive relationship between EO and PER	.270	.001	Accepted
	H <sub>3b</sub> : there is a positive relationship between MO and PER	.127	.005	Accepted
	H <sub>3c</sub> : there is a positive relationship between LO and PER	.052	.001	Rejected

The results of testing the direct effect hypotheses indicate that the three cognitive factors and the two dimensions of strategic orientation are positively and significantly related to SME performance. Consequently, five direct effect hypotheses were accepted and one was rejected. The table 6.27 presents a summary of testing the direct effect hypotheses of the current study.

### **6.18 Assessing the Structural Model with Mediating Effects**

The structural model of this study included three mediating relationships. It has been hypothesized that self-efficacy mediates the relationship between achievement motivation, goal setting, mastery experience, and performance. The following sections of the thesis present the results of assessing the overall model fit, the comparison of mediating model with the alternative nested models, the estimation of mediating paths, the decomposition of direct, indirect and total effects, and the testing of mediating hypotheses.

#### **6.18.1 Overall Model Fit of Mediating Model**

The structural model with the mediation effect of self-efficacy on performance has achieved an adequate model fit reporting  $\chi^2 = 852.862$ ,  $df. = 470$ ,  $CMIN/df = 1.815$ ,  $GFI = .877$ ,  $CFI = .937$ ,  $IFI = .938$ ,  $TLI = .929$ ,  $RMR = .039$  and  $RMSEA = .048$ . All indices have indicated a good fit for the mediating model. It shows that the model is appropriate for testing the mediating hypotheses established in the study. The output for the model fit indices of the mediating model is given in the appendix XV.

##### **6.18.1.1 Comparing with Measurement Model**

The mediating model was compared with the measurement model for further assessment of the overall fit of the mediating model. The results of the comparison are shown in the table 6.28.

Table 6.28

*Comparison of Model Fit between Measurement Model and Mediating Structural Model*

Model	$\chi^2$	df	CMIN/df	CFI	RAMSEA
Measurement model	999.167	593	1.685	.941	.044
Structural model with mediating effects	852.862	470	1.815	.937	.048
$\Delta$	146.305	69	0.13	.004	.004

As the table 6.28 shows, the Chi-square difference test shows that  $\chi^2$  of mediating model has significantly improved ( $\Delta\chi^2 = 146.305$ ,  $\Delta$  df = 69) compared to the measurement model. CFI and RMSEA remain almost same with a slight difference. This result indicated that the mediating structural model has achieved a better fit than the measurement model providing a good evidence for the overall fit of the model. the output for the model fit indices of the measurement model is given in the appendix XI.

**6.18.1.2 Comparing with Alternative Nested Model**

In addition to the comparison with the measurement model, the mediating model was compared with the alternative nested model for further verification of the model fit. The nested model was constructed by removing the structural path from achievement motivation to self-efficacy and then it was similar to the mediating model in terms of the complexity. The results of the comparison is given in the table 6.29 and the graphical output of the nested alternative model is given in the appendix XVI.

Table 6.29

*Comparison of Model fit between Alternative Nested Model and Mediating Structural Model*

Type of the model	$\chi^2$	df	CMIN/df	CFI	RAMSEA
Alternative nested model	882.457	471	1.874	.932	.050
Structural model with mediating effects	852.862	470	1.815	.937	.048
$\Delta$	29.595	01	.059	.001	.002

According to the table 6.29, it shows that the mediating model has achieved the better fit than the alternative nested model. The results of the Chi-square difference test indicate that the Chi-square difference between the mediating and the alternative nested model is significant at .001 level ( $\Delta\chi^2 = 29.595, \Delta df = 01$ ). Moreover, CFI has reduced from .937 to .932 in the nested model and RAMSEA has increased from .048 to .050. It indicates that the best model is the current mediating model compared to the alternative nested models. (See the appendix XVII for the model fit indices of the nested model)

### 6.18.2 Evaluating Mediating Paths of Structural Model

The present study hypothesized that self-efficacy has a mediating effect on the relationship between cognitive factors and performance. The structural model with these mediating effects was estimated and the graphical output is given in figure 6.3.

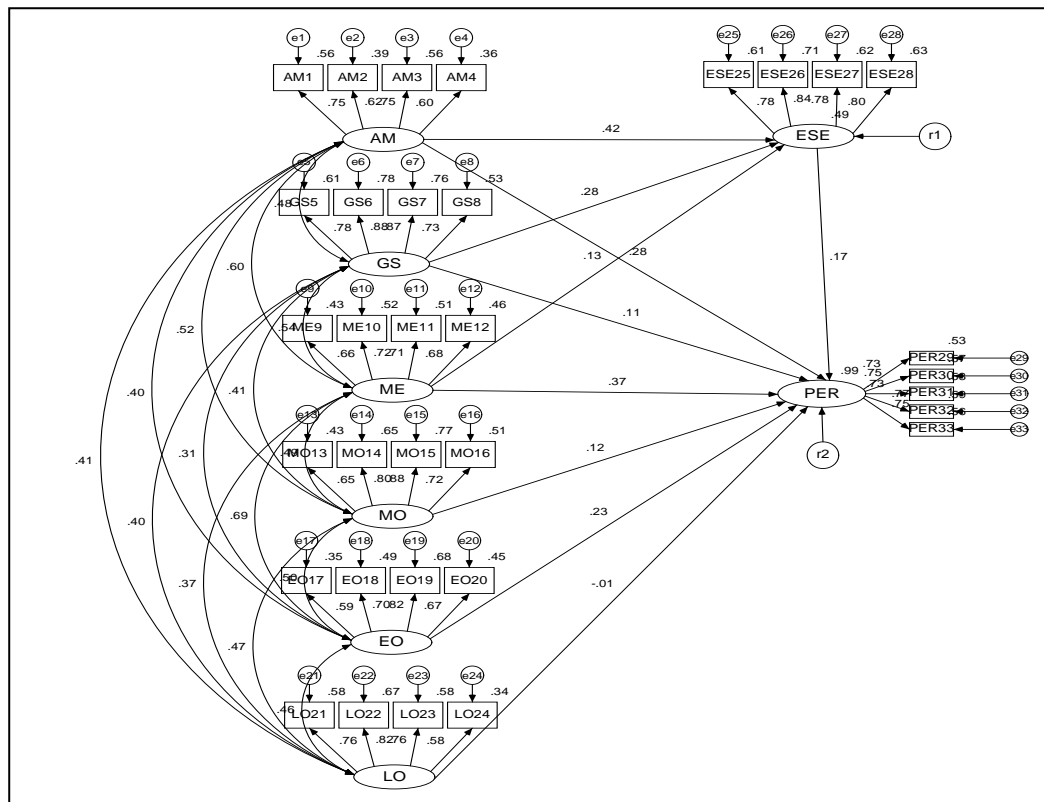


Figure 6.3  
Graphical Output for Testing Structural Model with Mediating Effects

The figure 6.3 shows the graphical output for the estimation of both direct and mediating effects together in a single model. The output in the figure 6.2 has estimated only the direct paths. By comparing the two outputs, the mediating effects were assessed (see the appendices XIV and XV). The table 6.30 below shows the regression weights for the direct effects.

Table 6.30  
*Estimated Standardized Regression Weights for direct effects*

Relationship	Estimate	S.E.	C.R.	P
AM <---> PER	.331	.046	6.22	.000
GS <---> PER	.148	.036	3.52	.000
ME <---> PER	.340	.078	4.61	.000

The table 6.30 shows the estimated regression weights for the direct paths between achievement motivation, goal setting, mastery experience, and SME performance. Achievement motivation has a positive and significant direct effect on performance ( $\beta = .331$ ,  $P = .000$ ). Goal setting shows a positive and significant effect on performance ( $\beta = .148$ ,  $P = .000$ ). Mastery experience has a positive, direct effect on performance ( $\beta = .340$ ,  $P = .000$ ). The table 6.31 below presents the parameter estimation after introducing the mediating effects into the structural model.

Table 6.31  
*Estimated Standardized Regression Weights for Mediating Effects*

Relationship	Estimate	S.E.	C.R.	P
AM <---> PER	.218	.049	5.021	.000
GS <---> PER	.106	.037	2.521	.012
ME <---> PER	.273	.077	5.128	.000
AM <---> ESE	.422	.061	5.503	.000
GS <---> ESE	.285	.050	4.495	.000
ME <---> ESE	.126	.072	1.687	.002
ESE <---> PER	.167	.050	3.680	.000

The regression values given in the table indicate that the relationship between self-efficacy and performance remains positive and significant. After introducing the mediating effect of self-efficacy into the model, the  $\beta$  value between achievement motivation and performance has reduced from .331 to .218 but it remains significant. The  $\beta$  value between goal setting and performance has reduced from .148 to .106 and the relationship has become insignificant. The regression weight between mastery experience and performance has reduced from .340 to .273 while the relationships remain statistically significant. Accordingly, the relationship between achievement motivation, mastery experience, and performance remains significant and the relationship between goal setting and performance has become insignificant at .01 levels after introducing the mediating effects of self-efficacy into the model. Moreover, the relationships between achievement motivation, goal setting, mastery experience and self-efficacy remain statistically significant in the mediating model.

#### 6.18.2.1 Decomposition of Effects

To decide the magnitude of the mediating effects of achievement motivation, goal setting, and mastery experience on performance, the effects were decomposed into the total, the direct, and the indirect effects.

Table 6.32  
*Total, Direct and Indirect Effects of AM, GS and ME on Performance*

Standardized Total Effects			
	AM	GS	ME
PER	.351	.153	.294
Standardized Direct Effects			
	AM	GS	ME
PER	.281	.106	.273
Standardized Indirect Effects			
	AM	GS	ME
PER	.070	.041	.021

The table 6.32 shows the results of the decomposed effects. (The original AMOS output for the decomposed effects are given in the appendix XVIII). As the table indicates, achievement motivation shows a significant direct effect ( $\beta=.281$ ,  $p<.05$ ), indirect effect ( $\beta=.070$ ,  $p<.05$ ), and total effect ( $\beta=.351$ ,  $p<.05$ ) on SME performance. The direct effect of goal setting on performance records .106 but not statistically significant at .005 level. The indirect effect and the total effects between goal setting and performance recorded as  $\beta=.041$  ( $p<.05$ ) and  $\beta=.153$ , ( $p<.05$ ) respectively. Mastery experience reports the direct effect of  $\beta=.373$  ( $p<.05$ ), the indirect effect of  $\beta=.021$ ( $p<.05$ ), and the total effect of  $\beta=.394$ , ( $p<.05$ ) on SME performance.

