CHAPTER 1
INTRODUCTION

1.1 Background to the Research

Small and medium enterprises (SMEs) are increasingly seen as playing an important role in the economy of many countries. Thus, governments throughout the world focus on the development of the SME sector to promote economic growth. In Thailand, SMEs comprise the majority of businesses in the country. The Department of Industrial Promotion (2004) revealed that in 2002 there were 1,639,427 SMEs in Thailand, comprising 99.63 percent of all enterprises. SMEs make substantial contributions to the national economy in terms of output, employment and effective utilisation of regional resources (Asian Productivity Organization 2002a; Industrial Estate Authority of Thailand 2003; Office of Small and Medium Enterprises Promotion 2001a; Satetawanich 2005). The crucial role of SMEs in the overall health of the country’s economy is, however, dependent on their performance – that is their growth and profitability (Panpiamrat 2005).

It has been noted that one of the major constraints that inhibit the performance of SMEs in Thailand is access to finance (Business Thailand 2002; Small Industry Credit Guarantee Corporation 2005). Access to finance is seen as the most serious constraint during the formation of a new venture, and also manifests itself at later stages when businesses require additional inflows of finance to support expansion and growth (Holmes et al. 2003). This hinders SMEs from realising their full potential, eventually resulting in slower economic growth for the country as a whole (Beck and Demirg-Kunt 2001).

As the SME sector is the backbone of the country’s economy, intervention by the government to address SMEs ability to access finance has been extensively developed, and has focused on supply-side factors aimed at increasing the availability of funds to the SME sector. Financial capital is available in the financial market in a variety of forms and from a range of sources (Business Thailand 2002; Department of Industrial Promotion 2006; The Stock Exchange of Thailand 2006a). Despite financial sector
reforms, an increase in the number of financial institutions, and the introduction of the secondary market, access to finance continues to be a major problem that constrains SME performance in Thailand (Institute for Small and Medium Enterprises Development 2003; Satetawanich 2005; Suranaree University of Technology 2001; Worachattarn and Shuntharinka 2001).

The above indicates that addressing only the supply-side factors by increasing finance available to small firms cannot solve the financial problems of SMEs in Thailand (Sarapaivanich and Kotey 2006; Sevilla and Soonthornthada 2000). In addition, direct intervention through increased supply of funds to the SME sector may distort the workings of the market and encourage inefficiency and poor performance in the sector. Research has shown that demand-side factors may be a more powerful constraint on SME ability to access finance than supply-side factors (Kotey 1999; Mason and Harrison 2001; Sarapaivanich and Kotey 2006).

Demand-side factors suggest that access to finance continues to be a major constraint for SMEs because they are not investment-ready (Harding and Cowling 2006; Holmes et al. 2003). Investment readiness is the ability to provide sufficient information, credibility and trust to financial providers to motivate them to invest money in the business (Mill Consultancy 2006). Investment readiness comprises owner/manager readiness, business readiness and information readiness. Thus, it is suggested that in order to help SMEs take advantage of the pool of available capital, the government has to attend to the demand-side factors by helping them to become investment-ready (HM Treasury 2001; Mason and Harrison 2001).

Investment readiness, however, does not only influence access to finance but also affects SME performance. Owner/manager readiness, business readiness and information readiness in turn enhance the potential for success of SMEs. Increasing the ability of the SMEs to access finance through investment readiness also enables these enterprises to undertake more ambitious projects, expand their businesses, and have larger financial buffers against managerial mistakes and market downturn. Thus, this study seeks to examine the relationships among investment readiness, access to finance and firm performance.
1.2 Problem Identification

As previously mentioned, SMEs are the major backbone of the Thai economy. However, despite government efforts to make these firms viable and help them contribute to economic development, most SMEs do not perform as expected because they lack access to finance and are not investment-ready. Theoretical insights into the relationships among performance, investment readiness and performance have largely been confined to studies undertaken in developed countries such as the United States of America and the United Kingdom (Cook 2001). In developing countries and especially Thailand, research on these relationships is scanty or even non-existent. Previous studies on Thai SMEs focused on publicly listed firms (Thongpakde, Pupphahavesa, and Pussarangsri 1994). For instance, Yammeesri (2003) examined the effects of ownership structure on the corporate performance of non-financial listed firms in Thailand in 1993-1996. Graham, King and Bailes (2000) investigated the relationship between Thai financial information and Thai security prices before and after the chaotic devaluation of the baht in 1997. Tirapat and Nittayagasetwat (1999) investigated Thai listed firms’ financial distress using macro and micro variables. Also, Persons (1999) examined a number of quantitative and qualitative variables in predicting bankruptcy for finance companies in Thailand.

There does not appear to be any academic study that has examined the direct and indirect relationships among performance, access to finance and investment readiness in Thailand. It is important to note that different countries have different institutional arrangements, such as tax, the existing market for SMEs, and the roles financial providers play. There are also differences with respect to level of economic development, social, and cultural factors. Thus, it is essential to clarify whether Western findings are generally applicable in other economic environments, specifically in the Thai economic environment, in developing appropriate policies and programs to deal with the problem of accessing finance. In spite of the contribution made by SMEs to the country’s economy, there is limited study on these relationships in Thailand. This study therefore examines these relationships in an attempt to provide empirical evidence that might fill the gap in this area, and to recommend policies relevant to addressing these issues at both micro and macro levels.
1.3 Research Objectives

As there has been comparatively little research done on demand-side factors in Thailand, the main objective of this study is to examine the relationships among the investment readiness, the access to finance, and the performance of SMEs in Thailand. Specifically it aims to do the following:

1. examine the influence of access to finance on the performance of SMEs in Thailand;
2. assess the effect of investment readiness on the access to finance of SMEs in Thailand;
3. evaluate the influence of investment readiness on the performance of SMEs in Thailand; and
4. determine if there are any indirect relationships between the investment readiness and the performance of SMEs in Thailand through their access to finance.

Research hypotheses are developed from the above research objectives and discussed in detail in Chapter 3. The results of hypothesis testing are presented in Chapter 5, and the results are discussed in Chapter 6.

1.4 Justification for the Research

As discussed in Section 1.1, lack of access to finance has been identified as a constraint for the majority of Thai SMEs. The problems associated with access to finance have significantly hindered the role SMEs play in the overall performance of the country’s economy (Satetawanich 2005; Worachattarn and Shuntharinka 2001). Demand-side factors suggest that the whole external funding process is more efficient if the recipients of funding (SMEs) are better prepared (Hallberg 2000). Such preparedness, backed by investment readiness, enhances a company’s ability to access finance and performance, and ultimately boosts national economies by encouraging the survival of the most efficient firms. The relationships among performance, access to finance and its investment readiness have, however, received limited attention in developing countries and no attention in the Thai context. Therefore, a study of these
relationships would contribute to knowledge of the linkages among performance, access to finance and investment readiness specifically in Thailand.

As can be seen from the discussion in Section 1.1, the Thai government’s concern about access to finance has focused on the supply of capital to SMEs (supply-side factors). Thus, an examination of the relationships among the performance, access to finance and investment readiness of SMEs will provide valuable information for the question of whether or not policy measures that aim to enhance the ability of SMEs to access finance need to take account of the firm’s demand for finance alongside supply. The results of the study will thus have valuable implications for economic development, policy formulation, and program development in the SME sector in Thailand.

This study focuses on the retail sector, which occupies an important position in the Thai economy in terms of job creation and revenue generation. Therefore, examining the factors that influence access to finance and hence performance in this sector will highlight areas where there is a need for government intervention.

Finally, the survey design and statistical methods employed for hypothesis testing in this study contribute to understanding of empirical research framework in this area. Justifications for these contributions are discussed fully in Chapter 6.

1.5 Research Methodology

The aim of this research is to test empirically the relationships among performance, access to finance and investment readiness. Since the majority of SMEs in Thailand are in the trading sector and are primarily located in Bangkok, Khon Kan, and Chiang Mai (Institute for Small and Medium Enterprises Development 2006a), these SMEs were chosen as the target population from which the sample was drawn. Restricting the study to the trading sector was considered more desirable than using a cross-section of SMEs as it enabled the extraneous factors which may affect the dependent variables and thus impact on internal validity to be controlled for (Conant, Mokwa, and Varadarajan 1990; Kotey 1999; Robinson and Pearce 1983; Zikmund 1997).
Due to time and resource limitations, convenience sampling was used so that a large number of questionnaires could be completed as quickly and economically as possible (Malhotra 1999; Zikmund 1999). Face-to-face interviews using a structured questionnaire were conducted to collect primary data from owner/managers of SMEs in Thailand and 407 responses were obtained for this study. A structural equation modeling technique using Partial Least Square (PLS) was used to test the hypotheses in the study as this technique has minimal requirements for sample size. It also allows simultaneous testing of an entire model and the examination of indirect relationships among factors (Faulk and Miller 1992). Justifications for these design features are discussed in detail in Chapter 4.

1.6 Definitions

This section defines key terms involved in establishing the position taken in the research. This step is necessary because of a lack of terminological consistency in the literature.

The Small and Medium Enterprises (SMEs):

SMEs in Thailand are categorised into three major sectors: production, service and trading. The focus of this study is SMEs in Thailand’s trading sector. This consists of wholesale and retail, and is defined by the Ministry of Industry as the largest sector in the economy (Department of Industrial Promotion 2004).

There is no commonly agreed-upon definition of SMEs because different criteria are used to define SMEs, for example, number of employees and annual sales. For the purpose of this study, SMEs in trading sector are defined according to criteria used by the Ministry of Industry: number of employees, and value of fixed assets (Institute for Small and Medium Enterprises Development 2006b):
medium enterprise

number of employees:

**Wholesale**  not exceeding 50 persons  
**Retail**  not exceeding 30 persons

**Small enterprise**  not exceeding 25 persons  
not exceeding 15 persons

fixed assets:

**Wholesale**  > THB50 - 100 million  
(≈ AUD1.6 - 3.2 million)  
≤ THB50 million  
(≈ AUD1.6 million)

**Retail**  > THB30 - 60 million  
(≈ AUD0.96 - 1.92 million)  
≤ THB30 million  
(≈ AUD0.96 million)

AUD1 = THB31.25 - average exchange rate between 1/7/05 and 3/11/05 (x-rate.com 2006)

Note that the terms ‘small and medium enterprises’, ‘small and medium businesses’, ‘small and medium firms’, and ‘SMEs’ are used interchangeable in this study.

financial structure:

Financial structure is the combination of the sources of finance employed by a business in order to establish and expand its activities. It encompasses all sources of finance in the form of equity from owners’ savings, family and/or friends and debt including short-term non-institutional finance such as trade credit, tontines and middlemen.

investment readiness:

Investment readiness in this study is defined as the ability to attract financial providers to invest in the business in question. It comprises three dimensions:

1) **Owner/manager readiness** refers to the owner/manager’s characteristics that are attractive to providers of funds, and consists of experience, education, age and gender.

2) **Business readiness** refers to the characteristics of a business that make financial providers confident about and willing to invest in the business, such as financial leverage and business size.
3) Information readiness is the ability to provide information that can attract financial providers, and focuses on financial information.

**Access to Finance:**
Access to finance refers to owner/managers’ perceptions of their ability to access external finance such as venture capital, angel financing, overdrafts, short-term loans and long-term loans from financial institutions.

**Performance:**
Performance in this study is defined in terms of goal achievement. As SMEs are generally unwilling to provide objective financial information, and in many cases financial rewards are not the only goals pursued by owner/managers, this study uses a subjective approach and focuses on both financial and non-financial goals as measures of performance. The financial criteria are assessed in relation to owner/managers’ satisfaction with profitability, growth in sales, return on assets, and the cash flow of their businesses. Lifestyle, independence and job security are utilised as the non-financial criterion.

**Owner/managers:**
Studies in small business usually focus on owner/managers of SMEs as they are responsible for all decisions and their implementation. In this study, owner/managers are persons who control and make decisions for the enterprise.

**Experience:**
Experience of owner/managers has been seen as a critical factor in small business performance, particularly industry experience. Industry experience provides the opportunity for owner/managers to build up social networks that support their businesses. Experience in the present study refers to owner/managers’ industry experience, and is defined as the number of years owner/managers have owned or managed their businesses.

**Education:**
The educational level of owner/managers may determine their persistence, motivation, and self-discipline (Coleman 2004). These qualities are anticipated to influence their
ability to access finance, and their performance. Education in this study refers to owner/managers’ highest educational qualification or nearest equivalent.

**Age:**
Owner/managers’ age is mainly used as a control variable in a number of studies. Age in this study refers to owner/managers’ age, and is measured by asking owner/managers to indicate their age within a number of categories.

**Financial Leverage Ratio:**
Financial leverage ratio presents the level of debt in a business financial structure. It signals liquidity risk and the ability to service the financial provider requirements of business. It is measured in a number of ways based on the objective of this study. In this study, it is defined in terms of total liabilities as a percentage of total capital.

**Size:**
Size is a multidimensional construct incorporating complexity and resource availability. There are a number of variables used to measure business size, such as sales revenue, total assets and number of employees. There is, however, no suggestion in the literature that one particular measure of size is superior to another. Business size in this study is measured in terms of number of employees and value of fixed assets.

**Financial Information:**
Financial information is information expressed in financial terms that helps in making decisions about organisations. This study adopts a detailed measure of financial information, acknowledging the large variation in financial reports and indicators used in previous studies and recommended as useful for small businesses. The 15 reports and indicators employed are as follows: balance sheet, profit and loss statement, cash flow statement, aged debtors balance, aged creditors balance, budget, variance analysis, inventory turnover, return on assets, return on equity, net profit margin, current ratio, debt to total assets ratio, debt to equity ratio, and times interest covered. The quality of financial information is assessed in this study since the ability of such information to assist in decision-making is based on its quality. Quality of financial
information is measured in terms of accuracy and completeness, timeliness, and consistency.

**Information Asymmetry:**
Information asymmetry is where financial providers have less information than owner/managers about the financial circumstances and prospects of small firms.

**1.7 Limitations of the Present Study**

Research on the relationships among the investment readiness, access to finance, and performance of SMEs in developing countries and especially in Thailand has been meagre to date. Prior research on these relationships concentrated on larger listed firms and in developed countries. Therefore, most of the studies cited in the present research were conducted in developed countries. Thus, generalisability may be a problem because of the differences between SMEs in developed and developing countries in terms of organisational, structural, environmental, and management variables, not to mention the definition of SME used.

Moreover, the results of this research are not generalisable to other industries because the study is restricted to one industry sector, the trading sector. In addition, this study employs convenience sampling, which is less reliable than other sampling methods because of sampling bias. However, it is the most feasible method given limitations of time and resources.

**1.8 Outline of the Study**

An overview of the study is depicted in Figure 1.1. From this figure, it can be seen that the study is organised into six chapters.
The content of each chapter is briefly outlined as follows.

Chapter Two: This chapter provides an overview of SMEs in Thailand, the role and importance of SMEs to the Thai economy, the obstacles they face, and the policies of the Thai government relating to SMEs.

Chapter Three: A review of literature relevant to the four objectives of the study is presented in this chapter. Research hypotheses are developed for the four objectives. The chapter ends with a conclusion on the
relationships among the performance, access to finance and investment readiness of SMEs.

Chapter Four: The chapter details the process of survey design, including decisions about the measurement of variables, target respondents, communication methods, and the development of the questionnaire. The data collection process and the justification for the statistical methods used for hypothesis testing are also discussed.

Chapter Five: The findings from preliminary analyses of the data gathered using descriptive statistics such as frequencies, percentages, and means are presented in this chapter. This is followed by an assessment of the measurement model and the results of the hypothesis tested.

Chapter Six: A summary and discussion of the findings drawn from the results in Chapter 5 are presented. This chapter also examines the implications of the research for policy makers and practitioners and suggests further improvements of the research design and variable measurement. Some consideration of the limitations of the study and directions for future research concludes this chapter.

The next chapter will deal with the significance of the role of SMEs in the Thai economy, before reviewing the relevant literature and developing research hypotheses that pertain to these relationships.
CHAPTER 2
SMALL AND MEDIUM ENTERPRISES IN THAILAND

2.1 Introduction

SMEs have come to play an increasingly crucial role in the economic growth of countries around the world, including Thailand. In the past the policies of the Thai government encouraged large firms to the detriment of smaller firms in order to ensure that the former were able to benefit from economies of scale. However, recent trends show a change in the focus of government policies. It is now recognised that small and medium firms are indispensable for long-term economic growth and welfare in Thailand.

The purpose of this chapter is to provide information on the crucial role of small and medium enterprises (SMEs) in the Thai economy. The chapter is divided into six sections. The first section presents a definition of SMEs in Thailand. This is followed by sections that provide an overview of SMEs in Thailand and their role in the Thai economy. The fourth and fifth sections cover obstacles faced by SMEs in Thailand and the Thai government’s policies on SMEs respectively. The key issues dealt with in the chapter are summarised in the last section.

2.2 Definition of SMEs

There is no universally accepted definition of small and medium enterprises (SMEs) (Campbell 1976; Keats and Bracker 1988). SMEs have been differentiated from their large counterparts according to various quantitative and qualitative criteria. The quantitative criteria frequently applied in defining SMEs are the amount of capital invested and the number of employees. Nevertheless, there is no standard means of distinguishing SMEs from large firms, and the defining criteria vary from one country to another (Campbell 1976). It can be seen from the Table 2.1 that SMEs are identified in differing ways in different countries, with number of employees the most frequently used criterion in many countries. Other criteria by which small firms are
defined include value of assets, volume and value of sales, and amount of capital invested in the business.

Table 2.1 Definition of SMEs in Asian and other countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Category of industry</th>
<th>Criteria/country’s official definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Manufacturing</td>
<td>Small enterprises, &lt;100 employees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium enterprises, &lt;200 employees</td>
</tr>
<tr>
<td>China</td>
<td>SMEs</td>
<td>Depends on product group, usually &lt;200 employees</td>
</tr>
<tr>
<td>Indonesia</td>
<td>SMEs</td>
<td>&lt;100 employees</td>
</tr>
<tr>
<td>Japan</td>
<td>Manufacturing</td>
<td>&lt;300 employees or asset capitalisation &lt;¥300 million</td>
</tr>
<tr>
<td></td>
<td>Wholesale trade</td>
<td>&lt;100 employees or asset capitalisation &lt;¥100 million</td>
</tr>
<tr>
<td></td>
<td>Retail trade &amp; services</td>
<td>&lt;50 employees or asset capitalisation &lt;¥10 million</td>
</tr>
<tr>
<td>Korea</td>
<td>Manufacturing</td>
<td>&lt;300 employees</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>&lt;20 employees</td>
</tr>
<tr>
<td>Malaysia</td>
<td>SMIs</td>
<td>&lt;75 full-time workers or a shareholder fund of &lt;RM 2.5 million</td>
</tr>
<tr>
<td></td>
<td>SIs</td>
<td>Manufacturing establishments employing between 5 and 50 employees, or with a shareholders’ fund of up to RM 500,000</td>
</tr>
<tr>
<td></td>
<td>MIs</td>
<td>Manufacturing establishments employing between 50 and 75 full-time employees or with a shareholders’ fund of between RM 500,000 and RM 2.5 million</td>
</tr>
<tr>
<td>Singapore</td>
<td>Manufacturing</td>
<td>&lt;$S$12 million fixed assets</td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td>&lt;100 employees</td>
</tr>
<tr>
<td>USA</td>
<td>Very small enterprises</td>
<td>&lt;20 employees</td>
</tr>
<tr>
<td></td>
<td>Small enterprises</td>
<td>20-99 employees</td>
</tr>
<tr>
<td></td>
<td>Medium enterprises</td>
<td>100-499 employees</td>
</tr>
<tr>
<td>Vietnam</td>
<td>SMEs</td>
<td>No fixed definition, generally &lt;200 employees</td>
</tr>
</tbody>
</table>

SMEs: Small and Medium Enterprises  
SMIs: Small and Medium Industries  
SIs: Small Industries  
MIs: Medium Industries

Source: Asian Productivity Organization (2002a p.16)

The Thailand Act for the Promotion of Small and Medium Enterprises of 2000 defines small and medium enterprises as businesses that produce goods and services, or engage in retail and wholesale, or any other businesses that have been announced and categorised by the Minister of Industry as small and medium firms (Office of Small and Medium Enterprises Promotion 2001b). In 2002, the Ministry of Industry
categorised small and medium enterprises in Thailand into three major sectors: production, service, and trading (including wholesale and retail) (Institute for Small and Medium Enterprises Development 2006b). However, in September 2002, the definition of SMEs in Thailand was modified by the Ministry of Industry using number of employees and amount of fixed assets as standards. The criteria currently employed in defining small and medium enterprises in Thailand are presented in Table 2.2.

Table 2.2 Definition of SMEs in Thailand

<table>
<thead>
<tr>
<th>Sector</th>
<th>Medium Enterprise</th>
<th>Small Enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employment (no. of people)</td>
<td>Fixed Assets</td>
</tr>
<tr>
<td>Production</td>
<td>&gt; THB50 - 200 million (≈ AUD1.6 - 6.4 million$)</td>
<td>≤ 50</td>
</tr>
<tr>
<td>Service</td>
<td>&gt; THB50 - 200 million (≈ AUD1.6 - 6.4 million$)</td>
<td>≤ 50</td>
</tr>
<tr>
<td>Trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Wholesale</td>
<td>≤ THB50 - 100 million (≈ AUD1.6 - 3.2 million$)</td>
<td>≤ 25</td>
</tr>
<tr>
<td>- Retail</td>
<td>&gt; THB30 - 60 million (≈ AUD0.96 - 1.92 million$)</td>
<td>≤ 15</td>
</tr>
</tbody>
</table>

Source: Institute for Small and Medium Enterprises Development (2006b)

# : AUD1 = THB31.25 - average exchange rate between 1/7/05 and 3/11/05 (x-rate.com 2006)

SMEs are classified as medium or small enterprises in terms of both number of employees and amount of fixed assets. According to Institute for Small and Medium Enterprises Development (2006b), the amount of fixed assets can be determined as the lower amount of the following:

a) the net amount of fixed assets excluding land as it appears in the last financial statement prepared, audited and signed by an authorised person and an auditor, in accordance with the current Thai Accounting Act; and

b) the net amount of fixed assets, excluding land, valued by financial institutions or credible financial consulting companies.
In a situation where the number of employees and the value of fixed assets place the firm in both categories, that is either small or medium, the lower of the two will determine how the enterprise should be classified (Institute for Small and Medium Enterprises Development 2006b).

2.3 Overview of SMEs in Thailand

Thailand lies in the heart of Southeast Asia, and is surrounded by Myanmar, Laos, Cambodia and Malaysia (see Figure 2.1 and Figure 2.2). Bangkok is the capital city and the centre of political, commercial and industrial activities. Thailand is divided into the north, central, northeast, east and south regions, and consists of 76 provinces (see Figure 2.2). The population of 65 million is largely homogeneous, with most being ethnic Thai and followers of Buddhism (Tourism Authority of Thailand 2006).

Figure 2.1 Location of Thailand

The Thai economy is firmly rooted in its abundant natural resources and agricultural advantages. Thailand is famous for rice and products native to tropical climates including rubber, sugar, pineapples, tropical fruit, tapioca and seafood. A major campaign to promote industries in Thailand that began in the late 1970s has driven the modernisation of the economy, with tremendous growth in manufacturing, technology and foreign investment particularly in the late 1980s and 1990s (Thai Portal 2006).

Early development policies in the country looked to large, capital-intensive industries for economic growth, with a consequent neglect of small and medium enterprises (SMEs). However, due to the economic crisis in 1997 the government experienced an abrupt slowdown from double-digit growth in the mid-1980s to less than 2 percent growth in 1997. It became obvious then that SMEs are a vital component of the modern Thai economy and a catalyst for sustainable economic development. SMEs
are considered a major mechanism in supporting and strengthening the country’s development at the grass-roots and community levels. Thus, the government has become increasingly aware of and interested in the role that small firms play in the country’s economic development (Industrial Estate Authority of Thailand 2003; Institute for Small and Medium Enterprises Development 2003b).

In 2003 and 2004, the trading sector accounted for the largest number of SMEs in Thailand with 851,501 or 39.4 percent of SMEs. It was followed by the service sector with 710,420 or 32.9 percent SMEs. Manufacturing accounted for 482,229 or 22.3 percent SMEs, while 117,427 or 5.4 percent SMEs were not classified in terms of industry sector (see Figure 2.3) (Office of Small and Medium Enterprises Promotion 2004).

**Figure 2.3 Number of Small and Medium Enterprises in 2003 and 2004 by Sector**

![Figure 2.3](image)

*Source: Office of Small and Medium Enterprises Promotion (2004)*

Figure 2.4 reveals that in 2004 the trading sector held a higher share of employment than the manufacturing and service sectors in the northeast and northern regions, accounting for 35 percent of the total SME employment in the northeastern region and a third of SME employment (32 percent) in the northern region. SME employment was highest in manufacturing but lowest in the trading sector (25 percent) in the central and eastern regions. The service sector took over the lead in the southern
region and was followed by the trading sector which accounted for 33 percent of SME employment in this region.

**Figure 2.4 Distribution of Employment under Small and Medium Enterprises in 2004 by Sector and Region**

Trading activities cover grocery, wood and wood products, agricultural products, health products, vehicle, clothing, textile, jewellery and gems (Institute for Small and Medium Enterprises Development 2006a). However, there is limited information on number or percentage of SMEs in each trading sector activity. SMEs in Thailand are mainly located in the northeast (31 percent), Bangkok and metropolitan (21 percent), and the north (17 percent) (see Figure 2.5). More than half of SMEs in the country are within these three regions.
Figure 2.5 Proportion of Thai SMEs by Region

Source: Office of Small and Medium Enterprises Promotion (2006c)

Figure 2.4 shows that SMEs in the major provinces are primarily located in Bangkok, followed by Khon Kan and Chiang Mai in order. Bangkok is the main centre in the Bangkok and metropolitan region, Khon Kan is the main centre in the northeast, and Chiang Mai is the major city in the north. These provinces correspond to the three regions with the majority of SMEs as presented in Figure 2.5.

Figure 2.6 Proportion of Thai SMEs in the Major Provinces

Source: Office of Small and Medium Enterprises Promotion (2006c)

As shown in Figure 2.7, the majority of SMEs in the three regions with the most SMEs are in the trading sector.
It can be seen that SMEs comprise the majority of businesses in Thailand. As a result, they have come to be identified as the driving force behind economic growth. The crucial role of SMEs in the country’s economy is discussed in the following section.

2.4 The Role and Importance of SMEs in the Thai Economy

SMEs are the indisputable engines and barometers of the nation’s economy. They played a major role in revitalising the economy after the economic crisis of 1997. SMEs make a significant contribution to Thailand’s national economy in terms of employment creation, export value, Gross Domestic Product (GDP), innovation and so on (Office of Small and Medium Enterprises Promotion 2003). The contributions of SMEs to these areas are discussed in the ensuing sections.

2.4.1 Employment Creation

As is true in other countries, SMEs make up the overwhelming majority of businesses in Thailand and therefore contribute substantially to employment (Asian Productivity Organization 2002a). They not only provide job opportunities for the growing labour
force, but also help spread economic activities out of the urban to the regional areas. They absorb the labour surplus from the rural and agricultural sector, thereby helping minimise migration to the already overcrowded metropolitan areas with their associated problems of housing, water and power supply, and various social problems (Economic and Social Commission for Asia and the Pacific 1993).

According to Office of Small and Medium Enterprises Promotion (2003) SMEs were the main sources of domestic employment, accounting for 68.98 percent of total employment in the country, while large enterprises employed the remaining 31.02 percent. Employment by SMEs was 36.47 percent for the trading sector, 33.43 percent for the manufacturing sector, and 30.10 percent for the service sector. SMEs generated 4.99 million jobs throughout the country. Table 2.3 shows that the majority of firms that create employment in the country’s economy are in the small and medium categories (APEC Center for Technology Exchange and Training for Small and Medium Enterprise 2006).

Table 2.3 Percentage Contribution of Various Sized Enterprises to Economic Activities

<table>
<thead>
<tr>
<th>All Categories</th>
<th>Proportion Classified according to number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-4 (people)</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>74.72</td>
</tr>
<tr>
<td></td>
<td>5-9 (people)</td>
</tr>
<tr>
<td>Wholesaling</td>
<td>54.85</td>
</tr>
<tr>
<td></td>
<td>10-49 (people)</td>
</tr>
<tr>
<td>Retailing</td>
<td>90.28</td>
</tr>
<tr>
<td></td>
<td>50-199 (people)</td>
</tr>
<tr>
<td>Service</td>
<td>98.10</td>
</tr>
<tr>
<td></td>
<td>&gt;200 (people)</td>
</tr>
<tr>
<td>Restaurant and Hotel</td>
<td>82.20</td>
</tr>
<tr>
<td></td>
<td>No figures available</td>
</tr>
<tr>
<td>Service</td>
<td>98.10</td>
</tr>
<tr>
<td></td>
<td>No figures available</td>
</tr>
<tr>
<td>Construction</td>
<td>98.10</td>
</tr>
<tr>
<td></td>
<td>No figures available</td>
</tr>
<tr>
<td>Total</td>
<td>83.72</td>
</tr>
</tbody>
</table>

2.4.2 Export Value

Exports have been the prime movers in Thailand’s drive towards prosperity. Thailand is known as an exporter of traditional commodities and food, especially tapioca, rubber, canned pineapple and frozen shrimp. It is also one of the major exporters of sugar, corn and poultry. The government’s initiatives to promote foreign investments, improve business infrastructure and encourage local entrepreneurs have helped Thailand to expand its export volumes. In 1972, the first year the government emphasised export promotion as a core policy, exports accounted for only 13 percent of the country’s GDP. By 1987, however, the ratio had risen to 23 percent, and by 1998 it was 50 percent (Thai Portal 2006).

SMEs contribute a major part of the country’s export values. Figure 2.8 shows that the value of exports of industrial products from Thai SMEs was THB1,209 billion, or AUD39 billion (AUD1 = THB31.25 - average exchange rate between 1/7/05 and 3/11/05), accounting for 38.21 percent of all industrial products exported from Thailand in 2002. Even though the proportion decreased from 39.48 percent in 2001, the total value of exports has grown continuously. The export value of Thai SMEs increased from THB755 billion (AUD24 billion) in 2000 to THB794 billion (AUD25 billion) in 2001 and THB1,209 billion (AUD39 billion) in 2002.

Figure 2.8  The Proportion of Export of Firms Classified by Size over the Period 2000 – 2002

2.4.3 Gross Domestic Product (GDP)

Thailand’s recovery from the economic crisis of 1997 has inevitably been linked to the development and sustainability of the SME sector, with around 40 percent of the country’s GDP generated by these firms (see Table 2.4). According to the Office of Small and Medium Enterprises Promotion, the GDP contribution of SMEs in all sections for 2002 was THB2113 billion out of a total of THB5,430 billion (AUD174 billion), accounting for 38.91 percent of GDP in that year.

Table 2.4 Gross Domestic Product over the Period 1998 - 2002

<table>
<thead>
<tr>
<th>Gross Domestic Product (THB million)</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison of Gross Domestic Products (percentage)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Product for agricultural sector</td>
<td>12.17</td>
<td>10.84</td>
<td>10.39</td>
<td>10.39</td>
<td>10.03</td>
</tr>
<tr>
<td>Gross Domestic Product for SMEs</td>
<td>37.73</td>
<td>39.37</td>
<td>39.80</td>
<td>39.36</td>
<td>38.91</td>
</tr>
<tr>
<td>Mining SMEs</td>
<td>0.90</td>
<td>0.96</td>
<td>1.16</td>
<td>1.23</td>
<td>1.23</td>
</tr>
<tr>
<td>Manufacturing SMEs</td>
<td>8.38</td>
<td>8.94</td>
<td>9.52</td>
<td>9.64</td>
<td>9.89</td>
</tr>
<tr>
<td>Construction SMEs</td>
<td>2.82</td>
<td>2.64</td>
<td>2.25</td>
<td>2.18</td>
<td>2.18</td>
</tr>
<tr>
<td>Wholesale and retail SMEs</td>
<td>13.15</td>
<td>13.33</td>
<td>13.35</td>
<td>12.88</td>
<td>12.25</td>
</tr>
<tr>
<td>Service SMEs</td>
<td>12.48</td>
<td>13.51</td>
<td>13.52</td>
<td>13.44</td>
<td>13.35</td>
</tr>
<tr>
<td>Gross Domestic Product for large enterprises and others</td>
<td>50.09</td>
<td>49.79</td>
<td>49.81</td>
<td>50.25</td>
<td>51.06</td>
</tr>
<tr>
<td>Total Gross Domestic Product (GDP)</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Office of Small and Medium Enterprises Promotion (2003 p. 17)

Table 2.4 shows that SMEs in the service and trading sectors account for the highest contributions of the SME sector to GDP in Thailand. This covers all types of services provided by the private sector only, and not the educational and health services, that are provided by the state. In the year 2002, SMEs in the service sector delivered products and services to the economic system worth 13.35 percent of the total GDP. This was followed by the wholesale and retail trade sector (12.25 percent) and the manufacturing sector (9.89 percent). SMEs also contributed to the country’s investment in areas of infrastructure such as buildings, roads and transport systems.
2.4.4 Innovation

The evolving integration of economies and accelerating competition in the global market shorten the life-cycle of products and speed up changes in production processes and technologies. Along with new patterns of international competition, innovation has become the main driver of firm success and, ultimately, the country’s economic development. The ability to innovate is therefore both the source of competitiveness and the key to survival in this era of knowledge-based economies (APEC Center for Technology Exchange and Training for Small and Medium Enterprise 2006; Leopairote 2003). SMEs’ contribution to the innovation process does not involve introducing new products that have not been seen before, but rather adapting existing products to the needs of customers. Although Thai SMEs generate a very small proportion of new production and service innovation, their major contribution in this area is through improvement and modification of existing technology or products to meet market needs. Through these processes, they are able to remain competitive in the world market and contribute to the country’s development (APEC Center for Technology Exchange and Training for Small and Medium Enterprise n.d.).