### **6.18.3 Testing Hypotheses on Mediating Effects**

The present model hypothesized three mediating effects. It was hypothesized that self-efficacy mediates the relationship between achievement motivation, goal setting, mastery experience, and SME performance. These mediating hypotheses were tested with the results of direct effect model and the model with mediating effects. The following section provides the results of testing the hypotheses.

The first mediating hypothesis, ( $H_{2a}$ ) was self efficacy mediates the relationship between achievement motivation and firm performance.

As per the direct effect model, achievement motivation reports ( $\beta=.331$ ,  $p<.005$ ) a direct effect on performance. After introducing the mediating effect of self-efficacy into the model, the direct effect was reduced to  $\beta=.281$  and remains the relationship statistically significant. The decomposition of effects shows the direct and the indirect effects were significant (table 6.32). These results show that self-efficacy partially mediates the relationship between achievement motivation and performance and the first hypothesis can be accepted.

The second mediating hypothesis, (H<sub>2b</sub>) was self efficacy mediates the relationship between goal setting and SME performanc.

The results of the direct effect model shows that achievement motivation has statistically significant direct effect on performance ( $\beta=.148$ ,  $p<.005$ ). With the introduction of self-efficacy into the model as a mediator, the direct effect has reduced to .106 and has become statistically insignificant. Accordingly, self-efficacy fully mediates the relationship between goal setting and SME performance and the second hypothesis can be accepted.

The third mediating hypothesis, (H<sub>2c</sub>) was self efficacy mediates the relationship between mastery experience and SME performance”.

The direct effect model reports a significant positive relationship between mastery experience and performance ( $\beta=.340$ ,  $p<.005$ ). This direct effect has reduced to  $\beta=.273$  and remains the relationship statistically significant after introducing self-efficacy. The decomposition of effects also shows significance in the direct the indirect and the total effects. These results support the partial mediation of the third hypothesis and can be concluded that self-efficacy partially mediates the relationship between mastery experience and performance. The third mediating hypotheses can be accepted and the table 6.33 presents a summary the results.

Table 6.33  
*Summary of testing mediating effect hypotheses*

Research question	Hypotheses	Type of mediation	Accepted/ rejected
Does self efficacy mediate the relationship between cognitive factors and performance	H <sub>2a</sub> ESE mediates the relationship between AM and PER.	Partial mediation	Accepted
	H <sub>2b</sub> ESE mediates the relationship between GS and PER.	Full mediation	Accepted
	H <sub>2c</sub> “ESE mediates the relationship between ME and PER.	Partial mediation	Accepted



## 6.19 Assessing the Structural Model with Moderating Effects

This study tested three moderating hypotheses specified in the research model. It was hypothesized that the relationship between market orientation, entrepreneurial orientation, learning orientation, and performance are moderated by absorptive capacity. The multi group analysis was used to test these hypotheses. Initially, the variable, absorptive capacity was divided into two groups. Then the measurement invariance between the two groups was estimated. Next, the multi group analysis was performed. Finally, the moderating hypotheses were tested. The results of these steps are given in the following sections.

### 6.19.1 Forming Multi Groups

The multi group analysis needs converting the moderating variable, absorptive capacity into a dichotomous variable. Therefore, as the initial step, the sample was divided into two groups as the low absorptive capacity and the higher absorptive capacity groups. The results of dividing into the groups are shown in the table 6.34 below.

Table 6.34  
*Low Absorptive Capacity and High Absorptive Capacity Groups*

Grouping criteria	Group	Number of Respondents
Mean value of ACAP <3	Low ACAP	195
Mean value of ACAP >3	High ACAP	155

As per the table, the respondents were divided into two groups based on the mean values of absorptive capacity. The respondents with the mean value for absorptive capacity less than 3 were grouped as the low absorptive capacity group and the mean value higher than 3 were considered as the high absorptive capacity group. The low

absorptive capacity group and the high absorptive capacity group included 195 and 155 respondents respectively.

### 6.19.2 Measurement Invariance between Groups

the measurement invariance between the two groups were assessed for testing the suitability of the two groups for the multi group analysis. For assessing the measurement invariance, the measurement model was tested as a configural invariance model separately in the two groups and compared the model fit indices (Schoot, Lugtig, & Hox, 2010; Milfont & Fischer, 2010). The results of the test are given in the table 6.35.

Table 6.35  
*Test of Measurement Invariance*

Group	Model	$\chi^2$	DF	CMIN/DF	CFI	RMAEA
Low ACAP	Measurement	1038.584	593	1.751	.880	.062
Higher ACAP	Measurement	1037.222	593	1.749	.878	.063
Difference	-	1.362	00	.002	.002	.001

According to the information in the table, the configural invariance model did not show any difference between the two groups in terms of the overall model fit. The overall fit indices such as  $\chi^2$ , CMIN/DF, CFI and RMSEA have no significant difference between two groups. Accordingly, it has proven that the same measurement model is valid across both groups and the measurement invariance exists in two groups. Therefore, the results have permitted to continue the multi group analysis for testing the moderating effects specified in the research model.

### 6.19.3 Multi Group Analysis

The multi group analysis for testing the moderating effects was performed in few steps. Firstly, the configural model (baseline model) with free parameter estimates

was tested across the low absorptive capacity and the high absorptive capacity groups. Secondly, the model with constrained parameters was tested across the two groups and the results were compared. To compare the results, the Chi-square difference test was conducted. Then, the parameter estimates for the moderating relationships across the two groups were examined. Thirdly, the squared multiple correlation values for the moderating relationships across the two groups were estimated. The results of these steps are given in the following sections.

### 6.19.3.1 Baseline Model across Two Groups

The configural model with direct effects was tested across the low absorptive capacity group and the higher absorptive capacity group. Then the overall model fit was assessed.

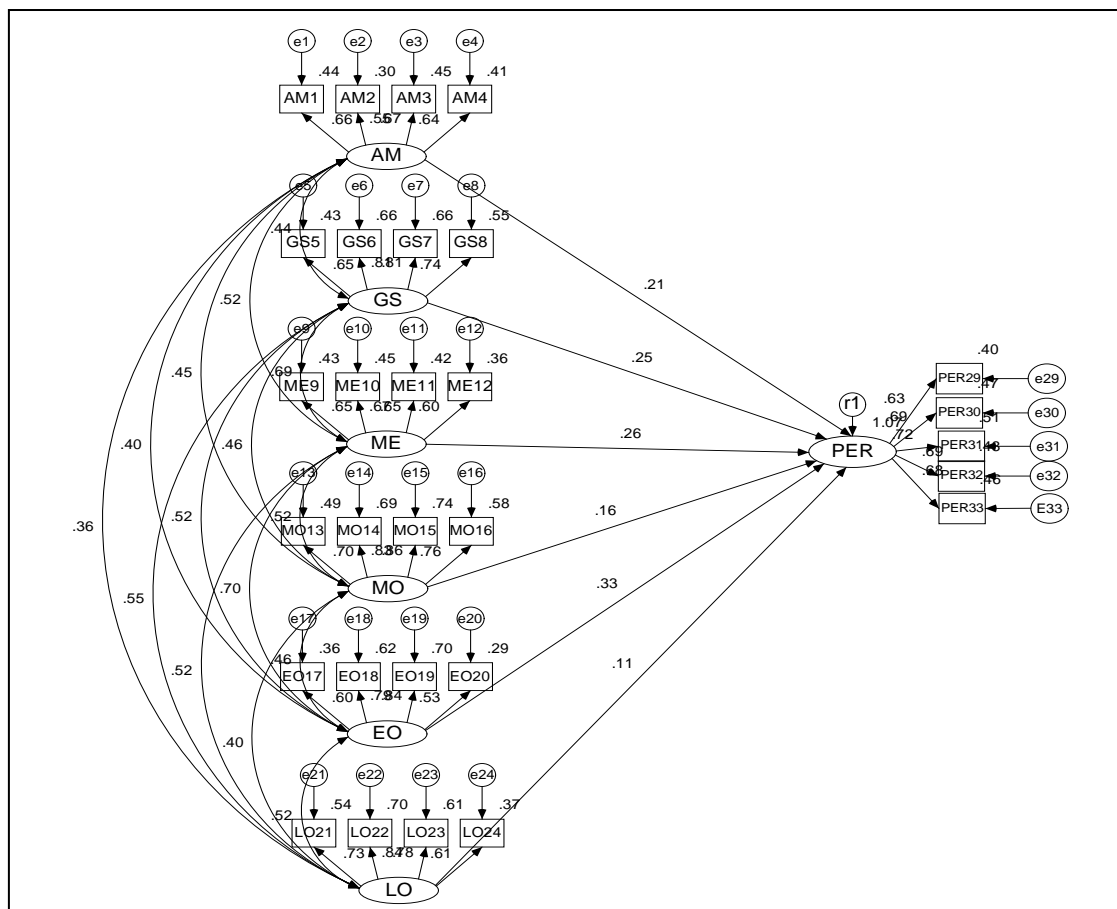


Figure 6.4  
Graphical Output of Baseline Model across Two Groups

The graphical output of the baseline model tested for multi group analysis is shown in the figure 6.4. The figure shows that the baseline model well fit across both the low absorptive capacity group and the high absorptive capacity group with  $\chi^2=1128.254$  and  $df = 714$ . All overall model fit indices records a good model fit (CMIN/df=1.580, CFI=.909, and RMSEA=.041). It also shows that all the standardized estimated parameters are significant for the relationships between market orientation, entrepreneurial orientation, learning orientation and performance. The table 6.37 displays estimated parameters for the both groups.

#### **6.19.3.2 Constrained Model across Two Groups**

As the second step of the multi group analysis, the constrained models were tested across the low and the high absorptive capacity groups. The graphical outputs of the two constrained models are shown in the figures 6.5 and 6.6. The figure 6.5 shows the constrained model tested for the low absorptive capacity group. The direct paths from achievement motivation, goal setting, and mastery experience to performance were constrained to fixed values. The figure 6.6 shows the graphical output for the constrained model with the fixed parameters for the direct paths from achievement motivation, goal setting, and mastery experience to performance and estimated for the high absorptive capacity group.

These two constrained models with the structural parameters on market orientation, entrepreneurial orientation, learning orientation, and performance constrained to fixed values has also reported a good model fit with  $\chi^2=1155.234$ , and  $df=719$ . The overall fit indices too have reported a good model fit (CMIN/df=1.607, CFI=.904, and RMSEA=.042). The output of the model fit indices for the configural model and the constrained model is given in the appendix XIX.