2.5 Obstacles Faced by SMEs in Thailand

The discussions so far indicate that SMEs play an important role in the country’s economic development. Nevertheless there are several problems that prevent SMEs from making their full contribution. The Committee for the Promotion of SMEs summarised the obstacles faced by Thai SMEs in 4 main categories: limited access to financial capital, loss of competitive advantage, lack of good corporate governance, and ineffective support from the government (Office of Small and Medium Enterprises Promotion 2001b). Each of these is examined below.
2.5.1 Limited Access to Financial Capital

One of the biggest obstacles facing Thai SMEs is limited access to finance - a problem which constrains their business investment and operations (Asian Productivity Organization 2002a; Department of Industrial Promotion 2004; Office of Small and Medium Enterprises Promotion 2006b). SMEs have difficulty obtaining loans from financial institutions, especially since the economic crisis of 1997.

The government has implemented various policies to increase SME access to finance, such as deregulating the finance sector to increase the number of financial institutions and enhance the availability and effectiveness of financial capital for SMEs in the country. There are now 19 financial institutions that provide credit for SMEs in Thailand. In addition, several programs have been implemented to increase the flow of funds to the SME sector. These include rediscount facilities provided by commercial banks and by the Bank of Thailand; long-term credit facilities made available by the Industrial Finance Corporation of Thailand (IFCT); special interest rate medium- and long-term loans from the Office of Revolving Fund for Cottage and Handicraft Industries; and the Small Industry Finance Corporation (SIFC), which provides funding specifically for small firms (Department of Industrial Promotion 2006; Economic and Social Commission for Asia and the Pacific 1993).

In practice, however, financial institutions in Thailand are hesitant about to provide funding to SMEs since they have a higher risk of default (Business Thailand 2002). Bankers recognise that it is more costly to lend to the SME sector, where technology is basic and management inexperienced, and where accounting is less transparent (Office of Small and Medium Enterprises Promotion 2001b). In addition, SMEs do not have enough collateral to guarantee loans made to them (Small Industry Credit Guarantee Corporation 2005).

An alternative source of funding from financial institutions is the capital markets. There are two capital markets in Thailand, the main board market and the second board market. SMEs do not meet the listing requirements necessary to raise funds on the main board market (the Stock Exchange of Thailand) nor do they have the capital
and profit levels or adequate transparency to offer trust and security to investors (Business Thailand 2002; Suranaree University of Technology 2001).

The second board market, the Market for Alternative Investment (MAI), was developed to provide fund-raising opportunities for SMEs with high growth potential. It was established under the Securities Exchange of Thailand Act, and officially commenced operations in 1999. MAI simplifies the examination and listing process for SMEs. The profitability, capital stock and dispersion of shareholdings requirements are less stringent compared with the listing requirement for the main stock exchange (The Stock Exchange of Thailand 2006a). Although this market is expected to provide important alternative sources of finance for SMEs in Thailand, it is still in its early stages.

In summary, despite financial sector reforms, the increasing number of financial institutions and the introduction of the second board market, access to finance continues to be a major problem constraining SME development and competitiveness in Thailand (Office of Small and Medium Enterprises Promotion 2001b).

2.5.2 Loss of Competitive Advantage

The economic crisis in 1997 made it clear that Thailand can no longer rely on cheap labour for simple mass produced goods that primarily compete on the basis of price. As indicated in Figure 2.9, this advantage has long been lost to other lower-cost-producing countries such as China and Vietnam (Department of Industrial Promotion 2004; Office of Small and Medium Enterprises Promotion 2001b; Sevilla and Soonthornthada 2000).
In order to meet global quality standards, Thai industries are now pressured to abide by several regulatory requirements affecting quality, production costs, and delivery. Major problems that obstruct the global competitive ability of Thai SMEs are the loss of competitive advantage in terms of labour, a lack of know-how in the utilisation and adaptation of technology, a lack of innovation, insufficient research on product development and production techniques, and a decline in the efficiency of the production process (Office of Small and Medium Enterprises Promotion 2001b; Panpiamrat 2005). These obstacles provoke the ‘Nut Cracker Effect’, where SMEs are trapped in the middle between countries with lower production costs such as China, Vietnam and Indonesia and those with high value-added products and skilled labour such as Italy, Japan and Taiwan (see Figure 2.9) (Department of Industrial Promotion 2004; Office of Small and Medium Enterprises Promotion 2001b). To survive in the global competitive area, Thai SMEs have to build new competitive advantages and improve their productivity.

2.5.3 Lack of Good Corporate Governance

The majority of SMEs in Thailand are family owned and not professionally managed. Thus they are deficient in the qualities associated with good corporate governance
such as accountability, transparency and equity (Office of Small and Medium Enterprises Promotion 2001b). In keeping with the results in Table 2.5, Satetawanich (2005) reveals that Thai SMEs generally lack awareness of financial management techniques and the ability to utilise them effectively. Lack of commitment to good corporate governance in turn limits the ability of SMEs to develop efficient management tools for doing business. For instance, they are unable to manage production costs efficiently, set their prices in relation to the cost of production and the market situation, establish appropriate accounting systems for their businesses, or keep up with the trade liberalisation environment that is characteristic of the new economy (Office of Small and Medium Enterprises Promotion 2001b).

Table 2.5 Awareness and Usage of Management Techniques among Thai SMEs

<table>
<thead>
<tr>
<th>Management Techniques</th>
<th>Not Aware</th>
<th>Used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
<td>Med.</td>
</tr>
<tr>
<td>Financial Management Techniques:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income statement</td>
<td>12.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Balance sheet</td>
<td>12.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Report on sources and uses of funds</td>
<td>50.4</td>
<td>28.2</td>
</tr>
<tr>
<td>Product costing</td>
<td>18.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Cash budgets</td>
<td>24.5</td>
<td>17.4</td>
</tr>
<tr>
<td>Projected income statements</td>
<td>45.3</td>
<td>24.0</td>
</tr>
<tr>
<td>Variance analysis</td>
<td>71.9</td>
<td>50.7</td>
</tr>
<tr>
<td>Human Resource Management Techniques:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job analysis</td>
<td>31.7</td>
<td>21.7</td>
</tr>
<tr>
<td>Interview techniques</td>
<td>21.6</td>
<td>8.7</td>
</tr>
<tr>
<td>Employee performance appraisal</td>
<td>52.5</td>
<td>29.7</td>
</tr>
<tr>
<td>Job rotation/enrichment</td>
<td>43.2</td>
<td>21.0</td>
</tr>
<tr>
<td>Management by objectives</td>
<td>49.6</td>
<td>19.6</td>
</tr>
<tr>
<td>Profit sharing</td>
<td>53.2</td>
<td>23.9</td>
</tr>
<tr>
<td>Flexitime</td>
<td>36.7</td>
<td>21.0</td>
</tr>
<tr>
<td>Marketing Techniques:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales training</td>
<td>54.0</td>
<td>38.4</td>
</tr>
<tr>
<td>Sales forecasting</td>
<td>48.9</td>
<td>34.1</td>
</tr>
<tr>
<td>Marketing research</td>
<td>59.0</td>
<td>35.5</td>
</tr>
<tr>
<td>Break even analysis</td>
<td>50.4</td>
<td>26.1</td>
</tr>
<tr>
<td>Marketing planning</td>
<td>48.9</td>
<td>28.3</td>
</tr>
</tbody>
</table>

Source: Dart, Ng, and Sarkar (1990)

2.5.4 Ineffective Support from Government

Although the SME sector is recognised as important to the Thai economy, government efforts to promote this sector have not been very effective. In the past, there was a clear policy framework that guided assistance programs to the sector.
However, existing programs were not reviewed or evaluated on a regular basis (Krongkaew 1988; Office of Small and Medium Enterprises Promotion 2001b). This has changed in recent times with more focused interventionist policies that seek to correct market failures preventing SMEs from achieving their full potential (Sevilla and Soonthornthada 2000). Nevertheless, there is still room for improvement, in particular with respect to the structural weaknesses of the public sectors that deliver programs to SMEs. It has been argued that the Institute for Small and Medium Enterprises Development (ISMED), which relies on academic institutions to provide SME information networks and training, may not be an effective vehicle for delivering programs to SMEs. This is because academics in these institutions generally do not have sufficient business experience or up-to-date training facilities for hands on training in areas relevant to the needs of SMEs (Sevilla and Soonthornthada 2000). Some policies benefit large firms to the detriment of SMEs. For instance, the policies developed by the Board of Investment Unit for Industrial Linkage Development to promote and develop supporting industries in Thailand mostly benefit large multinational firms, and moreover focus only on the automobile and electronics/electrical appliance industries (Sevilla and Soonthornthada 2000).

Although the competitive advantages of SMEs are acknowledged, SMEs encounter problems that prevent them from realising their full potential. As the performance of SMEs has a direct impact upon the Thai’s economy, their survival and growth are valid concerns of policy makers. Some of the policies and programs implemented by the Thai government to assist SMEs are discussed next.

2.6 The Government Policy on SMEs in Thailand

The Government of Thailand recognises that, though SMEs contribute extensively to the economic development and growth of the country, they are not able to compete effectively in national and global markets. This is exacerbated by the increased trade and investment liberalisation policies of the Thai government. Policies and programs assisting SMEs in Thailand date back to the 1970s with the birth of Thailand’s National Development Plans. However, active policy implementation for SME development did not come into the spotlight until after the economic crisis in 1997.
Since then, the government has established a strategy for the promotion of SMEs in the Master Plan of Thailand's Small and Medium Enterprises (SMEs) Promotion 2002-2006 in order to improve the competitiveness of SMEs. According to the Office of Small and Medium Enterprises Promotion (2001b, p. VI), this strategic plan emphasises the following four main areas:

1) solving the two urgent problems of continuing difficulty in securing finance and marketing for SMEs.
2) creating and improving basic infrastructure and state services so that they can be utilised readily and comprehensively by all enterprises and reducing problems and obstacles on business operation caused by the state.
3) promoting sustainable growth of SMEs by raising their competitiveness, increasing the potential of entrepreneurs, improving the skill of SMEs' workforce, promoting technological know-how, research and development and innovation as well as amongst SMEs and cluster formation amongst SMEs.
4) emphasising on the urgent need to solve problems and to lay a foundation for the growth of specific groups of strategic SMEs.

The vision of this plan is to create a more entrepreneurial society in Thailand, to establish strong, stable and high-standard SMEs that can achieve internationalisation and act as a strong foundation for the national and community economies (Office of Small and Medium Enterprises Promotion 2001b). This strategic plan has been implemented by relevant institutions promoting SMEs in Thailand, such as the Institute for Small and Medium Enterprises Development, the Office of Small and Medium Enterprises Promotion, and the Department of Industrial Promotion. In relation to this plan, these institutions are responsible for delivering advisory services to SMEs and disseminating knowledge to SME personnel and SME service providers through training, media, long-distance learning, and so on. They are also responsible for developing an extensive network of training and support agencies to serve the needs of SMEs (Institute for Small and Medium Enterprises Development 2006; Office of Small and Medium Enterprises Promotion 2006d).

Although this strategic plan has been implemented, there are still a number of constraints impeding Thai SMEs from being competitive in the market place. These include a lack of access to raw materials, the high cost of raw materials, a lack of relevant labour force in industries such as textiles, gems and plastics, and a lack of information relevant to exporting. In addition, the Free Trade Agreement between
Thailand and a number of countries increases competition from imports. Therefore, in addition to the programs presented above, assistance programs that provide information and training on exporting are required (Office of Small and Medium Enterprises Promotion 2006a).

2.7 Conclusion

Since the Thai economic crisis of 1997, SMEs have been given a new economic status as the engine for growth and economic recovery. They are a vital part of the structural reform program intended to strengthen the Thai economy because of their number and variety, their contributions to all aspects of the economy, their involvement in regional development, their complementary role in supporting the large firms, and their role as the basis for innovations and adaptations. Although the government has developed policies to enhance SME performance, there still remain several constraints on their growth and development. The major constraints include their lack of access to finance, loss of competitive advantage, lack of good corporate governance, and ineffective delivery of assistance programs.

The next chapter presents the concept of performance and discusses the factors that influence it. The chapter focuses primarily on access to finance as it is a key factor affecting the performance of SMEs particularly in Thailand. It is suggested that, in addition to providing finance for the SME sector, the government can enhance the ability of SMEs to access the available funds for use in improving their performance by ensuring they are investment-ready. That is, if owner/managers are ready to access new sources of finance and firms can provide information to attract potential financial providers, SMEs should be able to access finance. The relationships among the performance, access to finance and investment readiness of SMEs specifically in Thailand are examined, and hypotheses are developed on the basis of these relationships.
CHAPTER 3
LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

3.1 Introduction

This chapter identifies the relationships among the performance, access to finance, and investment readiness of SMEs. It also presents a comprehensive review of literature related to these factors. The chapter is divided into eight sections. The first section considers the importance of SME performance, and presents the concept of performance adopted in this study. This is followed by a discussion of factors that influence the performance of SMEs, with a specific emphasis on finance. The third section focuses on sources of finance and financial structure in SMEs. In the fourth section, access to finance is analysed in relation to its supply and demand components. Three aspects of the demand-side factors are examined in greater depth in the following three sections as together they determine the investment readiness of the business: owner/manager readiness, business readiness, and information readiness. The hypotheses tested in the study are summarised at the end of Section seven. The chapter ends with a summary of the relationships among performance, access to finance, and investment readiness of SMEs in Thailand.

3.2 Performance of SMEs

SMEs play an increasingly crucial role in the economic growth and development of countries around the world, as they not only comprise a mass base of productivity and growth but are also major providers of employment (Asian Productivity Organization 2002a; McQueen 1989; Sage 1993). The role of SMEs in the overall health of an economy is dependent on their performance. As noted by Sage (1993) and Venkatraman and Ramanujam (1987), performance is a fundamental element influencing the continuation of a firm and ultimately also its contribution to the economic development. Yet, conceptualising the construct of performance in small firms is one of the major challenges facing researchers (Hrebinjak, Joyce, and Snow
1989; Rodsutti and Swierczek 2002). Performance in SME research has been conceptualised in different ways, based on the research questions addressed, the disciplinary focus, and the availability of data (Venkatraman and Ramanujam 1987). A review of the literature identifies four major approaches to describing performance: the goal approach, the systems resource approach, the process approach, and the constituency approach (Ford and Schellenberg 1982). Each of these approaches is described in detail below.

3.2.1 Goal Approach

The goal approach, one of the earliest concepts of performance, defines performance in terms of goal achievement (Etzioni 1964). Initial models of this approach focused on a single goal such as profit, productivity, organisational growth, or stability (Steers 1975). Profit is often selected as a goal of a firm because it is a target pursued by most firms; indeed it is assumed that firms need to make profit if they are to survive. However, this analytical emphasis on a single goal has been questioned because it fails to capture all the factors involved in performance. Besides, such an emphasis can distort the picture of an organisation’s goal(s) since it excludes from consideration other goals that are equally important and pursued (Ramanujam, Venkatraman, and Camillus 1986). In response to these limitations of the single-goal approach, more sophisticated models involving several goals have been developed as ways of conceptualising performance in SMEs. This extension of the goal approach views performance in terms of an organisation’s capacity to use its resources successfully towards specific ends. A set of relevant goals, such as profitability, satisfaction, productivity, resource acquisition, growth, and survival, are used together as they all influence organisational performance (Cooper, Gimeno-Gascon, and Woo 1994; Steers 1975).

The main criticism of the multiple-goal approach is that useful and valid sets of criteria and organisational goals are difficult to determine (Lachman and Wolfe 1997; Rodsutti and Swierczek 2002; Steers 1975). Moreover, each goal has a different degree of influence on organisational performance. Thus, it is suggested that goals must be prioritised in order to clearly define their relative importance. Steers (1975)
mentioned that to make this approach effective, a weighting must be assigned to each goal that reflects the value attached to it. However, finding the most suitable set of goals and establishing the priorities of various goals are still problematic tasks. This is because different firms may not pursue the same set of goals (Lachman and Wolfe 1997; Rodsutti and Swierczek 2002; Steers 1975). Due to limitations such as these, the systems approach has been proposed as an alternative way of conceptualising performance.

3.2.2 Systems Resource Approach

In contrast to the goal approach, the systems resource approach emphasises the means necessary to achieve ends (Lachman and Wolfe 1997; Yuchtman and Seashore 1967). This approach views organisational performance in terms of the organisation’s ability to acquire scarce and valued resources from the environment. It is based on the assumption that businesses are built up from the resources and capabilities that they currently possess. The term ‘resource’ was conceived by Wernerfelt (1984 p.172) broadly as “anything that can be thought of as a strength or a weakness” of the firm. According to the system resource approach, the more resources an organisation can acquire and exploit, the better the position it will gain in sustaining a competitive advantage, and thus the better the performance of the organisation (Dhanaraj 2003; Lachman and Wolfe 1997; Yuchtman and Seashore 1967).

Although this approach examines an organisation’s performance in the context of its interactions with resources from its environment, it has been argued that concepts and measurements used in the systems resource approach are not well developed (Pratt and Eitzen 1989). Thus, the process approach was proposed as an alternative approach for conceptualising performance.

3.2.3 Process Approach

The process approach focuses on organisational functioning and integration (Chelladurai and Haggerty 1991; Steers 1977). Under this approach, an organisation’s performance is viewed in terms of the efficiency of its internal processes and general
operations. Organisations that can provide a harmonious and efficient internal environment are viewed as viable organisations (Steers 1977). Although conceptualising organisational performance on the basis of the process approach provides additional insight into the nature of performance, it has been criticised on the grounds that the relevant processes are difficult to define and assess (Lachman and Wolfe 1997). Moreover, it has been argued that the effective operation of an organisation would not necessarily result in heightened organisational performance since the sum of efficient components may not lead to an efficient whole (Weese 1997). Another shortcoming of this approach lies in its one-sided view of performance; that is, constituent groups who have an influence on the activities and decisions of an organisation such as clients, employees and shareholders are ignored. These individuals or groups have identifiable common interests, and therefore their viewpoints should be included when organisation performance is being evaluated (Papadimitriou and Taylor 2000). Dissatisfaction with the goal, systems resource and process approaches thus resulted in the development of the constituency approach as a way of providing a more representative picture of the performance of organisations.

3.2.4 Constituency Approach

The constituency approach views organisations as open systems involving numerous constituents, such as shareholders, employees, and society (Connolly, Conlon, and Deutsch 1980). This approach seeks a definition of performance based upon the behaviour of an organisation’s constituents (Davidson and Griffin 2000; Ford and Schellenberg 1982; Steers 1977), and suggests that an organisation’s performance should be extended to its ability to at least minimally satisfy various constituencies (Connolly, Conlon, and Deutsch 1980; Gaertner and Ramnarayan 1983). Gaertner and Ramnarayan (1983 p. 97) state that, under this approach, performance is defined as “the ability of an organisation to account successfully for its outputs and operations to its various internal and external constituencies”. This definition implies a shift in focus from the internal organisational level to the influence of the organisation on its environment. Examples of criteria suggested for assessing performance under the constituency approach are employee injuries, consumer sovereignty, and the quality of society (Cameron and Whetten 1983; Keeley 1984). Under this approach,
performance is both multidimensional and subject to multiple evaluations, with each valuation distinctive to the evaluator. As a result, it is possible for the organisation to be assessed as good on some dimensions and poor on others, or to score different assessment results on the same dimension from different evaluators (Hage 1980). The main drawback of this approach is deciding from whose viewpoint performance should be considered, since each constituent has its own objectives. Moreover, if all constituencies are considered, the complexity of the performance concept will be increased (Khandwalla 1977). The four approaches discussed above are summarised in Table 3.1.

Table 3.1 Approaches to Conceptualising Organisational Performance

<table>
<thead>
<tr>
<th>Approaches to Conceptualising Organisational Performance</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The goal approach</td>
<td>The organisation’s ability to achieve its goal(s).</td>
</tr>
<tr>
<td></td>
<td>- Single goal – considers only one goal at a time, such as profit, productivity, or growth</td>
</tr>
<tr>
<td></td>
<td>- Multiple goals – involves several goals at a time, such as profit, growth, and survival</td>
</tr>
<tr>
<td>2. The systems resource approach</td>
<td>The organisation’s ability to acquire resources.</td>
</tr>
<tr>
<td>3. The process approach</td>
<td>The organisation’s ability to manage its internal processes and general operations smoothly and efficiently.</td>
</tr>
<tr>
<td>4. The constituency approach</td>
<td>Different measures of performance from each constituent’s viewpoint, such as employees injuries and customer satisfaction.</td>
</tr>
</tbody>
</table>

As discussed in the preceding paragraphs, though many approaches have been developed to capture performance, there is lack of consensus about which one is the most appropriate for conceptualising performance. In addition, as highlighted at the beginning of this section, conceptual approaches are based on the purpose of the research (Blackwood and Mowl 2000; Iakovleva n.d.; Ramanujam, Venkatraman, and
Camillus 1986). Therefore, none of these conceptual approaches is superior to the others, and each will be appropriate depending on the type of study being conducted.

Lachman and Wolfe (1997), however, note that the goal approach is one of the dominant performance approaches still used currently. Moreover, it is suggested that the goal approach is particularly appropriate for SMEs, where the goals of the firm and owner are generally the same (Murphy, Trailer, and Hill 1996). The literature on SMEs has shown that the goals of owner/managers are indistinguishable from those of their businesses (Ang 1992; Glancey 1998; Jarvis et al. 2000; Naffziger, Hornsby, and Kuratko 1994). In addition, it is clear that there is a need to understand SME owner/managers’ goals before assessing SME performance (Watson, Newby, and Woodliff 2000), as each owner/manager has a set of goals specific to their individual situation (Naffziger, Hornsby, and Kuratko 1994). For example, some owners may not desire growth because they are afraid of losing control of their businesses. A third justification for the goal approach is that goals serve as standards in assessing organisational performance (Etzioni 1964; Jarvis et al. 1996a; McMahon and Stanger 1995). Accordingly, the goal approach is used to conceptualise enterprise performance in this study.

Having discussed how performance is conceptualised in the literature, there is a need to identify the factors that influence the performance of SMEs, since this ultimately determines their contribution to economic development. A number of factors have been identified as influencing the performance of SMEs. These are the owner/manager’s education, experience, financial information, and in particular access to finance. The influence of these factors on SME performance is discussed next.

3.3 Factor Influencing SME Performance

Given the importance of the role played by SMEs in economic development, it is suggested that understanding the factors that affect SME performance is crucial to the stability and health of the economy, and also enables public policymakers and SME support agencies to better serve the SME community (Gaskill, Van Auken, and
Manning 1993). For this reason, the factors influencing SME performance are a recurrent theme in most branches of SME studies. Summarising the words of John Murphy, partner in Solvency and Reconstruction, Arthur Anderson & Co., Flahvin (1985) stated that about 70 percent of businesses that start up with nothing will fail within two years. He identified the following internal influences as factors that impede performance in SMEs: lack of finance, lack of financial control and accounting information, lack of management skill and experience, and inability to respond and adapt to change.

Similarly, Lussier (1995) compared variables identified in twenty previous studies as factors affecting the performance of SMEs. He showed that the fifteen factors most commonly cited were as follows: finance, record keeping and financial control, industry experience, management experience, planning, professional advisors, education, staffing, product/service timing, economic timing, age, partners, parents, minority, and marketing. Results from interviewing 160 business owners suggest that getting adequate start-up capital was one of the top ten factors considered crucial to business performance.

Blackwood and Mowl (2000) attempted to identify factors which were most likely to explain and therefore help to increase SME performance. Based on postal surveys, owners were asked to rate their perception of certain factors that influence business performance; these were derived from the literature and a pilot study. The following factors were identified in order of importance: access to sufficient finance, sound planning, effective financial management, management experience, industry experience, business training, use of external advisors, and overseas experience. The owners considered access to sufficient finance to be the most significant factor influencing performance because it was difficult to raise external finance to fund a business.

Based on a survey of 100 SMEs in Indonesia, Indarti and Langenberg (2004) showed that financial access, marketing, and technology positively affected SME performance, while legal regulations negatively affected their performance. The explanation for legal regulations having a negative influence on performance was that SMEs have to spend many resources to deal with complicated bureaucracy and legal regulations.
The authors suggested that owner/managers of SMEs and other parties associated with SME development, such as government agencies, universities, and SME service units, should pay more attention to these four factors if SME performance is to improve.

The above findings are summarised in Table 3.2. It can be seen from the table that, while several factors are cited as influencing SME performance, finance is a frequently mentioned factor.

This is hardly surprising given that finance is crucial for SME operations, particularly business start-ups, in which revenue is low or nonexistent and several one-time establishment costs, such as legal fees, initial investments in inventory, equipment and property are also involved. Businesses beyond the start-up stage also need finance for expanding, upgrading and/or replacing facilities and equipment. Finance enables SMEs to undertake ambitious strategies, overcome the monetary demands imposed by growth, receive better training, and prepare more extensive plans (Aldrich and Auster 1986; Leeds 2003; Levy 1993; United States Small Business Administration 2004b). A number of studies have emphasised the importance of finance to SME activities and performance. For example, McQueen (1989 p. 25) stated that “the more rapidly and strongly capital can be built up, the larger and more durable a business will become”. He concluded that SMEs with greater finance can invest more in product or service development, production, and marketing, and have a larger financial cushion to provide insulation against market downturns or managerial mistakes. McQueen maintained that businesses need finance all the time: without finance they will rapidly wither and die. Finance is therefore truly the king of all business types.
Table 3.2 A Comparison of Variables Identified in the Literature as Factors Contributing to SMEs Performance

<table>
<thead>
<tr>
<th>Author</th>
<th>Finance</th>
<th>Management / Management Experience</th>
<th>Record Keeping and financial control</th>
<th>Industry/ Work Experience</th>
<th>Planning</th>
<th>Professional Advisors</th>
<th>Education</th>
<th>Staffing</th>
<th>Product/ Service Timing</th>
<th>Gender</th>
<th>Age</th>
<th>Partners</th>
<th>Parents</th>
<th>Minority</th>
<th>Marketing</th>
<th>Legality/ Political/ Govern. regulation &amp; support</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Yusuf 1995)</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P P</td>
<td>P1, P6</td>
<td></td>
</tr>
<tr>
<td>(Barsley and Kleiner 1990)</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Blackwood and Mowl 2000)</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Cooper, Gascon, and Woo 1991)</td>
<td>P</td>
<td>N</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>P</td>
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<td>P</td>
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<td>P</td>
<td>P</td>
<td>-</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(Indarti and Langenberg 2004)</td>
<td>P</td>
<td>-</td>
<td>-</td>
<td>N</td>
<td>N</td>
<td>-</td>
<td>-</td>
<td>N</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P5</td>
<td></td>
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<tr>
<td>(Levy 1993)</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>P</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P P</td>
<td>P3, P4</td>
<td></td>
</tr>
<tr>
<td>(McQueen 1989)</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>P</td>
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<td>-</td>
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<td></td>
<td></td>
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<tr>
<td>(Reynolds 1989)</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>-</td>
<td>N</td>
<td>N</td>
<td>P</td>
<td>N</td>
<td>P</td>
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<tr>
<td>(Sage 1993)</td>
<td>P</td>
<td>P</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>P</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P1, P2</td>
<td></td>
</tr>
</tbody>
</table>

P - Variable is considered a factor contributing to performance

N - Does not consider variable a factor contributing to performance

- Does not mention variable as a factor contributing to performance

P1 - Personal quality and traits, such as self-confidence, optimism
P2 - Social factors, such as employment and refugees
P3 - Costs, such as cost of finance, materials, and equipment
P4 - Non-financial inputs, such as materials and equipment
P5 - Technology
P6 - Overseas exposure
P7 - Economic timing
Similar evidence regarding the crucial role of finance was noted by Cooper, Gimeno-Gascon, and Woo (1994). From their longitudinal study of 1,053 new ventures representing all industry sectors and geographical areas, they found that finance is one of the most visible resources that enable SMEs to carry a broader mix of merchandise, undertake more ambitious projects, provide better training for employees, and buy time while the entrepreneur learns from and/or overcomes problems. Since firms with greater financial resources have more money to pursue market opportunities, invest in product or service development, and ensure that they have the freedom and scope to grow, SME performance could be accelerated if they had greater access to finance. Thus, the findings of previous studies on the importance of the role of access to finance in SME performance all point to the fact that the sources of finance for SMEs in general, and in particular those in Thailand, need to be investigated in detail. The impact of access to finance on SME performance is considered in Section 3.5.

3.4 Sources of Finance and Financial Structure in SMEs

There are several potential sources of finance capable of meeting the needs of SMEs, and a number of theories explaining how SMEs choose their sources of finance. In the next three sub-sections, sources of equity and debt for SMEs specifically in Thailand, financial structure, and theories of financial structure are presented respectively.

3.4.1 Sources of Finance

Finance for all businesses, be they small, medium or large, takes the form of equity and debt. However, the components of these two main sources differ between SMEs and larger firms. Specific sources of finance for SMEs, the different sources available to larger firms, and sources of equity and debt for SMEs in Thailand are discussed below.

3.4.1.1 Equity

Equity finance for SMEs is money invested in a business by owners and/or investors in exchange for an ownership position in the business. Equity providers take the risk
of failure and benefit through participation in profits and through the eventual sale of their stake (English 2001; Holmes et al. 2003).

Equity finance is available via internal and external sources. Internal equity for SMEs comes mainly from the owners’ savings, sometimes from family and friends, and also from retained earnings (Holmes et al. 2003; Ratnatunga, Romano, and Lourens 1993). A number of SMEs are started with the personal savings of the business owners and/or equity from their family and friends. However, these sources are inadequate for funding growth.

Potential external equity funds for SMEs are angel financing, venture capital and public share offers. These sources of external equity finance do not play a significant role in funding SMEs. This is because providers of these funds look for companies with good prospects for management, high potential for success, and good financial information records, and only a small number of SMEs meet these criteria (Holmes et al. 2003). Moreover, unlike large public companies, SMEs typically do not have the option of issuing shares or bonds (Cole and Wolken 1996; Holmes et al. 2003; Peterson and Rajan 1994). They do not meet the listing requirements, particularly on the main board market. Moreover, the few SMEs that are able to issue shares on capital markets incur relatively high transaction costs (Carter and Van Auken 1990; Peterson and Rajan 1994; Van Auken and Holman 1995). In some countries, the second board market, with lower listing requirements, has been developed to provide alternative equity finance for SMEs. However, funds raised from secondary boards are limited since SMEs again do not seem to be able to meet the requirements (Carpentier and Suret 2006). Thus, internal equity continues to be the major source of equity for SMEs.

The reliance of SMEs on internal equity has been attributed to their inability to access finance from other equity sources, the lack of marketability of private company shares, and their fear of losing control as a result of their financing choices (Hamilton and Fox 1998; Holmes et al. 2003; Holmes and Kent 1991).
3.4.1.2 Debt

Debt finance is money borrowed from a lender that must be paid within a given period of time with interest. Debt providers do not require ownership positions in the business. The main differences between debt and equity are that debt providers request interest payments and capital repayments, and the borrowed money is usually secured on business assets or the personal assets of owners and/or shareholders. Debt providers also have the power to initiate bankruptcy proceedings if the business defaults on debt interest or repayments or its prospects decline (English 2001).

Sources of debt finance may be formal or informal (English 2001). Formal debt may be provided for a short- or a long-term. Short-term debt refers to operating term loans in which the due date for repayment is less than one year, and is used to finance day-to-day business operations. Sources of short-term debt for SMEs include trade credit, and loans from banks and other financial institutions (Holmes et al. 2003). Long-term debt, on the other hand, is an obligation due for repayment after more than one year. Whereas short-term debt is a major source of outside finance for SMEs, long-term debt plays a less significant role in SMEs because of the requirement of collateral security. The major source of formal debt finance for SMEs, whether short- or long-term, is the bank loan (Cole and Wolken 1996; Coleman 2004; Perterson and Rajan 1994; Startups 2004). This is because the number and types of banks providing business credit has expanded; thus, SMEs have more finance providers and financial services from banks to choose from than from other financial institutions (Cole and Wolken 1996).

However, due to the difficulty involved in obtaining finance from formal financial institutions, the informal credit markets play a major role in lending to small businesses (The Committee of Donor Agencies for Small Enterprise Development 1989). Sources of informal finance include family loans, pawnbrokers, middle men, and tontines (an informal system of banking frequently found among Chinese and other Asian communities (Choy 1990)). Bootstrapping is yet another source of finance adopted by small firms to gain funding through informal or short-term sources, such as absorbing resources from customers and suppliers. It is an alternative means of meeting the need for resources without relying on long-term external finance.
(Winborg and Landstrom 2001). The interest rates charged by these informal sources are usually higher than in the formal sector, and exceed the ceilings under usury laws.

### 3.4.1.3 Source of Finance for SMEs in Thailand

Types of equity available to SMEs in Thailand include personal savings, family and friends, retained earnings (existing business), and capital markets (main board and second board markets). As discussed in Section 2.5.1, Thai SMEs generally do not meet the listing requirements of the main board. As a result, the Thai government established the secondary board (Market for Alternative Investment) in 1999, with lower financial requirements for listing in this market than in the main Thailand Stock Exchange, to provide opportunities for SMEs to raise equity finance (Market for Alternative Investment 2005). This source of equity, however, is not common for Thai SMEs, as this is a new market and the majority are unable to meet even the minimum listing requirements. Thus, as in most transition countries, an underdeveloped capital market forces Thai SMEs to rely on self-financing or family and friends. After these options are exhausted, they tend to rely more on informal debt finance than on other sources of funding (Thongpakde, Puppahavesa, and Pussarangsri 1994).

Sources of debt finance for SMEs in Thailand are trade credit, loans from banks, and informal debt finance such as middle men and tontines. As discussed in Section 2.5.1, even though debt finance is available for Thai SMEs through a number of financial institutions and credit programs, access to such finance is claimed to be difficult for SMEs (International Labour Organization 2000; Thongpakde, Puppahavesa, and Pussarangsri 1994). This is because information asymmetry between lenders and SMEs makes it hard for lenders to determine the real value of a project. This leads to the high interest-rates charged to SMEs and the demands made on SMEs by banks for high collateral and loan guarantees (Business Thailand 2002).

The combination of finance from various sources of debt and equity for a firm is termed ‘financial structure’, and theories developed to explain such structure are reviewed in the following section.
3.4.2 Financial Structure

Financial structure comprises the various types of debt and equity employed by a business in order to establish and expand its activities (Peirson et al. 2002; Riahi-Belkaoui 1999). Different types of finance have different required rates of return due to differences in associated risk. Thus, each type of finance is associated with a different cost (Brigham, Gapenski, and Ehrhardt 1999). Cost of equity is the return that equity holders expect to earn when they invest in a company. It comprises the dividend compensation for bearing risk and waiting for return on investment, and the increase or decrease in the market value of the shares over time (ValuePro 2004). Cost of debt, on the other hand, is the interest rate a company has to pay on all its debt within a specified period of time (Peirson et al. 2002). The interest rate comprises a nominal rate and a risk premium, which in turn are based on the risk profile of the firm. Due to the different costs of equity and debt finance, businesses consider not only the amount of money needed when evaluating various sources of funds, but also the cost involved. In general, a firm’s choice of financial structure depends on attributes that determine the various costs and benefits associated with each type of debt and equity financing (Abor and Biekpe 2005).

A number of studies in this area suggest that SMEs tend to rely more on internal equity than on debt and external equity finance. Indarti and Langenberg (2004) found that most SMEs in Indonesia depend on personal savings (56 percent) and family investment (23 percent) as their main financial sources. Very few (3 percent) of the enterprises take advantage of bank loans. Additionally, Ghosh, Kim and Meng (1993) showed that the main sources of financing for SMEs in Singapore are personal savings and the family.

Though SMEs seem to depend mostly on internal equity, empirical studies reveal that a number of SMEs use debt. Van Auken, Doran and Yoon (1993) provided new insights into the financial structure of smaller firms in developing economies. Canonical correlation techniques were used to examine the balance sheets of 45 Korean SMEs. The results were then compared to those of similar studies of SMEs in the United States. Data on Korean SMEs were obtained from Annual Reports of
Korean Companies, and comparable data on US small and large firms was acquired from the studies conducted by Carter and Van Auken (1990) and Stowe, Watson and Robertson (1980). The results show that SMEs in both Korea and the United States mainly obtained finance from debt. When the financial structures of SMEs were compared to those of larger firms, the results was consistent with the findings of Carter and Van Auken (1990), showing that SMEs in both Korea and the United States rely more on debt financing, than do large US firms.

The increasing proportion of debt finance in SME financial structure has been a feature of a number of studies. Hamilton and Fox (1998) used a postal survey to investigate the financial preferences of small firm owners and found that the proportion of firms with initial funding from the founder’s own savings fell from 76 percent during 1980 to 60 percent during 1992-1994. In contrast, the percentage of businesses depending on debt finance increased from 11 percent to 24 percent in the same time period. In addition, they reported that, when owners had to augment ongoing funding, around 41-54 per cent of them would seek only debt finance. Furthermore, on average, 41 per cent of owners would consider a new equity investor only if there was no effect on their control over the business. The percentage decreased to 22 percent if new equity meant some weakening of control.

Results from a postal survey carried out by Holmes and Kent (1991) provided an indication of the financial structure of Australian small firms (Table 3.3). Their findings indicate that small firm start-up finance was heavily dependent on the owners’ personal funds, while debt finance, especially bank borrowing, increased significantly as a source after the start-up phase.
### Table 3.3 Sources of Funding in Australian Manufacturing Enterprises

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage of Responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 20 Employees</td>
</tr>
<tr>
<td><strong>Start-up Funds</strong></td>
<td></td>
</tr>
<tr>
<td>Personal Funds of Owner</td>
<td>74</td>
</tr>
<tr>
<td>Borrowings from Trading Bank</td>
<td>19</td>
</tr>
<tr>
<td>Borrowings from Finance Company</td>
<td>1</td>
</tr>
<tr>
<td>Borrowings from Merchant Bank</td>
<td>1</td>
</tr>
<tr>
<td>Other Borrowings</td>
<td>2</td>
</tr>
<tr>
<td>Other Owners Equity</td>
<td>1</td>
</tr>
<tr>
<td>No Answers</td>
<td>3</td>
</tr>
<tr>
<td><strong>Additional Funding (post start-up)</strong></td>
<td></td>
</tr>
<tr>
<td>Additional Funds Provided by Owners</td>
<td>45</td>
</tr>
<tr>
<td>Borrowings from Trading Bank</td>
<td>39</td>
</tr>
<tr>
<td>Borrowings from Finance Company</td>
<td>2</td>
</tr>
<tr>
<td>Borrowings from Merchant Bank</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>9</td>
</tr>
<tr>
<td>No Answers</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

**Source:** Holmes and Kent (1991 p. 148-149)

Similar evidence of an increasing trend towards debt financing among SMEs was confirmed in a developing country study by Fong (1990). In analysing the development of small and medium industries (SMIs) in Malaysia, Fong (1990) found that the proportion of self-financing firms decreased from 72.9 percent in the initial year of operation to 63 percent in the year of the research (1985), while the use of debt finance increased from 12.6 percent to 24.8 percent in the same period. His findings indicate that SMEs launch their businesses mainly using internal equity, while debt finance tends to increase after the start-up phase of the firms. Likewise, the Asian Productivity Organization (2002b) found that in 1977 the vast majority of SMEs in Thailand (72.6 percent) depended on their own funds, with only 12.3 percent of the SMEs accessing commercial bank loans. A small number (17 percent) took advantage of unofficial sources, such as borrowing from friends and relatives. However, a similar study found that in 1997 a significant number of SMEs in the sample surveyed relied on commercial bank loans (55 percent). A significant number (38.3 percent) still depended on their own funds, but fewer firms (9.6 percent) used unofficial sources.
It appears from the literature that the general assumption that internal equity is the major source of finance for SMEs does not apply at all stages of small firm development. The type of finance employed tends to vary with each stage of development (Berger and Udell 1998). Berger and Udell (1998) suggested that start-up firms are heavily dependent on initial insider finance because it is difficult to access external finance at this stage, unless they can provide substantial collateral. Debt finance would typically come later, after they achieve a level of production such that their balance sheets reflect substantial tangible business assets such as inventory and equipment that could be pledged as collateral. Various theories have been developed to explain the variation in the mix of debt and equity in SMEs. These theories are discussed in the following sections.

3.4.3 Theories of Financial Structure

Four major theoretical frameworks have been proposed to explain the financial structure of SMEs: the traditional approach, the Modigliani and Miller (M&M) optimal financial structure, the pecking order theory, and the trade-off choice framework. The first two theories relate to large publicly listed firms. The ensuing sections will examine the application of these frameworks to SMEs.

3.4.3.1 Traditional Theory

The traditional theory of financial structure deals with the issue of the right mix of debt and equity in the financial structure of an individual firm. This view suggests that the cost of finance is a weighted-average cost of equity and debt in a firm’s financial structure. The cost of debt is lower than equity because interest on debt is deductible for tax purposes. Moreover, even if there is no tax deductibility, debt will be lower because it carries less risk. Hence, the introduction of debt into the financial structure will reduce the average cost of finance (McLaney 2000).

However, there are two consequences of increasing debt level in the financial structure. Firstly, the equity holders will require a higher rate of return when they realise that the risks associated with their investments are increasing. Secondly, lenders will also realise the higher risk on their investment caused by the increase in
the leverage levels and demand higher interest payments. These two main factors erode the advantage gained by substituting lower cost debt for equity, eventually increasing the cost of both debt and equity (Samuels, Wilkes, and Brayshaw 1999).

The upshot of this is that, if a company takes on debt, the overall cost of finance is initially reduced up to a point. Beyond that point, however, if debt continues to increase then the cost of finance will also start to increase. Therefore, there is a level of debt for each firm where the average cost of finance is at its lowest point, and shareholder’s wealth and the value of the firm are maximised (McLaney 2000; Samuels, Wilkes, and Brayshaw 1999).

However, it is argued that debt has no effect on either the cost of capital or the value of the firm. The weighted-average cost of capital is constant, as the benefits of using cheaper debt are offset by the increase in the cost of equity due to the higher expected rate of return on equity (McLaney 2000; Romano, Tanewski, and Smyrnios 2001). The optimal financial structure was developed by Modigliani and Miller to support this argument.

### 3.4.3.2 Modigliani and Miller (M&M) Optimal Financial Structure

Two propositions related to financial structure made by Modigliani and Miller (M&M) (1958; 1963) are among the most important contributions to the theory of corporate finance. The first proposition suggests that financial structure does not affect cost of finance or the value of the firm. This proposition was initially framed in a highly simplified environment that assumed no taxes and no transaction costs. In the absence of taxes, the increase in return to stock-holders resulting from the use of debt is exactly offset by the increase in risk. Therefore, the weighted-average cost of finance and the value of the firm are constant for all combinations of debt and equity, as there is no benefit to using debt (McLaney 2000; Romano, Tanewski, and Smyrnios 2001).

The latter proposition suggests that, with taxes and the deductibility of interest charges, the total cost of finance is decreased by adding as much debt as possible to the financial structure. This is because interest on debt is deductible for tax purposes;
Thus, the cost of debt becomes lower than the cost of equity. In other words, the greater the level of debt in the financial structure, the lower the average cost of finance. The M&M theory assumes that debt does not add significant risk to equity, so that the company does not have to offer higher returns to its equity holders when debt levels are increased. Returns to equity holders will increase as the level of debt increases. An implied assumption in the M&M propositions is that bankruptcy is costless reallocation of resources, so that bankruptcy is not a major concern to shareholders. Also, in a perfect market, if the firm does not have sufficient funds to meet its interest obligations in a particular year, it should be able to borrow to cover the short fall as long as it is profitable in the longer term (Chittenden, Hall, and Hutchinson 1996; McLaney 2000).

The optimal financial structure may not always hold for SMEs, as it is based on impractical assumptions. Unlike larger, particularly publicly held companies, SMEs typically do not have the option of issuing stocks or, more relevantly, bonds. As highlighted by Ang (1991; 1992) and Carter and Van Auken (1990), financial structures of SMEs and large businesses are dissimilar because of several unique characteristics of smaller businesses, such as a lack of publicly traded securities and the high cost of financial markets. Moreover, Binks, Ennew and Reed (1992) showed that some firms cannot obtain funds through the banking system, because they have insufficient collateral, or they cannot provide information relevant to their project quality or their ability to return money. These findings imply the existence of imperfections in the financial market that are incompatible with the assumptions of this theory. Therefore, the central hypothesis of the M&M framework, that adding as much debt as possible to the financial structure will reduce cost of finance, is clearly of limited use in explaining the financial structure of SMEs as these seem to develop structures that have a minimum, rather than maximum, amount of debt (Ang 1991; Ang 1992; Chittenden, Hall, and Hutchinson 1996; Coleman and Cohn 2000). Since imperfections in the financial market exist, the assumptions of this theory do not always explain the financial structure of businesses, especially SMEs. The pecking order framework was developed as an alternative theory capable of explaining firm financial structure.
3.4.3.3 Pecking Order Framework

The pecking theory proposed by Myers (1984) suggested that firms have a particular preference order for their choices of financing. That is, they rely on internally generated funds as much as possible. When this is exhausted, they move on to debt finance. Thus, the business will seek to obtain external equity finance only when these two sources cannot provide enough funds to meet its needs. This hierarchical pecking order is therefore based on internally available funds, debt, and external equity. There are two explanations associated with this particular preference order for the financing choices of the firms, transaction costs and information asymmetries (Cassar and Holmes 2003).

The transaction cost explanation refers to firms obtaining as much finance as necessary from the cheapest and easiest source before moving on to the next least expensive. Transaction costs, such as the application and start-up fees of internally generated funds (retained profits or contributions of existing owners), are the lowest, followed by the transaction cost of debt and then external equity. Hence, firms prefer internal funds to debt, and debt to external equity (Chittenden, Hall, and Hutchinson 1996).

The second explanation is that information asymmetry between the firm and its potential financiers will introduce inequities into the costs associated with various sources of finance. In other words, the greater the information asymmetries from various sources of outside financing, the higher the return on capital demanded by each source. For example, new equity holders will expect a higher rate of return on their capital investment than owners of existing internal funds since they have less information about the firm than internal equity holders. This results in the higher cost of external equity finance compared with internal sources of equity. In this scenario, firms will prefer internal funds over external equity. The same logic is applicable when debt providers and internal sources of funds are compared. Accordingly, firms will prefer internal equity to debt, short-term debt to long-term debt, and any debt to external equity. For SMEs, external equity is not an option so they face a ‘constrained’ Pecking Order Framework (Cassar and Holmes 2003; Chirinko and Singha 2000; Chittenden, Hall, and Hutchinson 1996).
Perterson and Rajan (1994), however, argued that though similar funding preferences to the pecking order theory apply to smaller enterprises, the reasons behind their preferences differ from those of larger firms. Unlisted SMEs rely heavily on the owner’s capital because they do not have the option of issuing additional equity to the public. Furthermore, in keeping with agency theory, owner/managers strongly desire to maintain control of strategic decisions, and are afraid of losing control of the firm because of outside financing decisions or pressures. Therefore, internal sources are the most preferred by SMEs, followed by debt, and then external equity (Hamilton and Fox 1998; Holmes and Kent 1991).

It is suggested that tax benefits, bankruptcy, and agency costs occur when firms adopt debt finance in their financial structure. The impact of these factors on the firm’s financial structure is discussed next.

3.4.3.4 Trade-off Choice Framework

The trade-off choice framework describes financial structure by exploring the friction among the tax advantages of debt, the increase in expected bankruptcy costs, and agency costs. Cassar and Holmes (2003 p. 4) suggested that firms trade off “several aspects, including the exposure of the firm to bankruptcy and agency costs against the tax benefits associated with debt use”.

Bankruptcy costs are those that are directly incurred when businesses are perceived to be unable to pay their debts as and when they fall due. In response to the perceived risk of defaulting on finance payments, lenders will increase their cost of debt to incorporate the potential costs associated with liquidating the net assets of the firm in the event of bankruptcy (Berger and Udell 1998; Cassar and Holmes 2003; McLaney 2000). Bankruptcy costs will occur even if only non-lending stakeholders believe that the firm has a chance of being discontinued. For instance, if firms are perceived to be bankrupt, suppliers may be less willing to extend trade credit and customers are less likely to buy goods and services due to the risk of unfulfilment of product quality standards, while employees may also have less incentive to work for the firms. The response from non-lending stakeholders will also reduce the value of the firm and increase the costs of outside financing. Given these bankruptcy costs, a firm’s
financial structure is influenced by the risk that it may not be able to operate under normal circumstances. Firms with higher operating risk would have greater bankruptcy costs and thus face higher costs of securing outside debt. Thus, higher risk firms seek to reduce external debt to decrease the total cost of finance (Cassar and Holmes 2003).

Agency costs arise from conflicts between the goals of management and those of suppliers of finance when external funding is introduced into the financial structure. Agency costs are those associated with monitoring the decisions and actions of agents (managers) to ensure that they are in the best interest of the principals, that is, external equity and debt holders (Ang, Cole, and Lin 2000). The agency theory does not have the same application to SMEs as it does to larger firms because generally the owners of SMEs are also the managers (Ang 1991). For larger firms, agency relationships are associated with external share and debt holders (the principals) for whom the managers act as agents. For SMEs, agency costs are generally associated with debt finance, and venture capitalists and angels who constitute the major sources of external equity in SMEs (Coleman and Cohn 2000). External equity providers use tools such as position on the company board and equity interest in the firm to minimise the agency costs associated with their investments (Holmes et al. 2003). These monitoring devices increase the cost of finance to the firm. Consequently, firms with greater conflict between owner/managers and debt and external equity holders would have higher agency costs and therefore lower levels of external financing (Cassar and Holmes 2003). To reduce the cost of finance, these firms would generally avoid debt and external equity. However, agency theory suggests that the value of the firm will be increased with higher debt. This is because interest payments and debt repayments reduce ‘free cash flow’ and hence limit owner/managers’ ability to divert resource to themselves (Beal and Goyen 2005).

Tax benefits from debt are another issue considered within the trade-off framework. The use of debt is encouraged because of the tax deductibility of interest payments. However, the use of debt leads to bankruptcy and agency costs which wear away the benefits of using debt (tax deduction) (Chirinko and Singha 2000). From the trade-off choice framework discussed above, though tax benefit encourages firms to use debt finance, the anticipation of higher finance costs associated with the potential costs of
liquidation and monitoring encourage SMEs to avoid debt. Therefore, trading off tax benefits related to debt and the potential costs of liquidation and monitoring usually influence the final financial structure of the firm (Brounen and Eichholtz 2001; Chirinko and Singha 2000; Romano, Tanewski, and Smyrnios 2001).

The four main theories used to explain the financial structure of SMEs are summarised in Table 3.4. It can be seen that the theoretical literature applied to explaining the financial structure of SMEs is based on costs derived from information asymmetries, bankruptcy costs, and agency costs (Abor and Biekpe 2005). The concept of optimal financial structure is based on the notion of information asymmetry. The justification for a hierarchy of firms’ preferences in the pecking order framework is based on the implications drawn from information asymmetry. That is, SMEs initially depend on internally generated funds where there is no information asymmetry. They will turn to debt if additional funds are needed, and they will finally issue external equity to cover any remaining financial requirements. The explanation put forward by the trade-off choice framework is based on weighing the tax benefits of debt against bankruptcy and agency costs.

The theories and issues discussed in the preceding sections suggest that access to finance is a critical factor in SME performance. The influence of access to finance on performance is discussed next.
Table 3.4 Theories of Financial Structure

<table>
<thead>
<tr>
<th>Theories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Theory</td>
<td>If a firm takes on debt, the overall cost of finance is initially reduced up to a point. Beyond that point, if debt continues to increase then the cost of finance will start to increase. Thus, there is a level of debt in the financial structure for each firm where the average cost of finance is at its lowest point and shareholder’s wealth and value of the firm are maximised. It is argued that debt has no effect on either the cost of capital or the value of the firm as the benefits of using debt are offset by the increase in the cost of equity due to higher expected rate of return on equity.</td>
</tr>
<tr>
<td>M&amp;M optimal Financial Structure</td>
<td>M&amp;M1: In the absence of taxes, there is no benefit to using debt. Thus, financial structure does not affect the cost of finance nor the value of the firm.</td>
</tr>
<tr>
<td></td>
<td>M&amp;M2: With taxes and deductibility of interest charges, the cost of debt is lower than that of equity. Therefore, the firm has to add as much debt as possible to the financial structure in order to reduce the total cost of finance. The existence of imperfections in the financial market when SMEs access finance suggests that this approach does not always hold for SMEs.</td>
</tr>
<tr>
<td>Pecking order framework</td>
<td>The firm has a particular preference order for its choice of funds in its financial structure: internal equity, debt, and external equity. It is argued that though similar funding preferences to pecking order theory apply to smaller firms, the reasons for their preference differ from those of larger firms.</td>
</tr>
<tr>
<td>Trade-off choice framework</td>
<td>Financial structure results from trading off tax benefits with debt used by the firm against the potential costs of liquidation and monitoring. This approach uses two of the most important concepts developed to explain the capital of small firms: bankruptcy costs and agency costs.</td>
</tr>
</tbody>
</table>
3.5 Access to Finance and SME Performance

As presented in Section 3.3, access to finance has been cited as one of the most significant factors affecting SME performance (Eeden et al. 2004; Indarti and Langenberg 2004; Leeds 2003; Lussier 1995; Steel and Webster 1992). Levy (1993) conducted field surveys in Sri Lanka’s leather industry, and Tanzania’s furniture industry, asking entrepreneurs to rank the constraints on the expansion of their businesses. He found that lack of access to finance emerged as the leading constraint on performance for SMEs in both countries. Similarly, research by Bukvic and Bartlett (2003), based on face-to-face interviews using a structured questionnaire of more than 200 SMEs in 2000/2001, confirmed that access to finance is a major constraint to SMEs. Their research highlighted the fact that high cost of finance, high collateral requirements, and high service charges and fees are perceived by SMEs as the three major constraints on accessing finance.

Pissarides (1999) established that financial constraints that apply to SMEs arise from a number of factors, including the high cost of credit, relatively high bank charges and fees, high collateral requirements, and a lack of outside equity and venture capital. In most transitional economies, an underdeveloped financial market limits the ability of SMEs to access formal sources of finance, and so they are forced to rely on high cost credit finance. Indarti and Langenberg (2004), Leeds (2003), Bukvic and Bartlett (2003), Pissarides (1999), Gadenne (1998), Yusuf (1995), and Lussier (1995) explained that, when small firms experience difficulties in accessing finance, potential growth and further market opportunities are forgone.

Though a synthesis of studies confirms that access to finance is a major factor influencing SME performance, the work of Gaskill, Van Auken and Manning (1993), which examined factors perceived to contribute to SME performance, yielded contradictory findings. They asked owner/managers of discontinued SMEs to indicate the extent to which thirty five items cited in the literature as associated with business performance contributed to the financial state of their businesses. The result of factor analysis showed that access to finance has no contribution to SME performance. Nevertheless, they suggested that this item, which has been previously cited as
important to SME performance, was not found to be a factor contributing to SME performance in their study because the firms in their sample were not in operation during the period of study. Therefore, finance became a less important factor in explaining the performance of these SMEs.

In Thailand, access to finance is one of the major obstacles to SME performance. This fact was documented by Dart, Ng, and Sarkar (1990) who compared the managerial practices and problems of SMEs in Malaysia, Singapore, and Thailand. A similar questionnaire was used to gather information across the three countries, thus allowing for a consistent comparison. The respondents were asked to identify the financial problems they face. The results showed that the first six constraints were associated with access to finance. These findings indicate that lack of finance is a major constraint faced by Thai SMEs.

The findings of Wiboonchutikula (2002) make it clear that access to finance is a key constraint faced by Thai SMEs. Table 3.5 shows that insufficient finance is the most serious problem for these SMEs. This fact has been reported in a number of documents in Thailand, such as those produced by the Intergovernment Panel on Climate Change (2004), the Office of Small and Medium Enterprises Promotion (2003), Prince of Songkla University (2003), and Suranaree University of Technology (2001).

**Table 3.5 Economic Problems Faced by Thai SMEs**

<table>
<thead>
<tr>
<th>Economic problems</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
</tr>
<tr>
<td>Insufficient capital</td>
<td>38.48</td>
</tr>
<tr>
<td>Labour shortage</td>
<td>37.27</td>
</tr>
<tr>
<td>Raw material shortage</td>
<td>15.94</td>
</tr>
<tr>
<td>Marketing</td>
<td>22.76</td>
</tr>
<tr>
<td>Uncertainty government policies</td>
<td>17.34</td>
</tr>
<tr>
<td>Others</td>
<td>7.71</td>
</tr>
</tbody>
</table>


As discussed in Section 2.5.1, SMEs in Thailand have difficulty accessing finance because of the underdevelopment of the capital market and financial sector in
Thailand. Moreover, they do not meet the basic requirements of financial providers in terms of professional management and standard accounting procedures. SMEs that do obtain loans have to pay higher interest rates as banks regard them as higher risks than larger companies. The high cost of credit financing has the potential to increase the insolvency risk of SMEs, especially if they do not have enough money to meet interest and principal payments. This credit constraint also prevents them from expanding and growing their businesses (Office of Small and Medium Enterprises Promotion 2001a; Worachattarn and Shuntharinka 2001). These findings indicate that Thai SMEs should be able to perform better if they have a greater ability to access finance. There is however, no empirical evidence of the relationship between access of finance and performance of SMEs in Thailand. Thus, the following hypothesis is developed:

**H1**: Access to finance has a positive effect on the performance of SMEs in Thailand

It has been proposed that access to finance is influenced by a number of factors. These are discussed in the next section.

### 3.6 Factors Influencing Access to Finance

A number of theoretical and empirical studies have focused on the concept of the finance gap in explaining the constrained access to finance faced by small firms. This finance gap, has two distinct components; supply and demand components (Bhaird and Lucey 2006; Carter et al. 2003; Watson, Newby, and Mahuka 2006).

#### 3.6.1 Supply-side Factors

There has been a long standing debate in countries such as the United Kingdom, Canada, and countries in the European Union about the finance gap in small businesses. The main argument centres on deficiencies in the supply of finance to SMEs. The supply-side argument contends that SMEs face difficulties in accessing
funds, either because funds are unavailable to them or the cost of the available funds is higher than for larger businesses (Holmes et al. 2003).

SMEs have limited access to finance since, unlike large firms, they generally do not have access to capital markets. They are not attractive to other equity providers such as angels and venture capitalists either since they rarely have good prospects for management or good financial information. They have to pay higher costs associated with debt such as application fees, administration and monitoring fees, and higher interest costs than their larger counterparts. This is due to the high risks associated with loans and high operational costs that banks face in providing loans to SMEs (Coleman and Cohn 2000). Using 425 respondents from small and large firms in both metropolitan and regional locations, Holmes, Dunstan and Dwyer (1994) found that the cost of debt and the costs of loan applications for small firms were higher than for larger firms. According to Lattimore et al. (1998), due to the higher default risks and assessment and administration costs involved in lending to small firms, more restrictive conditions are applied to small firms in order to reduce default risk. Gibson (2002) and the Australia Industry Commission (1991) argued that the higher cost of debt for SMEs is not a surprise. This is because the cost of a loan application is generally related to the size of the loan: the larger the loan amount, the lower the average loan application cost. Since the loan size for small firms is normally smaller than for larger firms, the average application cost for smaller firms is most often higher than for larger firms.

SMEs face high interest costs largely due to the perception on the part of financial providers that they pose a higher risk than their larger counterparts. The main causes of such risk are a lack of managerial capability and a lack of reliable financial information. These are important criteria in the banks appraisal of loan applications from SMEs (Coleman and Cohn 2000; Office of Small and Medium Enterprises Promotion 2001b).

Limited access to finance often forces SMEs to seek funds outside the formal financial system where interest rates are higher. This excessive interest cost involved reduces the amount they can borrow because they are concerned about their ability to
discharge their financial obligation and their solvency. Further, this lack of access to finance limits SMEs’ investment to projects whose rate of return is higher than the interest rate (Office of Small and Medium Enterprises Promotion 2001b). It is, however, recognised that exploitation of highly profitable opportunities by SMEs could be accelerated only if they had greater access to external financing.

Governments in many countries such as the United Kingdom, Canada, Australia, and Thailand have introduced a portfolio of policies to increase the supply of funds to SMEs. In the United Kingdom, several schemes such as tax incentives, the Loan Guarantee Scheme, the Business Expansion Scheme, the Enterprise Investment Scheme (EIS) and Venture Capital Trusts (VCTs) have been developed to reduce biases in the size, stage, and geographical distribution of investment activity among financial providers (Her Majesty's Treasury 2001; Mason and Harrison 2001). In Canada, the Capital Pool Company program for Canadian small business was implemented to close the equity gap by allowing small firms direct access to the stock market (Carpentier and Suret 2006). In Thailand, as discussed in Section 2.5.1, several schemes such as special interest rates and special loan schemes have been developed by the government to increase sources of credit finance for Thai SMEs. Moreover, the second board market with lower listing requirements than the main board market (Stock Exchange of Thailand) has been introduced to provide an alternative capital market for SMEs.

Despite financial sector reform, the strengthening of banking capabilities, and the introduction of numerous financial instruments such as the stock exchange, venture capital companies and business assistance funds, access to finance continues to pose a major hindrance to the performance of SMEs in Thailand (Asian Productivity Organization 2002a; Steel and Webster 1992). This is because these credit programs have done little to increase SME access to financial capital. Instead, they inhibit the development of sustainable financial institutions and often foster a non-repayment culture among SMEs (Hallberg 2000).

The new products, new methods of production and new markets that capitalist enterprises create erode the profits and positions of old and inefficient firms. In other words, the market has to clean itself by taking resources away from inefficient firms,
and reallocating resources to more efficient firms (Foster and Kaplan 2001; Schumpeter 1975). Government intervention, where not appropriate, takes resources away from high potential firms, and provides resources to firms that do not generate much benefit to the long-term growth of the economy (Foster and Kaplan 2001; Fritsch and Mueller 2004; Mathur 1999). For effective operation of the market, governments must intervene only where there are genuine market failures (Her Majesty's Treasury 2003; The Oklahoma League of Economists 1996). Government intervention in the absence of genuine market failure can incur costs and create economic distortions (Her Majesty's Treasury 2003; The Oklahoma League of Economists 1996). As such financial markets should be deregulated. This should increase the number of financial institutions and ultimately the supply of funds to various sectors of the economy including SMEs (Lattimore et al. 1998). An increase in the supply of funds relative to demand should encourage financial institutions to design appropriate instruments in their pursuit of the SME market.

Lattimore et al. (1998) have established that there is no need for government to intervene to increase the supply of funds to the SME sector on grounds of higher interest costs, stringent requirements for collateral or the unwillingness of banks to provide unsecured lending to the SME sector. This is because these are appropriate responses to the higher costs and risks associated with lending to the SME sector. Direct intervention that increases the supply of funds to the SME sector at lower than the real cost will distract market operations and cause inefficient firms to persevere. This argument is supported by the Canadian experience of implementing the Capital Pool Company program for Canadian small businesses (Carpentier and Suret 2006). This program was developed to close the equity gap by allowing small firms direct access to the stock market. It was, however, found that this program attracted mainly low quality firms. The vast majority of companies which took advantage of the program showed poor operating performance in the years following listing (Carpentier and Suret 2006).

From the above discussion, addressing only supply-side factors by increasing finance available to small firms cannot solve the problem of the finance gap (Sarapaivanich and Kotey 2006; Sevilla and Soonthornthada 2000). In addition, it interferes with the free operation of the financial market, and could be counter-productive to the
performance of SMEs. It disrupts the signalling effect of incentives on productive SMEs activities. Instead, the SME sector will be well served by programs that focus on demand-side factors and improve the investment readiness of SMEs (Mason and Harrison 2001; Southon and West 2006).

3.6.2 Demand-Side Factors (Investment Readiness)

Towards the end of 2000, it was recognised that governments’ attempts to bridge the finance gap had not been successful. Researchers thus sought to examine factors associated with the demand for finance. In general, it is suggested that the government’s role should be to reduce impediments to the free operation of the financial markets (Panpiamrat 2005). This should increase the supply of funds to all sectors including SMEs. Moreover, government interventions should concentrate on those parts of the financial market that are left out by the private sector, such as seed capital. This capital is provided to develop a concept, create the initial product, and carry out the first marketing efforts. The private sector is not very interested in providing such capital as firms that need seed capital are usually very young, around one year old, and have no products or services ready for commercial sale.

According to the demand-side argument, in order to successfully access finance, whether equity, loans or other forms of finance, a firm has to be investment-ready (Harding and Cowling 2006; Her Majesty's Treasury 2001; Mason and Harrison 2001; Southon and West 2006). Investment readiness is defined by Mill Consultancy (2006) as the ability to provide “sufficient information, credibility and trust to an investor to motivate him to invest in a proposition”. That is, a firm has to be sufficiently attractive to the providers of funds (investment-ready) in order to take advantage of the pool of finance that is currently available. According to Harding and Cowling (2006), SMEs still face difficulties in accessing external finance because they are not always investment-ready. The criteria that investors use when assessing the investment readiness of a business are widely documented (Bhaird and Lucey 2006; Esperança, Gama, and Gulamhussen 2003; Harding and Cowling 2006) and readily available to business to self assess their investment readiness.
To verify if a firm is investment ready, it is possible to collect information from firms that have been successful in attracting investment and from investors. These are the important characteristics investors look for when making their investment decisions.

From the review of the literature, investment readiness comprises three dimensions: owner/manager readiness, business readiness, and information readiness. Owner/manager readiness is the owner/manager's characteristic that is attractive to the providers of funds. Business readiness refers to the characteristic of business that makes financial providers feel confident about and willing to invest in such business, while information readiness is the ability to provide information to attract financial providers. These three components of investment readiness are summarised in Table 3.6 and discussed in depth in the following sections.

Table 3.6 Three Dimensions of Investment Readiness

<table>
<thead>
<tr>
<th>Investment Readiness</th>
<th>Explanation</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Owner/manager</td>
<td>Characteristics of owner/managers that are attractive to financial providers</td>
<td>- Harding and Cowling (2006)</td>
</tr>
<tr>
<td>Readiness</td>
<td></td>
<td>- Confederation of British Industry (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Her Majesty's Treasury (2001)</td>
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<td></td>
<td></td>
<td>- Feeney, Haines, and Riding (1999)</td>
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<td></td>
<td></td>
<td>- Kotey and Meredith (1997)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Mason and Rogers (1997)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Marsden Jacob Associates (1995)</td>
</tr>
<tr>
<td>2) Business</td>
<td>Characteristics of the firm itself that enable it to access finance</td>
<td>- Bhaird and Lucey (2006)</td>
</tr>
<tr>
<td>Readiness</td>
<td></td>
<td>- Esperanca, Gama, and Gulamhussen (2003)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Feeney, Haines, and Riding (1999)</td>
</tr>
<tr>
<td>3) Information</td>
<td>Ability to provide information to attract financial providers</td>
<td>- Her Majesty's Treasury (2001)</td>
</tr>
<tr>
<td>Readiness</td>
<td></td>
<td>- Mason and Harrison (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Feeney, Haines, and Riding (1999)</td>
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<td></td>
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<td>- Mason and Rogers (1997)</td>
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<tr>
<td></td>
<td></td>
<td>- Marsden Jacob Associates (1995)</td>
</tr>
</tbody>
</table>
3.7 Owner/manager readiness

Owner/manager readiness in this study refers to owner/managers’ characteristics that are attractive to financial providers and that motivate them to invest in business. The ability of SMEs to access finance is closely linked to owner/managers’ characteristics. Kotey (1999) noted that owner/managers face difficulties in accessing funds because they are reluctant to use funds even when suitable finance is available. A number of owner/managers see the need to look for external finance as a sign of weakness (Confederation of British Industry 2001). In spite of the availability of capital, some owner/managers are unwilling to capitalise their business mainly because they feel they have no need to expand their operations or they have enough self-funding (Ferraro 2003). The Confederation of British Industry (2001) and Connell (1994) indicated that lack of success in obtaining finance by small firms was due to their owner/managers’ reluctance to dilute control through external finance. Mason and Harrison (2001) suggested that helping owner/managers to understand the different forms of financing available to them should lead to an increase in the flow of investment opportunities (Mason and Harrison 2001). Accordingly, prior experience, education, age and gender are four characteristics of owner/managers that have been identified in the literature as influencing access to finance (Cooper 1998; Crook 1997; Keats and Bracker 1988; Sandberg and Hofer 1987).

3.7.1 Owner/managers’ Experience, Access to Finance, and Performance

Studies have shown that a wider portfolio of skills and relevant knowledge used to support the management and development of business are acquired from experience of owner/managers. There are three types of experience: general experience, industry experience, and entrepreneurship experience (Bosma et al. 2004). General experience is owner/managers’ experience in general, such as experience from education and experience as an employee. Industry experience refers to owner/managers’ experience in the specific industry. Entrepreneurship experience is owner/managers’ experience in ownership or activities relevant to business ownership, such as earlier experience in starting up a business and membership of an association for small business founders.
(Bosma et al. 2004). It has been widely established that there are links between these three types of owner/managers’ experience, access to finance, and performance.