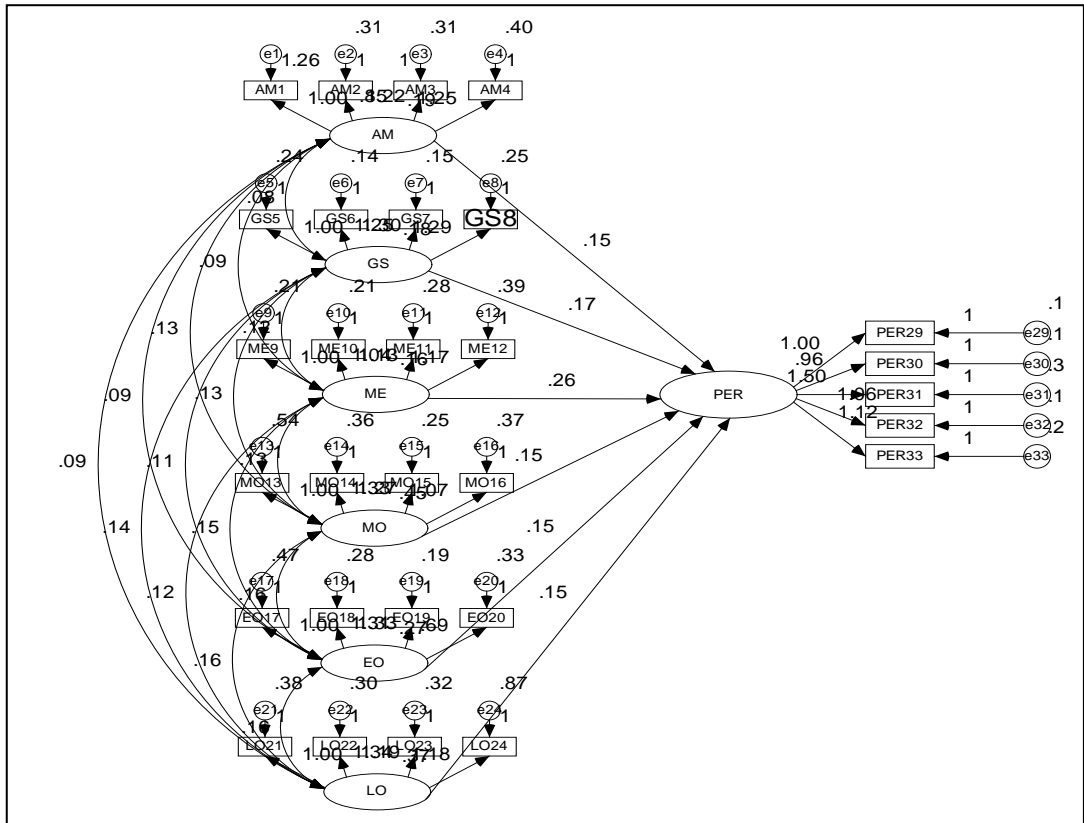


Figure 6.5  
Graphical Output of Constrained Model for low ACAP Group

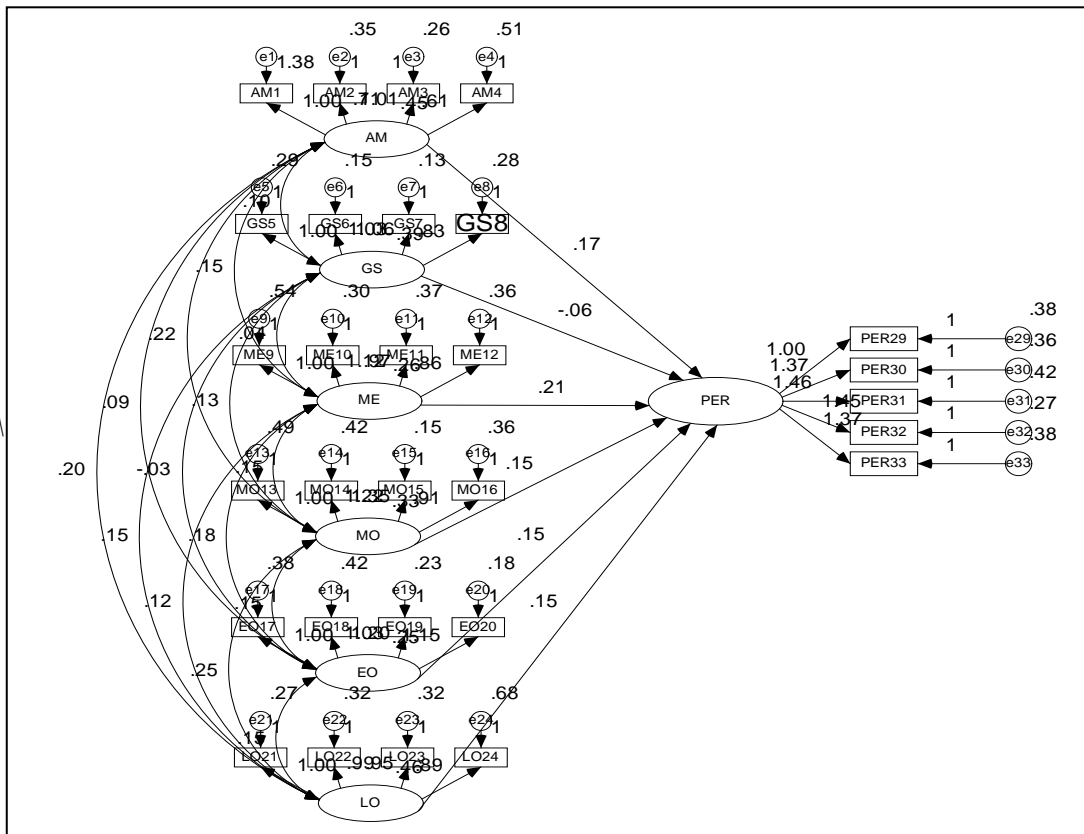


Figure 6.6  
Graphical Output of Constrained Model for High ACAP Group

### 6.19.3.3 Chi-square Difference Test

The results of the comparison of the  $\chi^2$  values and the other model fit indices are given in the table 6.36 below.

Table 6.36  
*Results of Multi Group Analysis*

Model	$\chi^2$	df	$\chi/df$	CFI	RMSEA
Configural model with all parameters free across groups	1128.254	714	1.580	.909	.041
Model with constrained parameters across two groups	1155.234	719	1.607	.904	.042
Difference	26.98	05			

The table 6.36 indicates that the Chi-square value has increased for the constrained model ( $\Delta\chi^2 = 26.98$  and  $\Delta df = 5$ ). The difference of the two models is significant at .005. The result indicates the inequality of parameters in the structural paths across the low and the high absorptive capacity groups. This difference provides a clear evidence for the existence of the moderating effect of absorptive capacity on the relationship between market orientation, entrepreneurial orientation, learning orientation, and performance.

### 6.19.3.4 Evaluating Parameters for Moderating Effects

In order to determine the direction and the magnitude of the moderation effects the standardized  $\beta$  values for the structural paths of the configural model across two groups were examined.

Table 6.37  
*Estimated Parameters for High and Low ACAP Groups*

Structural path	Low ACAP group ( $\beta$ )	High ACAP group ( $\beta$ )
MO > PER	.160*	.364*
EO > PER	.218*	.354*
LO > PER	.117*	.203*

\*significant at .05

The table 6.37 displays the estimated  $\beta$  values of the configural model. The output for the regression weights for baseline model across two groups are given in the appendix XIX. The  $\beta$  values in the table indicate that the effect of high absorptive capacity group on the relationship between market orientation, entrepreneurial orientation, learning orientation, and performance are higher while there is a comparatively lower effect in the low absorptive capacity group. For example, the effect of the high absorptive capacity group on the relationship between market orientation and performance indicates a value of .364 ( $p < .01$ ). The same value for the low absorptive capacity group is .160 ( $p < .05$ ). The values show a significant deterioration compared to the high absorptive capacity group. The other two estimated paths also have given similar results.

#### 6.19.3.5 Squared Multiple Correlations for Multi Groups

The squared multiple correlations for the estimated paths were also used to determine the explained variance of the dependent variable by the independent variables (Byrne, 2010). The table 6.38 below displays the estimated squared multiple correlation values for the relevant variables.

Table 6.38  
*Squared Multiple Correlations*

Structural Path	Low ACAP group (SMC)	High ACAP group (SMC)
MO > PER	.470	.880
EO > PER	.465	.770
LO > PER	.430	.663

As per the table 6.38, the variance of performance explained by market orientation, entrepreneurial orientation, and learning orientation in the low absorptive capacity group was considerably lower than that of the high absorptive capacity group. For example, the variance of performance explained by market orientation for the low

absorptive capacity group is .47 while it is .88 for the higher absorptive capacity group. The squared multiple correlations for entrepreneurial orientation and learning orientation for the low absorptive capacity group is .465 and .430 respectively. The values for the same relationships in the high absorptive capacity group is .770 and .663 respectively. It clearly shows that the variance explained in the low absorptive capacity group is less than that of the high absorptive capacity group.

#### 6.19.4 Testing Hypotheses on Moderating Effects

This study specified three moderating effects in the research model. It was hypothesized that the relationship between strategic orientation and firm performance is moderated by absorptive capacity. To test the moderating hypotheses, initially, the Chi-square difference test between the configural model and the constrained model was performed. A significant increase in the Chi-square value of the constrained model compared to the configural model provides the evidences for the existence of the moderating effects. Subsequently, the estimated parameters for the low and the high absorptive capacity groups were examined for deciding the direction and magnitude of the moderating effects. Finally, the squared multiple correlations for both groups were examined for further verification of the magnitude of the moderating relationships. A summary of these three tests is given in the table 6.39 below.

Table 6.39  
*Summary of Testing Moderating Effects*

Moderating path	$\chi^2$ difference	$\beta$ for ACAP groups		SMC for ACAP groups	
		Low	High	Low	High
MO > PER	significant	.160	.364	.470	.880
EO > PER	significant	.218	.354	.465	.770
LO > PER	significant	.117	.203	.430	.663



The table provides the information necessary for testing the moderating hypotheses. By using this information, the moderating hypotheses were tested and the results are given in the following sections.

The first moderating hypothesis of the study ( $H_{4a}$ ) was that absorptive capacity moderates the relationship between market orientation and firm performance. The result of the Chi-square difference test shows the existence of the moderating effect of absorptive capacity on the relationship between market orientation and performance. The regression estimates for the high absorptive capacity group and the low absorptive capacity group are .364 and .160 respectively. The squared multiple correlations for the low absorptive capacity group is .470 and for the high absorptive capacity group, it is .880. This result proved that the effect of absorptive capacity on the relationship between market orientation and performance was greater in the higher absorptive capacity group. Therefore, the hypothesis,  $H_{4a}$  can be accepted.

The second moderating hypothesis ( $H_{4b}$ ) was that absorptive capacity moderates the relationship between entrepreneurial orientation and firm performance.

The result of Chi-square difference test is evident for the existence of a moderating effect of absorptive capacity on the relationship between entrepreneurial orientation and performance. The regression weight for the low absorptive capacity group is .218 and for the high absorptive capacity group it is .354. It shows that the effect of entrepreneurial orientation on performance is lower in the low absorptive capacity group. It is further verified by the squared multiple correlation values for the two groups. The squared multiple correlations for the low absorptive capacity group and the high absorptive capacity group are .770 and .465 respectively. These results proved that the effect of entrepreneurial orientation on performance is higher in the

high absorptive capacity group than the low absorptive capacity group. Therefore, the hypothesis,  $H_{4b}$  is accepted.

The third moderating hypothesis ( $H_{4c}$ ) of the study was that absorptive capacity moderates the relationship between learning orientation and firm performance.

The result of the Chi-square difference test between the configural model and the constrained model has shown that there is a moderating effect of absorptive capacity on the relationship between learning orientation and firm performance. The  $\beta$  coefficient for the path from learning orientation to firm performance in the low absorptive capacity group reports .117 and the same value for the same relationship in the higher absorptive capacity group is .203. It shows that the value is greater in the higher absorptive capacity group. The squared multiple correlation values for the relationship between learning orientation and performance in the low absorptive capacity group is .430 and the same value for the low absorptive capacity group is .663. These results indicates that the relationship between learning orientation and performance is higher in the high absorptive capacity group than in the low absorptive capacity group. Therefore, the hypothesis,  $H_{4c}$  is supported by these results.

Accordingly, the Chi-squared difference test, the  $\beta$  values for relevant structural paths and the squared multiple correlations values have proven that the three moderating hypotheses,  $H_{4a}$ ,  $H_{4b}$ , and  $H_{4c}$  are accepted. Based on the hypotheses testing, it can be concluded that absorptive capacity moderates the relationship between strategic orientation and firm performance.

## 6.20 Summary of Hypotheses Testing

This study has tested 12 hypotheses including six direct effect hypotheses, three mediating hypotheses, and three moderating hypotheses. A summary of the results of the hypotheses testing is shown in table 6.40.

Table 6.40  
*Summary of Hypotheses Testing*

Hypothesis	Accepted/Rejected
H <sub>1a</sub> : there is a positive significant relationship between AM and PER	Accepted
H <sub>1b</sub> : there is a positive significant relationship between GS and PER	Accepted
H <sub>1c</sub> : there is a positive significant relationship between ME and PER	Accepted
H <sub>2a</sub> : self efficacy mediates the relationship between AM and PER	Accepted
H <sub>2b</sub> : self efficacy mediates the relationship between GS and PER	Accepted
H <sub>2c</sub> : self efficacy mediates the relationship between ME and PER	Accepted
H <sub>3a</sub> : there is a positive relationship between EO and PER	Accepted
H <sub>3b</sub> : there is a positive relationship between MO and PER	Accepted
H <sub>3c</sub> : there is a positive relationship between LO and PER	Rejected
H <sub>4a</sub> : absorptive capacity moderates the relationship MO and PER	Accepted
H <sub>4b</sub> : absorptive capacity moderates the relationship EO and PER	Accepted
H <sub>4c</sub> : absorptive capacity moderates the relationship LO and PER	Accepted

## 6.21 Summary

The sample members of this study were diverse in terms of the age, the gender, the education, and the tenure. The analysis of the sample background has shown that the sample was representative. An acceptable level of the reliability and the validity was found in all the standard measures used in this study. The tests of multivariate assumptions proved that the data set was adequately fit for using the structural equation modeling as the data analysis tool. The results of the data analysis revealed that both the measurement model and the structural model have achieved a satisfactory level of model fit. The results of the multi group analysis have shown that the hypothesized moderating effects in the research model have been empirically

proven. As per the results of the hypotheses testing, all but one hypothesis were accepted. The positive effects of cognitive factors on firm performance and the mediating effect of self-efficacy on the same relationship have been proven. The positive effect of strategic orientation on firm performance was supported by the results and the moderating effect of absorptive capacity has been proven. Only one hypothesis that postulated a positive relationship between learning orientation and firm performance was not accepted.

## CHAPTER SEVEN

### CONCLUSION AND RECOMMENDATIONS

#### 7.1 Introduction

The final chapter focuses on the discussion of findings, the conclusions and the recommendations based on the results of the study. The first part of the chapter presents a discussion of the findings referring to the relevant research objectives and the research questions. Next, a recapitulation of the findings is presented. Then it describes the contributions made in terms of the theoretical and the practical perspectives. The chapter also presents a discussion on the practical, the theoretical, and the policy implications of the study. Finally, it discusses the limitations of the study and the suggestions for the future research.

#### 7.2 Discussion

The focus of this study was to determine the complex relationships among the factors affecting performance and their effects on performance. Specifically, it focused on the direct effect of cognitive factors and strategic orientation on performance. In addition, the mediating effect of self-efficacy on cognitive factors and performance and the moderating effect of absorptive capacity on strategic orientation and performance were studied. Under the cognitive factors, the effect of achievement motivation, goal setting, and mastery experience on performance were investigated while the mediating effect of self-efficacy on the same relationship was examined. Under the strategic orientation, the direct effect of market orientation, entrepreneurial orientation, and learning orientation on performance were investigated. The moderating effect of absorptive capacity on the relationship between market orientation, entrepreneurial orientation, learning orientation, and performance was

also studied. Accordingly, six direct effect hypotheses, three mediating effect hypotheses and three moderating effect hypotheses, all together twelve, were tested in this study.

### **7.2.1 The Direct Effects of Cognitive Factors on SME Performance**

This study found that achievement motivation had a direct positive effect on performance as hypothesized in H<sub>1a</sub> ( $\beta=.331$ ,  $p<.001$ ). The findings of the study are in congruence with the theory of need for achievement which proved that achievement motivation positively affects individual level performance (McClelland, 1961, 1965) because achievement motivation was found to be positively related to organizational level performance. The results show that this strong relationship proved in the theory can be applied at an organizational level. The relationship found in this study was also consistent with many other studies at the individual level (Lachman, 1980; Collins *et al.*, 2004; Stewart & Roth, 2007; Riyan *et al.*, 2011). A number of studies that used achievement motivation as a predictor of SME performance have yielded inconsistent findings (Lee & Tsang, 2001; Swierczek & Thanh ha, 2003; Acharya *et al.*, 2007). The positive relationship between the two constructs found in this study is also in congruence with some of the previous studies at the organizational level performance (Swierczek & Thanh ha, 2003; Zhang & Burning, 2011). Therefore, the results clear the ambiguity of previous findings on the effect of achievement motivation on firm performance. Some of the previous studies that did not prove the relationship have been conducted with small samples (Sirec & Mocnic, 2010) and in the developed countries (Kirkaldy *et al.*, 2001). It was argued that achievement motivation is more important for the SMEs in the developing countries and the findings supported the argument that achievement motivation is

more relevant for the SMEs in the developing countries than the developed countries (Luthans & Ibrayewa, 2006; Li, 2008; Kirkaldy *et al.*, 2001).

This study introduced goal setting as a predictor of SME performance hypothesizing a positive relationship between two variables. The findings proved that goal setting positively affect performance with  $\beta=.148$ ,  $p<.001$ . This relationship at an individual level has strongly been supported by the goal setting theory (Locke & Latham, 1990). The findings were consistent with the theory of goal setting that provided a very strong theoretical background for the effect of goal setting on individual level performance (Locke & Latham, 1990). The results supported the proposition that the findings of the goal setting theory can be applied at an organizational level. The findings also are in line with many other studies that had proved the positive relationship between goal setting and individual level performance (Knight *et al.*, 2001; Seights *et al.*, 2004). The most of the past studies on goal setting have been conducted in the laboratory settings instead of the natural environments and the relationship is to be proven in the natural settings (Locke & Latham, 1990; Seights *et al.*, 2004). The results of the current study were in congruence with the findings of the most of the studies conducted in the laboratory settings and therefore this study provides further support for the previous findings. There was an argument that goal setting is more influential in the SME settings. (Latham & Marshall, 1981; Dossett *et al.*, 1979, Locke & Latham, 1990). This argument was supported by the current findings. In addition, the findings supported for the argument that cognitive factors such as goal setting have more importance at SME settings in the developing countries than the developed countries (Segal & Rimler, 2011). Accordingly, the objective of this study to introduce goal setting as a predictor of firm performance was successful.

Mastery experience was introduced as a possible predictor of performance and the third hypothesis, ( $H_{1c}$ ) tested in this study was to determine the relationship between mastery experience and performance. Mastery experience was found to be positively affect performance ( $\beta=.340$ ,  $p<.001$ ). The social cognitive theory has strongly proven that mastery experience is a predictor of individual level performance (Bandura, 1986) and it has not been previously investigated in the SME settings. The current results are in consistent with the social cognitive theory because they proved that the effect of mastery experience on SME performance remains as it is in the individual level. There was an argument that entrepreneurial experience as a predictor variable of SME performance in previous studies has yielded inconsistent results because of narrower definition.

Mastery experience has been defined including past performance and failures (Bandura, 1986) and expected to be a more powerful predictor variable to the performance. The current findings supported the introduction of mastery experience as predictor variable to performance and the new variable was a better alternative to the entrepreneurial experience. Therefore, the findings are consistent with the social cognitive theory which suggests that past failures and performances are decisive in the future performances (Bandura 1986; Bandura 1997). Mastery experience as a main source of self-efficacy was argued to be a more important variable in the developing countries because efficacious human capital is essential for SMEs to face the volatile environments in those countries (Luthans & Ibrayewa, 2006). This argument was also supported by the current findings. Finally, mastery experience introduced by this study as an organizational level predictor variable of firm performance was a successful contribution to the entrepreneurship literature.



Accordingly, the findings revealed that the three cognitive factors namely achievement motivation, goal setting, and mastery experience, investigated in this study were found to be good predictors of performance. Some of the previous researchers have argued that the cognitive factors have been ignored by giving more attention to other factors, but they cannot be ignored in performance models (Agrawal, 2007; Sandberg & Hofer, 1987). These results supported the argument that the role of cognitive factors cannot be ignored in organizational performance. The positive relationships found in this study also supported to clear the ambiguity in findings because some researchers argue that the findings of previous studies were inconsistent (Agrawal, 2007; Sandberg & Hofer, 1987). There was also an argument that the cognitive factors are more important in the developing countries, but they have been ignored (Luthans & Ibrayewa, 2006; Li, 2008; Ryan *et al.*, 2011). The results of this study proved that cognitive factors are important in the SMEs in the Sri Lankan context and supported the argument that they are more important in the developing countries. Accordingly, one of the main objectives of the study to determine the direct effect of cognitive factors on performance was attained successfully.