3.7.1.1 Owner/managers’ Experience and Access to Finance

A number of studies have reported that experience is one of the most important factors that financial providers look for in making an investment decision (Bukvic and Bartlett 2003). This is because financial providers perceive that experienced owner/managers have more knowledge to support their business management and thus reduce the risk of their investment. As highlighted by Bukvic and Bartlett (2003) and Feeney, Haines, and Riding (1999), financial providers are turned off by owner/managers who lack experience.

Owner/managers’ experience allows them to develop a supportive network. This networking in turn assists owner/managers to access finance. The crucial role of networking in facilitating access to finance was indicated in a study by Cron, Bruton, and Slocum (2006), who reported that SMEs with larger networks are more likely to have access to sources of information and finance.

In the Thai context, it could be argued that financial providers are more willing to lend money to owner/managers with more experience in their businesses since they perceive that experienced owner/managers generally have a wider base of skills and knowledge which can be used to support the management and development of businesses. Furthermore, as indicated by Panpiamrat (2005) and SMEs on Kao-San Road (2005), Thai SMEs are generally small and therefore need to have strong networks which usually emanate from previous experience to support themselves. These networks could provide a source of information about how to access finance. As a result, Thai owner/managers with greater experience in their business are more likely to have a better supportive network and the needed skills and knowledge, which in turn should increase their ability to access finance. Therefore:

H2a: Owner/managers’ experience has a positive effect on the access to finance of SMEs in Thailand
3.7.1.2 Owner/managers’ Experience and Performance

Experience, notably gained through familiarity with the industry/market, leadership ability, and the ability to evaluate and handle risks, is a key factor determining business decisions. A number of studies have repeatedly reported the significance of the relationship between owner/managers’ experience and business performance (Cron, Bruton, and Slocum 2006; Fasci and Valdez 1998; Silversides 2001; Sinha 1996). In their study of owners of accounting practices of the American Institute for Certified Public Accountants, Fasci and Valdez (1998) indicated that owner/managers’ work experience was strongly related to firm performance.

Cron, Bruton, and Slocum (2006) showed that there is a significant relationship between managerial experience and firms’ performance. They suggested that such experience allows owner/managers to build a well-endowed network which is important to the success of the firm. Saffu et al. (2006) and Cooper, Gimeno-Gascon, and Woo (1994) contended that entrepreneurial experience is conducive to firms’ performance. However, no relationship between entrepreneurial experience and performance was found in the study of Saffu and Manu (2004) in the Ghanaian context. They explained that this was not a surprise finding given that 81.5 percent of respondents had no previous entrepreneurial experience and the current business was their first venture.

Bosma et al. (2004) provided the evidence that owner/managers’ experience in general, and specifically in industry and in entrepreneurship, have significant roles in enhancing firm performance. However, they further indicated that industry experience has a more significant influence on firm performance than general and entrepreneurial experience. This is because such experience provides the most relevant knowledge and skills to owner/managers.

In the Thai context, a positive effect of owner/managers’ experience in their businesses on SME performance is anticipated. Panpiamrat (2005) and SMEs on Kao-San Road (2005) indicated that owner/managers’ experience in their businesses allows them to build a social network related to the business. This network assists them in finding potential partners, identifying new market trends or business ideas,
expanding their client base, endorsing the new business to others, and overcoming the lack of resources which is often identified as a reason for firm failure. Thus, it can be inferred that experience is important for SMEs in Thailand. Hence:

**H2b**: Owner/managers' experience has a positive effect on the performance of SMEs in Thailand

From the arguments advanced in Section 3.7.1.1, it is expected that owner/managers' with more experience are likely to be able to access finance since experience provides the knowledge and skills needed to access finance. As discussed in Section 3.5, access to finance is expected to have a positive influence on performance of SMEs in Thailand. Thus, if experience influences access to finance, and access to finance enhances performance, then it could be speculated that experience will influence access to finance and ultimately performance. Accordingly:

**H2c**: Owner/managers' experience has an indirect effect on performance through access to finance

### 3.7.2 Education, Access to Finance, and Performance

Some of the knowledge useful to owner/managers in running their businesses can be obtained from formal education. A number of empirical studies have examined the effect of education on access to finance and performance (Coleman 2004; Kangasharju and Pekkala 2002; Saffu et al. 2006). Higher levels of education provide higher levels of human capital for the firm. The educational achievement of owner/managers is associated with their persistence, motivation, and self-discipline (Bird, Sapp, and Lee 2001). These qualities, in turn, might be expected to increase SMEs’ ability to access finance and enhance their performance.

#### 3.7.2.1 Education and Access to Finance

There is recognition in the small business literature of the significance of owner/managers’ education in the firm’s ability to access finance. The Confederation of British Industry (2001) showed that education assists SMEs in accessing finance
since it provides owner/managers with essential knowledge about where sources of finance are and how to access them. Aryeetey et al. (1994) indicated that, while educational opportunities are available for owner/managers, not many owner/managers possess the requisite financial management skills normally derived from education. Owner/managers need these skills to facilitate not only firm management and financial planning but also access to finance. Coleman (2004), however, could not find any significant difference in access to finance between the United States owner/managers with higher education levels and those with lower education levels. This is because they did not request information on the owner/managers’ areas of specialisation in their education (such as business, education and engineering). It is possible that different types of education could affect firms’ ability to access finance.

In Thailand, Jamkajornkeat (2005) argued that, even though not all relevant knowledge can be acquired from formal education, most of the skills essential for accessing finance are indeed gained from such education. As knowledge evolves, owner/managers need to have a certain level of education in order to gain basic knowledge related to accessing finance. Therefore:

**H3a:** Owner/managers’ education has a positive effect on the access to finance of SMEs in Thailand

### 3.7.2.2 Education and Performance

Research has shown an association between owner/managers’ education and performance (Kangasharju and Pekkala 2002; Pena 2002; Saffu et al. 2006). Education is presumably related to knowledge and skills, motivation, self-confidence, problem solving ability, commitment, and discipline (Bird, Sapp, and Lee 2001). Higher education could be expected to increase owner/managers’ ability to cope with problems and seize opportunities that are important to the growth of SMEs. According to Parker (2004), owner/managers’ performance is often a function of business skills in general and relevant entrepreneurship education in particular. Bosma et al. (2004), Bates (1997) and Bates (1995) highlighted the fact that highly
educated owner/managers are more likely to perform better than their lower-educated counterparts.

Fasci and Valdez (1998) on the other hand, found that education does not have an influence on performance. They suggested that this may result from the fact that all respondents in their study had a base educational level since all had obtained CPA certification. Yusuf and Saffu (2005) did not find a significant relationship between education and performance in their study of Ghanaian owner/managers. This is because, in contrast to the situation in professional sectors such as medicine, accounting, law, engineering, and consulting, higher education is not a necessary requirement or a common characteristic of owner/managers in the trading sector. Blackwood and Mowl (2000) raised the issue that the area of owner/managers’ education may not be related to the type of business in which they are involved. In this case, education is not likely to have a significant effect on performance.

These mixed findings is explained by Thibault (2001), who indicated that owner/managers vary greatly in terms of education level. Some successful owner/managers are highly educated whereas others have yet to complete their high school diplomas. They suggest that success may depend on the individual himself/herself and the way he or she manages the business.

Nevertheless, a number of researchers have found a positive link between the educational level of owner/managers and firm performance. In a study of Finnish entrepreneurs, Kangasharju and Pekkala (2002) found that more highly educated owner/managers’ SMEs have higher growth rates. A study by Pena (2002) of Spanish firms found that the education level of owner/managers has a positive effect on firm performance. Coleman (2004) and Papadaki and Chami (2002) also reported the same result in a study of United States and Canadian firms respectively.

In Thailand, Jamkajornkeat (2005) suggested that owner/managers need to have knowledge from formal education. This is because this knowledge provides the basic information and skills necessary for managing a business. It also assists owner/managers in applying new knowledge to their business, which ultimately improves their business performance. Accordingly:
H3b: Owner/managers’ education has a positive effect on the performance of SMEs in Thailand

An indirect relationship between education and performance via access to finance is also expected. This is because the education level of owner/managers is expected to enhance their ability to access finance since knowledge gained from formal education provides the skills needed to access finance (see Section 3.7.2.1). Moreover, it is anticipated that access to finance will improve the performance of SMEs in Thailand (see Section 3.5). Therefore, if education level influences access to finance, and access to finance enhance performance, education level will influence access to finance and ultimately add to performance. Accordingly:

H3c: Owner/managers’ education has an indirect effect on performance through access to finance

3.7.3 Age, Access to Finance, and Performance

The importance of owner/managers’ demographic characteristics such as age has been emphasised in the small business literature. This is because age influences owner/managers’ attitudes towards risk, finance, and firm performance. These associations are discussed below.

3.7.3.1 Age and Access to Finance

Coleman (2004) proposed that owner/managers’ age may reflect their attitude towards risk and affect their success in accessing finance. Following Davidson’s (1991) argument, younger owner/managers are more willing to take on risks in order to grow their business. Older individuals who continue to be owner/managers of small firms are more likely to have realised their initial aspirations. While younger individuals have more motivation to expand their businesses they may have fewer financial resources and fewer networks. Low and Mazzarol (2006) and Kabacoff and Stoffey (2001) indicated that younger owner/managers are more likely to be energetic, self-confident, and risk-taking than older owner/managers. It is therefore likely that younger owner/managers will have a better attitude towards external finance, better
understand the expectations and requirements of financial providers, and know more about how to make their business proposals into attractive investment opportunities.

Coleman (2004) argued that, since younger owner/managers are less risk-averse than older owner/managers, younger owner/managers are more willing to accept the risks associated with external finance. In contrast, Cron, Bruton, and Slocum (2006) noted that older owner/managers have better networks of support than younger owner/managers. These networks provide older owner/managers with easier access to finance.

The situation in Thailand is somewhat different as younger owner/managers generally have higher educational levels than older owner/managers due to improvements in the education system over time. During the past decades, the government has concentrated on the development of education as it is believed that education is very important to individual development and will therefore contribute to the social and economic development of the country (Office of the Educational Council 2006). In 1921, a law on compulsory primary education was passed requiring every 7-year-old child to receive free primary education until the age of 14. Subsequently, the National Scheme of Education was promulgated, extending compulsory education from five to six years in 1932 and to twelve years in 1997 (Office of the Educational Council 2006). This implies that younger owner/managers of SMEs in Thailand have higher educational levels than older owner/managers.

It is suggested in hypothesis 3a that owner/managers with higher educational levels could be expected to have more knowledge and information capable of assisting them in accessing finance (Jamkajornkeat 2005). Therefore, younger owner/managers of SMEs in Thailand will have a greater ability to access finance than their older counterparts since they have higher educational levels. Accordingly:

**H4a: Younger owner/managers of SMEs in Thailand have a greater ability to access finance than older Thai owner/managers**
3.7.3.2 Age and Performance

The relationship between owner/managers’ age and business performance has been captured through empirical research. Sinha (1996) showed that younger owner/managers have better performance than older owner/managers. In contrast, Heck, Rowe, and Owen (1995) noted that owner/managers who are older tend to have a greater degree of understanding of the principles of running a business. They have more experience in their own businesses. As a result, older owner/managers are likely to perform better than their younger counterparts. Thibault (2001) and Williams (1987) advanced a similar view to the effect that business performance is better for businesses whose owner/managers are older. However, no evidence was found in the study of Bosma et al. (2004) and Papadaki and Chami (2002) that owner/managers’ age affects performance. Although there are mixed findings related to the influence of owner/managers’ age on performance, the empirical evidence suggests that younger owner/managers tend to perform better than their older counterparts, as they are more willing to take on risks in order to grow their businesses (Davidson 1991; Sinha 1996).

As discussed previously, due to the development of the education system in Thailand, younger owner/managers in Thailand are more likely to have higher educational levels than their older counterparts. It is suggested that education has a positive influence on SME performance since education helps to provide the knowledge and skills, self-confidence, and problem solving ability required to operate a business successfully (Jamkajornkeat 2005). It can thus be expected that younger owner/managers in Thailand will perform better than their older counterparts. Hence:

**H4b: Younger owner/managers of SMEs in Thailand achieve higher performance than older Thai owner/managers**

Based on the discussion in Section 3.7.3.1, it is expected that younger owner/managers of SMEs in Thailand will have a greater ability to access finance than their older counterparts since they have more of the knowledge and skills needed to access finance through their higher educational levels. Access to finance is also expected to enhance the performance of SMEs in Thailand (see Section 3.5). Thus, if younger owner/managers have a greater ability to access finance, and if access to
finance enhances performance, it could be expected that younger owner/managers will have a greater ability to access finance, and thus higher performance. Hence:

H4c: Owner/managers’ age has an indirect effect on performance through access to finance

3.7.4 Gender, Access to Finance, and Performance

Existing studies provide evidence that an important influence on access to finance and performance is gender. Two feminist theories offer theoretical perspectives regarding gender-related differences in access to finance and performance: the liberal feminist theory and the social feminist theory (Porter 1997). The liberal feminist theory does not recognise any inherent differences between men and women. The implicit assumption of this theory is that men and women will achieve equal performance if given the same opportunities (Porter 1997). It argues that the disparity between genders is attributed to a wide variety of factors associated with society's attitudes towards men and women (Hooks 2000). These attitudes are based on historical and institutional factors in society which lead men to act differently from women (Beasley 1999; Cron, Bruton, and Slocum 2006; Schmidt and Parker 2003). The social feminist theory, on the other hand, argues that there are innate differences between males and females which condition them to differ in many characteristics. These differences lead men to take different actions from women in similar situations. It does not mean that either the male or the female perspective or orientation is superior, but that the differences between the genders are considered to be pervasive and often subtle in nature (Buttner 2001; Fletcher 1998). Both streams of feminist theory imply one may expect to find gender differences in various aspects of entrepreneurship, including access to finance and performance.

There is an alternative theoretical perspective that contradicts the feminist theory: the rational economic model (Ferber and Nelson 1993). This theory assumes that individuals are economically rational. They are rational, systematic, and logical in accessing alternative economic choices, and seek to maximise the economic benefit to themselves or the firm. Therefore, they will make their choices based on the benefits
gained from the transaction and not the gender of the service provider (Ferber and Nelson 1993). Simon, Fagley, and Halleran (2004) and Levin et al. (2002), however, argued that humans are not always rational. The same person may react differently to the same situation at different times, or different people may respond to the same situation in different ways.

Although empirical evidence on the effect of gender on access to finance and performance has been found, it has not provided clear insights into whether feminist theory or the rational economic model is more valid (Cron, Bruton, and Slocum 2006). Previous findings on the relationships among gender, access to finance, and performance are discussed in the following sections.

3.7.4.1 Gender and Access to Finance

It has been proposed in the literature that there is a gender effect on access to finance for SMEs. There is some evidence that financial providers impose more stringent requirements on female owner/managers in regard to collateral for loans, and thus limit their ability to access finance (Saffu and Manu 2004; Shaw et al. 2006). Saffu and Manu (2004) indicated that Ghanaian female owner/managers are hardest hit by this lack of access to credit because of banks’ insistence on landed property as collateral. As the control of land is generally in male hands, it is difficult for female owner/managers to access such finance.

Belcourt, Burke, and Lee-Gosselin (1991) noted that female owner/managers are treated less respectfully by financial providers than male business owner/managers. This hampers the ability of female owner/managers to access finance. In a similar vein, Carter et al. (2003) suggested that, even though the availability of equity funds in the United States has increased, female owner/managers have not yet accessed the large pool of equity capital currently available in the country. They argued that female owner/managers are less likely to secure outside equity than their male counterparts because of their lower educational level.

Kitakule, Limburg, and Weisert (2006) and Loscocco et al. (1991) revealed that women’s relative lack of access to finance limits the types of businesses they can
operate to those that require less start-up finance, such as businesses in the service sector. Loscocco et al. (1991) highlighted that, even after women have developed successful businesses, they have difficulty obtaining funds for expansion or investment capital. Even women who own businesses with higher gross incomes than their male counterparts report difficulty in finding external sources of funding. Anecdotal evidence indicates that the belief on the part of some financial providers that business ownership is not an appropriate role for women represents an additional obstacle.

In contrast to the above findings, Tigges and Green (1994), Fabowale, Orser, and Riding (1995) and Haynes and Haynes (1999) have argued that male- and female-owned businesses have the same ability to obtain finance. Using data from the 1998 National Survey of Business Finances, Coleman (2002) revealed that, if other variables are controlled, women are no less likely than men to apply for or be approved for a loan. Similarly, Fabowale, Orser, and Riding (1995) argued that male and female business owners are different in systematic ways, but when such differences are taken into account there are no differences in their access to finance and in the terms of credit provided.

In Thailand, the control of assets normally required by financial providers as collateral is generally in male hands (Klausner 1997). Furthermore, in the formal credit market, women applying for loans in their own name often run into difficulties with banking regulations which require the heads of households, who are most likely to be men, to make the loan application. In addition, Thai female owner/managers are more likely to have lower educational levels than Thai male owner/managers (United Nations Development Fund for Women and United Nations Development Programme 2000). They are therefore likely to have less knowledge and fewer skills for accessing finance. As a result, Thai women who own SMEs are deprived of essential opportunities to access finance. Therefore:

**H5a: Male owner/managers of SMEs in Thailand have a greater ability to access finance than Thai female owner/managers**
3.7.4.2 Gender and Performance

The effect of gender on performance has been widely studied. A number of studies have shown that women achieve lower performance than men (Chaganti and Parasuraman 1997; Fasci and Valdez 1998; Loscocco et al. 1991; Rosa, Carter, and Hamilton 1996). Fasci and Valdez (1998), Light and Rosenstein (1995) and Tigges and Green (1994) established that, though business ownership might provide women with a viable opportunity to achieve career success, gender negatively impact on the performance of businesses owned by women. This is due to disadvantages experienced by women in socialisation practices, educational experiences, family roles, and networks. Similarly, Loscocco et al. (1991) observed that small businesses owned by women in the United States tend to be less successful than those owned by men, even though ever-increasing numbers of women have been choosing small business ownership in an apparent attempt to escape their well-documented inequality in the labour market. Similarly, Cron, Bruton, and Slocum (2006) suggested that females in the United States earn significantly less than their male counterparts. It is indicated that the lower performance outcomes for female owner/managers are the result of women having less experience as business providers and less motivation to become entrepreneurs than their male counterparts.

Other studies, however, suggest that there are no performance differences between men and women owned enterprises (Fischer, Reuber, and Dyke 1993; Kalleberg and Leicht 1991; Tigges and Green 1994). For example, Johnsen and McMahon (2005) and Papadaki and Chami (2002) indicated that there are no significant differences in performance between men and women owner/managers once appropriate demographic and other relevant influences are taken into account.

In Thailand, Thai women are seen as the “elephant’s hind legs”, forever destined to follow the lead of the men (Klausner 1997). Even though Thai women are becoming more assertive and beginning to demand equal rights, these changes seem to be superficial at best. Female owner/managers are therefore less likely to demonstrate certain characteristics regarded as essential for improving firm performance, such as confidence, ambition and risk-taking. In addition, female owner/managers in Thailand have primary responsibilities for children, parents and the household (Bunmattaya
2005; Klausner 1997; United Nations Development Fund for Women and United Nations Development Programme 2000). They are more family oriented and less keen on pursuing economics goals related to firm expansion. Accordingly, they are expected to have lower performance than their male counterparts. As a result:

**H5b: Male owner/managers of SMEs in Thailand achieve higher performance than female owner/managers**

An indirect effect of access to finance on the relationship between gender and performance is expected in the Thai context. As discussed in Section 3.7.4.1, it is anticipated that Thai male owner/managers are more likely to be able to access finance than their female counterparts. Based on the discussion in Section 3.5, access to finance enhances the ability to pursue business objectives and improve business performance. Therefore, if male owner/managers have greater ability to access finance, and if access to finance improves performance, then it could be speculated that male owner/managers of SMEs in Thailand will have greater ability to access finance, and ultimately enhance the performance of their firms. Accordingly:

**H5c: Owner/managers’ gender has an indirect effect on performance through access to finance**

### 3.8 Business Readiness

Business readiness in this context refers to the characteristics of the firm itself that enable it to access finance. It is widely suggested that SMEs face more difficulty in accessing finance since they are perceived as posing a higher risk than their larger counterparts (Feeney, Haines, and Riding 1999; Vyakarnam and Jacobs 1991). Due to such risk, financial providers are usually unwilling to provide funds to SMEs without rigorous evidence to show that they will be able to repay the money. Therefore, it is anticipated that SME access to finance will be improved if they are able to meet the financial provider’s requirements (Berger and Udell 1998; Esperanca, Gama, and Gulamhussen 2003). The two factors that financial providers normally use to examine
the ability of the firm to repay are financial leverage ratio (the relative amount of debt that firms employ in their financial structure) and firm size.

3.8.1 Financial Leverage Ratio, Access to Finance, and Performance

Financial leverage ratio is the proportion of debt in the total capital (Beal and Goyen 2005). It is suggested that financial leverage ratio signals liquidity risk and ability to meet financial provider requirements. This in turn influences SME access to finance and performance. The relationships between financial leverage ratio, access to finance, and performance are discussed next.

3.8.1.1 Financial Leverage Ratio and Access to Finance

A relationship between financial leverage ratio and access to finance is anticipated because a higher level of debt increases the magnitude of risk associated with repaying money to financial providers. As indicated by Harris and Raviv (1991), a higher financial leverage ratio results in a lower liquidation value. This reduces the willingness of financial providers to invest money and consequently decreases the ability of firms to access outside finance (Deakins and Hussain 1993).

The relationship between financial leverage ratio and access to finance can be explained in terms of the costs of credit financing. In other words, bankruptcy costs increase with increasing financial leverage since the latter increases the risk that the company might not be able to generate enough cash flow to meet financial providers’ requirements, such as dividends, interest payments, and principal payments (Cassar and Holmes 2003; Titman 1984). In addition, agency costs may increase due to information asymmetry between owner/managers and financial providers. The greater the bankruptcy and agency costs arising from higher financial leverage, the higher the risk of insolvency (Brigham, Gapenski, and Ehrhardt 1999). It is thus expected that, the higher the financial leverage, the lower the willingness of financial providers to supply finance and thus the lower the ability of the firm to access finance.

In addition, for securing debt, higher financial leverage implies a lower portion of fixed assets is available as collateral. As collateral plays an important role in SMEs’
access to finance, SMEs with higher financial leverages are more likely to have lower ability to access finance (Abor and Biekpe 2005; Cassar and Holmes 2003). Financial leverage ratio also denotes the ability of SMEs to access capital market. One of the listing criteria is that businesses have to be in a healthy financial condition and have sufficient working capital (The Stock Exchange of Thailand 2006b). A higher financial leverage ratio may hamper the ability of SMEs to meet this requirement. This in turn reduces their ability to access such finance.

In Thailand, financial providers perceive SMEs as having a higher risk than their larger counterparts due to information asymmetries, bankruptcy costs and agency costs (Business Thailand 2002). Thus, they have less ability to service financial provider requirements such as dividends, interest payments, and principal payments. A higher financial leverage ratio also indicates a lower portion of assets available to secure debt. In addition, it reduces the ability of SMEs to indicate that the business is in a stable and healthy financial condition with sufficient working capital (The Stock Exchange of Thailand 2006b). All of these factors reduce financial providers’ willingness to invest in SMEs. Therefore, it is hypothesised that:

H6a: Financial leverage has a negative effect on the access to finance of SMEs in Thailand

3.8.1.2 Financial Leverage Ratio and Performance

A negative effect of the relative amount of debt that firms employ in their financial structure – financial leverage ratio – on performance has been proposed in the small business literature. It is suggested that firms with higher financial leverage ratios hold greater costs of credit financing (Beal and Goyen 2005). Cassar and Holmes (2003) noted that firms with higher profits have lower levels of debt, as internal funds are preferred to debt because of the relatively higher cost of the latter. This association is supported by Gibson (2002) for small firms in the United States, and Michaelas, Chittenden, and Poutziouris (1999) and Chittenden, Hall, and Hutchinson (1996) for those in the United Kingdom.
A negative association between financial leverage ratio and performance is anticipated for SMEs in Thailand, as higher leverage ratios increase credit costs and liquidity risk. Thus, firms with a higher amount of debt in their financial structure are expected to have less funds available to manage their businesses, a less secure financial shield against management mistakes, and therefore lower performance. Hence:

**H6b:** Financial leverage has a negative effect on the performance of SMEs in Thailand

From the argument in Section 3.8.1.1, it is expected that SMEs with lower financial leverages will be more able to access finance since financial providers perceive that they have less liquidity risk and a greater ability to meet financial provider requirements. When SMEs have access to finance, potential viable growth and further market opportunities enhance their performance (see Section 3.5). Therefore, if a lower financial leverage ratio positively influences access to finance, and if access to finance adds to performance, then it might be expected that SMEs with lower financial leverages will have a greater ability to access finance and exhibit better performance. The following hypothesis is proposed for testing:

**H6c:** Financial leverage has an indirect effect on performance through access to finance

### 3.8.2 Size, Access to Finance, and Performance

The size of a firm is a business characteristic employed in several studies on small firms. Size has been viewed as a determinant of a firm’s ability to access finance and its performance.

#### 3.8.2.1 Size and Access to Finance

Research shows that business size contributes to a firm’s ability to access finance. Generally, smaller firms are expected to have less access to finance. This is because smaller firms frequently lack the consistent and sufficient financial information
needed to convince financial providers about their operating performance and financial condition, and thus demonstrate their capacity to repay (Abor and Biekpe 2005; Berger and Udell 1998; Cunningham, Nikolai, and Bazley 2000; English 2001). According to Coleman (2004), Coleman and Cohn (2000), Weinberg (1994), Bank of England (1993) and Vyakarnam and Jacobs (1991), difficulty in accessing finance decreases with the size of the firm. This is because larger firms generally have more tangible assets and thus an increased ability to reduce the magnitude of potential losses that financiers might incur. These consequently improve access to outside finance at lower finance costs (Harris and Raviv 1991).

Likewise, Berger and Udell (1998), Keasey and Watson (1993), and Wedig et al. (1988) pointed out that access to finance increases where firms can provide tangible assets such as inventory and equipment to serve as collateral. Small firms which provide security backed by tangible assets are generally charged a lower margin over base than those that are unable to provide such security. If the firm’s assets are pledged as collateral, the cost associated with adverse selection and moral hazards can be reduced. In addition, size and therefore assets work as instruments for resolving conflict between owner/managers and financial providers, as assets provide an indication of owner/managers’ participation in sharing business risk (Abor and Biekpe 2005).

Cosh and Hughes (1994) added that, since operational risk is inversely related to firm size, this presupposes that financial providers are less willing to invest in smaller-sized firms, and thus it is harder for smaller firms to access finance. In addition, firm size is one of the key criteria that indicate whether a firm will be able to access the capital market. In general, smaller sized firms are unable to access the capital market simply because they do not have enough fixed assets to meet the listing requirements (The Stock Exchange of Thailand 2006b).

In a similar vein, the International Labour Organization (2000), Wiboonchutikula (2002) and Pussarangsri (1994) indicated that, in Thailand, business size is an important determinant of bank attitudes to lending to business. Bank managers regard larger-sized businesses as less risky than smaller-sized businesses. This is because the higher costs of resolving information asymmetry problems with smaller firms
discourage financial providers from lending to smaller-sized firms. Unlike larger firms, small firms do not enter into contracts that are publicly visible or widely reported in the press. Many small firms do not publish audited financial information that can be shared with providers of outside finance (Business Thailand 2002). Without credible business information, small firms have to provide collateral to reduce such risks. However, they often do not have enough assets to secure loans (Small Industry Credit Guarantee Corporation 2005; Suranaree University of Technology 2001). These factors imply that smaller firms are more likely to be denied loans or investments than larger firms.

Size also determines if Thai SMEs are able to access the capital market. One of the requirements is that listing firms must have paid-up capital in common shares of not less than THB300 million or AUS 10.62 million, to raise capital from the main board market (the Stock Exchange of Thailand) and THB30 million or AUS 0.71 million, for the second board market (Market for Alternative Investment), where AUS 1 = THB 28.26 (x-rate.com 2006). In addition, the number of minority shareholders (non-strategy shareholders) must not be less than 1,000 for the main market and 300 for the secondary market (The Stock Exchange of Thailand 2006b). These requirements suggest that larger-sized firms are more likely to meet these listings criteria and gain access to external equity finance than smaller firms. Therefore, it is hypothesised that:

H7a: Business size has a positive effect on the access to finance of SMEs in Thailand

3.8.2.2 Size and Performance

Size of business has also been found to have an important influence on SME performance (McMahon 2001b; Tigges and Green 1994). Larger-sized firms receive more benefits from government regulations, tax law, competition for labour, and financial resources (Indarti and Langenberg 2004). In addition, due to economics of scale larger-sized firms pay less than smaller-sized firms for their inputs (Aldrich, Rosen, and Woodward 1987). They therefore tend to perform better than their smaller-sized counterparts.
The influence of firm size on performance is also anticipated in the Thai context, as a number of factors contribute to the advantages of larger firms in Thailand. Smaller firms have fewer resources and tend to benefit less from government programs than large firms. In addition, without economics of scales, smaller firms have higher costs of production than larger firms. Accordingly:

**H7b: Business size has a positive effect on the performance of SMEs in Thailand**

It is anticipated that larger-sized firms are more likely to be able to access finance since they have more fixed assets to use as collateral (see Section 3.8.2.1). From the discussion in Section 3.5, access to finance is expected to have a positive influence on performance. Therefore, if business size positively influences access to finance, and if access to finance also has a positive association with performance, then larger firms are expected to have a greater ability to access, finance which ultimately enhances their performance. The relationship is hypothesised as follows:

**H7c: Business size has an indirect effect on performance through access to finance**

**3.9 Information Readiness**

Information readiness is the ability to provide information intended to attract financial providers. Marsden Jacob Associates (1995) highlighted that a lack of investment readiness is primarily due to information failure (information failure occurs where economic agents have inaccurate, incomplete or uncertain data and so make potentially wrong choices). SMEs face difficulty in accessing finance because they do not have the track record that potential investors can rely on in making their investment decisions (Marsden Jacob Associates 1995; Mason and Rogers 1997; Southon and West 2006). Moreover, they do not know how to present themselves as attractive investment opportunities (Harding and Cowling 2006; Mason and Harrison 2000).
Financial information allows financial providers to appraise business performance and thus reduce difficulties in accessing finance. This is because financial information enables financial providers to assess SMEs’ ability to remain solvent, grow, and meet financial providers’ requirements (Batten and Hettihewa 1999; Berger and Udell 1998; KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003). Financial information reduces information asymmetry (where financial providers have less information than owner/managers about the financial circumstances and prospects of small firms) by allowing financial providers to assess SME health and make sound decisions. This in turn reduces the risk of investment in SMEs. Therefore, information readiness in this study focuses on financial information, as it is crucial for attracting financial providers to invest in SMEs. The types of financial information are covered in the next section.

3.9.1 Financial Information Types

Financial information has been defined in various ways by a range of scholars. According to Carrington and Howitt (1983) and O'Regan (2001), financial information provides a picture of the financial condition of a business and is presented in various forms, such as balance sheet, income statement, cash flow statement, and budgets. The profit and loss statement summarises the results of SMEs’ operating activities, i.e. revenues, expenses, and net income (or net loss), for a specific time period. It shows the relationship between the decisions that owner/managers make during this period and the results of those decisions (Cunningham, Nikolai, and Bazley 2000). The balance sheet shows SMEs’ financial position on a specific date. It is a snapshot of the firm’s assets and the sources of funding for these assets at a point in time (English 2001; Ingram et al. 1999). Budgeting provides an indication of what the business intends to do, and allows financial providers to uncover potential problems. A budget quantifies the resources that SMEs expect to use for their operating activities. It also creates benchmarks for evaluating SME performance by comparing the results of operating activities with the related budget amounts (Cunningham, Nikolai, and Bazley 2000).
Financial information also takes the form of financial indicators, such as return on investment, return on assets, current ratio, and inventory turnover. These financial indicators are useful for measuring business health. They show the firm’s strengths and weaknesses in terms of liquidity, profitability, and financial position (Barsley and Kleiner 1990). Carrington and Howitt (1983) described financial information as information that represents some real phenomena in monetary terms. This is consistent with the definition by Pearson Education (2005), that financial information is “information which may be reported in money terms”. Ratnatunga, Romano and Lourens (1993), Ingram et al. (1999) described financial information as the provision of information in financial terms which helps in making decisions about organisations. From these definitions, it can be concluded that an important aspect of financial information is that it provides useful information in monetary terms for business decision-making.

Financial information can be classified into statutory and non-statutory forms (English 2001). Statutory financial information is information required by the government depending on the form of the business organisation. For example, sole proprietorships are not generally required to provide business financial information but only information on their personal income. On the other hand, registered partnerships and companies are generally required to prepare statutory information on profit and loss statement and balance sheet (Cunningham, Nikolai, and Bazley 2000). Non-statutory financial information is broadly classified apart from statutory financial information, and usually includes cash flow statement, forecasting financial statements, and financial ratios, i.e. assets turnover, interest cover, and inventory turnover (Holmes and Nicholls 1989).

Financial information, whether statutory or non-statutory, must have certain characteristics in order to provide information useful for business decisions. The characteristics of financial information are presented in the next sub-section.
3.9.2 Characteristics of Financial Information

To be useful for decision-making, financial information must possess certain characteristics (Knapp and Kemp 2003). Quality is an important characteristic of financial information. This is because quality ensures that financial information is reliable and useful. High-quality financial information allows owner/managers to appraise the financial health of their business and to answer questions such as, how quickly inventory is turning over, how much the firm owes, and when debts are due (Cunningham, Nikolai, and Bazley 2000; Xu et al. 2003). In addition, quality financial information also enables smaller firms to detect problems before these become threats to their viability. Problem detection and correction are very important in the day-to-day management and operation of an enterprise (English 2001). Quality is defined in several forms such as accuracy, relevance, reliability and timeliness.