### **7.2.2 The Direct Effects of Strategic Orientation on SME Performance**

This study tested three hypotheses ( $H_{3a}$ ,  $H_{3b}$  and  $H_{3c}$ ) to achieve the objective of determining the effect of strategic orientation on SME performance. It was hypothesized that market orientation, entrepreneurial orientation, and learning orientation have a positive effect on performance.

Market orientation has a positive effect on performance with  $\beta=.127$ ,  $p <.005$ . The results were consistent with many other previous studies that have tested positive relationship between market orientation and performance. It is consistent with the

results of the studies in small-scale manufacturing industry by Frishammar and Horte (2007), and Lee, and Tsai (2005). The results also are in line with the findings by Aziz and Yassin (2010) in small-scale agro food organizations. The study conducted by Kurtinaitiene (2005) in telecommunication industry again resembles the results of this study. The results also consistent with some of the previous studies conducted in the SME sector (e.g. Maurer, 1997; Paladino, 2009; Slater & Narver, 2000; Reijonena & Komppulab, 2010). This study also found that the combined effect of different orientations affect firm performance. This result was consistent with the findings by Li *et al.* (2008) who found that the relationship strengthens when market orientation is combined with entrepreneurial orientation.

The current results are found to be inconsistent with few studies (e.g. Ledwith & Dwyer, 2009; Li *et al.*, 2006; Yim, 2007). However, the studies by Ledwith and Dwyer, (2009) and Li *et al.*, (2006) have been conducted on new product performance as the criterion variable. In Yim's (2007) study, the relationship has been investigated under the condition of demand uncertainty.

The findings on market orientation did not support the argument that organizational orientation of SMEs of the developing countries are lower compared to the developed countries because market orientation reports a moderate level of mean value of 3.82. The study also argued that organizational orientations separately do not predict performance well. It was supported by the findings reporting a relatively low regression coefficient between market orientation and performance.

Entrepreneurial orientation also has a positive effect on SME performance ( $\beta=.270$ ,  $p<.001$ ). The findings of many previous studies are similar to the relationship found in this study between entrepreneurial orientation and firm performance. Maurer

(1997) found the same pattern of relationship in entrepreneur-led firms. It is also consistent with the findings of the study by Wang (2008). However, Wang's study has been conducted in a sample of medium and large-scale firms. In automotive firms, the similar relationship was found by Zehir and Eren (2007). Tajeddini (2010) has validated the similar results in hotel and restaurant industry in Switzerland similar to the context of the current study. Entrepreneurial orientation reports a moderate mean value of 3.57 in the Sri Lankan context and it does not support the common notion that strategic orientation in the developing countries are at a lower level (Dharmasiri, 2009). With a relatively low level of regression weight, it supported the argument that separate orientations are less influential in improving SME performance.

Although learning orientation has a positive effect on performance, it was not statistically significant and the hypothesis, H<sub>3c</sub> was rejected. It was controversial whether learning orientation is important for the success of SMEs. This result was contradictory to the notion that learning orientation is critical for the success of not only larger organizations but also SMEs. The insignificant relationship found between learning orientation and firm performance is not consistent with the study by Farrel and Oczkowski (2002), Lee and Tsai (2005), Farrell (2000), and Baker and Sinkula (1999b) who found significant relationship between two variables. However, the first three studies have been conducted in the manufacturing firms. Baker and Sinkula (1999b) have investigated the relationship in large-scale firms. The relationship found in this study supported the other end of the argument that states learning orientation is less relevant to the SMEs in comparison with larger organizations.

The current study argued that the configuration of market orientation, learning orientation, and entrepreneurial orientation as strategic orientation by Hakala (2010) would be a good predictor variable to the performance. This argument was partly supported by the current findings. The results implied that being market oriented and entrepreneurial oriented are more important in achieving performance but being learning oriented is not as important as being market oriented and entrepreneurial oriented. This finding on learning orientation is consistent with the argument of some of the researchers that being learning oriented is not critical for the success of the SMEs as for the large-scale businesses. The study accepted two hypotheses ( $H_{3a}$  and  $H_{3b}$ ) and rejected one ( $H_{3c}$ ) that assumed a positive relationship between learning orientation and performance.

The overall results on the direct effects support the prevailing argument that the cognitive factors alone are not good predictors of performance and should be coupled with other possible variables. The combination of cognitive factors and strategic orientations as predictors of SME performance in a single research model was successful.

### **7.2.3 Mediating Effect of Self-efficacy**

In this study, entrepreneurial self-efficacy was assumed to have a mediating effect in the relationship between the three cognitive factors (achievement motivation, goal setting, and mastery experience) and SME performance. The results found that self-efficacy mediates the relationship between achievement motivation and SME performance with ( $\beta$  for AM $\leftrightarrow$ PER= .218,  $\beta$  for AM $\leftrightarrow$  ESE =.422,  $\beta$  for ESE $\leftrightarrow$ PER=.167,  $p<.05$ ) and the findings supported the hypothesis,  $H_{2a}$  of the study. However, it did not report a full mediation because the direct effect between achievement motivation and performance remains significant even after introducing

the mediation paths into the model and therefore only a partial mediation exists. This result implies that SMEs with the people who have higher achievement motivation improve their perception on the ability to perform well and in turn improve the organizational performance. Moreover, the result is consistent with the social cognitive theory that postulates the mediating role of self-efficacy in individual level performance (Bandura, 1986). The current study argued that the mediating role of self-efficacy at individual level can be applied to SME settings and the argument was supported by the results.

The study introduced goal setting as a predictor of organizational level performance and it was successful because self-efficacy fully mediates the relationship between goal setting and performance ( $\beta = \text{GS} \rightarrow \text{PER} .106$ ,  $\beta = \text{GS} \rightarrow \text{ESE}.285$ ,  $\beta = \text{ESE} \rightarrow \text{PER}.167$ ,  $p < .05$ ). The results reported insignificant effect between goal setting and performance after introducing the mediating path into the research model. The results also imply that the organizations that set goals highly improve their perception on the ability to achieve the higher level of performance and in turn improve the organizational performance. This is in congruence with the goal setting theory and the social cognitive theory (Locke & Latham, 1990; Bandura, 1986). The relationship between self-efficacy, goal setting, and individual performance were interpreted slight differently by three previous research models (Early & Lituchy, 1991). The results of the study were consistent with the Eaden's (1988) model and Garland's (1985) model. It was further confirmed that the findings of those models are applicable to SME settings. In addition, this study expected that goal setting has higher importance in the SMEs. The current findings confirmed that goal setting is a key factor achieving the performance of SMEs in the Sri Lankan context.

Mastery experience was introduced in this study as a predictor of organizational level performance in SMEs. Accordingly, the third mediating hypothesis of the study expected that self-efficacy mediates the relationship between mastery experience and SME performance. The results indicated partial mediation to the relationship by self-efficacy ( $\beta$  for ME $\leftrightarrow$ PER =.273,  $\beta$  for ME $\leftrightarrow$ ESE=.126,  $\beta$  for ESE $\leftrightarrow$ PER=.167,  $p<.05$ ). After introducing mediating paths into the model, the direct relationship between mastery experience and performance reduced, but remains significant demonstrating a partial mediation. The current study expected that mastery experience defined in terms of the past successes and the failures would be a better alternative to the entrepreneurial experience which was inconsistent as a predictor variable to the SME performance. The findings of the current study proved that mastery experience defined including past successes and failures is a good predictor of SME performance. The results implied that the past successes and the failures lead to improve self-efficacy and in turn self-efficacy improves the performance while mastery experience also directly affects SME performance. These findings are consistent with the social cognitive theory and many other studies conducted at individual level. In addition, the findings reconfirmed mastery experience as a strong source of self-efficacy as specified in the social cognitive theory (Bandura 1986). Accordingly, introducing mastery experience as an organizational level predictor of performance was successful.

There is one main counter argument against the social cognitive theory. It is that self-efficacy is not a cause of performance, but reverse is the truth (Vancouver *et al.*, 2001; Vancouver *et al.*, 2002). The overall results of the mediating effects of the current study reject this counter argument and confirm the findings of the social cognitive theory. In addition, this overall results further confirmed the argument that

the people who are more efficacious are critical for the success of the SMEs in developing countries which face many constraints (Luthans & Ibrayewa, 2006; Li, 2008; Riyan *et al.*, 2011) because the results show that higher level of self-efficacy is important in the Sri Lankan SME context.

#### **7.2.4 Moderating Effect of Absorptive Capacity**

The current study expected that absorptive capacity would be a possible moderator to the relationship between strategic orientation and SME performance. Accordingly, absorptive capacity was hypothesized to moderate the relationship between market orientation, entrepreneurial orientation, and learning orientation and SME performance. The data analysis provides clear statistical evidences for the moderating impact of absorptive capacity on the relationship between the specified relationships. Hypothesis, H<sub>4a</sub> assumed that absorptive capacity moderates the relationship between market orientation and performance. The results of the Chi-square difference test between the baseline model and the constrained model across the low and the high absorptive capacity groups provides evidences for the existence of hypothesized moderating effect on the relationship. The estimated parameters of the structural paths of the baseline model across two groups further confirmed the moderating effect. The  $\beta$  value for the low absorptive capacity group is .160 while it is .364 for the high absorptive capacity group. The squared multiple correlations are also different across two groups (.470 for the low absorptive capacity group and .880 for the higher group) and confirmed the moderating effect of absorptive capacity on the relationship between market orientation and SME performance. This result implied that market orientation with higher absorptive capacity would improve the performance of SMEs. Moreover, the lower the level of absorptive capacity in SMEs the lower the relationship between market orientation and performance. Accordingly,

introducing absorptive capacity as a moderator was successful. The findings are also consistent with the premise behind the resource based theory and the theory of dynamic capabilities.

Hypothesis, H<sub>4b</sub> of the study hypothesized that absorptive capacity moderates the relationship between entrepreneurial orientation and performance. The Chi-square difference test estimated parameters for the baseline model across two groups and the squared multiple correlations across two groups provides very clear evidences for the existence of moderating effect for proving the hypothesis. The Chi-square difference test between the baseline model and the constrained model is significant. The estimated  $\beta$  values for the low and the high absorptive capacity groups were .218 and .354 respectively. The squared multiple correlations for the low group is .465 while it is .770 for the higher group. The three tests confirmed the moderating effect of absorptive capacity on the relationship between entrepreneurial orientation and performance. It implies that the relationship between entrepreneurial orientation and performance is greater when the SMEs have higher level of absorptive capacity.