Previous studies have focused primarily on accuracy as a key characteristic of financial information quality (Huang, Lee, and Wang 1999; Wand and Wang 1996). Accuracy is, however, always defined in several terms. For example, Wang, Storey and Firth (1995) identified that, in accounting and auditing, accuracy is defined in terms of the frequency, size, and distribution of errors in information. However, Xu et al (2003) indicated that information quality is beyond accuracy, and that quality should be identified in multiple dimensions. Several dimensions of information quality have been identified, such as relevance, reliability, completeness, consistency, timeliness and flexibility (Wand and Wang 1996; Xu et al. 2003). Nevertheless, Ballou et al. (1998) and Wand and Wang (1996) quoted in Xu et al. (2003 p. 461) suggest that four information quality dimensions are commonly identified:

1. accuracy, which occurs when the recorded value is in conformity with the actual value
2. timeliness, which occurs when the recorded value is not out of date
3. completeness, which occurs when all values for a certain variable are recorded
4. consistency, which occurs when the representation of the information values is the same in all cases

The Statements of Accounting Concepts No.3 (ISA3) identifies relevance and reliability as the primary qualitative characteristics of financial information necessary
for achieving the objectives of general purpose financial reporting. General purpose financial reporting is a means of meeting all the information needs of users who are unable to demand the preparation of specific financial information. Relevance is defined as “quality of financial information which exists when that information influences decisions by users about the allocation of scarce resources”. Reliability refers to the “quality of financial information which exists when that information can be depended upon to represent faithfully and without bias” (Knapp and Kemp 2003 p. 23, 24). Studies have indicated that financial information has to be accurate, timely, complete and consistent if it is to be considered relevant and reliable (Ballou et al. 1998; Wand and Wang 1996).

Hughes (2004) and Palmer (1994) indicated that timely and accurate financial information is important to owner/managers in making effective decisions. McMahon (2001a) suggested that timely and relevant financial information is needed to monitor the firm’s financial position and performance. Likewise, Wood (1989) observed that a key to the management decision-making process is the keeping of accurate financial information. From the above discussion, quality is clearly central to the characteristics of effective financial information.

Having presented the types and characteristics of financial information, there is a need to understand how SMEs prepare and use this information to support their decision-making since these influence their ability to access finance and the performance of their businesses (Palmer 1994; Peacock 2000; Potts 1977; Wichmann 1983).

### 3.9.3 Financial Information Practice in SMEs

The practical issues involved in preparing and using quality financial information in SMEs have been investigated in a number of studies (Gibson 1992; Gibson 1993; McMahon 1998). This section provides a broad overview of existing practices in a number of countries including Thailand, followed by several frameworks used to explain the financial information practices of SMEs.
3.9.3.1 Financial Information Practices: Evidence from Other Countries

The literature suggests that SMEs generally have no systematic way of generating financial information. SME financial information is mainly prepared by external professional accountants in order to meet statutory obligations, and it normally comprises the profit and loss statement and the balance sheet (Cameron 1993; KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003). Financial information is usually neither adequate nor timely, and is likely to be out-of-date by the time it is ready to be used (KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003; McMahon 1999b; Storey et al. 1989).

A number of propositions have been made in an attempt to explain this practice among SMEs. Firstly, owner/managers of SMEs have limited financial and technical capabilities, and are so involved in day-to-day business matters that the preparation of financial information is often neglected (KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003; McMahon 1999a). Secondly, SMEs abandon the preparation of financial information because most are sole traders who are not obliged to submit audited financial accounts to the Registrar of Companies within a specific time period (Storey et al. 1989). Finally, there is a cost involved in producing this information. SMEs face higher costs of preparing financial information than larger firms, since they cannot afford to invest in financial information systems (Holmes et al. 2003).

Holmes (1986) showed that, although owners/managers generally view financial information as useful for decision-making, very few use financial information in their decision-making. Conversely, a recent study by McMahon (1999a) revealed very high levels of preparation and use of financial information by owner/managers (more than 79 percent). However, it can be seen in Table 3.7 that this high level is associated with only statutory financial information, that is, balance sheet and profit and loss statement.
Table 3.7 Financial Information Practices among SMEs in Australia

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>Available and used</th>
<th>Available, not used</th>
<th>Not available</th>
<th>Not applicable</th>
<th>Not answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet</td>
<td>84.9%</td>
<td>5.9%</td>
<td>4.7%</td>
<td>0.8%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Profit and Loss Statement</td>
<td>87.9%</td>
<td>5.3%</td>
<td>3.0%</td>
<td>0.8%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Cash Flow Statement</td>
<td>79.6%</td>
<td>9.5%</td>
<td>4.3%</td>
<td>0.8%</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

Source: McMahon (1999a p. 41)

Based on interviews with 36 small retail owner/managers in the United States, Palmer’s (1994) study on the financial information use of small independent retailers showed that only statutory financial information (balance sheet and profit and loss statement) has a high level of preparation and usage. The level of preparation and usage of other financial information, such as cash flow and forecasting financial statements, is often very low (See Table 3.8). Other financial information is compiled and used only by owners/managers who are very familiar with their financial information and keep their financial information in-house. Moreover, Palmer (1994) found that the usage rate of financial information for decision-making varies greatly from one owner/manager to another. Some owner/managers only glance at the financial reports, and only a few do thorough monthly comparisons. Many SMEs respondents (89 percent) indicated they had no managerial purpose for preparing financial statements. Furthermore, a number of owner/managers said they kept relevant information in their minds instead of writing it down or recording it in a financial information system (Palmer 1994).

Table 3.8 Preparation and Usage of Financial Statements

<table>
<thead>
<tr>
<th>Financial Statements</th>
<th>Prepared</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheque Book</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Profit/Loss Statement</td>
<td>100%</td>
<td>92%</td>
</tr>
<tr>
<td>Balance Sheet</td>
<td>86%</td>
<td>75%</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>22%</td>
<td>19%</td>
</tr>
<tr>
<td>Common Size Profit and Loss Statement</td>
<td>39%</td>
<td>39%</td>
</tr>
<tr>
<td>Common Size Balance Sheet</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Forecasting Financial Statement</td>
<td>36%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Source: Palmer (1994 p. 70)
In accordance with the findings of McMahon (1999a) and Palmer (1994), Dart, Ng and Sarkar (1990) observed a significant awareness and usage of financial information among SMEs in Singapore. Results from a questionnaire demonstrated that all Singaporean SMEs were using income statement and balance sheet. These findings suggest that Singaporean SMEs realise that financial information is critical to the management of their businesses. Nevertheless, their awareness and usage of more sophisticated information resources, such as product costing, projected income statement, and variance analysis, significantly decreased in comparison with those for statutory requirements.

Walton (2000) stated that owners of small, medium, and micro enterprises (SMMEs) in developing countries typically have no business training and keep no records. Many of them consider financial information something of a haphazard patchwork because they equate it with taxation and feel it is something to be avoided.

It appears from the above discussion that there are several kinds of financial information which may be generated by SMEs. However, statutory financial information is usually prepared annually for tax purposes (English 1992; Holmes and Nicholls 1988; Palmer 1994; Ratnatunga and Dixon 1993). Furthermore, the level of use and preparation of non-statutory financial information is quite low among SMEs because they lack understanding of the usefulness of this type of financial information. Additionally, the quality of financial information is low for SMEs (KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003). Two main frameworks have been developed to explain financial information practices in SMEs: the traditional framework and the alternative framework.

3.9.3.2 Frameworks for SME Financial Information Practices

The traditional framework and the alternative framework are the two main frameworks that are used to explain financial information practices in SMEs. These two frameworks point to distinctly different possibilities for financial information practices amongst SMEs (Gibson 1992; McMahon 1998). Each of these frameworks is discussed below.
1) The Traditional Framework

The traditional or mainstream neoclassical framework is based on the maximising assumptions of mainstream neoclassical economics. It assumes that the owner/manager is a rational economic decision-maker. Thus, the owner/manager must have access to complete information, including financial information, in order to facilitate the evaluation of available options and the making of optimum decisions by choosing the action with the maximum expected utility (Gibson 1992). In accordance with this view, McMahon (1986) explained that owner/managers of small firms must have access to financial information in order to ensure that the most efficient decisions are made. Nevertheless, studies of small firms generally indicate contradictory findings. That is, “owner/managers rarely have ready access to all of the information necessary to conduct the many aspects of their business operations effectively” (Holmes and Nicholls 1989 p. 143). Moreover, it appears that access to financial information is not important in the decision-making process of owner/managers (Holmes and Nicholls 1989; Sweeting 1991). This is because owner/managers do not understand the benefits of financial information, and they prepare this information simply for tax purposes (Walton 2000).

Because the traditional framework is based on economic rationalist decision-making assumptions, it is likely to focus on one objective: profit maximisation or monetary reward (Gibson 1993). However, the ideal assumptions of this framework rarely exist in the small business world. It appears that SMEs pursue a wide variety of goals, and in many cases monetary reward is not the sole or primary goal of small firms (Barsley and Kleiner 1990; Jarvis et al. 1996b; McMahon and Stanger 1995). For example, they may pursue freedom, independence and a better lifestyle, and financial information is not adequate for assessing the extent to which these goals are accomplished. An alternative framework was thus developed to overcome the weaknesses of the traditional framework in explaining financial information practices of SMEs (Gibson 1992; Gibson 1993).
2) The Alternative Framework

The alternative or Austrian framework espoused by the Austrian school of economics foreshadows the likely financial information practices of SMEs in a less than perfect world. This framework is concerned with the internal use of general purpose financial reports by owner/managers (Gibson 1992; Young 1987). A justification for considering this alternative framework is put forward by Gibson (1992 p. 221), who stated:

Substantial relaxation of these assumptions (assumptions derived from mainstream neoclassical framework) is often necessary to provide plausible explanations for many observed practices such as the irregular use of financial information in small firm decision contexts. Rather than seeking to justify these departures within the extant framework, understanding may be better accommodated by adopting a different perspective.

The Austrian framework is primarily concerned with the role of entrepreneurs in the economic market process, and focuses on the acquisition of knowledge that might guide action through experience rather than the attainment of financial information to support decision-making (Gibson 1993). In this situation, financial information has little decision usefulness for owner/managers.

Likewise, Storey et al. (1989) objected that financial information is likely to be of limited use since it provides historical data rather than data on current and future prospects. It is therefore only partially useful as an information source for owner/managers and other interested parties.

From the arguments above, it can be inferred that financial information appears to be useful only in evaluating the success of past decisions, and in determining the present position (McMahon 1998). In this context, financial reports for tax purposes are more likely to be sufficient to satisfy the information needs of SME owner/managers. The Austrian perspective on financial information in SMEs is supported by Gibson and Wallschutzky (1992). The results of in-depth interviews with Australian owner/managers in Gibson and Wallschutzky's (1992) study showed that few SME owner/managers identify access to financial information as important when making decisions affecting growth and opportunity. Financial information is not normally
used because it is not considered useful in making decisions. This information might be considered to have some utility for control decisions only.

McLaney (2000), on the other hand, argued that, whilst financial information is a record of past events, it is still worthwhile in providing guidelines for decisions about future actions and strategies. That is, financial information can help owner/managers detect existing problems, predict potential future difficulties, recommend solutions to existing problems, and suggest ways to avoid problems in the future. Similarly, Ratnatunga and Dixon (1993) stated that financial information is a stepping stone in aiding SMEs to avoid managerial problems, such as over- or under-stocking, and over-investment. Therefore, well prepared financial information provides a solid basis for good management which assists in making business decisions (Ratnatunga and Dixon 1993; Schaper and Volery 2004).

McMahon (1998) emphasised that owner/managers’ decisions regarding financial information are complex, and not simply a dichotomous choice between two extreme positions. There are several ways in which SME financial information may be limited in practice. For instance, most SMEs prepare only statutory financial statements (balance sheet and profit and loss statement), while only a few SMEs prepare other more sophisticated reports. Moreover, even if financial statements are prepared, they lack adequate detail and are not regular. This is either because owner/managers do not seek to be better informed of the financial consequences of their decisions, or because they believe that the costs of being better informed outweigh the benefits.

Having discussed the financial information practices of SMEs in other countries, there is a need to examine the financial information practices of SMEs in Thailand, as this study focuses on the Thai context.

3.9.3.3 Financial Information Practices: Evidence from Thailand

Previous studies suggest that SMEs in Thailand place emphasis on annual statements to satisfy taxation and other related statutory information requirements (Dart, Ng, and Sarkar 1990; Sarapaivanich 2002 (unpub.)). Other reports, such as cash flow statements, age analyses of receivables and debt, and budgets, which are significantly
useful for financial decisions, are less often prepared by Thai SMEs. In addition, the financial information prepared is generally unreliable and often delayed in submission to the Tax Revenue department and the Department of Commercial Registration in Thailand (Kingkaew and Limpaphayom 2001; Sarapaivanich 2002 (unpub.)).

A comparative study of managerial practices and problems faced by SMEs in Malaysia, Singapore, and Thailand by Dart, Ng and Sarkar (1990) showed that income statement and balance sheet are the best known and most widely accepted financial information resources used by Thai SMEs. Other financial information such as reports on sources and uses of funds which provide information about a firm’s ability to remain solvent and to grow, and variance analysis which supplies information comparing actual results and budgets, is not normally used in identifying problems and planning for the future. Dart, Ng and Sarkar (1990) concluded that, in general, Thai SMEs lag behind Malaysian and Singaporean SMEs in their use of financial information. This is particularly true of more sophisticated financial information, such as variance analysis and projected income statements. These findings suggest that Thai SMEs do not realise the importance of financial information in managing their businesses.

In addition, the Institute for Small and Medium Enterprises (2001) maintained that owner/managers do not have enough accounting knowledge or skilled accounting staff. These constraints obstruct SMEs from producing reliable financial information. This report revealed that owner/managers are aware of this problem, and recommended that they require training in this area to adequately cope with the problem.

Evidence from the literature discussed above suggests that the financial information practices of SMEs in Thailand are consistent with those of other countries. That is, SMEs generally prepare financial information on an annual basis to satisfy statutory requirements, and this information is usually of low quality. Several studies have attempted to investigate the crucial role of financial information in the operation of SMEs, and the need to improve their financial information practices because financial information has been recognised as a key factor influencing SME performance and access to finance (Lattimore et al. 1998; Palmer 1994; Peacock 2000; Potts 1977;
Schaper and Volery 2004; Walton 2000; Wichmann 1983). The association between financial information and access to finance is examined in the next sub-section.

3.9.4 Financial Information and Access to Finance

It was noted in Section 3.8 that financial information is very useful for SMEs in accessing finance (Holmes et al. 2003; Ratnatunga, Romano, and Lourens 1993). This is because finance, as discussed in Section 3.3.1, is one of the key factors enabling SMEs to grow and pursue their goals. As discussed in Section 3.5.2, the issue of investment readiness has been used to rationalise the finance gap. It explains that one of the reasons why small firms face more restrictive financing conditions than larger firms is because they fail to keep financial information which allows outside investors to assess their performance (Lattimore et al. 1998). Information asymmetry, where financial providers have less information about the financial circumstances and prospects of small firms than owner/managers, is regarded as the root of small business finance problems, and poses two concerns for financial providers (Binks, Ennew, and Reed 1992; Deakins and Hussain 1994).

The first is a moral hazard (a monitoring problem), and involves small businesses intentionally taking advantage of information asymmetry to redistribute wealth to themselves (Deakins and Hussain 1994). This problem can take the form of excessive consumption of perquisites such as the unauthorised use of a firm’s assets for personal purposes (Holmes et al. 2003). Moreover, since the firm’s expected returns depend on the associated risk, owner/managers may have an incentive to take higher risks than they otherwise would if they bore all the risks. This is because, with external funding, they benefit from any additional returns, but do not suffer disproportionately if businesses are liquidated. Even so financial providers try to minimise this risk by securing seats on the board or imposing restrictive covenants (Deakins and Hussain 1994).

The second problem is adverse selection (a risk assessment problem). Adverse selection arises from small firms that are perceived to have higher default risk than larger firms; thus, higher interest rates are applied to them (Friedman and Hahn 1990).
As the interest rate is increased, the mix of small firms that are seeking finance changes adversely. The safer small firms, who always repay their debt or comply with the terms of funding, stop applying, while only the riskier small firms, who are willing to pay higher interest rates where they perceive their probability of repaying loan to be lower, keep applying (Craig 2004). Thus, raising interest rates does not result in an increase in receipts to cover the higher risk of small firms, but may lead to lower returns due to the increasing average risk of small firms that seek external funds (Friedman and Hahn 1990).

The result of information asymmetry between financial providers and small firms, is that the willingness of financial providers to supply finance to firms is reduced (Ang 1992; Berger and Udell 1995; Lattimore et al. 1998; Peterson and Rajan 1994; Stiglitz and Weiss 1981; Winker 1999). However, Meza and Webb (1987) demonstrate that asymmetric information can lead to an oversupply of finance rather than an under supply, due to the inability of lenders to discover all of the relevant characteristics of borrowers. While research findings are contradictory, it is suggested that financial information decreases the extent of the moral hazard and of adverse selection problems, and ultimately facilitates SME access to finance (Binks, Ennew, and Reed 1992).

Financial information presents an accurate financial position of an enterprise in a simple and straightforward manner (Barsley and Kleiner 1990; United States Small Business Administration 2004a). For instance, business incomes and expenses, money needed to support their operation and expansion, and their ability to pay back loans all assist owner/managers in evaluating and planning for their financial activities, and in identifying their financing requirements in the long- and short-term to achieve their goals (Cunningham, Nikolai, and Bazley 2000; Palmer 1994). In addition, financial information provides data that can be used in assessing the profitability of alternative courses of action, and in protecting SMEs from common faults such as securing the wrong type of financing, miscalculating the amount required, or underestimating the cost of finance (United States Small Business Administration 2004b). Therefore, the preparation and use of financial information decreases any ambiguity about the SME’s financial position, and smoothen the process of accessing finance (Cunningham, Nikolai, and Bazley 2000; Ray and Hutchinson 1985).
The preparation and use of financial information does not only communicate useful information on an SME’s financial position, but also conveys SME credit quality to financial providers. Credit quality assessment is considered one of the most effective mechanisms enabling financial providers to decide whether to invest in SMEs (Berger and Udell 1998; Choy 1990; Cunningham, Nikolai, and Bazley 2000; KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003; Palmer 1994). Financial information helps financial providers to evaluate whether SMEs need finance and, if so, helps to determine the appropriate amount, the length of time, and the likelihood that the SME will repay or comply with the terms of the finance (Choy 1990; Cunningham, Nikolai, and Bazley 2000).

Haron and Shanmugam (1994) found that insufficient information about loan applications from banks, lack of a proper business plan, and lack of knowledge of accounting are some of the common problems faced by bank officers when dealing with small firms. Batten and Hettihewa (1999), Haron (1996), Haron and Shanmugam (1994), and the World Bank (1978) found that lack of financial information about SMEs makes it hard for lenders to access their credit ratings and evaluate their potential risks and returns. These problems discourage lenders from lending to SMEs, though they may still lend to SMEs with high collateral requirements or at high interest rates since it is difficult to be confident that such firms have the ability to successfully repay funds lent.

Berkowitz and White (2004) and Chee (1984) also noted that lenders tend to ignore small firms, preferring larger firms that typically generate more income at less risk. On the other hand, Binks, Ennew and Reed (1992) and Stanga and Tiller (1983) argued that restricted access to finance is not attributable directly to size, but is instead a result of the problems associated with the availability of information necessary for evaluating projects. Financial information provides a valuable incentive for lenders to serve the credit needs of all borrowers equally. Likewise, Choy (1990) compared similarities and differences in the sources of financing for business enterprises in three East Asian countries, i.e. China, Japan, and Taiwan, as well as the United States, and concluded that finance is generally available to businesses with good financial information that can demonstrate their ability to repay loans.
Financial information is especially required when SMEs are seeking external equity, to ensure that investors are informed of events that may impact on their investment decisions (Holmes et al. 2003; Ratnatunga, Romano, and Lourens 1993). For instance, to access capital market, SMEs have to meet listing criteria related to financial information. That is, they must ensure that financial statements have been prepared in accordance with the stock exchange rules and regulations, and that the auditor has to be approved by the stock exchange. These requirements have been applied to ensure that all investors receive information necessary for investment decisions (The Stock Exchange of Thailand 2006b). Moreover, to attract other sources of external equity funds such as angel financing and venture capital, SMEs have to be able to provide good financial information records to demonstrate their potential for success (Mason and Harrison 2001).

In Thailand, it is suggested that financial information facilitates SMEs’ access to finance by providing information useful to owner/managers in identifying their financial blind spots, helping to notice when finance is needed, and assisting them to determine when and where to obtain financial resources and how much to obtain. It also communicates SMEs’ financial prospects to financial providers (Pedphon 2003). It is expected that financial information provides owner/managers and financial providers with accurate information useful for the evaluation of SMEs' financial situations, and results in better access to finance. Accordingly:

**H8a: Financial information has a positive effect on the access to finance of SMEs in Thailand**

### 3.9.5 Financial Information and SME Performance

In the absence of financial information, SMEs not only find it difficult to signal their value to financial providers when seeking finance, but also have trouble performing well. This is because, without financial information, SMEs do not have the means to control business activity, assess business performance, or plan for the future (Ratnatunga, Romano, and Lourens 1993).
Empirical evidence suggests that financial information is central to all business functions, forming the basis for corrective and preventive actions that improve organisational performance (Palmer 1994; Peacock 2000; Potts 1977; Wichmann 1983). Financial information provides all data on key operational matters necessary for protecting businesses from falling into a difficult situation before it is too late to recover (Hughes 2004; Lauzen 1985; Ratnatunga, Romano, and Lourens 1993). Therefore, businesses with solid financial information practices are more likely to perform better than businesses lacking these (Hughes 2004).

Hughes (2004) argued that SMEs are unable to perform well by just being able to access finance, but that they need to have financial information to manage it. In other words, even if SMEs have sufficient finance, they may lose it simply because they do not have timely financial information on key operating matters that they can draw upon in making sound decisions. Financial information enables SMEs to make better decisions, plan more effectively, and avoid the many possible pitfalls businesses face.

Blackwood and Mowl (2000) examined the relationship between business planning/financial management and business performance, and found that businesses with better performance were likely to be operated by owner/managers who regularly prepared financial information. These results are consistent with the findings of Lussier (1995), Palmer (1994), McMahon and Davies (1994; 1992), Gaskill, Van Auken, and Manning (1993), Whittred and Zimmer (1984), and Wichmann (1983), all of whom highlight financial information as one of the important factors affecting SME performance.

The influence of financial information on SME performance does not end with their preparation or maintenance; rather, it is dependent on their use for decision-making. As such, financial information does not provide any benefits unless it is used as a management tool (Ingram et al. 1999). As discussed in Sections 3.8.4.1 and 3.8.4.2, though a majority of smaller enterprises prepare statutory financial information, very few use this information for decision-making (KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003). Potts (1977) noted that the use of financial information in decision-making provides the clearest and most striking distinction between small
businesses with good performance and those with low performance. DeThomas and Fredenberger (1985) corroborate Potts’ (1977) findings by demonstrating that businesses which did not use adequate financial information for financial controls had lower performance than firms that did. This scenario may be understood in the light of the findings of Hodgetts and Kuratko (1998) and Ratnatunga and Dixon (1993), whose analyses indicate that financial information provides owner/managers with information vital to their businesses. Such information includes the profitability of past activities, their ability to meet liabilities and operating expenses, and the financial structure of the business in relation to current and non-current assets.

Nevertheless, the benefits of using financial information depend on its quality. KPMG Special Services, and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart (2003), indicated that a competent assessment of SME economic and financial performance is based on high quality financial information. This is because such information gives an accurate picture of the true financial condition of the business.

In contrast to the findings of the above studies, a meta-analysis of 320 empirical studies conducted by Capon, Farley and Hoenig (1990) relating environmental, strategic, and organisational factors to financial performance failed to discover any definitive impact of financial information on financial performance. A similar outcome was reported in Thomas and Evanson’s (1987) study of 398 small pharmacies in the United States. They were unable to demonstrate a significant association between the number and the frequency of use of financial information on one hand and SME performance on the other. They hypothesised that this might be due to a lack of ability on the part of owner/managers to interpret information properly. Their proposition is supported by the findings of KPMG Special Services, and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart (2003), and Williams (1984), that a lack of knowledge about financial information limits SMEs’ ability to utilise this information to gain a competitive advantage.

In Thailand, it is suggested that financial information allows owner/managers to access valuable information with guidelines for controlling the resources of the firm.
This in turn helps them to make effective decisions, which ultimately enhances firm performance (Pedphon 2003). Therefore:

**H8b: Financial information has a positive effect on the performance of SMEs in Thailand**

Based on the discussion in Section 3.9.4, financial information is expected to enhance access to finance. This is because firms with good financial information will face fewer barriers in raising external funds. As discussed in Section 3.5, access to finance is expected to enhance performance of SMEs in Thailand since it allows them to have more investment opportunities. Thus, if financial information impacts performance, and if access to finance enhances performance, then it is speculated that financial information will influence access to finance which ultimately influence performance. Accordingly:

**H8c: Financial information has an indirect effect on performance through access to finance**

The hypothesised relationships among performance, access to finance, and variables representing investment readiness are depicted in Figure 3.1, which forms the conceptual model tested in this study. The hypotheses developed in this study are summarised in Table 3.9.
Figure 3.1  The Relationships among Performance, Access to Finance, and Investment Readiness Factors

Investment Readiness

Owner/manager readiness

- EXP
- EDU
- AGE
- GEN

Business Readiness

- FLR
- SIZE

Information Readiness

- FI

where:

PERF - Performance  ACCESS - Access to Finance
EXP - Experience  EDU - Education
AGE - Age  GEN - Gender
FLR - Financial Leverage Ratio  SIZE - Size
FI - Financial Information
Table 3.9 Hypotheses in This Study

<table>
<thead>
<tr>
<th>Hypothesis</th>
</tr>
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<tbody>
<tr>
<td>1) The influence of access to finance on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>H1 Access to finance has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>2) The influence of investment readiness on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>H2a Owner/managers’ experience has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>H3a Owner/managers’ education has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>H4a Younger owner/managers of SMEs in Thailand have a greater ability to access finance than older Thai owner/managers</td>
</tr>
<tr>
<td>H5a Male owner/managers of SMEs in Thailand have a greater ability to access finance than female owner/managers</td>
</tr>
<tr>
<td>H6a Financial leverage has a negative effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>H7a Business size has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>H8a Financial information has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>3) The influence of investment readiness on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>H2b Owner/managers’ experience has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>H3b Owner/managers’ education has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>H4b Younger owner/managers of SMEs in Thailand achieve higher performance than older Thai owner/managers</td>
</tr>
<tr>
<td>H5b Male owner/managers of SMEs in Thailand achieve higher performance than female owner/managers</td>
</tr>
<tr>
<td>H6b Financial leverage has a negative effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>H7b Business size has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>H8b Financial information has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>4) The indirect effect of investment readiness on the performance of SMEs in Thailand through access to finance</td>
</tr>
<tr>
<td>H2c Owner/managers’ experience has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>H3c Owner/managers’ education has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>H4c Owner/managers’ age has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>H5c Owner/managers’ gender has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>H6c Financial leverage has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>H7c Business size has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>H8c Financial information has an indirect effect on performance through access to finance</td>
</tr>
</tbody>
</table>
3.10 Conclusion

There is no doubt that access to finance is a crucial factor affecting SME performance. On the demand-side, access to finance is impacted by the investment readiness of the firm. Investment readiness in this study comprises three dimensions: owner/manager readiness, business readiness, and information readiness. These factors, which are identified as determinants of access to finance, also impact SME performance.

To understand the relationships among performance, access to finance, and investment readiness factors, hypotheses are developed for four main objectives in this study. The first objective is to investigate the influence of access to finance on the performance of SMEs. The second objective is to examine the influence of investment readiness on access to finance. The third objective is to investigate the influence of investment readiness on the performance of SMEs. The last purpose is to discover whether there is an indirect effect of investment readiness on the performance of SMEs in Thailand through access to finance. The model presented in Figure 3.1 forms the basis of the empirical component of this study, and informs the development of an appropriate research design discussed in the next chapter. Chapter 4 focuses on data gathering and the methods employed to facilitate the empirical assessment of the hypothesised model. The results of the hypotheses tests are reported in Chapter 5 and discussed in detail in Chapter 6.
CHAPTER 4
RESEARCH METHODOLOGY

4.1 Introduction

The research objectives and the hypothesised models were presented in Chapters 1 and 3. The models form the focus of the empirical component, and direct the development of an appropriate research methodology for this study. This chapter presents the rationale behind the selection of a research methodology for the study. It begins with a step-by-step discussion of the survey design process, including preliminary considerations, questionnaire content, question phrasing, response format, question sequence, question layout and characteristics, and pretest. Following this, the data collection procedures are outlined. The statistical methods adopted for hypothesis testing are described in the final section.

4.2 Survey Design

This section discusses the underlying rationale and issues covered in the process of designing and administering the instrument used to gather the primary data for the study. According to Cook and Campbell (1979), a researcher must consider the validity and reliability of instruments when designing and evaluating his or her research. Validity examines the development of adequate operational measures for the concepts being investigated, and determines whether the measure correctly represents the concept under investigation. Reliability, on the other hand, concerns the extent to which the instrument yields the same results on repeated trials (Cooper and Emory 1995; Hair et al. 1998). To ensure the validity and reliability of the instruments, Tull and Hawkins’ (1990 p.28) decisions process for questionnaire construction is adopted and used for the survey design process in the study. Following Tull and Hawkins’ recommendations, there are seven steps in the survey design process: preliminary decisions, decisions about question content, decisions concerning question phrasing, decisions about the response format, decisions concerning the question sequence, decisions concerning the layout of the questionnaire, and pretesting and revision. This process is depicted in Figure 4.1 and explored in detail in the following sections.
4.2.1 Preliminary Decisions

Using the objectives and hypotheses of the study, an extensive list of required information was built and existing instruments evaluated. Target respondents and methods of communication with respondents were then identified and evaluated. This information and instruments are discussed in the following sections.

4.2.1.1 Information Required

The broad composition of the required information is intended to include items which measure the variables in this study. These variables comprise performance, access to finance, experience, education, age, gender, financial leverage ratio, size, and financial information. Some of these variables, such as performance, access to finance and financial information, are latent variables measured by several observed variable items. The observed or measured variables for each of the unobserved variables are initially derived from the literature and then developed to capture the variable holistically. The measurement of the variables, both observed and unobserved, is discussed in the ensuing subsections.
Figure 4.1 Survey Design Process

1. Preliminary decisions
   - Exactly what information is required?
   - Exactly who are the target respondents?
   - What methods of communication will be used to reach respondents?

2. Decisions about question content
   - Is the question really needed?
   - Is the question sufficient to generate the needed information?
   - Can the respondent answer the question correctly?
   - Will the respondent answer the question correctly?
   - Are there any external events that might bias the response to the question?

3. Decisions concerning question phrasing
   - Do the words used have only one meaning to all the respondents?
   - Are any of the words or phrases loaded or leading in any way?
   - Are there any implied alternatives in the question?
   - Are there any unstated assumptions related to the question?
   - Will the respondents approach the question from the same frame of reference desired by the research?

4. Decisions about the response format
   - Can this question be best asked as an open-ended, multiple choice, or dichotomous question?

5. Decisions concerning the question sequence
   - Are the questions organised in a logical manner that avoids introducing errors?

6. Decisions concerning the layout of the questionnaire
   - Is the questionnaire designed in a manner that avoids confusion and minimises the possibility of recording errors?

7. Pretest and revise
   - Has the final questionnaire been subjected to a thorough pretest?

Source: adopted from Tull and Hawkins (1990 p. 28)
4.2.1.1 Measurement of Performance

Measurement of the performance of SMEs has long been of central interest to researchers. It is widely accepted that, due to differences in research questions, it is appropriate for different fields of study to use different measures of firm performance (Cron, Bruton, and Slocum 2006; Venkatraman and Ramanujam 1986). As discussed in Section 3.2, one approach often used to measure small firm performance is to relate performance to organisational goals. This goal approach is suggested to be particularly appropriate for SMEs, where the goals of the owner/managers and businesses are similar (Murphy, Trailer, and Hill 1996). The goal approach is thus adopted as a way of measuring performance in this study. Two major issues underlie the measurement of business performance using the goal approach. One is that owner/managers goals could be either financial or non-financial. The other is that the mode of performance assessment may be either objective or subjective. The classificatory scheme for the measurement of business performance is presented in Figure 4.2.

Figure 4.2 A Classificatory Scheme for the Measurement of Business Performance

<table>
<thead>
<tr>
<th>Mode of Assessment</th>
<th>Objective</th>
<th>Subjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial assessments and evaluation based on records such as profit, sales, and return on assets</td>
<td>Financial perceptual assessments and evaluation by owner/managers such as perception of or satisfaction of owner/managers with firm’s profit, sales, and return on assets</td>
<td>Non-financial assessments and evaluation based on records such as lifestyle, job security and independence</td>
</tr>
</tbody>
</table>

Owner/managers’ Goals
Performance measurement has tended to be restricted to frameworks and theories drawn primarily from the discipline of economics (Jarvis et al. 2000; Jarvis et al. 1996b). The measures of performance used often emphasise profit maximisation using indicators such as profit margins, sales growth, return on investment, and return on assets, as this is considered to be the goal generally pursued by most owner/managers (Dess and Robinson 1984; Jarvis et al. 1996b; Palepu, Healy, and Bernard 2000; Schutjens and Wever 2000). Thus, objective measures, which are the mode of assessment based on records such as financial statements and financial ratios linked to owner/managers' financial goals, are widely used in measuring SME performance (Jarvis et al. 2000).

Jarvis et al. (1996b) regarded cash flow as a surrogate for financial performance as it is a key indicator of survival. It facilitates survival and reflects the importance of liquidity to small firms. Based on the results from interviews of 20 owner/managers of small firms, profit measures do not accurately reflect performance since they are difficult to obtain and are not considered good indicators of day-to-day performance by owner/managers. Moreover, owner/managers do not all place an emphasis on growth because they are afraid of losing control of the firm's day-to-day operations with firm growth. They concluded that survival and stability are the most appropriate measures of performance, given that they are the real goals pursued by small firms.

Palepu, Healy and Bernard (2000) suggested return on equity (ROE) as another financial performance measure. They reasoned that, while there is no doubting the importance of sales and profits to a business, it is equally important to relate these output measures to their inputs, such as equity and assets. They referred to return on assets (ROA) as an important determinant of ROE because it shows how much profit a company is able to generate for each dollar of assets invested.