The last hypothesis tested in this study (H<sub>4c</sub>) was that the relationship between learning orientation and performance is moderated by the absorptive capacity. The direct relationship between learning orientation and performance is not significant with  $\beta = .052$ ,  $p > .05$ . Despite this insignificance in the direct effect, the moderating effect of absorptive capacity was tested across two groups to see whether there is an improvement in the parameters. The results indicated that the standardized  $\beta$  values for learning orientation and performance have improved from .052 to .117 for the low absorptive capacity group but remains insignificant. Conversely, for the high absorptive capacity group, it was improved considerably from .052 to .203 reporting a statistically significant improvement. This result confirmed that the absorptive



capacity moderates the relationship between learning orientation and performance. The squared multiple correlations between learning orientation and performance across two groups also supported the existence of the same moderating effect. The squared multiple correlations are reported as .430 for the low absorptive capacity group and .663 for the high absorptive capacity group. The results implied that the relationship between learning orientation and performance become significant in the SMEs with high level of absorptive capacity. In addition, the same relationship is moderated by absorptive capacity and consistent with the results of other two strategic orientations. Therefore, testing the three strategic orientations (market orientation, entrepreneurial orientation, and learning orientation) in a single research model was successful in predicting SME performance.

The moderating role of absorptive capacity has been examined by few previous studies. Lin-Van *et al.* (2010) found that the variable shows no moderating effect. However, the study's independent variable is acquisition of knowledge. The results are consistent with the findings by Wang & Han, (2011) who found a moderating role of absorptive capacity between knowledge properties and innovation performance. This study found results consistent to the study by Yang-Chao *et al.* (2010) who investigated the moderating effect of absorptive capacity between market orientation and innovative performance. The moderating role of absorptive capacity found in this study is consistent with the findings of Kim *et al.* (2011) in international joint ventures. However, the study considered the relationship between organizational resources and firm performance.

Finally, the overall results of the data analysis indicated that cognitive factors and strategic orientations together are good predictors of performance while self-efficacy plays a significant role in mediating the relationship between cognitive factors and

performance. Absorptive capacity is good moderator to the relationship between strategic orientation and performance.

### **7.3 Recapitulation of Findings**

The overall objective of this study was to understand the complex relationships among factors affecting performance of SMEs. The review of the literature revealed that the three cognitive factors which provides strong theoretical background as predictors of individual level performance might be good predictors of SME performance. Accordingly, achievement motivation, goal setting, and mastery experience were selected as one set of predictors to SME performance. In addition, literature review revealed that three strategic orientations namely, market orientation, entrepreneurial orientation, and learning orientation together might be another set of good predictor variables to SME performance. Therefore, these two sets of predictor variables were selected for testing the direct relationships to the SME performance. It was also revealed that self-efficacy and absorptive capacity might be a good mediator moderator respectively. Accordingly, this study designed a research model including six predictor variables, one mediator, and one moderator variable for achieving twelve specific research objectives.

One of the objectives was to determine whether there is a positive effect of cognitive factors on performance. To achieve this objective, three hypotheses ( $H_{1a}$ ,  $H_{1b}$ , and  $H_{1c}$ ) were tested. Hypothesis,  $H_{1a}$  assumed that achievement motivation has a positive effect on SME performance. The results of data analysis proved that the higher the achievement motivation the higher the SME performance and the hypothesis were accepted. This result leads to the conclusion that improving achievement motivation in the entrepreneur and the other personnel, higher level of performance can be achieved in SME settings.

The hypothesis, H<sub>1b</sub> was tested for achieving the objective of determining the effect of goal setting on SME performance. It was hypothesized that goal setting has a positive direct effect on performance. The findings proved that the higher level of goal setting leads to higher performance in SMEs and the objective was achieved. Hypothesis, H<sub>1c</sub> was tested for determining whether the variable mastery experience has a direct positive effect on SME performance. The results of the data analysis proved that mastery experience also directly and positively affects SME performance. Accordingly, all the three cognitive variables tested in this study proved direct positive effect on performance and can be concluded that the higher level of achievement motivation, goal setting, and mastery experience will improve the performance of SMEs. These results also lead to the notion that cognitive factors are important in achieving a higher level of performance in Sri Lankan SMEs.

Another specific objective established in this study was to determine the effect of strategic orientation on SME performance. To achieve this objective, the study tested three direct effect hypotheses (H<sub>3a</sub>, H<sub>3b</sub>, and H<sub>3c</sub>). Hypothesis, H<sub>3a</sub> was to achieve the objective of determining positive effect of market orientation on performance. The objective was achieved by accepting the hypothesis. It was concluded that higher level of market orientation in SMEs would improve the organizational performance. The hypothesis, H<sub>3b</sub> established in this study was tested for achieving the objective of determining the effect of entrepreneurial orientation on SME performance. The results supported the hypothesis and successfully achieved the objective. It can be concluded that the higher level of mastery experience in SMEs improve their performance. The other hypothesis tested under the objective of strategic orientation was H<sub>3c</sub>. It was hypothesized that learning orientation positively affects performance. Though there is a positive effect between learning orientation and performance, this

hypothesis was rejected because the relationship is not statistically significant. Therefore, it can be concluded that learning orientation is positively related to SME performance but the effect is not significant enough to make a considerable influence on performance. As a whole, market orientation, entrepreneurial orientation, and learning orientation are positively related to SME performance, but only market orientation and entrepreneurial orientation show a significant effect. The higher level of market orientation and entrepreneurial orientation in SMEs will improve their level of performance.

The study established three mediating effect hypotheses ( $H_{2a}$ ,  $H_{2b}$ , and  $H_{2c}$ ) to achieve the objective of determining the mediating effect of self-efficacy on the relationship between cognitive factors and SME performance. The hypothesis,  $H_{2a}$  hypothesized that the relationship between achievement motivation and performance is mediated by self-efficacy. The results supported for a partial mediation and concluded that achievement motivation directly affects performance while indirectly also affects through self-efficacy. Therefore, high level of achievement motivation will improve self-efficacy and in turn self-efficacy affects SME performance. The study established  $H_{2b}$  for testing the mediating effect of self-efficacy on the relationship between goal setting and performance. That was to achieve the objective of determining the mediating effect of self-efficacy on the relationship between goal setting and performance. This objective was successfully achieved by the study proving that self-efficacy fully mediates the relationship between goal setting and SME performance. When self-efficacy involves, the direct relationship between goal setting and performance disappeared. Accordingly, the conclusion was that higher level of goal setting leads to self-efficacy and in turn self-efficacy will improve the performance of SMEs. The last specific objective achieved under the strategic

orientation was determining the mediating effect of self-efficacy on the relationship between mastery experience and performance. To achieve this objective, the hypothesis, H<sub>2c</sub> was tested.

The results of hypothesis testing supported for a partial mediation and it can be concluded that mastery experience has both direct and indirect effects on performance through self-efficacy. Moreover, the higher level of mastery experience leads to self-efficacy and in turn self-efficacy improves the SME performance. As a whole, it is noted that self-efficacy mediates the relationship between all the three cognitive factors (achievement motivation, goal setting, and mastery experience) and performance. In addition, the relationship between goal setting and performance is fully mediated by self-efficacy while the relationships between achievement motivation, mastery experience, and SME performance are partially mediated.

The final specific objective of the study was to determine whether the relationship between strategic orientations and performance are moderated by absorptive capacity. To achieve this objective, three hypotheses (H<sub>4a</sub>, H<sub>4b</sub>, and H<sub>4c</sub>) were tested. H<sub>4a</sub> was tested for achieving the objective of determining whether the relationship between market orientation and performance is moderated by absorptive capacity. The results of the multi group analysis proved that the established relationship is moderated by self-efficacy and the objective was successfully achieved. The results imply that the SMEs with higher absorptive capacity have a greater effect of market orientation on performance. The hypothesis, H<sub>4b</sub> hypothesized that absorptive capacity moderates the relationship between entrepreneurial orientation and performance for determining the moderating role of absorptive capacity in SME performance. The results supported the hypothesis and the objective was achieved. Based on the results, it can be concluded that with higher level of absorptive

capacity, the relationship between entrepreneurial orientation and performance are higher and directional. The last specific objective of the study was to determine the moderating effect of absorptive capacity on the relationship between learning orientation and performance. Hypothesis,  $H_{4c}$  was tested for achieving this objective. It was hypothesized that absorptive capacity moderates the relationship between learning orientation and performance. Learning orientation is positively related but there is no significant direct effect on SME performance.

However, the results on moderating effects were quite interesting and important. Though the direct effect of learning orientation on performance is not statistically significant in the SMEs, the effect was significantly improved for the SMEs with high absorptive capacity. These results provide clear evidences for the existence of moderating effect of absorptive capacity on the relationship between learning orientation and performance. It implies that the level of learning orientation is material in the SMEs with higher absorptive capacity though it is not so for the SMEs with low absorptive capacities.

## **7.4 Implications**

The findings of the present study show the theoretical, the managerial, and the policy implications, which denote the theoretical and the practical importance of the study. The following sections take an insight into those implications.

### **7.4.1 Theoretical Implications**

This study focused SME performance as the criterion variable and cognitive factors and strategic orientations as the predictors thereof with the complex mediating and moderating relationships of self-efficacy and absorptive capacity respectively. The three cognitive predictors were selected for this study namely, achievement

motivation, goal setting, and mastery experience. These factors have a very strong theoretical background as the predictor variables of the individual level performance. The theory of need for achievement has proven the effect of achievement motivation on entrepreneurial performance. It was a characteristic that distinguish entrepreneurs from non-entrepreneurs. However, a few studies were conducted on predicting organizational performance and yielded inconsistent results. The findings of the present study imply that the premise behind the theory of need for achievement can be extended into the organizational level performance of SMEs especially, in the developing countries. It also implies that the construct achievement motivation is worth of revisiting in the contexts of the developing countries where the owner managers face many constraints in their operations.

Similar to the construct achievement motivation, goal setting has been very strongly established as a predictor of individual level performance by the goal setting theory and many other previous studies. With such a strong theoretical background, the present study introduced the level of goal setting as a predictor of the organizational level performance in SMEs. This attempt was a success and it provides a new insight that the strong theoretical relationship between goal setting and individual performance established in the goal setting theory can be applied into the organizational level performance in the SMEs. It also implies that more attention is needed to the effect of goal setting on SME performance in the developing countries where the entrepreneur, other personnel, and their commitment to goals have an utmost importance.

Mastery experience was another construct that very strongly established in the social cognitive theory as a determinant of the individual level performance. The construct that defined in terms of past successes and failures in the social cognitive theory has

not been investigated previously as a determinant of the firm level performance. Though entrepreneurs' experience has been investigated in many studies, the previous definitions have ignored the past performance of organizations. Many of those studies yielded inconsistent results. This study introduced mastery experience as a possible predictor of organizational level performance in SMEs because the past performance at individual level has been proven as a strong determinant of their future success in the social cognitive theory. This introduction of the present study is a success and it implies that the theoretical definition for experience which encompasses the past failures and the successes is essential in the future studies. As a whole, the present study has taken three constructs (achievement motivation, goal setting, and mastery experience) that were studied in three well established theories (theory of need for achievement, goal setting theory and social cognitive theory) into one research model to explain a new aspect of performance at organizational level. The results implies the need of revisiting those well-established cognitive theories in terms of organizational level performance.