However, research has consistently recorded that focusing purely on financial criteria is not appropriate and that accessing this information is difficult (Blackwood and Mowl 2000). This is because, in many cases, financial rewards are not the only goals pursued by owner/managers (Barsley and Kleiner 1990; McMahon and Stanger 1995). The use of both financial and non-financial goals is suggested as a means of increasing the accuracy of performance measurement (Blackwood and Mowl 2000;
Jarvis et al. 2000; Keasey and Watson 1987). This argument is consistent with the work of Murphy, Trailer and Hill (1996 p. 22), who noted:

Financial measures are necessary but not sufficient to capture total organizational performance. Thus, future studies should continue to include financial measures, but nonfinancial measures need to be emphasized as well.

Blackwood and Mowl (2000) buttressed this argument by showing that using purely financial measures is not necessarily appropriate, and also presents problems in gaining access to relevant information.

Non-financial measures of performance frequently used by researchers are job satisfaction or the ability to balance work and family responsibilities; personal freedom or independence; securing a future for family members; and pursuing one’s own interests (Birley and Westhead 1990; Blackwood and Mowl 2000; Fielden, Davidson, and Makin 2000; Kuratko, Hornsby, and Naffziger 1997). Walker and Brown (2004) noted that these non-financial measures have often been referred to as lifestyle goals. These lifestyle measures are helpful in explaining the personal objectives and goals of owner/managers, where both financial and non-financial goals are pursued (Wheelock and Baines 1998). As such, even when they are not financially successful, owner/managers may still be happy with other types of rewards, such as personal satisfaction (Wheelock and Baines 1998). As Jennings and Beaver (1997 p. 63) stated:

…….contrary to popular belief, and a great deal of economic theory, money and the pursuit of a personal financial fortune are not as significant as the desire for personal involvement, responsibility and the independent quality and style of life which many small business owner-managers strive to achieve.

Lumpkin and Dess (1996), nevertheless, highlighted that the use of traditional objective financial information related to small firms may skew the results since, as experienced by a number of researchers, small firms are notorious for their unwillingness and inability to provide performance-related data (Birley and Westhead 1990; Fiorito and LaForge 1986). Besides, where available, such information may not be accurate, since it is usually not audited (Lumpkin and Dess 1996). In addition, objective measures often require data to be observed over a continuous period of time.
(Chandler and Hanks 1993). Bracker and Pearson (1986) suggested that the appropriate period over which performance should be measured in order to obtain consistent and reliable results is five years. Walker and Brown (2004) indicated that non-financial measures of performance are subjective and personally determined, and are therefore difficult to quantify.

To overcome the limitations discussed above, subjective performance measures, which most commonly involve perceptual assessments and evaluation by owner/managers, are developed as an alternative method of performance measurement. These subjective measures have been used to measure performance on both financial and non-financial criteria in most empirical studies of small firms (Birley and Westhead 1990; Conant, Mokwa, and Varadarajan 1990; McCracken, McIlwain, and Fottler 2001; Venkatraman and Ramanujam 1987).

Huber and Power (1985) and McMullan, Chrisman and Vesper (2001) argued that using subjective measures may lead to bias and erroneous conclusions. A study by Venkatraman and Ramanujam (1987), however, reveals that owner/managers tend to be less biased in their assessment of their firms’ performance than researchers have previously judged. In addition, a number of studies have found positive relationships between subjective assessments and objective performance measures, such as Dess and Robinson (1984), Venkatraman and Ramanujam (1987), Dollinger and Golden (1992), Powell (1992), and McCracken, McIlwain and Fottler (2001). These findings suggest that subjective measures can be employed as acceptable operationalisations of performance. As indicated by Dess and Robinson (1984) subjective measures are appropriate substitutes for objective measures where accurate objective measures of performance are not available, and are also useful in operationalising non-financial dimensions of performance.

The above discussion indicates that subjective and objective measures of performance have positive and negative attributes (Venkatraman and Ramanujam 1987). Therefore, combining the two methods is suggested as a way of improving the validity of results of performance measures. McCracken, McIlwain and Fottler (2001), and Robinson et al. (1986), suggested that using both subjective and objective measures reduces the problems that arise when objective performance measures are difficult to obtain. This
is because businesses are more willing to provide subjective data than objective data, which makes perceptual measures useful and important additions to the study.

Based on the evidence discussed above, the criteria used to capture SME performance in this study relate to the attainment of both financial and non-financial goals (Blackwood and Mowl 2000; Kasey and Watson 1987). Profitability, sales growth, and return on assets are frequently used as operationalisations of firm financial goals (Ezzamel 1992; McCracken, McIlwain, and Fottler 2001; Schutjens and Wever 2000; Venkatraman and Ramanujam 1986), as they are key goals pursued by most owner/managers (Jarvis et al. 1996b; Palepu, Healy, and Bernard 2000; Schaper and Volery 2004). Cash flow is another financial goal pursued by owner/managers, as it is critical to a firm’s survival (Jarvis et al. 1996b). Accordingly, these four measures are adapted in this study to capture financial goals.

Lifestyle, independence, and job security are measures widely used in previous studies to capture non-financial goals. Lifestyle is primarily a non-financial goal sought by owner/managers (Glancey 1998). It is suggested as an appropriate measure for SME performance since it has great influence on the way owner/managers run their businesses, and therefore ultimately affects their performance (Blackwood and Mowl 2000; Glancey 1998). In addition, the desire to be independent is also considered to be one of the most important non-financial goals for owner/managers, as they are willing to sacrifice low financial rewards to achieve such independence (Akande 1994; Birley and Westhead 1990; Boyer and Roth 1978; Brush and Vanderwerf 1992; Fielden, Davidson, and Makin 2000). Similarly, Kuratko, Hornsby and Naffziger (1997) indicated that a number of entrepreneurs pursue independent employment through their lines of business in spite of adverse events or lack of financial success in running their businesses. Another non-financial goal pursued by a number of owner/managers is the job security that their ownership affords them and their families (Aronoff and Ward 1995; Kuratko, Hornsby, and Naffziger 1997). Consequently, attainment of these three non-financial goals becomes one of the principal criteria for business performance, and is therefore used to measure non-financial performance in this study.
Since financial information on SMEs in Thailand is generally unavailable, difficult to access, and inaccurate (Kingkaew and Limpaphayom 2001; Sarapaivanich 2002 (unpub.)), this study applies subjective measures suggested as the most appropriate surrogates of performance when objective data is not available (Dess and Robinson 1984; Venkatraman and Ramanujam 1987).

Performance is measured in this study by first asking respondents to indicate the level of importance attached to performance surrogates on a five-point Likert scale ranging from ‘not at all important’ to ‘very important’, in order to capture different perceptions of the level of importance placed on these performance surrogates. The surrogates are profitability, sales growth, return on assets, cash flow, lifestyle, independence, and job security (McMahon and Stanger 1995; Schutjens and Wever 2000). The respondents were then asked to indicate their satisfaction with their firm’s performance over the previous two financial years on a five-point Likert scale ranging from ‘strongly dissatisfied’ to ‘very satisfied’. Each ‘satisfaction’ score was multiplied by the corresponding ‘importance’ scores to compute a weighted average performance index for each firm (Gupta and Govindarajan 1984).

4.2.1.1.2 Measurement of Access to Finance

Instead of asking respondents whether or not they succeeded in accessing finance, this study applied subjective criteria to measure access to finance. This step was taken to control for the impact of environmental factors on access to finance. It is generally believed that two firms with similar characteristics may experience different outcomes when seeking finance from the same source at different times due to differences in the environmental factors operating at each point in time. For instance, due to the economic crisis in 1997, SMEs which accessed finance during 1997–2000 are likely to have faced more difficulty than SMEs that accessed finance in 2004, when several financial support programs were introduced. Moreover, results from objective measure may not accurately represent SMEs’ ability to access finance. For example, SMEs classified as unsuccessful in accessing finance may not be SMEs that cannot access finance, but rather are SMEs that do not want to pay high credit costs or are unwilling to provide personal assets as collateral. Due to the drawbacks of an
objective measure, this study employed owner/managers’ perception of ability to access finance as a means of measuring access to finance.

A number of studies have used barriers to obtaining finance to measure access to finance (Rasheed 2004; Van Auken 1999). Chittenden, Hall and Hutchinson (1996) focused on access to financial markets, access to long-term debt, and collateral as surrogate measures of access to finance in their comparative study of access to capital markets and the financial structures of listed and unlisted small firms. They argued that small firms are not able to access the capital market, and do not have enough collateral to access long-term debt, and that these are the two major factors that hamper them from accessing finance. Similarly, Kristiansen, Furuholt and Wahid (2003), and Indarti and Langenberg (2004) examined ability to raise financial capital from various sources as this is important to a small business’ ability to remain viable, capture market opportunities, and succeed.

In addition, a number of studies focus on access to debt finance. This is because small firms are heavily dependent on loans as a financing resource due to their inability to access the public capital market (Binks, Ennew, and Reed 1992; Coleman 2004; Pissarides 1999). Barriers to debt capital, such as the high cost of debt, high collateral requirements and the bureaucratic procedures of banks, are often used to measure access to debt finance (Bukvic and Bartlett 2003; Coleman 2004; Kariuki 1995). Researchers including Pissarides (1999), Van Auken and Holman (1995), Holmes, Dunstan and Dwyer (1994), Levy (1993), and Cater and Van Auken (1990), employed cost of debt, such as interest costs and application costs, as a surrogate for access to finance. They argued that these costs limit the ability of SMEs to access financial resources, and are perceived by owner/managers of SMEs as deterrents to their ability to access finance (Carter and Van Auken 1990; Levy 1993; Van Auken and Holman 1995). On the other hand, Kariuki (1995) used financial access procedures to measure access to finance. Kariuki (1995) indicated that the opportunity cost in time spent applying for and obtaining finance is a deterrent to the use of formal sources of finance by SMEs. As highlighted in a study by Haron and Shanmugam (1994), simple financial accessing procedures are essential to increasing SME ability to access finance, because they ensure that finance is available to assist businesses when they need it.
Rasheed (2004) used a five-point Likert scale from ‘never’ to ‘often’ to measure the frequency with which owner/managers experience difficulties in obtaining finance. Likewise, Berkowitz and White (2004) employ a dummy variable to measure whether the most recent application for credit within the past three years was denied and if managers have been discouraged from applying for loans at any time during the past three years.

It can be seen from the above discussions that financial constraints have been used in previous studies to measure access to finance. The barriers to obtaining finance are predominantly classified into five areas: lack of outside equity capital, the high cost of issuing public shares, the high cost of loans, high collateral requirements, and complicated loan-accessing procedures.

The perception of owner/managers regarding the extent to which these factors pose constraints to accessing capital is adopted in this study as a way of gauging their measure perception of their ability to access finance. The first two barriers are used to measure ability to access external equity, while the last three refer to ability to access formal debt. This study focuses on owner/managers’ perceptions of ability to access public capital and formal debt, since difficulties in accessing financial resources occur when SMEs access these two sources of capital (Coleman 2004; Hamilton and Fox 1998; Holmes et al. 2003). Even though most SMEs in Thailand are generally unable to issue shares on capital markets, this study includes access to the capital market as part of access to finance. This is because the government has improved SME access to the capital market by establishing a second board market specifically for SMEs (MAI), expecting that this market will play a significant role in providing an alternative source of funds for Thai SMEs.

The surrogates used to measure ability to access finance are the perceptions on following financial constraints used by previous studies discussed in the above section: access to outside equity capital, costs of issuing public shares, costs of debt, loan processing costs, collateral requirements, and loan accessing procedures. A five-point Likert scale was used to measure all these surrogates of ability to access finance. Firstly, respondents were asked to classify the level of importance they attach to these surrogates on a five-point Likert scale ranging from ‘not at all important’ to ‘very
important’. They were then asked to gauge the ability of their business to access external equity and formal debt on a five-point Likert scale ranging from ‘very poor’ to ‘very good’. The results from these two questions were multiplied to obtain a weighted average score for perception of ability to access finance.

4.2.1.1.3 Measurement of Experience

As noted in Section 3.6.1, there are three types of owner/managers’ experience: general experience, industry experience, and entrepreneurship experience (Bosma et al. 2004). Studies have found empirical support for the relationships between these three types of experience and business performance (Bosma et al. 2004; Bukvic and Bartlett 2003). Bosma et al. (2004), however, highlighted that industry experience is more influential than general and entrepreneurship experience. Zimmerman and Zeitz (2002), Silversides (2001) and Loscocco et al. (1991) indicated that industry experience is critical since it provides an opportunity to establish a social network of support and enhance the success of the firm. Similarly, Cron, Bruton, and Slocum (2006) revealed that a supportive network built over years in an industry can help arrange financing from a variety of sources and also help to validate the new business to others. Due to the advantages brought by industry experience, this study focuses on such experience. In keeping with Cron, Bruton, and Slocum (2006) and Fischer, Reuber, and Dyke (1993), experience in this study is measured by asking owner/managers how many years they have owned or managed their businesses.

4.2.1.1.4 Measurement of Education

Educational attainment may signify owner/managers’ persistence, motivation, and self-discipline (Coleman 2004). These qualities are in turn expected to enhance firm access to finance and performance. This implies that the higher the educational level, the higher the owner/manager is likely to possess qualities of persistence, motivation, and self-discipline. Education in this study thus refers to owner/managers’ highest educational qualification or nearest equivalent. To measure education, owner/managers are asked to specify their highest educational qualification or nearest equivalent ranging from ‘no education’ to ‘doctoral degree’ (Thibault 2001).
4.2.1.1.5 Measurement of Age

Owner/managers vary greatly in age. Owner/managers’ age has been seen as a critical factor for small business, particularly access to finance and performance. To measure owner/managers’ age, owner/managers were asked to indicate their age under categories ranging from ‘up to 20 years’ to ‘60 years and over’.

4.2.1.1.6 Measurement of Gender

It has been found in small business studies that owner/managers’ gender influences access to finance and business performance. Various studies have examined gender in terms of sex of the owner/manager. The measurement of gender in this study is consistent with that found in the majority of previous studies (Johnsen and McMahon 2005; Rasheed 2004; Rietz and Henrekson 2000; Thibault 2001), which use the sex of the owner/manager as a surrogate. Gender is a dichotomous variable reflecting whether the respondent is male or female.

4.2.1.1.7 Measurement of Financial Leverage Ratio

Financial leverage ratio is measured in a number of ways. In order to test if firms with different levels of inside ownership (a corporate officer or director or any individual who is actively involved in the decisions of the firm) use different levels of long-term debt in the financial structure, Kim and Sorensen (1986) applied the ratio of long-term debt to total capital as a measure of financial leverage. Hull (1999) used the debt-to-equity ratio and examined the relationship between this ratio and stock prices. Stewart and Rohit (2001) defined financial leverage as total external debt to total liabilities, as suggested by the Australian Stock Exchange Guide to Ratios. The objective of their study was to examine the impact of leverage on earnings of management among companies listed on the Australian Stock Exchange.

Bennett and Donnelly (1993) examined whether the factors that influence short-term debt differ from those that influence long-term debt. They observed differences in financial leverage, where measurement was based on market values rather than book values. They employed six different measures of financial leverage, which they
divided into two different groups. The first group was based on the market values and the second group on the book values of total capital. Each group employed three different measures of debt as numerators: total debt, long-term debt, and short-term debt. Based on their findings, the authors suggested that market-based measures of leverage should be applied, where possible, when attempting to understand the factors involved in choice of financial structure. In contrast, Marsh (1982) argued that managers tend to focus on book values when making financial structure decisions.

Different surrogates have been developed to measure financial leverage ratio based on the objective of study. This study focuses on the influence of the proportion of debt in the firm’s financial structure on access to finance and performance. Therefore, following Johnsen and McMahon (2005) and Hovakimian, Opler, and Titman (2001), this study uses total liabilities as a percentage of total capital to measure financial leverage ratio. Owner/managers were asked to identify the proportions of debt in their start-up capital and in their current capital on a scale ranging from ‘0 %’ to ‘91-100 %’.

**4.2.1.1.8 Measurement of Firm Size**

Firm size is measured in several ways in the literature. A number of studies have measured size by total assets, such as Cassar and Holmes (2003), Hall, Hutchinson, and Michaelas (2000), Michaelas, Chittenden, and Poutziouris (1999), and Chittenden, Hall, and Hutchinson (1996). Others have used sales (Bennett and Donnelly 1993; Jordan, Lowe, and Taylor 1998) and number of employee (Fasci and Valdez 1998; Johnsen and McMahon 2005; Romano, Tanewski, and Smyrnios 2001; Tigges and Green 1994) as measures of firm size. There is no suggestion in the literature that one particular measure of business size is superior to another.

In the present study, firm size is measured according to number of employees and value of fixed assets. Number of employees is used in this study since it is generally adopted in most studies, and owner/managers of SMEs in Thailand are also willing to provide this information. In relation to fixed assets, it is suggested that larger SMEs generally have more fixed assets, an attribute that enhances their ability to access finance. Fixed assets are normally required as collateral to access debt finance (Cron,
Bruton, and Slocum 2006; Saffu and Manu 2004). They provide an indication of the firm’s potential for success, and effective management, both of which are criteria required by debt and equity providers. This study does not include sales as a measure of firm size since SMEs are generally unwilling to disclose exact sales figures for their businesses (Dhanaraj 2003).

4.2.1.1.9 Measurement of Financial Information

The majority of studies that deal with small firms operationalise financial information in terms of statutory information, generally comprising profit and loss statement and balance sheet, and non-statutory financial information such as budgets, variance analysis and financial ratios (McMahon 2001a; McMahon and Davies 1994). Non-statutory financial information has been used in addition to statutory financial information to measure financial information because it is seen to be as useful as statutory information in making decisions (English 2001; Patrone and duBois 1981; Ratnatunga, Romano, and Lourens 1993). However, studies show that a relatively small number of SMEs prepare non-statutory information (Holmes and Nicholls 1989; Palmer 1994). Both statutory and non-statutory financial information have been used to measure financial information in many studies. Table 4.1 summarises how various researchers have operationalised the financial information construct.
<table>
<thead>
<tr>
<th>Study</th>
<th>Financial Information</th>
<th>Statutory</th>
<th>Non-statutory</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeThomas and Fredenberger (1985)</td>
<td>- Balance sheet</td>
<td>- Bank reconciliation</td>
<td>- Cash reconciliation</td>
</tr>
<tr>
<td></td>
<td>- Profit and loss statement</td>
<td>- Cash flow statement</td>
<td>- Inventory turnover</td>
</tr>
<tr>
<td></td>
<td>- Tax return</td>
<td>- Debtors days/creditors days</td>
<td>- Debtors days/creditors days</td>
</tr>
<tr>
<td>Holmes and Nicholls (1989)</td>
<td>- Balance sheet</td>
<td>- Cash flow statement</td>
<td>- Profit and loss budget</td>
</tr>
<tr>
<td></td>
<td>- Profit and loss statement</td>
<td>- Cash flow budget</td>
<td>- Cash flow budget</td>
</tr>
<tr>
<td></td>
<td>- Tax return</td>
<td>- Ratio analysis</td>
<td>- Manufacturing statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inter-firm comparison</td>
<td>- Industry trends</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Source and application of funds</td>
<td>- Break-even analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Production report</td>
<td>- Job costing report</td>
</tr>
<tr>
<td>Dart, Ng and Sarkar (1990)</td>
<td>- Balance sheet</td>
<td>- Report on sources and uses of funds</td>
<td>- Product costing</td>
</tr>
<tr>
<td></td>
<td>- Profit and loss statement</td>
<td>- Cash budget</td>
<td>- Cash budget</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Projected income statement</td>
<td>- Projected income statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Variance analysis</td>
<td>- Variance analysis</td>
</tr>
<tr>
<td>McMahon and Davies (1992)</td>
<td>- Balance sheet</td>
<td>- Funds statement</td>
<td>- Cash flow statement</td>
</tr>
<tr>
<td></td>
<td>- Profit and loss statement</td>
<td>- Other statement</td>
<td>- Stock turnover</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Stock turnover</td>
<td>- Debtors days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Liquidity ratio</td>
<td>- Debtors as percent of sales</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Labour as percent of total costs</td>
<td>- Net profit on sales</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Profit margin on labour</td>
<td>- Creditors days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Acid test</td>
<td>- Gross profit on sales</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interest cover</td>
<td>- Debtors days/creditors days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Asset turnover</td>
<td>- Liquidity ratio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Labour expense ratio</td>
<td>- Labour as percent of total costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Materials expense ratio</td>
<td>- Profit margin on labour</td>
</tr>
</tbody>
</table>
As discussed in Section 3.9.3.1 and 3.9.3.3, three major financial information practices of SMEs are that financial information is prepared predominantly to meet statutory requirements on an annual basis, the level of use and preparation of non-statutory financial information is quite low, and the quality of the financial information prepared is often low. This makes it necessary to consider preparation, use, and quality of financial information as three major criteria in measuring such information.

As shown in Table 4.2, the majority of studies use only one or two of these criteria in assessing financial information in SMEs. Focusing only on a single criterion may not capture the whole picture of financial information in SMEs. For example, as pointed out above, a number of owner/managers do not use the financial information prepared in their decision-making process. Thus, focusing only on ‘use’ or ‘preparation’ may not give a true and fair view of financial information in SMEs (DeThomas and Fredenberger 1985). Ratnatunga and Dixon (1993), McMahon (1986), Lauzen (1985), and Bryan and Friedlob (1984) suggest that assessment of an enterprise’s financial

<table>
<thead>
<tr>
<th>McMahon and Davies (1994)</th>
<th>Balance sheet</th>
<th>Funds statement</th>
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</thead>
<tbody>
<tr>
<td>Balance sheet</td>
<td>Profit and loss statement</td>
<td>Cash flow statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other statement</td>
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</tbody>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Balance sheet</td>
<td>Profit and loss statement</td>
<td>Common size profit and loss</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cash flow statement</td>
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<tr>
<td></td>
<td></td>
<td>Cheque book</td>
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<td></td>
<td></td>
<td>Forecasting financial statement</td>
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<tr>
<td></td>
<td></td>
<td>Break-even point</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inventory turnover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>McMahon (2001a)</th>
<th>Balance sheet</th>
<th>Cash flow statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance sheet</td>
<td>Profit and loss statement</td>
<td>Cash position</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Future-oriented financial statement</td>
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<tr>
<td></td>
<td></td>
<td>Future-oriented cash flow statement</td>
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<tr>
<td></td>
<td></td>
<td>Benchmarking</td>
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<td></td>
<td></td>
<td>Budget forecast</td>
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<tr>
<td></td>
<td></td>
<td>Cash flow forecast</td>
</tr>
</tbody>
</table>
health and progress requires not only an understanding of whether it prepares accounting information but also whether the information is used to extract important relationships, trends, strengths, and weaknesses. Thus, a number of studies investigate both preparation and use in measuring financial information (McMahon 2001a; McMahon and Davies 1994; McMahon and Davies 1992; Palmer 1994).

Table 4.2 Financial Information Criteria Used in Previous Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Financial Information Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preparation</td>
</tr>
<tr>
<td>Wichmann (1983)</td>
<td></td>
</tr>
<tr>
<td>DeThomas and Fredenberger</td>
<td>√</td>
</tr>
<tr>
<td>Holmes and Nicholls (1989)</td>
<td>-</td>
</tr>
<tr>
<td>Dart, Ng, and Sarkar (1990)</td>
<td>-</td>
</tr>
<tr>
<td>McMahon and Davies (1992)</td>
<td>√</td>
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<tr>
<td>McMahon and Davies (1994)</td>
<td>√</td>
</tr>
<tr>
<td>Palmer (1994)</td>
<td>√</td>
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<tr>
<td>McMahon (2001a)</td>
<td>√</td>
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</tbody>
</table>

Wand and Wang (1996) also found strong evidence to support their assertion of poor data quality in SMEs. Most organisations have experienced the adverse effects of decisions based on information of inferior quality (Huang, Lee, and Wang 1999). For example, errors in an inventory database may cause owner/managers to make decisions that lead to over- or under-stocking (Ratnatunga, Romano, and Lourens 1993). Thus, the quality of financial information should also be considered when measuring the construct.

In Section 3.8.2, information quality was identified as comprising certain characteristics such as accuracy, relevance, reliability, timeliness, completeness, and consistency. Nevertheless, Ballou et al. (1998) and Wand and Wang (1996) suggest that accuracy, timeliness, completeness, and consistency are four information quality dimensions commonly identified.

Wang, Storey and Firth (1995) indicate that accuracy does not have a well-established definition. Though most studies assume that information is accurate if it presents
actual value, this does, however, lead to the question of the definition of ‘actual value’. They further argue that information is accurate if it contains the complete set of instances. This implies an overlap between the accuracy and completeness dimensions of information. This overlap is also present in the definitions of the two constructs. Accuracy is defined as “the degree to which information sources are free from mistakes and errors” (New Mexico State University Library 2004), while completeness is the degree to which all necessary parts or elements are included (Glen D. Chambers Consulting n.d.; OPEN Process Framework 2005). For information to be free from mistakes and errors, it must cover all necessary parts. To avoid any confusion in the definitions of accuracy and completeness, this study combines the accuracy and completeness dimensions, suggested by Ballou et al. (1998), into one dimension labelled ‘accuracy and completeness’. Consequently, three main dimensions of financial information quality are identified in this study: accuracy and completeness, timeliness, and consistency.

This study adopts a more detailed measure of financial information, acknowledging the large variation in financial reports and financial indicators used by previous studies and recommended as useful for small businesses. These are summarised in Table 4.3.

Table 4.3 Financial Information Criteria Used in this Study

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>Author</th>
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</thead>
<tbody>
<tr>
<td><strong>Statutory</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Dart, Ng, and Sarkar (1990)</td>
</tr>
<tr>
<td></td>
<td>- McMahon and Davies (1992), (1994)</td>
</tr>
<tr>
<td></td>
<td>- Palmer (1994)</td>
</tr>
<tr>
<td></td>
<td>- McMahon (2001a)</td>
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<tr>
<td></td>
<td>- English (2001)</td>
</tr>
<tr>
<td></td>
<td>- Schaper and Volery (2004)</td>
</tr>
<tr>
<td>Non-statutory</td>
<td></td>
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<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>3. Cash flow statement</td>
<td>DeThomas and Fredenberger (1985)</td>
</tr>
<tr>
<td></td>
<td>Holmes and Nicholls (1989)</td>
</tr>
<tr>
<td></td>
<td>McMahon and Davies (1992), (1994)</td>
</tr>
<tr>
<td></td>
<td>Palmer (1994)</td>
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<td></td>
<td>McMahon (2001a)</td>
</tr>
<tr>
<td></td>
<td>Schaper and Volery (2004)</td>
</tr>
<tr>
<td></td>
<td>McMahon and Davies (1992)</td>
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<tr>
<td></td>
<td>Hodggetts and Kuratko (1998)</td>
</tr>
<tr>
<td>5. Aged creditors balance</td>
<td>DeThomas and Fredenberger (1985)</td>
</tr>
<tr>
<td></td>
<td>McMahon and Davies (1992)</td>
</tr>
<tr>
<td>6. Budget</td>
<td>Dart, Ng, and Sarkar (1990)</td>
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<tr>
<td></td>
<td>Hodggetts and Kuratko (1998)</td>
</tr>
<tr>
<td></td>
<td>McMahon (2001a)</td>
</tr>
<tr>
<td>7. Variance analysis</td>
<td>Dart, Ng, and Sarkar (1990)</td>
</tr>
<tr>
<td>8. Inventory turnover</td>
<td>DeThomas and Fredenberger (1985)</td>
</tr>
<tr>
<td></td>
<td>McMahon and Davies (1992)</td>
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<tr>
<td></td>
<td>Palmer (1994)</td>
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<tr>
<td></td>
<td>Hodggetts and Kuratko (1998)</td>
</tr>
<tr>
<td></td>
<td>Schaper and Volery (2004)</td>
</tr>
<tr>
<td>9. Return on assets</td>
<td>Holmes and Nicholls (1989)</td>
</tr>
<tr>
<td></td>
<td>McMahon and Davies (1992)</td>
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<tr>
<td></td>
<td>Hodggetts and Kuratko (1998)</td>
</tr>
<tr>
<td></td>
<td>English (2001)</td>
</tr>
<tr>
<td></td>
<td>Schaper and Volery (2004)</td>
</tr>
<tr>
<td>10. Return on equity</td>
<td>Holmes and Nicholls (1989)</td>
</tr>
<tr>
<td></td>
<td>Hodggetts and Kuratko (1998)</td>
</tr>
<tr>
<td></td>
<td>English (2001)</td>
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<tr>
<td></td>
<td>Schaper and Volery (2004)</td>
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<td></td>
<td>McMahon and Davies (1992)</td>
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<td>English (2001)</td>
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<td>Schaper and Volery (2004)</td>
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<td>McMahon and Davies (1992)</td>
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<td>Hodggetts and Kuratko (1998)</td>
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<td></td>
<td>English (2001)</td>
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<tr>
<td></td>
<td>Schaper and Volery (2004)</td>
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</tbody>
</table>
For more reliable and valid measure of financial information practices in SMEs, data on the three criteria, i.e. preparation, use, and quality was collected separately in this study. Additionally, this study applies the quality dimensions developed in Ballou et al. (1998) since they cover the most important dimensions of quality addressed in previous studies (Xu et al. 2003).

Respondents were asked to indicate on a nominal scale, with a ‘yes’ or ‘no’ answer, whether or not they prepare financial information. Only respondents that prepare financial information were asked in a separate question to also identify, using a nominal scale, whether or not they use financial information in decision-making. As discussed above, quality of financial information will influence access to finance and performance. Therefore, only respondents who indicated that they prepare and use financial information were asked to further evaluate the quality of financial information in their businesses. It was explained to respondents that financial information quality in this study comprises three dimensions: accuracy and completeness, timeliness, and consistency. The meaning of each quality dimension was clarified to respondents during the face to face data collection process. A Likert scale was used to access three quality dimensions. A five-point Likert scale ranging from ‘not at all accurate and complete’ to ‘very accurate and complete’ was employed to measure the accuracy and completeness dimensions. Another five-point Likert scale ranging from ‘not at all on time’ to ‘always on time’ was used to identify the timeliness of financial information. The respondents were asked to indicate the frequency with which financial information is prepared in their businesses on six different levels of frequency (a six-point Likert scale) ranging from ‘never’ to
‘monthly’. Additionally, in order to capture the different levels of importance owner/managers attach to different kinds of financial information, they were asked to classify the level of importance of the surrogates on a five-point Likert scale ranging from ‘not at all important’ to ‘very important’. The results of the level of importance were multiplied by each of the three financial information quality criteria, i.e. accuracy and completeness, timeliness, and consistency in order to obtain a weighted average score for financial information quality. Each quality dimension is assessed individually for a better understanding of its effect on performance and access to finance.

To understand why several SMEs prepare only statutory financial information, and why a number of owner/managers do not use this information in their decision-making, respondents were provided with a number of choices and asked to select those that best explain their use or non-use of financial information to support their business decisions.

4.2.1.2 Target Respondents

Once the information required is specified, it is necessary to identify the target respondents for the study. Although the target respondents or population in this study are owner/managers of Thai SMEs, the study is restricted to one industry sector for a number of reasons. First, it allows control over some extraneous factors which may affect the dependent variables and thus impact on internal validity (Kotey 1999; Robinson and Pearce 1983; Zikmund 1997). Moreover, though limiting the study to a single industry prevents generalising of the results to other industries, focus on a single industry provides a greater degree of environmental control (Conant, Mokwa, and Varadarajan 1990). Thus, this study is limited to a single industry: the trading sector. SMEs in the trading sector were chosen because an analysis of the distribution of the total Thai SME population identified the trading sector as having the largest concentration of SMEs (Department of Industrial Promotion 2004; Institute for Small and Medium Enterprises Development 2006a).

Apart from industry, another key factor considered for this study is the geographic location of the sample. Focusing on a certain location ensures that target respondents
experience similar regulations, policies, infrastructural support, and environments (Kotey 1999). As shown in Chapter 2, SMEs are mainly located in Bangkok and metropolitan, Khon Kan, and Chiang Mai provinces. These provinces are located in three regions where most SMEs are found in Thailand. As a result, SMEs in the trading sector in Bangkok, Khon Kan, and Chiang Mai were chosen as the target respondents for this study.

4.2.1.3 Method of Communication

From the measurement of variables and target respondents discussed above, the discussion now turns to the choice of methods of communication used to reach respondents. There are a number of broad research methods. These include experiments, surveys, archival analysis, history, and case studies (Yin 1994). Each method has different criteria, as summarised in Table 4.4.

<table>
<thead>
<tr>
<th>Research Method</th>
<th>Type of Research Question</th>
<th>Control Over Behavioural Events</th>
<th>Focus on Contemporary Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>how, why</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Survey</td>
<td>who, what, where, how many,</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>how much</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archival analysis</td>
<td>who, what, where, how many,</td>
<td>No</td>
<td>Yes/No</td>
</tr>
<tr>
<td></td>
<td>how much</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>how, why</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Case study</td>
<td>how, why</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: Yin (1994 p. 4)

The questions addressed in this study, i.e. whether investment readiness positively influences the access to finance and performance of SMEs and, if so, to what extent, relates to ‘what’ and ‘how much’. Moreover, in this study the variables cannot be easily manipulated in an experimental manner, and the focus is on current events. Thus, from Table 4.4 the most appropriate research method for this study is either survey or archival analysis.
A choice between survey and archival analysis methods is based on the definition of archival analysis by Dane (1990). Dane (1990 p.169) defines the archival method as “any research in which a public record is the unit of analysis”. In this study, as discussed in Section 3.8.3.2, public records in Thailand are either not available or, at best, unreliable. Therefore the survey method is deemed appropriate for the study.

With the survey method decided, the techniques for selecting the sample and collecting data are the next major issues that need to be considered in making inferences about the population. These two major design choices are discussed in the following sections.

4.2.1.3.1 Sampling Method

There are two major sampling methods that can be used to generate samples that are representative of a population: probability and nonprobability sampling methods. Probability sampling covers techniques such as simple random sampling, systematic sampling, stratified sampling and cluster sampling. It is based on the concept of random selection: “a controlled procedure that assures that each population element is given a known nonzero chance of selection” (Cooper and Schindler 2001 p. 166). Under such conditions, there is substantial confidence that the sample is representative of the population from which it is drawn since the random selection of elements reduces sampling bias (Bryman 2001). In contrast, nonprobability sampling such as convenience, purposive, and snowball sampling, is non-random and subjective. Each member does not have a non-zero chance of being included, allowing interviewers to choose sample elements as they wish or wherever they can find them (Zikmund 1997).

While probability sampling appears to have technical superiority, there are limitations in its application. The probability sampling method is time-consuming and expensive compared to the nonprobability sampling method, since it clearly calls for more planning to ensure that each selected sample member is reached. Cooper and Schindler (2001) argue that carefully controlled nonprobability sampling often gives acceptable results. Given the practical disadvantages of probability sampling, the nonprobability sampling method has been selected for this study.
Convenience, purposive, and snowball sampling are nonprobability methods. Convenience sampling means selecting those sample members who are most conveniently available. Researchers have the freedom to choose whoever they find; thus, this method has the least reliable design. It is, however, a useful procedure employed to obtain a large number of completed surveys quickly and economically (Zikmund 1997). Purposive sampling is a nonprobability method that conforms to certain criteria, and is classified into two major types: judgement and quota. Judgement sampling is a technique by which the researcher selects the sample to serve a specific purpose, based upon some appropriate characteristics of the sample members. Quota sampling is used to ensure that various subgroups in a population are represented to the exact extent that the researcher desires. Snowball sampling is applied where respondents are difficult to identify and contact, and best located through referral networks (Cooper and Schindler 2001).

Due to time and resource limitations, for the present study convenience sampling is selected as this sampling method is best suited to obtaining a large number of completed questionnaires quickly and economically (Malhotra 1999; Zikmund 1999).

4.2.1.3.2 Data Collection Method

Several techniques can be chosen for collecting survey data including self-administered surveys, telephone interviews, and face-to-face interviews (Cooper and Schindler 2001). Each technique has its own strengths and weaknesses. Even so, self-administered mail questionnaire surveys continue to be one of the most popular techniques due to their distinct advantages. They enable more economic and timely collection of data from a large, geographically dispersed population (Frazer and Lawley 2000). They also encourage respondents to freely divulge private information. However, self-administered surveys have two main weaknesses, i.e. the potential problem of a low response rate and also the possibility of respondent misunderstanding, since there is no interviewer capable of providing explanations or clarifications (Cooper and Schindler 2001; Frazer and Lawley 2000).

With the widespread use of telephone services, telephone interviews can help to complete a study faster and cheaper than would be possible using face-to-face
interviews. There are, however, disadvantages to using this technique, such as households without telephone services, limitations on interview length (fewer measurement questions), ease of interview termination, and less respondent involvement (Cooper and Schindler 2001).

The information that can be collected from face-to-face interviews far exceeds that obtainable from telephone interviews and mail surveys (Bryman 2001). The face-to-face technique provides an opportunity for respondents to offer some explanation for contextual issues, which can be used to help account for certain findings. Nevertheless, high costs, the need for highly trained interviewers, and interviewer bias are all major flaws of this technique (Cooper and Schindler 2001; Dane 1990).

Dane (1990) suggests that the most important aspect of survey administration is to understand the needs of the research before designing the data collection technique. The present study requires a large number of respondents and low data collection costs. Moreover, some questions deal with complex issues such as financial information which need to be explained by an interviewer. Because of the needs of the study and the complexity of the questions, face-to-face interviews are considered appropriate for this study (Cooper and Schindler 2001). Interviewers are selected from among third- or fourth-year business students with a basic knowledge of topics related to this study, in order to meet the training requirements involved in conducting face-to-face interviews.

Three basic approaches are suggested for data collection using interviews (Patton 1980): the informal conversational interview, the general interview guide approach, and the standardised interview. The informal conversational interview approach is used in combination with participant observation to develop a better understanding of participant’s reactions to what is happening. This approach allows collection of data from different people with different questions (Patton 1980). However, it has the disadvantage that the data collected is difficult to put together and analyse. As a result, a greater amount of time is required. A checklist is used as a flexible guide to the interview in the general interview guide approach, but there is no specified set of questions (Nachmias and Nachmias 1992). Nevertheless, it is also a difficult approach to implement since data collection can be chaotic and difficult to control, collate, and
analyse. The standardised interview is an approach in which the questions, their wording, and their sequence are fixed and identical for every respondent. This approach enables a researcher to analyse variation between responses (Patton 1980). The data obtained is systematic and easier to analyse. Therefore, large data sets can be obtained and analysed from a large number of interviewees (Nachmias and Nachmias 1992; Patton 1980).

From the above discussion, it is apparent that the standardised interview is appropriate where the data are to be analysed statistically. Furthermore, it is a less time-consuming and cheaper method. In addition, using structured questionnaire, along with the interview process is considered extremely beneficial in survey research as it combines the strengths of the two methods (Dane 1990). Due to the advantages of the standardised interview over the first two methods, it is employed to collect data in this study.

4.2.2 Question Content

Now that a decision to use structured questionnaires along with face-to-face interviews has been made, decisions about question content must be considered. Question content is operationalised based on the literature and the researcher’s perspective. Measures employed in the literature to evaluate the variables in this study were discussed in Sections 4.2.1.1.1 to 4.2.1.1.9, and those chosen for this study were justified therein.

4.2.3 Question Phrasing

The items identified to measure each variable are examined for multiple meanings, inherent ambiguity, double barrelled interpretation, phrasing bias, and implicit assumptions about respondents’ knowledge. The questionnaire was reviewed by the supervisor, peers, and other experts in the area. Because this study is conducted in Thailand, questionnaires are carefully translated into Thai. To ensure that meaning was unchanged in the translation process, they were reviewed by the head of the
accounting school and by lecturers in the Faculty of Business Administration at Chiang Mai University in Thailand.

4.2.4 Response Format

Given that the questionnaire is used along with face-to-face interview, appropriate response and scaling formats are the next issues requiring attention. Basic response formats can be classified into the closed response or closed-ended format and the open-ended format, based on the amount of freedom respondents have in answering the questions. The open-ended format allows respondents to answer freely in their own words, while the closed format provides respondents specific and limited alternative from which they must choose the one closest to their perspective (Cooper and Schindler 2001; Zikmund 1999). Although free and uninhibited responses from an open-ended format may allow a researcher to find some unanticipated information or provide a source of new ideas, the cost of this format is significantly higher than that of the closed format. The closed response format has the potential advantages of decreasing the variability of responses, making fewer demands on interviewer skills, and being much easier to code and analyse (Cooper and Schindler 2001). The questions in the survey instrument used in this study are therefore closed.

Dichotomous, multiple choice, and Likert scale are the three closed response formats adopted in this study. A dichotomous response is applied in questions where two exclusive response choices are adequate, such as in questions relating to gender and access to finance. Multiple choice responses are developed when there are multiple options for the respondent to select from but only one answer is sought, such as in questions about experience, education and age (Cooper and Schindler 2001). A five-point Likert scale is the scaling format adopted in this study in order to gauge the perceptions and opinions of respondents on performance, access to finance, and financial information. The rationale for using the Likert scale is to provide objective scores associated with subjective assessments (Scheaffer, Mendenhall, and Ott 1996). Moreover, it is intuitive and simple to construct and administer (Corbetta 2003; Zikmund 1997). With the Likert scale, a set of statements are made about an issue or object, the respondent is given certain options in each case such as “very important”
to “not at all important”, each of which is assigned a numerical value. Then respondents are required to indicate their ratings on the scale for each statement.

4.2.5 Question Sequence

Question sequence can play an important role in the successful administration of the instrument. One technique is to start with relatively general and impersonal questions and place sensitive questions last, after a rapport has been established between respondent and interviewer (Cooper and Schindler 2001). The questionnaire for the study consists of five sections: business information, access to finance, financial information, performance, and personal information. In order to foster respondent interest in the interviewing process, the instrument begins with information on the business. This question is simple to comprehend and easy to answer (Zikmund 1999). After building trust, questions about variables in sections 2, 3, and 4 are asked, in that order gradually moving from less to more intrusive questions as a means of putting respondents at ease and encouraging them to divulge the required information about their businesses. The questionnaire ends with personal information, such as age and education level, because asking such information at the beginning can embarrass or threaten respondents (Cooper and Schindler 2001; Zikmund 1999). This logical ordering of questions maintains respondents’ cooperation and involvement throughout the questionnaire (Zikmund 1999).

4.2.6 Question Layout

The layout and physical attractiveness of questionnaires designed for face-to-face interviews is very important. The layout helps an interviewer follow the question sequence and the logic of the questionnaire (Zikmund 1999). In order to make a questionnaire a good instrument for the interviewer, some techniques related to language syntax and the content of the questions are necessary. First of all, the issue of questionnaire length is dealt with by keeping the questions concise and simple, and the number of pages kept to a minimum by using single-line spacing and reducing font size so that the questionnaire does not look too long (Corbetta 2003; Zikmund 1997). In addition, a cover letter is used to outline the importance of the study, enlist
the respondent’s assistance, and emphasise the value of their input (Cooper and Schindler 2001).

4.2.7 Pretest and Revise

The question is pretested to verify that the content and format are clear and logical, and that the questions are not ambiguous. The pretest is conducted using a convenience sample of ten owner/managers to assess how they interpret the questions, and to detect problem(s) in the questionnaire design for correction before the actual survey is conducted (Zikmund 1997). In addition, a focus group of five owner/managers from Khon Kan and five owner/managers from Chiang Mai were selected to discuss the questions and also to identify problems needing attention. In particular, the pilot survey and the focus group discussion sought to verify that the questions were clear enough to be understood by the target respondents, i.e. the owner/managers, and to identify questions that might be resisted (Cooper and Schindler 2001). A few minor changes were made to the translated version of the questionnaire following the preliminary test to enhance clarity and to increase the instrument’s construct validity.

4.3 Data Collection

After respondents had been selected and the research design process had been identified, the data was collected from June to November 2005. With the help of research assistants, 407 questionnaires were collected using face-to-face interviews with owner/managers of SMEs in the trading sector in Bangkok, Khon Kan and Chiang Mai. Convenience sampling was adopted in this study to overcome time and resource limitations. The data obtained from Bangkok, Khon Kan and Chiang Mai were 148 (36.4 percent), 128 (31.4 percent), and 131 (32.2 percent) respectively. Before analysing the data in the next chapter; it is necessary understand the statistical methods used for hypothesis testing in this study. These are presented in the next sections.
4.4 Statistical Methods for Hypothesis Testing

The technique used to test the hypotheses in this study is structural equation modeling (SEM). This section discusses the rationale and basis for structural equation modeling (SEM) and provides a justification for the use of Partial Least Squares (PLS), a version of SEM, in this study. The stages in structural equation modeling are described in an attempt to ensure that models are correctly specified and the results are valid.

4.4.1 Structural Equation Modeling (SEM)

With the increasing complexity and specificity of research questions in the social sciences and the appearance of flexible and user-friendly computer software, Structure Equation Modeling (SEM) is receiving widespread attention from social science researchers as a standard approach to testing research hypotheses (Hoyle 1995). SEM is a comprehensive statistical approach to testing hypotheses about relations among observed and unobserved variables. The observed variable, also known as measured variable, is a variable that can be observed directly and is measurable. The unobserved variable or latent variable, on the other hand, is a variable that cannot be observed directly and is inferred from measured variables (Diamantopoulos and Siguaw 2000; Hoyle 1995). SEM can be viewed as a multivariate technique combining aspects of multiple regression (examining dependence relationships) and factor analysis (representing unmeasured concepted-factors-with multiple variables) to analyse the interrelationships among variables simultaneously (Bollen 1989; Hair et al. 1998; Tabachnick and Fidell 2001). It is used to establish whether the proposed relationships among the variables are empirically supported in terms of whether or not significantly large parameters are found to exist between the variables.

SEM does not assume that variables are measured without error. This is because a distinction between theoretical variables (unobservable/latent variables) and their surrogates (observed variables) allows for measurement errors in the observed variables. As such, the use of SEM can help to relax the assumption of perfect
measurement, allowing for more realistic analyses (Hair et al. 1998; Kline 1998). In the absence of a perfect measurement assumption, there are two parts to SEM: a structural model and a measurement model. The structural model, the regression part of SEM, specifies the causal relationship between unobserved (latent) variables. The measurement model, the confirmatory factor analysis part of SEM, specifies the relationship between observed (measured) and underlying unobserved (latent) variables (Diamantopoulos and Siguaw 2000; Hair et al. 1998; Maruyama 1998). Due to the relaxation of the perfect measurement assumption, SEM is considered a powerful statistical technique and is widely used in social science research, including accounting (Anderson and Young 1999; Collins, Holzmann, and Mendoza 1997; Magner, Welker, and Campbell 1996).

4.4.2 Justification for the Use of Partial Least Squares (PLS)

There are two popular methods for estimating SEM with latent variables (Olsen and Johnson 2003). The first approach is the covariance-based approach fitting exemplified by software such as LISREL, EQS, and AMOS (Garson n.d.; Hair et al. 1998). The second is the variance-based approach, Partial Least Square (PLS). The covariance-based approach enables researchers to construct unobservable latent variables, model errors in measurement, and statistically test a priori theoretical and measurement assumptions against empirical data. It however, involves constraints in the form of normality assumptions, sample size, model complexity, and identification and factor indeterminacy (Chin and Newsted 1999). In order to use the covariance-based approach, it is assumed that observed variables follow a specific multivariate distribution and that observations are independent of one another. Moreover, it has critical requirement for sample size. The minimum sample size in the application of the covariance-based approach is ten times the number of parameters to be estimated, which is often beyond the range of researchers (Chin and Newsted 1999). Also critical is the potential for a type II error whereby a poor model can still falsely achieve adequate model fit.

In addition, the covariance-based approach can be modelled only in the reflective mode where indicators are viewed as being caused by the underlying latent variable.
The covariance-based approach does not make room for situations where indicators are modelled in the formative mode such that they are viewed as causing rather than being influenced by the latent variable (Lohmoeller 1989). To address these limitations of the covariance-based approach, PLS is proposed as an alternative approach (Chin, Marcolin, and Newsted 2003).

PLS is a linear regression technique developed to calculate regressions coefficients from several response variables. The PLS algorithm allows each indicator to vary in terms of how much it contributes to the composite score of the latent variable. Thus, each indicator does not assume equal weight. That is, indicators with weaker relationships to related indicators and to the latent construct are given lower weightings, and those varied weightings are carried through to an assessment of the theoretical estimators (Wang and Chang 2005).

It is suggested that PLS is particularly suitable for application and prediction as it assumes that the measured variance is useful variance requiring explanation Chin, Marcolin and Newsted (2003). Moreover, it avoids the problem of indeterminacy and provides an exact definition of component scores because the approach estimates the latent variables as exact linear combinations of the observed measures (Chin 2004). PLS is also able to handle multi-collinearity among endogenous constructs and also has the ability to create latent construct scores directly on the basis of cross products involving multi-item measures (Barclay, Thompson, and Higgins 1995). In addition, PLS does not require distributional assumptions and is useful in handling studies involving small sample sizes. The differences between variance-based approach and covariance-based approach are summarised in Table 4.5.
Table 4.5 Differences between Variance-based Approach and Covariance-based Approach

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Variance-based (PLS)</th>
<th>Covariance-based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>Prediction-oriented</td>
<td>Parameter-oriented</td>
</tr>
<tr>
<td>Approach</td>
<td>Variance-based</td>
<td>Covariance-based</td>
</tr>
<tr>
<td>Assumptions</td>
<td>Prediction-specific (non parametric)</td>
<td>Typically multivariate normal distribution and independent observations (parametric)</td>
</tr>
<tr>
<td>Parameter estimates</td>
<td>Consistent as indicators and sample size increase (i.e. consistency at large)</td>
<td>Consistent</td>
</tr>
<tr>
<td>Latent variable scores</td>
<td>Explicitly estimated</td>
<td>Indeterminate</td>
</tr>
<tr>
<td>Epistemic relationship between a latent variable and its measures</td>
<td>Can be modelled in either formative or reflective mode</td>
<td>Typically only with reflective indicators</td>
</tr>
<tr>
<td>Implication</td>
<td>Optimal for prediction accuracy</td>
<td>Optimal for parameter accuracy</td>
</tr>
<tr>
<td>Model complexity</td>
<td>Large complexity (e.g. 100 constructs and 1000 indicators)</td>
<td>Small to moderate complexity (e.g. less than 100 indicators)</td>
</tr>
<tr>
<td>Sample size</td>
<td>Power analysis based on the portion of the model with the largest number of predictors. Minimal recommendation from 30 to 100 cases.</td>
<td>Ideally based on power analysis of specific model. Minimal recommendations 200 to 800.</td>
</tr>
</tbody>
</table>

Source: Chin (2004)

PLS is widely used by a growing number of researchers, and is selected for this study for several reasons. Firstly, the component-based approach applied in PLS precludes two serious problems: inadmissible solutions and factor indeterminacy (Fornell and Bookstein, 1982). PLS estimates the latent variables as exact linear combinations of the observed measures. It thus avoids indeterminacy problems and provides an exact definition of component scores (Chin 2004).

Secondly, the PLS approach allows the examination of indirect relationships among factors (Maruyama 1998). As depicted in Figure 3.1, there is an indirect relationship between investment readiness and performance via access to finance. The indirect analysis is better achieved by the use of the PLS technique than by multiple regression analysis or other techniques (Maruyama 1998). Furthermore, PLS allows simultaneous testing of an entire model instead of a simple examination of the
relationship between two variables, which provides the researcher with a comprehensive means of assessing and modifying a given theory.

The PLS technique does not require a normality assumption for estimating model parameters, observation independences, or variable metrics, because a series of ordinary least squares analyses of the iterative algorithm is applied in this approach (Chin 2004; Faulk and Miller 1992). The PLS algorithm, encompassing canonical correlation, redundancy analysis, multiple regression, multivariate analysis of variance, and principal components, eliminates the multicollinearity problem: the correlations between observed variables which impact the degree to which any variable’s effect can be predicted or explained by the other variables in the analysis (Wold 1985).

In addition, it has minimal requirements for sample size (Faulk and Miller 1992). The issue of sample size for adequate estimation has been the focus of an extensive debate in the structural equation literature. There are a number of recommendations for developing an efficient method of determining sample size in the application of SEM. Hair et al. (1998), and Mueller (1996) suggest that the minimum sample size for the number of parameters to be estimated in a model is a ratio of at least 10:1. However, Kline (1998) indicates that a sample size of less than 100 was commonly found in previous studies using SEM. Kline (1998) suggests a minimum ratio of sample size to number of parameters of 5:1 for the complexity of the path model. While there is as yet no absolute standard sample size for SEM, Chin (2004) proposes as a rule of thumb that a minimum sample size for PLS should be ten times the largest number of structural paths directed at a particular construct in the structural model. In this study, the dependent variable, with the largest number of independent variables impacting it is performance. Performance is influenced by eight independent variables: access to finance, experience, education, age, gender, financial leverage ratio, size, and financial information. Therefore, the minimum sample size required for this study is 80 (8 * 10).

Finally, PLS can be used not only for theory confirmation but also for application and prediction. It identifies where relationships might or might not exist and suggests propositions for later testing (Chin 2004). It is recommended that once structural
equation modeling is chosen, PLS (variance-based approach) is to be preferred over covariance-based approach, since the goal is for prediction and the research is both exploratory and confirmatory (Barclay, Thompson, and Higgins 1995). Since, the research questions examined in this study fitted this description, PLS was the method of choice for analysing the hypotheses developed in the conceptual framework. Given the advantages of PLS over LISREL, AMOS, multiple regression, path analysis and other techniques, it has been chosen for testing the hypotheses in this study.

4.4.3 Process for Structural Equation Modeling

The process of building SEM outlined by Hair et al. (1998 p. 593, 602) is followed to ensure rigorous model development and sound estimation procedures and evaluation in this study. The seven stages of the process are as follows: develop a theoretically based model; construct a path diagram of causal relationships; convert the path diagram into a set of structural and measurement models; choose the input matrix type and estimate the proposed model; assess the identification of the structural model; evaluate goodness-of-fit criteria; and interpret and modify the model. A seven-stage process for structural equation modeling is presented in Figure 4.3. A detailed discussion of each step is given in the ensuing sections.

4.4.3.1 Develop a Theoretically Based Model

SEM is a confirmatory analysis technique guided by theory rather than an exploratory technique because SEM itself cannot draw causal relationships in models. The strength and conviction with which causation can be assumed to exist between variables in the model lies not in the analytical methods chosen but in the theoretical foundation developed and in the justification provided to support the analyses (Hair et al. 1998). Therefore, theoretical insight and judgement on the part of the researcher is of the utmost importance in estimating a model. Since theory is essential for providing a consistent and comprehensive explanation of a phenomenon, the hypothesised models for the study which specify how the variables in the analysis (performance, access to finance and investment readiness) are generated and related to each other are theoretically developed as detailed in Chapter 3.
Figure 4.3 Stages in Structural Equation Modeling

Stage 1: Develop a Theoretically Based Model

Stage 2: Construct a Path Diagram

Stage 3: Convert the Path Diagram

Stage 4: Choose the Input Matrix Type

Stage 5: Assess the Identification of the Model

Stage 6: Evaluate Model Estimates and Goodness-of-fit

Stage 7: Interpret the Model

Yes: Re-specify model

No: Modify the Model

Finalise the Model

Source: Hair et al. (1998 p. 593, 602)
4.4.3.2 Construct a Path Diagram

Path diagrams are another method of revealing a series of causal relationships among constructs in terms of visual portrayal (Hair et al. 1998). In this study, path diagrams showing relationships among three unobserved variables are examined and depicted in Chapter 3, Figure 3.1: performance, access to finance, and investment readiness. These variables denote the theoretical constructs corresponding to the relationships which are to be tested empirically. Observed or measured variables for these variables are then developed as discussed in Section 4.2.1.1. Seven observed variables for performance are selected: profitability, sales growth, return on assets, cash flow, lifestyle, independence, and job security. Six observed variables for access to finance are identified: perception of ability to access outside equity capital, ability to achieve low costs of accessing outside equity capital, ability to achieve low interest rates, ability to achieve low processing costs, ability to achieve low collateral requirements, and ease in handling loan accessing processes. Accuracy and completeness, timeliness, and consistency are three observed variables for financial information. The unobserved and observed variables for this study are summarised in Table 4.6.

4.4.3.3 Convert Path Diagram into Structural and Measurement Models

After developing the formal theoretically-based models and path diagram, the next stage is to specify relationships in terms of structural and measurement models in order to link operational definitions of the constructs for the theory to the appropriate empirical tests (Hair et al. 1998). The structural and measurement models for this study are specified in the following sections.
Table 4.6 Unobserved and Observed Variables for this Study

<table>
<thead>
<tr>
<th>Unobserved Variables</th>
<th>Observed Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance (PERF)</td>
<td>1. Satisfaction with profitability (PERF1)</td>
</tr>
<tr>
<td></td>
<td>2. Satisfaction with growth in sales (PERF2)</td>
</tr>
<tr>
<td></td>
<td>3. Satisfaction with return on assets (PERF3)</td>
</tr>
<tr>
<td></td>
<td>4. Satisfaction with cash flow (PERF4)</td>
</tr>
<tr>
<td></td>
<td>5. Satisfaction with lifestyle (PERF5)</td>
</tr>
<tr>
<td></td>
<td>6. Satisfaction with independence (PERF6)</td>
</tr>
<tr>
<td></td>
<td>7. Satisfaction with job security (PERF7)</td>
</tr>
<tr>
<td>Access to Finance (ACCESS)</td>
<td>1. Perception of ability to access outside equity capital (ACCESS1)</td>
</tr>
<tr>
<td></td>
<td>2. Perception of ability to achieve low costs of accessing outside equity capital (ACCESS2)</td>
</tr>
<tr>
<td></td>
<td>3. Perception of ability to achieve low interest rates (ACCESS3)</td>
</tr>
<tr>
<td></td>
<td>4. Perception of ability to achieve low processing costs (ACCESS4)</td>
</tr>
<tr>
<td></td>
<td>5. Perception of ability to achieve low collateral requirements (ACCESS5)</td>
</tr>
<tr>
<td></td>
<td>6. Perception of ease of handling loan application processes (ACCESS6)</td>
</tr>
<tr>
<td>Owner/manager readiness:</td>
<td></td>
</tr>
<tr>
<td>Experience (EXP)</td>
<td>- Number of years owner/managers have owned or managed their businesses (EXP1)</td>
</tr>
<tr>
<td>Education (EDU)</td>
<td>- Highest educational qualification or nearest equivalent of owner/managers (EDU1)</td>
</tr>
<tr>
<td>Age (AGE)</td>
<td>- Age of owner/managers (AGE1)</td>
</tr>
<tr>
<td>Gender (GEN)</td>
<td>- Sex of owner/managers (GEN1)</td>
</tr>
<tr>
<td>Business Readiness:</td>
<td></td>
</tr>
<tr>
<td>Financial Leverage Ratio (FLR)</td>
<td>1. Proportion of debt in start-up capital (FLR1)</td>
</tr>
<tr>
<td></td>
<td>2. Proportion of debt in current capital (FLR2)</td>
</tr>
<tr>
<td>Size (SIZE)</td>
<td>1. Fixed assets values (SIZE1)</td>
</tr>
<tr>
<td></td>
<td>2. Number of employees (SIZE2)</td>
</tr>
<tr>
<td>Information Readiness:</td>
<td></td>
</tr>
<tr>
<td>Financial Information (FI)</td>
<td>1. Accuracy and completeness (FI1)</td>
</tr>
<tr>
<td></td>
<td>2. Timeliness (FI2)</td>
</tr>
<tr>
<td></td>
<td>3. Consistency (FI3)</td>
</tr>
</tbody>
</table>
4.4.3.3.1 The Structural Model

The structural model in this study consists of a set of equations summarising the relationships among the unobserved variables. It is hypothesised that the performance of SMEs is a function of access to finance and investment readiness. At the same time, access to finance is also a function of investment readiness. As discussed in Sections 3.5.2, and 3.6 to 3.8, investment readiness in this study comprises experience, education, age, gender, financial leverage ratio, size, and financial information. The relationships among these unobserved variables for empirical testing purpose are shown in Figure 4.4.

Figure 4.4 The relationships among performance, access to finance, and investment readiness factors

![Diagram showing the relationships among performance, access to finance, and investment readiness factors.]

where PERF, ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE and FI are defined as in Table 4.6

The structural model in the above figure is the same as the model summarising the relationships among performance, access to finance, and investment readiness...
presented in Figure 3.1 in Chapter 3. This is because it is a straightforward procedure which translates a path diagram into a structural equation model. The above figure proposes a model in which access to finance and investment readiness have direct effects on performance. Concurrently, investment readiness also affects performance via access to finance, so that there are both direct and indirect effects on performance via access to finance. The model can be expressed in a set of equations as followed.

\[
\text{PERF} = \alpha_1 + A_1 \text{EXP} + A_2 \text{EDU} + A_3 \text{AGE} - A_4 \text{GEN} - A_5 \text{FLR} + A_6 \text{SIZE} + A_7 \text{FI} + B_1 \text{ACCESS} + S_1
\]

\[
\text{ACCESS} = \alpha_2 + A_8 \text{EXP} + A_9 \text{EDU} + A_{10} \text{AGE} - A_{11} \text{GEN} - A_{12} \text{FLR} + A_{13} \text{SIZE} + A_{14} \text{FI} + S_2
\]

where

- \( \alpha_1, \alpha_2 \) = Intercepts
- \( A_1, \ldots, A_{14} \) = Structural parameters, regression coefficients of unobservable exogenous variables
- \( B_1 \) = Structural parameters, regression coefficients of unobservable endogenous variable
- \( S_1, S_2 \) = Random errors

The terms exogenous and endogenous are model-specific (Bollen 1989). An exogenous variable is an independent variable and thus cannot be directionally influenced by any other variable in the model. An endogenous variable is a variable determined by other variables in the model. The coefficients, \( A_1, A_2 \) and \( B_1 \), show the strengths and directions of the relationships among the unobserved variables. The random error terms \( S_1 \) and \( S_2 \) present the proportions of the unobservable dependent variables that are not explained by the unobserved independent variables (Bollen 1989; Diamantopoulos and Siguaw 2000).

### 4.4.3.3.2 Assessment of Structural Model

The objective of assessing the structural part of the model is to determine whether the theoretical relationships specified at the conceptualisation stage are supported by the data. Two assessments are applied to evaluate the structural model. The first is the signs of the parameters. These signs, representing the paths among the unobserved variables, indicate whether the direction of the relationships is as hypothesised. The second assessment is the significance of the magnitudes of the estimated parameters. These values have to be significant (indicated by \( t \)-value) in order to verify the strength of the hypothesised relationships (Diamantopoulos and Siguaw 2000).
As indicated in Section 1.4, one of the main purposes of this study is to examine the indirect influence of investment readiness on performance through access to finance. This indirect relationship is assessed by the Sobel test, the most common method used to test indirect effects (Kenny 2006). The formula for the Sobel test is as follows:

$$z\text{-value} = \frac{a \cdot b}{\text{SQRT}(b^2 \cdot s_a^2 + a^2 \cdot s_b^2)}$$

where

- $a$ = raw (unstandardised) regression coefficient for the association between independent and mediator
- $s_a$ = standard error of $a$
- $b$ = raw coefficient for the association between the mediator and the dependent variable
- $s_b$ = standard error of $b$
- SQRT = square root

To verify this indirect relationship, the reported $p$-value of the test statistic has to be significant (Preacher and Leonardelli 2005).

### 4.4.3.3.3 The Measurement Model

The relationships among the unobserved variables in the structural model cannot be examined meaningfully without identifying the measurement models (Hair et al. 1998). The measurement models are a set of structural equations linking the observed and unobserved variables, and are depicted in Figure 4.5 – Figure 4.13.

**Figure 4.5 The Measurement Model for Performance**

![Diagram](image)

where PERF1, PERF2, PERF3, PERF4, PERF5, PERF6 and PERF7 are defined as in Table 4.6
Figure 4.6 The Measurement Model for Access to Finance

where ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5 and ACCESS6 are defined as in Table 4.6

Owner/manager readiness:

Figure 4.7 The Measurement Model for Experience

where EXP and EXP1 are defined as in Table 4.6

Figure 4.8 The Measurement Model for Education

where EDU and EDU1 are defined as in Table 4.6

Figure 4.9 The Measurement Model for Age

where AGE and AGE1 are defined as in Table 4.6
Figure 4.10  The Measurement Model for Gender

where  GEN and GEN1 are defined as in Table 4.6

**Business Readiness:**

Figure 4.11  The Measurement Model for Financial Leverage Ratio

where  FLR, FLR1 and FLR2 are defined as in Table 4.6

Figure 4.12  The Measurement Model for Size

where  SIZE, SIZE1 and SIZE2 are defined as in Table 4.6

**Information Readiness:**

Figure 4.13  The Measurement Model for Financial Information

where  F1, F11, F12 and F13 are defined as in Table 4.6

Figures 4.14 to 4.17 show the structural equation models (the structural and measurement parameters) for the four objectives in this study.
Figure 4.14  The Structural Equation Model for the First Objective

- Relationships among observed and unobserved variables (Measurement Model)
- Relationships among unobserved variables (Structural Model)

where PERF, ACCESS, PERF1, PERF2, PERF3, PERF4, PERF5, PERF6, PERF7, ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5, and ACCESS6 are defined as in Table 4.6

Figure 4.15  The Structural Equation Model for the Second Objective
where \( ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE, FI, ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5, ACCESS6, EXP1, EDU1, AGE1, GEN1, FLR1, FLR2, SIZE1, SIZE2, F11, F12, \) and F13 are defined as in Table 4.6

Figure 4.16 The Structural Equation Model for the Third Objective

\[
\begin{aligned}
\text{PERF} & \rightarrow \text{EXP} \\
\text{PERF} & \rightarrow \text{EDU} \\
\text{PERF} & \rightarrow \text{AGE} \\
\text{PERF} & \rightarrow \text{GEN} \\
\text{PERF} & \rightarrow \text{FLR} \\
\text{PERF} & \rightarrow \text{SIZE} \\
\text{PERF} & \rightarrow \text{FI} \\
\end{aligned}
\]
Figure 4.17 The Structural Equation Model for the Forth Objective

Relationships among observed and unobserved variables (Measurement Model)

Relationships among unobserved variables (Structural Model)

where PERF, ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE, F1, PERF1, PERF2, PERF3, PERF4, PERF5, ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5, ACCESS6, EXP1, EDU1, AGE1, GEN1, FLR1, FLR2, SIZE1, SIZE2, F11, F12 and F13 are defined as in Table 4.6
In SEM, rectangles or squares denote observed variables and ellipses or circles signify unobserved variables. The measurement model can be expressed in equation form. From the above models, ten separate sets of equations are developed.

1. **Performance**
   \[
   \text{PERF}_1 = X_1 + C_1 \text{PERF} + Q_1 \\
   \text{PERF}_2 = X_2 + C_2 \text{PERF} + Q_2 \\
   \text{PERF}_3 = X_3 + C_3 \text{PERF} + Q_3 \\
   \text{PERF}_4 = X_4 + C_4 \text{PERF} + Q_4 \\
   \text{PERF}_5 = X_5 + C_5 \text{PERF} + Q_5 \\
   \text{PERF}_6 = X_6 + C_6 \text{PERF} + Q_6 \\
   \text{PERF}_7 = X_7 + C_7 \text{PERF} + Q_7
   \]

2. **Access to Finance**
   \[
   \text{ACCESS}_1 = X_8 + C_8 \text{PERC} + Q_8 \\
   \text{ACCESS}_2 = X_9 + C_9 \text{PERC} + Q_9 \\
   \text{ACCESS}_3 = X_{10} + C_{10} \text{PERC} + Q_{10} \\
   \text{ACCESS}_4 = X_{11} + C_{11} \text{PERC} + Q_{11} \\
   \text{ACCESS}_5 = X_{12} + C_{12} \text{PERC} + Q_{12} \\
   \text{ACCESS}_6 = X_{13} + C_{13} \text{PERC} + Q_{13}
   \]

**Owner/manager readiness:**

3. **Experience**
   \[
   \text{EXP}_1 = X_{14} + C_{14} \text{EXP} + E_1
   \]

4. **Education**
   \[
   \text{EDU}_1 = X_{15} + C_{15} \text{EDU} + E_2
   \]

5. **Age**
   \[
   \text{AGE}_1 = X_{16} + C_{16} \text{AGE} + E_3
   \]

6. **Gender**
   \[
   \text{GEN}_1 = X_{17} + C_{17} \text{GEN} + E_4
   \]

**Business Readiness:**

7. **Financial Leverage Ratio**
   \[
   \text{FLR}_1 = X_{18} + C_{18} \text{FLR} + E_5 \\
   \text{FLR}_2 = X_{19} + C_{19} \text{FLR} + E_6
   \]

8. **Size**
   \[
   \text{SIZE}_1 = X_{20} + C_{20} \text{SIZE} + E_7 \\
   \text{SIZE}_2 = X_{21} + C_{21} \text{SIZE} + E_8
   \]

**Information Readiness:**

9. **Financial Information**
   \[
   \text{FI}_1 = X_{22} + C_{22} \text{FI} + E_9 \\
   \text{FI}_2 = X_{23} + C_{23} \text{FI} + E_{10} \\
   \text{FI}_3 = X_{24} + C_{24} \text{FI} + E_{11}
   \]
where PERF, ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE, FI, PERF1, PERF2, PERF3, PERF4, PERF7, ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5, ACCESS6, EXP1, EDU1, AGE1, GEN1, FLR1, FLR2, SIZE1, SIZE2, FI1, FI2, and FI3 are defined as in Table 4.6

\[ X_{1}, \ldots, X_{24} = \text{Intercepts} \]
\[ C_{1}, \ldots, C_{24} = \text{Regression coefficients (factor loadings)} \]
\[ E_{1}, \ldots, E_{11} = \text{Measurement errors in observed exogenous variables} \]
\[ Q_{1}, \ldots, Q_{13} = \text{Measurement errors in observed endogenous variables} \]

The regression coefficients \((C_{1}, \ldots, C_{24})\) specify the extent of the expected change in the observed variable with one unit of change in the unobservable variable. The error terms \((E_{1}, \ldots, E_{11})\) and \((Q_{1}, \ldots, Q_{13})\) measure the reliability of the observed variable, indicating the portion of the unobserved variable not explained by the specified observed variable (Bollen 1989).