Self-efficacy is a cognitive construct that has proven in the social cognitive theory as a mediating mechanism in individual performance. The theory also has indicated that motivation, goal setting, and mastery experience directly related to both self-efficacy and performance. The goal setting theory too has emphasized mediating role of self-efficacy in performance. Because of both social cognitive theory and goal setting theory emphasized the mediating role of self-efficacy in performance at an individual level, the present study considered the construct as a possible mediator to the relationship between achievement motivation, goal setting, mastery experience, and organizational level performance. The results again imply the importance of well-established three cognitive theories (theory of achievement motivation, social



cognitive theory and goal setting theory) for explaining the complex relationships among cognitive factors and the organizational level performance.

The present study proves that the relationship between achievement motivation and performance was partially mediated by self-efficacy. It implies that the combination of constructs supported by well-established theories yields good results. Further, the same theoretical implication is associated with the results of testing mediating effect of self-efficacy on the relationship between goal setting and performance. This relationship is fully mediated by self-efficacy implying that the combination of constructs from the goal setting theory and the social cognitive theory was successful. The results indicated that the relationship between mastery experience and SME performance was partially mediated by self-efficacy. It also implies the importance of wider theoretical definition of entrepreneurs' experience in explaining the complex relationships of organizational level performance. As a whole, the findings related to the set of cognitive factors (achievement motivation, goal setting, mastery experience, and self-efficacy) and performance were aligned with the three fundamental theories (the theory of need for achievement, the goal setting theory and the social cognitive theory).

Strategic orientation was another set of variables (market orientation, entrepreneurial orientation, and learning orientation) that were tested as predictor variables of SME performance. Market orientation, entrepreneurial orientation, and learning orientation as strategic orientation was a new configuration of the concept. The results of the present study imply that the new theoretical configuration of the concept is partially successful because only market orientation and entrepreneurial orientation proves a direct significant relationship with performance. Market orientation has a direct positive effect on performance and it implies that market orientation defined as an

organizational resource is important in SME research. Entrepreneurial orientation that proves a positive direct effect on performance has associated with the same theoretical implication.

The inclusion of entrepreneurial orientation and market orientation as dimensions of strategic orientation is a successful effort. Non-significant but positive direct effect of learning orientation on performance implies the need for more attention of researchers to the existing debate whether the learning orientation is critical for the success of the SMEs as in the large-scale organizations. The findings of this study are not aligned with the recent emphasis on the importance of the construct to small-scale organizations. Inclusion of learning orientation in the recent configuration of strategic orientation was debatable as per the present findings. Therefore, more studies are needed in different contexts and different settings for more clarification of this theoretical issue.

Absorptive capacity was tested as a moderating variable to the relationship between strategic orientation and SME performance. This was very successful and supported the premise behind the theory of dynamic capabilities that indicate the importance of such capabilities in exploiting the organizational resources. It also implies the need of revisiting the importance of knowledge based capabilities for SMEs as emphasized in recent studies. The relationship between market orientation and performance was moderated by absorptive capacity. In one aspect, it implies the importance of absorptive capacity as knowledge-based dynamic capability to the small-scale organizations. In another aspect, it implies the ability of absorptive capacity as a dynamic capability to exploit the market orientation as a resource for the success of SMEs. Further attention of the researchers on the application of the theory of dynamic capabilities for the success of SMEs is emphasized by these

present findings. In addition, the relationship between entrepreneurial orientation and SME performance was moderated by the absorptive capacity in this study. It has reemphasized the implication of absorptive capacity for exploiting entrepreneurial orientation and the importance of the theory of dynamic capabilities for the success of SMEs.

Finally, the relationship between learning orientation and SME performance is moderated by absorptive capacity. This finding of the present study posed very important theoretical implications because learning orientation does not show a direct significant effect on SME performance. However, when absorptive capacity was introduced as a moderator, the relationship was improved. Though it is not significant for the SMEs with the low absorptive capacity, conversely, for the SMEs with the high absorptive capacity, the relationship between learning orientation and performance was improved and become significant when absorptive capacity was introduced as a moderator. It is a very clear evidence for the existence of moderating effect and it implies that learning orientation become important when absorptive capacity of the firm is at a higher level. Further, this also implies that the arguments of recent researchers on the importance of learning orientation for the small-scale organizations could not be totally ignored and it needs more attention in the future studies. In that perspective, the inclusion of learning orientation in the configuration of strategic orientations cannot be condemned just only for the reason that learning orientation does not show a significant direct effect on SME performance. Therefore, the role of learning orientation in SMEs should be given further attention.

#### **7.4.2 Managerial Implications**

The intention of the present study was to determine the effect of cognitive factors and strategic orientation on the performance of SMEs. Further, it investigated the

mediating effect of self-efficacy on the relationship between cognitive factors and performance and the moderating effect of absorptive capacity on the relationship between strategic orientation and performance.

As cognitive factors, achievement motivation, goal setting and mastery experience will improve the organizational performance in the small-scale organizations in Sri Lanka. This implies that the improvement of cognitive characteristics of owner managers and other key personnel in SMEs should be paid due attention. Achievement motivation has a direct effect on SME performance and an indirect effect through self-efficacy. It implies that the characteristic of persistence on the effort of achieving something in owner managers leads to both performance and self-efficacy.

Goal setting affects performance only through self-efficacy because the relationship between goal setting and performance are fully mediated by self-efficacy. It implies that managers should systematize goal setting procedure of the organization in order to achieve the organizational performance. Especially, setting organizational goals for owner managers and other individuals should be given the due attention. Since setting organizational goals make people more efficacious, they will improve the perception on their ability to face constraints normally faced by the personnel in the SMEs of developing countries. This perception on their ability will, in turn, leads to firm performance. Mastery experience has both direct effect and indirect effect on performance through self-efficacy. It implies that past performance of the organization is important in determining both self-efficacy and future performance. This also implies that past successes of the organization should be reemphasized among employees rather than past failures and the employees who contributed to successful past events in the organization have more importance among others.

Therefore the strategic efforts should be made to retain employees with successful past records.

The mediating role of self-efficacy has proven that it is critical for the success of the SMEs. It claims the importance as a mediating mechanism through which all the three cognitive factors influence firm performance. It implies that the efficacious managers and employees are critical in achieving the performance in a situation where many constraints are available. Therefore developing the perception of the employees on their abilities in the critical organizational tasks would be the central focus of the managers. In such an attempt, the managers should focus on the perceptions of the employees' abilities in developing new product and market opportunities, building an innovative environment, initiating investor relationships, defining core purpose, coping with unexpected challenges, and developing critical human resources. The systematic programs rather than ad hoc initiatives in developing the abilities of the employees on these wide facets of self-efficacy would yield good results. Especially, any managerial effort to improve the employees' perception on their abilities should be aligned with their achievement motivation, goal setting, and mastery experience. The results of the study also imply that the role of cognitive factors in performance might be varied in different context. Therefore, the effect of contextual factors should be taken into consideration when the perception of the abilities of the employees are treated as a determinant and mediating mechanism in organizational level performance.

The results found that strategic orientation plays an important role in SME performance. This implies that being strategic oriented should be given the due managerial attention in the operations of SMEs. Market orientation directly affects the performance of SMEs. In addition, in SMEs with higher absorptive capacity, this

relationship will be improved. Therefore, one of the important managerial implications is that market orientation should be improved for a better organizational performance. In such attempts, customer orientation and competitor orientation should be the focus. Moving the organization from the product oriented, production oriented or sales oriented philosophy to the marketing philosophy is essential here. Introducing marketing concept to the organization and encouraging employees for continuously following the concept should be given the priority. The change management practices should be followed for smooth conversion of the people because adapting to a new situation needs a radical attitudinal change in people.

Another managerial implication of the results related to market orientation is that the higher level of absorptive capacity in the organization will make the relationship between market orientation and performance more beneficial to the organization. Therefore, the level of the capacity of absorbing knowledge must be considered by the managers. Both potential knowledge absorptive capacity and realized absorptive capacity are to be improved. The organization should focus on facilitating employees for acquisition and assimilation of knowledge from various sources for improving the potential absorptive capacity. In addition, transformation and exploitation of knowledge should be encouraged for improving the realized absorptive capacity. For this purpose, the formal and the informal communication streams should be developed while the the sources of sharing knowledge are facilitated.

The direct relationship proved between entrepreneurial orientation and SME performance implies the need of managerial attention to improve employees' entrepreneurial orientation. Innovativeness, risk taking abilities, and proactiveness should be the focus of this attempt. It also implies the need for developing a conducive environment for unlocking the employees' innovative capacities. There

should be a way of exploiting the innovativeness of all the personnel from bottom to top. Risk taking ability and proactiveness skills should be encouraged among employees by allowing them for more participation in decision-making. This also implies the need of rethinking about the simple organizational structure because the decision making power of most SMEs is centralized to the entrepreneur. Proactiveness is a skill and it should be practiced among employees to be more entrepreneurial oriented. The opportunities for employees to expose to such skill-building programs are to be opened. Accordingly, high absorptive capacity of the organization is more important for the relationship between entrepreneurial orientation and performance.

Though learning orientation has no direct effect on SME performance, it becomes significant in the SMEs with high absorptive capacity. Therefore, it implies that the opportunities for learning should be improved in the firms with high absorptive capacity. Especially, the vision of the organization should be shared among all the employees so that their commitment to the vision could be maximized. In most of the SMEs, the vision has not been formally articulated and documented. It is in the mind of entrepreneur and rarely shared with others for the effective use of it. The importance of learning orientation to the organization implies that the vision hidden in the entrepreneur should come out and effectively shared with others to ensure their commitment to the organizational vision. The results also imply that the employees' commitment to learning should be encouraged in the SMEs with a high level of absorptive capacity. For this purpose, formal and informal learning processes within the organization are to be established while the importance of commitment to learning should be convinced to the employees for the betterment of both the individuals and the organization. The alternative learning procedures are to be

opened for them to make them committed because the informal learning might be more beneficial for the employees. Open-mindedness was another facet of learning orientation that was implied to be important in SMEs with high absorptive capacity. The employees' ability to accept new ideas and changes must be improved. That is a skill and opportunities for developing such skills are to be opened and encouraged. One of the very important managerial implications here is to be careful in selecting employees to the organizational positions. Thorough screening process to identify their cognitive and other characteristics is essential.

Finally, the reviewing of the relationships as a whole provides the managerial implication that wide range of factors is important in firm performance. They extend into the cognitive and the personal, the organizational, and the extra organizational factors. According to the focus of the current study, the important areas can be listed as level of achievement motivation, effort on goal setting, and experience on past performance. In addition, developing new products and markets, establishing good investor relationships, ability to design the core purpose of the entity, ability to cope with unexpected challenges, ability to develop critical human resource, and being customer oriented and competitor oriented have proven their importance. Moreover, inter-functional coordination, innovativeness, ability to take risks, level of proactiveness, shared vision, commitment to learning, open-mindedness, level of acquisition and assimilation of knowledge, ability to transform knowledge and ability to exploit knowledge from various sources are also very important areas. The managerial focus only on limited and selected factors may impede the success of the SMEs.



## **7.5 Contributions of the Study**

The contributions made by this study on the theoretical and the practical perspectives are presented in the following sections.

### **7.5.1 Theoretical Contribution**

This study has made few conceptual and empirical contributions to the existing body of knowledge under the theoretical contributions. As one of the conceptual contributions, the current study introduces mastery experience with wider definition including past performances instead of conventional entrepreneurial experience that often defines as the number of years in the business. Mastery experience and goal setting are also new variables introduced in this study to predict the organizational level performance. these two variables have not been used previously as predictor variables to the SME performance though they have been tested as predictors of individual level performance.

Another conceptual contribution of this study is the introduction of the combination of three main cognitive factors from three well-established cognitive theories as predictor variables of SME performance. Achievement motivation from the theory of need for achievement, goal setting from the goal setting theory and mastery experience from the social cognitive theory have not been investigated together previously as predictors of firm level performance. In addition, introducing self-efficacy, another cognitive factor from social cognitive theory, as a mediating variable to the relationship between achievement motivation, goal setting, mastery experience, and performance was done first time in this study. For the first time, this study have used the recent configuration of strategic orientation including the dimensions of market orientation, entrepreneurial orientation, and learning orientation as a predictor of SME performance because previous studies have

investigated these dimensions separately or with other contextual variables. In addition, another important conceptual contribution is the introduction of absorptive capacity as a moderator variable to the relationship between new configuration of strategic orientation and SME performance. Finally, one of the main conceptual contributions of this study is introducing three cognitive factors and three strategic orientations in one research model as predictors of performance of SMEs.

In addition to theoretical contributions, few empirical contributions made by this study can be highlighted as follows. The study empirically investigated the direct relationships between three cognitive factors and SME performance which have not done previously. There were no empirical evidences for the direct relationship between achievement motivation and SME performance in Sri Lankan SME context. Since goal setting is a newly introduced variable, its relationship with SME performance has never been empirically investigated previously and is a new contribution of this study. Experience defined as mastery experience including past performances was also a newly introduced variable as a predictor of SME performance and investigated empirically by this study making it is as another empirical contribution. The empirical evidences for the mediating role of self-efficacy on the relationship between achievement motivation, goal setting, mastery experience, and performance were not available and this study contributes by filling that empirical gap.

Strategic orientation including the dimensions of market orientation, entrepreneurial orientation, and learning orientation was empirically tested for determining its relationship with SME performance in this study and that is another empirical contribution. The moderating effect of absorptive capacity on the relationship between strategic orientation and SME performance was empirically investigated for

the first time in this study and it is another empirical contribution. Mainly, this study found empirical evidences for the combination of three cognitive factors and three dimensions of strategic orientation as predictors of performance, which has never been investigated previously.

### **7.5.2 Practical Contribution**

The practical contribution of this study is outlined in terms of usefulness of findings to the various parties such as the policy makers, the managers, the entrepreneurs, the educators, and the trainers. The entrepreneurs and the managers can use the findings of this study to decide on what cognitive skills to be belonged by managers and their employees in order to achieve higher level of organizational performance. Especially, the level of motivation to be maintained among employees, making decisions on the internal goal setting process of the organization, making decisions on selection and retention of employees for better organizational performance can be effectively done by using the empirical findings of this study. Moreover, the perceptions of employees on their abilities to be developed can be understood while it gives an idea of the importance of being efficacious entrepreneurs.

Accordingly, the findings will serve the entrepreneurs and the managers to do a self-assessment and improving their skills to the expected level. The entrepreneurs and the managers will also be benefitted with these findings by giving them a clear guidance of the importance of being strategic oriented for the organizational success. The findings provide the guidance for managers to make their decisions on the level of market orientation, entrepreneurial orientation, and learning orientation to be maintained in the organization, whether the organization should adapt the marketing concept or not, and to what extent the organization should facilitate the absorbing of new knowledge.

The findings will also be important for the policy makers at the national and the organizational level. In the national level, making policy decisions on SME sector strategies, education, entrepreneurship development, and incentive schemes for SME sector will be guided by the findings. At the organizational level, it will be helpful for making policy decisions on organizational philosophies and business models, employee selection, retention and promotion criterion, inter-functional coordination, long-term directions, and learning processes. The educators and the trainers will also be guided by the findings for designing the courses and the other materials in universities and other educational institutes, identifying training needs of potential entrepreneurs, and developing skills of trainers. Finally, the findings of the study will also be helpful for potential investors in making their decisions.

#### **7.6 Limitations of the Study**

The present study faced certain limitations as presented below. This study was conducted only in small-scale hotel and restaurant sector in Sri Lanka, making some barriers to generalize findings into the entire SME sector because there are vast variety of other forms of small-scale organizations. The measurements of all variables of this study were based on the response to the questionnaires from the sample members and were not objective measures. Therefore, the results should be interpreted as perceptual estimation of relationships among variables. The sample of the study was limited only to the owner managers of the hotel and restaurant sector and therefore findings represent only their views on measured variables. Because of the time limitation, this study was conducted as a cross sectional study. The data were collected at a single point of time horizon and the study is associated with the inherent weaknesses of cross sectional studies. Because of the dispersion of the sample all over the island, the data collection was based only on a mail survey.

Therefore, it was not possible of using alternative data collection methods to validate data by estimating method invariance.

In addition, the questionnaires were self-administered and there were no opportunities to explain and make the respondents understanding of the vague points. This would be a limitation of the study because the majority of the respondents were from the lower levels of education background and some of the concepts are highly technical though they were simplified to the most possible extent. The study used the structural equation model testing approach since the objective of the study was limited to test the established relationships. Therefore, the study was not extended into model developing approach by adding modifications that the final solution might miss the best modified solution. However, the effect of this limitation could be avoided to a certain extent because the study has used the alternative model testing approach.

### **7.7 Suggestions for Future Research**

This study was limited only to the small-scale hotel and restaurant industry in Sri Lanka but more studies are essential in other areas in the country for further validation of the results and for the generalization of the results into entire SME sector. The sample of the study was limited only to the owner managers of the hotel and restaurant industry. Therefore, it is suggested for the future researchers to use wider sample frame for achieving better results. The future studies can be further extended into non-owner managers and other employees to test whether the findings are varying across different groups. The current study found that cognitive factors are important determinants of SME performance. However, the variables were limited only to three cognitive factors. The findings of the current study provide signals that it is worth extending future studies for investigating other potential cognitive

predictors of SME performance. Goal setting and mastery experience were newly introduced variables as predictors of organizational level performance and they claim the need of investigating them in different contexts for further confirmation of the results.

It was assumed that the cognitive factors tested in this study had more importance in the context of developing countries where the owner managers faced many constraints. The current findings supported this assumption and need for further investigation in different contexts of other developing countries. The study used new configuration of strategic orientation as predictor of performance. It is also worth of reexamine in different contexts for further validation of the results. Moreover, inclusion of learning orientation as a dimension of strategic orientation was questioned in the findings of this study because it shows no significant direct effect on performance. However, just only for that reason, it is not advisable to exclude learning orientation from future analysis because the variable behaved conversely in testing the moderating effects. The relationship between learning orientation and performance has become significant in SMEs with high absorptive capacity making the role of learning orientation in SME performance somewhat ambiguous. Therefore, future research in different contexts can investigate learning orientation as a predictor of SME performance for further clarification of its role. The study used only two sets of predictor variables namely, cognitive factors and strategic orientation. These two sets of factors were not capable of fully explaining the variance in SME performance indicating the possibility of having other factors contributing to the unexplained portion of the variance. Therefore, it is worthwhile investigating wide range of predictors in future research such as other organizational and extra organizational factors.

In addition, it is suggested for the future researchers to test this model with model development approach introducing modifications for the purpose of identification of the best alternative model. Moreover, it will be better for future studies to use alternative objective measures for measuring the variables to reduce the measurement error and to use alternative data collection methods enabling the testing of method invariance for more reliable findings. Finally, the study tested a recursive model that included only one-way influence between predictor and criterion variables. If the future researchers include feedback loops for the model and test the two way influence between variables it may be helpful for more refined understanding of complex phenomenon.

### **7.8 Conclusion**

This study mainly focused the complex relationships among firm performance and factors affecting firm performance. As exogenous factors two set of variables were investigated. One group of variables was cognitive factors that included achievement motivation, goal setting, and mastery experience. Strategic orientation was the other set of variables including the dimensions of market orientation, entrepreneurial orientation, and learning orientation. Self-efficacy was a mediating variable in the study. It was hypothesized that self-efficacy would mediate the relationship between three cognitive factors and firm performance. Absorptive capacity of the firm was expected to moderate the relationship between the dimensions of strategic orientation and SME performance.

The study found that the three cognitive factors positively and significantly affect firm performance. Mastery experience has the highest effect on firm performance followed by achievement motivation. There is only a slight difference between the two independent variables in terms of the magnitude of the effect on SME

performance. Goal setting has a relatively low positive effect on SME performance. Based on the results, it can be concluded that cognitive dispositions are important factors in achieving the firm performance. The findings further revealed that self-efficacy mediates the relationship between the three cognitive factors and firm performance. The relationship between goal setting and firm performance was fully mediated by self-efficacy. The partial mediation of self-efficacy was reported in the relationship between other two cognitive variables and firm performance.

Strategic orientation had a positive correlation with firm performance. Among three dimensions of strategic orientation, market orientation and entrepreneurial orientation show the highest effect on firm performance. Though the variable learning orientation is positively related to firm performance, the relationship is not statistically significant. It seems that learning orientation has a less significant in the SME context compared to the large-scale organizations.

The findings on the moderating paths proved that absorptive capacity moderates the relationship between the dimensions of strategic orientation and firm performance. The variable absorptive capacity moderated the relationship between market orientation, entrepreneurial orientation, and firm performance. The insignificant positive relationship between learning orientation and firm performance became significant when the moderating effect of absorptive capacity is in effect. Accordingly, except one, all the hypotheses established by the study were supported by successfully achieving all the objectives of the study



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