### 4.4.3.3.4 Assessment of the Measurement Model

The measurement part of the model is assessed to determine the validity and reliability of the measures used to represent the constructs of interest before examining the structural hypotheses. Validity reveals the extent to which an indicator actually measures what it is supposed to measure. Reliability, on the other hand, reflects the consistency of measurement (Diamantopoulos and Siguaw 2000).

#### Validity:

Validity is tested to examine whether a variable measures what it is supposed to measure. In other words, it proves if a measure corresponds to the concept (Bollen 1989). In PLS, the validity of the measurement model is assessed by the convergent and discriminant validities of the variables. Convergent validity is assessed by the average variance extracted (AVE) for each construct. AVE shows the amount of variance that is captured by the construct in relation to the amount of variance due to measurement error. The following formula is applied to calculate the AVE value (Diamantopoulos and Siguaw 2000).

\[
\text{AVE} = \frac{\Sigma \lambda^2}{[\Sigma \lambda^2 + \Sigma(\theta)]}
\]

where

- AVE = average variance extracted
- \(\lambda\) = indicator loadings
- \(\theta\) = indicator error variances
- \(\Sigma\) = summation over the indicators of the unobserved variable
A value of AVE greater than 0.50 shows that a significantly higher amount of variance in the indicators is captured by the construct compared to that accounted for by the measurement error (Fornell and Larcker 1981; Hulland 1999). In addition, this value offers additional confidence in operationalisation of the construct (Diamantopoulos and Siguaw 2000). Magner, Welker, and Campbell (1996), on the other hand, proposed an acceptable range between 0.38 to 0.70 for convergent validity. This study applies a cut-off point of 0.40 for convergent validity.

Discriminant validity represents the extent to which measures of a given construct differ from measures of other constructs in the same model (Hulland 1999). It is measured by comparing the correlation matrix of the constructs in the PLS model with the square root of the AVE for each construct. The square root of the AVE should be greater than the variance shared between the construct and other constructs in the model if it is to provide evidence of discriminant validity (Fornell and Larcker 1981; Hulland 1999).

**Reliability:**
Reliability of the indicators is assessed by factor loadings of the measures of the constructs and by the constructs’ composite scale reliabilities (Fornell and Larcker 1981). A value of factor loading greater than 0.70 is desirable in order to show that items have more explanatory power than error variance (Fornell, Tellis, and Zinkhan 1982). Barclay, Thompson and Higgins (1995), however, note that it is quite common for newly developed items to fail to meet the 0.70 level of reliability. Hair et al. (1995) suggest a minimum loading of 0.30. The cut-off point of 0.40 for factor loadings in this study is higher than the minimum recommended by Hair et al. (1995).

In addition to assessing the reliability of the individual indicators, a composite reliability ($\rho_c$) value is employed to assess reliability for each unobserved variable (Diamantopoulos and Siguaw 2000). The following formula is applied to calculate the $\rho_c$ value.
\[ \rho_c = \frac{(\Sigma \lambda)^2}{[(\Sigma \lambda)^2 + \Sigma(\theta)]} \]

where 
- \( \rho_c \) = composite reliability
- \( \lambda \) = indicator loadings
- \( \theta \) = indicator error variances
- \( \Sigma \) = summation over the indicators of the unobserved variable

A \( \rho_c \) value greater than 0.70 represents a reliable measurement of the construct (Nunnally 1978).

In conclusion, the significance of AVE, factor loading, and composite reliability are applied in this study to the assessment of the validity and reliability of the measurement part of the model, revealing evidence of validity and reliability for the operationalisation of the unobserved variables.

4.4.3.4 Choose the Input Matrix Type and Estimate the Proposed Model

With the structural and measurement model completely specified, the next step is to choose the type of input matrix (variance/covariance or correlation) to be used for the model estimation, the technique for estimating the precision of the PLS estimate, and the interactive indirect effect tests.

4.4.3.4.1 Input Matrix Type

SEM accommodates either a variance/covariance or a correlation matrix (Tabachnick and Fidell 2001). However, a variance matrix is employed in this study since it is the input matrix type adopted in PLS. As discussed in Section 4.3.3, the variance-based approach of PLS does not require any distributional assumptions, and has minimal requirements for measurement scales, sample size, and residual distributions. Along with the benefits discussed earlier, variance-based PLS is considered a powerful method of analysis (Chin and Newsted 1999).
4.4.3.4.2 Examining the Precision of the PLS estimates

Jackknifing and bootstrapping are techniques used to investigate the stability of estimates under PLS (Chin and Newsted 1999). This study adopts the bootstrap technique because it utilises a confidence estimation procedure other than the normal approximation. It is a computationally intensive method which permits significance tests about parameter estimates even where a computational form for a standard error for a statistic does not exist (Hoyle 1995). Moreover, the bootstrap technique is regarded as more efficient than the jackknife technique since the latter is an approximation to the bootstrap (Efron and Tibshirani 1993).

4.4.3.5 Assess the Identification of the Model

An identification problem is the inability of the proposed model to generate unique estimates, generating meaningless or illogical results. However, this stage is not applicable to the PLS procedure. Chin (2004) implies that, in order to identify a problem using PLS, closer attention should be paid to weak loadings, insignificant weights, low R-squares, and insignificant structural paths.

4.4.3.6 Evaluate Goodness-of-Fit Criteria

The goodness-of-fit measures are related to the ability of the model to account for the sample covariance. PLS, however, applies the variance-based technique that provides statistically inferior estimates and makes minimal demands on the data. Moreover, it is designed to maximise prediction rather than seek overall optimisation in parameter estimates through a full information estimation technique. Therefore, it does provide such fit measures (Chin 2004; Chin and Newsted 1999; Hulland 1999).

Chin (2004) argues that the fit indexes only relate to how well the parameter estimates are able to match the sample covariance, but do not relate to how well the latent variables are predicted. Therefore, a pure reliance on model fit can still generate excellent goodness of fit, even though the model has low R-square or low factor loading. It is thus suggested that the degree to which PLS accomplishes this objective
can be assessed by examining the R-square values for the dependent (endogenous) constructs instead of focusing on the model fit criteria (Chin 2004; Hulland 1999).

4.4.3.7 Interpret and Modify the Model

Interpreting and modifying the proposed models involve examination of the diagnostic tools available in PLS that may indicate potential ways to modify the model to improve predictive power. Examples include removing items with low factor loadings from the measurement model. Modification will be undertaken if there is a theoretical justification to do so.

4.5 Conclusion

This chapter has dealt with the data gathering methods used in the study. Justifications for the chosen survey instrument and statistical methods are also described. Face-to-face interviews with structured questionnaires were employed to collect primary data from owner/managers of Thai SMEs in the trading sector in three provinces: Bangkok, Khon Kan, and Chiang Mai. A sound basis on which to develop and estimate the structural equation models was described. The uses of SEM and PLS to test the hypotheses in this study were justified. The next chapter discusses the results of the analysis.
CHAPTER 5
DATA ANALYSIS AND TESTING OF HYPOTHESES

5.1 Introduction

This chapter presents the findings of the preliminary analysis of data through descriptive statistics and the results of the hypothesis testing using Partial Least Squares (PLS). The chapter is divided into eight sections. General results from the survey data are described in the first section. This is followed by the assessment of the measurement and structural models. The next four sections present the results of hypothesis testing; the relationship between access to finance and performance; the relationship between investment readiness and access to finance; the relationship between investment readiness and performance; and the indirect influence of investment readiness on performance through access to finance. The chapter concludes with a summary of the key findings from the above sections.

5.2 General Results

This section presents the general findings from the data gathered using descriptive statistics in the form of frequencies, percentages, means, and standard deviations. This information is reported in four parts. First, a broad summary of business characteristics is presented. The results from the analysis of performance, access to finance, and investment readiness are examined in the following three sections respectively.

5.2.1 Business Characteristics

The results from the descriptive statistics on business characteristics covering the organisation form and industry of operation are presented in Figure 5.1 and Figure 5.2 respectively.
Figure 5.1 shows that the majority of the SMEs were sole proprietors (79.9 percent). A few of them were companies (9.6 percent), registered partnerships (5.4 percent), and non-registered partnerships (4.4 percent). The finding that the majority of the SMEs in the study were organised as sole proprietorships is consistent with that of the studies by the Institute for Small and Medium Enterprises Development (2003) for Thailand, and by Saffu et al. (2006) for Ghana. The predominance of sole proprietorships over other legal forms may be due to the fact that they have fewer legal and tax requirements than partnerships or other business forms. Further, sole proprietorships provide owner/managers with independence in making decisions. These findings mirror results of Vatnabar’s (1998) research in Australia that one of the major motives for going into business is to retain independence as long as the viability of the firm permits.
Figure 5.2 shows that 28.04 percent of businesses in the sample were grocery shops selling necessities such as soap, shampoo, tissue, bread, jam, milk, and stationery. They were followed by firms selling electrical and computer parts (23.14 percent), vehicles (21.18 percent) and pharmaceutical products (11.98 percent). A small proportion of respondents dealt in agricultural products (7.06 percent) and clothing (5.88 percent). In addition, SMEs in the furniture and fuel areas in each case accounted for only 1.37 percent of the sample. A high percentage of SMEs were attached to the grocery businesses because capital requirements are low but demand for these products is high, allowing them to finance production quickly and make a profit.

5.2.2 Performance

The results of the level of importance attached to the performance surrogates and owner/managers’ satisfaction with these performance surrogates are presented in this section. Table 5.1 summarises the descriptive statistics for level of importance attached to the performance surrogates.
Table 5.1 Important Level of Performance

<table>
<thead>
<tr>
<th>Performance Surrogates</th>
<th>Mean (Imp. Level)</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>4.47</td>
<td>0.70</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Growth in sales</td>
<td>4.38</td>
<td>0.76</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Return on assets</td>
<td>4.01</td>
<td>0.86</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Cash flow</td>
<td>4.24</td>
<td>0.82</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Lifestyle</td>
<td>4.21</td>
<td>0.84</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Independence</td>
<td>4.27</td>
<td>0.94</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Job security</td>
<td>4.54</td>
<td>0.66</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

The table indicates a range of between 4.01 and 4.54 for the mean of the level of importance respondents attached to these performance surrogates. Job security had the highest mean index of 4.54, followed by profitability and growth in sales with mean indices of 4.47 and 4.38 respectively. Return on assets had the lowest mean index of 4.01. The table reveals that Thai owner/managers pursue a range of goals, and that making money is not necessary a primary goal. These results are consistent with the findings of Jarvis et al. (2000) for English owner/managers and McMahon and Stanger for Australian owner/managers (1995).

Table 5.2 Satisfaction with the Firm’s Performance

<table>
<thead>
<tr>
<th>Performance Surrogates</th>
<th>Mean (Satisfaction)</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>3.36</td>
<td>1.02</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Growth in sales</td>
<td>3.29</td>
<td>0.98</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Return on assets</td>
<td>3.09</td>
<td>1.16</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Cash flow</td>
<td>3.38</td>
<td>1.04</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Lifestyle</td>
<td>4.00</td>
<td>0.99</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Independence</td>
<td>4.13</td>
<td>1.07</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Job security</td>
<td>3.94</td>
<td>0.95</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

As indicated in Table 5.2, respondents were most satisfied with the level of independence (4.13) associated with operating their business, followed closely by lifestyle (4.00) and job security (3.94). Satisfaction with return on assets had the lowest mean index of 3.09. This finding is in line with those of the study by Jennings and Beaver (1997), which analysed existing studies on small business performance and suggested that owner/managers strive to achieve more in non-financial rewards such as independence and job security than in financial rewards.
5.2.3 Access to Finance

In response to the question of whether owner/managers had ever sought finance in addition to the start-up capital, 38.82 percent (158 respondents) answered ‘yes’ while 61.18 percent (249 respondents) answered ‘no’. About half (88 respondents) of owner/managers who had sought finance succeeded in accessing finance. The 38.82 percent of owner/managers who had sought finance indicated that their sources of finance in addition to the start-up capital varied. These are summarised in Figure 5.3.

Figure 5.3 Sources of Finance after Start-up

![Bar chart showing the percentage of finance sources used by owner/managers.]

Figure 5.3 shows that approximately 21 percent of owner/managers used equity from their own savings, 19 percent used retained earnings, 11 percent used trade credit, 10 percent obtained equity funds from family and friends, and 9 percent used bank overdrafts. The percentage of owner/managers who obtained loans from family was 7.72 percent, short-term loans from banks 7.16 percent, and long-term loans from banks 6.97 percent. A small number of owner/managers sought finance from business angels (1.69 percent), hire purchase (0.75 percent), and public shares (0.19 percent). No respondents sought finance from venture capital.
Table 5.3 shows that the percentage of sources of finance after start up does not vary significantly across business areas. Owner/manager’s savings and retained earnings were the first two major sources of finance after start up for SMEs in the five retail sectors in this study. This suggests that internal equity is the first source of finance after start up capital. Owner/managers utilise all they can get from internal equity on the business before resorting to external sources. The proportions of internal equity, debt, and external equity in post start-up capital appear to be similar across the retail sectors examined.

Table 5.3 Sources of Finance after Start-up Classified by Business Area

<table>
<thead>
<tr>
<th>Type of Capital</th>
<th>Grocery (percent)</th>
<th>Vehicle (percent)</th>
<th>Health (percent)</th>
<th>Agricultural (percent)</th>
<th>Others (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Equity:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner’s savings</td>
<td>22.86</td>
<td>21.60</td>
<td>21.34</td>
<td>18.33</td>
<td>19.26</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>20.00</td>
<td>20.99</td>
<td>17.33</td>
<td>20.00</td>
<td>18.01</td>
</tr>
<tr>
<td>Family and friends (equity)</td>
<td>10.00</td>
<td>9.26</td>
<td>6.67</td>
<td>11.67</td>
<td>13.04</td>
</tr>
<tr>
<td><strong>Debt:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade credit</td>
<td>11.91</td>
<td>9.88</td>
<td>14.67</td>
<td>6.67</td>
<td>11.80</td>
</tr>
<tr>
<td>Overdrafts</td>
<td>8.57</td>
<td>8.64</td>
<td>6.67</td>
<td>13.33</td>
<td>9.32</td>
</tr>
<tr>
<td>Family loans</td>
<td>5.71</td>
<td>9.26</td>
<td>4.00</td>
<td>6.67</td>
<td>8.70</td>
</tr>
<tr>
<td>Bank loans – short-term</td>
<td>7.62</td>
<td>7.41</td>
<td>9.33</td>
<td>8.33</td>
<td>5.59</td>
</tr>
<tr>
<td>Bank loans – long-term</td>
<td>5.71</td>
<td>7.41</td>
<td>12.00</td>
<td>6.67</td>
<td>4.97</td>
</tr>
<tr>
<td>Tontines</td>
<td>2.38</td>
<td>2.47</td>
<td>1.33</td>
<td>1.67</td>
<td>3.73</td>
</tr>
<tr>
<td>Middle men</td>
<td>2.86</td>
<td>1.23</td>
<td>4.00</td>
<td>3.33</td>
<td>1.86</td>
</tr>
<tr>
<td>Hire purchase</td>
<td>1.43</td>
<td>-</td>
<td>1.33</td>
<td>-</td>
<td>1.24</td>
</tr>
<tr>
<td><strong>External Equity:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angel financing</td>
<td>0.95</td>
<td>1.85</td>
<td>1.33</td>
<td>3.33</td>
<td>1.86</td>
</tr>
<tr>
<td>Public shares</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.62</td>
</tr>
<tr>
<td>Venture capital</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

These results are consistent with the findings of Thongpakde, Puppahavesa, and Pussarangsri (1994) for firms in Thailand, Goedhuys and Sleuwaegen (2000) for firms in Cote d’Ivoire, and Fong (1990) for firms in Malaysia. These researchers reported that internal equity is the major source of finance for SMEs in their samples. The results lend strong support to the Pecking Order Framework (POF) for financing in small enterprises in that the most likely preferred form of finance for SMEs is internal equity, followed by debt, and then external equity (Cassar and Holmes 2003; Hamilton and Fox 1998).
In the literature, SMEs seek finance after start-up for several reasons such as expanding their businesses, replacing equipment, and purchasing fixed assets. Thus, to further ascertain why SMEs in this study sought finance, respondents were asked to indicate the purposes for which finance in addition to start-up capital was sought.

Figure 5.4 Purposes of Seeking Finance in Addition to the Start-up Capital

Figure 5.4 shows that the main purpose of seeking finance for the sample in this study was to increase the level of current assets (39.19 percent), then to prevent liquidity problems (26.01 percent), to replace existing assets such as furniture and office equipment (15.38 percent), and to purchase new fixed assets (9.89 percent). Thus, additional capital was sought for growth and/or for managing liquidity.

Figure 5.5 Problems Encountered When Seeking Finance
Figure 5.5 summarises the problems encountered when owner/managers tried to obtain finance. From the 158 respondents who sought finance in addition to start-up finance, 112 respondents (70.89 percent) reported that they had encountered problems when trying to access finance. The major problem encountered was high interest rates (28.52 percent). This was followed by complex procedures (12.08 percent) and high collateral requirements (11.41 percent). The majority of the problems related to external debt, as few SMEs use external equity. The problems associated with accessing debt encouraged dependence on internal equity. The findings indicate that SMEs faced constraints in accessing debt (Vatnabar 1998).

The reasons that 61.18 percent of owner/managers had never sought finance in addition to start-up finance are summarised in Figure 5.6.

**Figure 5.6 Reasons that Owner/managers Had Never Sought Finance**

The figure reveals that the main reason was because they reinvested profit from their business in order to finance growth from internal sources (32.80 percent). This was followed by the need to maintain control over their businesses (28.67 percent), and to
keep the business small (12.19 percent). A few of respondents indicated other reasons, such as the high cost of finance (6.27 percent), the complications involved in the process (3.58 percent), and lack of knowledge about how to access finance (2.15 percent). These findings are consistent with the Pecking Order Framework. That is, the firms that can be funded from internal sources (profitable firms) do not seek money from external sources since the cost of outside capital is greater than the cost of internal funds (Cassar and Holmes 2003; Holmes et al. 2003). Moreover, owner/managers are not willing to access outside finance because they do not want to reduce their level of control over their businesses (Connell 1994).

The mean, standard deviation, maximum values and minimum values in relation to the level of importance attached to the access to finance surrogates are shown in Table 5.4.

Table 5.4 Level of Importance Attached to the Indicators of Access to Finance

<table>
<thead>
<tr>
<th>Access to Finance</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of accessing outside equity capital</td>
<td>3.15</td>
<td>1.15</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Low costs of accessing outside equity capital</td>
<td>3.29</td>
<td>1.14</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Low interest rates</td>
<td>3.97</td>
<td>1.11</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Low processing costs</td>
<td>3.73</td>
<td>1.03</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Low collateral requirements</td>
<td>3.78</td>
<td>1.03</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Simple loan application procedures</td>
<td>3.65</td>
<td>1.07</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

As indicated in Section 4.2.1.1.2, the first two surrogates (ease of accessing outside equity capital, and low costs of accessing outside equity capital) apply to ability to access external equity, while the last four surrogates were used to measure ability to access formal debt. The table reveals that the levels of importance owner/managers attached to surrogates for access to finance were not markedly different. The first four surrogates of access to finance considered most important by owner/managers were associated with access to formal debt: low interest rates, low collateral requirements, low processing costs, and simple loan application procedures with mean indices of 3.97, 3.78, 3.73, and 3.65 respectively. The two surrogates for access to external equity (ease of accessing outside equity capital, and low costs of accessing outside equity capital) were considered the least important. These findings again support the
Pecking Order Framework proposed by Cassar and Holmes (2003) and Hamilton and Fox (1998) in that, once internally generated funds are exhausted, the most likely preferred form of finance is debt, followed by external equity. Thus, given the current stages of their businesses and the associated capital requirements, factors that affect access to debt are considered more important than those associated with access to external equity.

Table 5.5 Access to Finance

<table>
<thead>
<tr>
<th>Access to Finance</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to access outside equity capital</td>
<td>2.56</td>
<td>1.64</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Ability to achieve low costs of accessing outside equity capital</td>
<td>2.42</td>
<td>1.66</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Ability to achieve low interest rates</td>
<td>2.94</td>
<td>1.37</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Ability to achieve low processing costs</td>
<td>3.18</td>
<td>1.37</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Ability to achieve low collateral requirements</td>
<td>3.22</td>
<td>1.32</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Easy to accommodate loan application procedures</td>
<td>3.32</td>
<td>1.35</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Owner/managers were asked to indicate the ability of their business to access finance. Table 5.5 shows that the four surrogates for access to formal debt (ability to achieve low interest rates, ability to achieve low processing costs, ability to achieve low collateral, and ease of handling loan application procedures) had higher mean indices than the two surrogates for access to external equity (ability to access outside equity capital, and ability to achieve low costs of accessing outside equity capital). These findings indicate that owner/managers considered that they had greater ability to access external debt than external equity finance. In other words, SMEs faced more difficulty in accessing external equity finance than debt finance either because they were typically not in a position to issue shares on the stock market or the costs of accessing such finance were higher than their debt (Cole and Wolken 1996; Holmes et al. 2003).
5.2.4 Investment Readiness

Investment readiness, as discussed in Section 3.5.2, consists of three constructs: owner/manager readiness, business readiness, and information readiness. Results from the analyses of these three constructs are examined in the next three sub-sections.

5.2.4.1 Owner/manager readiness

As discussed in Section 3.6, owner/manager readiness consists of industry experience, education, age, and gender. The frequencies of responses to questions related to these variable items are depicted on a percentage basis and discussed below.

Experience

Owner/managers included in the sample have been in their businesses for various lengths of time. A large number of owner/managers (28.7 percent) had managed their businesses for over 15 years. The second largest category (25.6 percent) had been in business for between 0-3 years (Figure 5.7). The findings imply that even though a number of owner/managers start their businesses, several businesses do not survive. The percentages of businesses in the age categories after 0-3 years declined, except for those in the over 15 year age groups.

Figure 5.7 Experience
**Education**

Figure 5.8 shows the different educational levels of the owner/managers surveyed. Forty-one percent of owner/managers had a bachelor’s degree. This finding is consistent with those of the study of the characteristics of successful entrepreneurs in the Southern region of Thailand, where it is noted that a large number of entrepreneurs have a bachelor’s degree (Institute for Small and Medium Enterprises Development 2003a). A very small percentage had no education (1 percent) while only 0.2 percent had a doctoral degree. The rest of the respondents had completed primary school (13 percent), junior high school (11.3 percent), senior high school (14.7 percent), or a diploma (11.6 percent).

**Figure 5.8 Education Level**

![Bar chart showing education levels](chart.png)

**Age**

The ages of the respondents ranged from 21 to over 60 years (Figure 5.9). The modal age categories were 31-35 and 36-40, each accounting for 15.2 percent of respondents. The percentages of respondents in the other age categories were similar, for example 13.8 percent for those in the range 46-50 years, 13.5 percent for 41-45 years, 13.3 percent for 26-30 years, and 12.7 percent for 51-55 years. Only 4.7 percent of respondents were under 26 years of age or above 60 years.
Figure 5.9 Age Group

<table>
<thead>
<tr>
<th>Age group (year)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-25</td>
<td>4.7</td>
</tr>
<tr>
<td>26-30</td>
<td>13.3</td>
</tr>
<tr>
<td>31-35</td>
<td>15.2</td>
</tr>
<tr>
<td>36-40</td>
<td>15.2</td>
</tr>
<tr>
<td>41-45</td>
<td>13.5</td>
</tr>
<tr>
<td>46-50</td>
<td>13.8</td>
</tr>
<tr>
<td>51-55</td>
<td>12.7</td>
</tr>
<tr>
<td>56-60</td>
<td>6.9</td>
</tr>
<tr>
<td>over 60</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Gender

Figure 5.10 displays the gender of owner/managers in the total sample of 407 respondents. Of these, 247 (60.7 percent) were female and 160 (39.3 percent) male.

Figure 5.10 Gender

Table 5.6 shows that, when male and female owner/managers were classified by business area, female respondents were more than male respondents across all the retail sectors, indicating that there may be more women than men in the retail sector.
Table 5.6 Owner/managers’ Gender Classified by Business Area

<table>
<thead>
<tr>
<th>Type of Capital</th>
<th>Grocery (percent)</th>
<th>Others (percent)</th>
<th>Vehicle (percent)</th>
<th>Health (percent)</th>
<th>Agricultural (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>39.20</td>
<td>47.50</td>
<td>28.70</td>
<td>31.10</td>
<td>44.40</td>
</tr>
<tr>
<td>Female</td>
<td>60.80</td>
<td>52.50</td>
<td>71.30</td>
<td>68.90</td>
<td>55.60</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

5.2.4.2 Business Readiness

As discussed in Section 3.7, business readiness comprises financial leverage ratio and size of business. The descriptive statistics in relation to these surrogates are explained in this section.

Financial Leverage Ratio

For the purpose of determining financial leverage ratios, owner/managers were required to provide the proportion of debt in their start-up capital and the proportion of current debt to current total finance. The responses to these questions are summarised in Figure 5.11 and Figure 5.12 respectively.

Figure 5.11 Proportion of Start-up Debt to Total Start-up Capital

Figure 5.11 shows that approximately 58 percent of firms had initial financial leverage ratios of 10 percent or less. Within this category, 42.8 percent of enterprises
had used internal equity finance only, while 15.2 percent reported using 10 percent or less debt in their start-up capital. It is apparent that equity finance was by far the predominant source of initial funding for SMEs. This finding is consistent with those of the study of Godfried and Song (2000) in Ghana and Vatnabar (1998) in Australia. They indicated that SMEs rely heavily on internal equity finance since credit for start-up enterprises is relatively scarce. Moreover, banks do not want to risk lending to new enterprises that do not have a track record of performance.

**Figure 5.12 Proportion of Current Debt to Total Finance**

As can be seen from Figure 5.11 and Figure 5.12, the percentage of enterprises that used only equity finance for start-up fell from 42.8 percent at the start-up phase to 15.8 percent at the current stage. Moreover, the number of enterprises that reported using debt of between 1 to 10 percent increased from 15.2 percent during start-up to 26.6 percent in their current finance. The proportions of current debt to total current capital were generally higher than the proportions of start-up debt to total start-up capital. This suggests that Thai owner/managers tend to rely more on internal equity finance at start up as debt is not readily available at this stage when they have no collateral or a track record of performance. They are able to access external debt finance over time as the business grows and/or their viability can be more readily accessed by debt providers, minimising the risk associated with lending to them. These results are in line with the findings of the study by Hamilton and Fox (1998) for New Zealand SMEs, Berger and Udell (1998) for American SMEs, and Holmes and...
Kent (1991) for Australian SMEs, all of which indicate that external debt is not readily available to small firms at the start-up phase.

**Size of the Firm**

As discussed in Step 4.2.1.1.8, size was measured according to the total number of employees and the value of fixed assets. The frequencies of responses to questions related to these surrogates are depicted in Figure 5.13 and Figure 5.14.

**Figure 5.13 Number of Employees**

It is apparent from Figure 5.13 that more than half of SMEs (55.04 percent) did not have any employees and 35.26 percent had 1-5 employees. This may be because the size of the business was small (see Figure 5.14). The findings indicate that the majority of firms in the sample were small.
Figure 5.14 reveals that 97.3 percent of SMEs indicated a market value of their fixed assets of less than or equal to THB 30 million or AUD 960,000 (31.25 = average exchange rate between 1/7/05 and 3/11/05 (Forex Capital Markets LLC 2006)). Only 2.7 percent of SMEs indicated that the market value of their fixed assets was more than THB 30 million or AUD 960,000. Based on the definition of SMEs in Thailand as stated in Section 2.2, more than 97 percent of SMEs in this study fell into the small enterprise category, while about 3 percent were medium enterprises.

5.2.4.3 Information Readiness

As discussed in Section 3.8, information readiness is measured by quality of financial information. The descriptive statistics of responses to questions related to financial information are presented in this section. Results show that 220 (54.05 percent) of owner/managers prepared financial information. About 86.82 percent (191) of these owner/managers prepared financial information for management purposes, and about 65.45 percent prepared this information for tax purposes. Around 90 percent (199) of owner/managers who prepared financial information used this information to support their business decisions. McMahon (1999b) and Dart, Ng, and Sarkar (1990) also reported a high level of use of financial information to support business decisions in small firms in Australia and Singapore respectively. The reasons why
owner/managers use financial information to support their business decisions are summarised in Table 5.7.

Table 5.7 Reasons Why Owner/Managers Use Financial Information to Support their Business Decisions

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provided useful information</td>
<td>4.42</td>
<td>0.63</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Financial information was available</td>
<td>3.94</td>
<td>0.75</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Financial information was accurate</td>
<td>4.14</td>
<td>0.72</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Financial information was up to date</td>
<td>4.12</td>
<td>0.72</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Financial information contained adequate information needed</td>
<td>4.15</td>
<td>0.72</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 5.7 shows that the main reason why owner/managers used financial information was because it provided useful information with the highest mean index of 4.42. This was followed by the view that it provided an adequate coverage of the information required (4.15), it was accurate (4.14), it was up to date (4.12), and it was available (3.94). These findings suggest that owner/managers use financial information because they realise the usefulness of financial information in supporting their business decisions. This may be associated with the high educational levels of owner/managers in this study (high school and above).

The descriptive statistics show that about 10 percent (21) of owner/managers who prepared financial information did not use this information. The reasons why these owner/managers did not use financial information to support their business decisions are summarised in Table 5.8. The table reveals that the main reasons why owner/managers did not use this information were because they considered financial information was inadequate for their decisions (with a mean index of 3.43), they did not have the knowledge and skills adequate for using the available financial information (3.29), and because the financial information was not up to date (3.24). Another significant reason was lack of understanding of the available information (3.14). These findings are consistent with those of the Institute for Small and Medium Enterprises Development (2001), which also reported that Thai owner/managers do not have enough knowledge and skills to use financial information.
Table 5.8 Reasons Why Owner/Managers Did Not Use Financial Information to Support Business Decisions

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business did not keep financial information records</td>
<td>2.81</td>
<td>1.08</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Financial information was inaccurate and incomplete</td>
<td>3.00</td>
<td>0.78</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Financial information was not up to date</td>
<td>3.24</td>
<td>0.63</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Financial information was inadequate</td>
<td>3.43</td>
<td>0.75</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Did not understand financial information provided</td>
<td>3.14</td>
<td>0.85</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Inadequate knowledge and skills for using financial information</td>
<td>3.29</td>
<td>0.72</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Owner/managers who prepared financial information were asked to indicate the level of importance they attached to various pieces of financial information. The responses to this question are summarised in Table 5.9.

Table 5.9 Important Level of Financial Information

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit and loss statement</td>
<td>4.00</td>
<td>1.67</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Balance sheet</td>
<td>3.33</td>
<td>1.96</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Cash flow statement</td>
<td>2.54</td>
<td>2.28</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Budget</td>
<td>2.32</td>
<td>2.20</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Variance analysis</td>
<td>2.05</td>
<td>2.18</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Aged debtors balances</td>
<td>1.71</td>
<td>2.07</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Aged creditors balances</td>
<td>1.70</td>
<td>2.08</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Current ratio</td>
<td>2.00</td>
<td>2.16</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Inventory turnover</td>
<td>2.08</td>
<td>2.19</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Return on assets</td>
<td>2.09</td>
<td>2.19</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Return on equity</td>
<td>2.04</td>
<td>2.17</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>2.32</td>
<td>2.28</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Debt to total assets ratio</td>
<td>1.97</td>
<td>2.13</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Debt to equity ratio</td>
<td>1.90</td>
<td>2.13</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Times interest covered</td>
<td>1.95</td>
<td>2.18</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 5.9 shows that owner/managers considered profit and loss statement and balance sheet as the most important forms of financial information, with mean indices of 4.00 and 3.33 respectively. These were followed by cash flow statement (2.54),
budget (2.32) and net profit margin (2.32). Owner/managers attached lower levels of importance to the other forms of financial information. This can be explained by the fact that financial information prepared by SMEs generally consists mainly of profit and loss statement and balance sheet (Cameron 1993; KPMG Special Services and EIM Business & Policy Research in the Netherlands, European Network for SME Research, and Intomart 2003). During the data collection process, a number of owner/managers indicated that they did not know or had never heard of other financial information. Some of them had never prepared other financial information apart from profit and loss statement and balance sheet. Thus, they placed emphasis generally on profit and loss statement and balance sheet, mainly to conform with tax requirements.

Quality of financial information was measured in three dimensions: accuracy and completeness, timeliness, and consistency. Results of these assessments are presented in Table 5.10.

**Table 5.10 Quality of Financial Information**

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>Mean</th>
<th></th>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accuracy and completeness</td>
<td>Timeliness</td>
<td>Consistency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit and loss statement</td>
<td>3.27</td>
<td>3.22</td>
<td>2.82</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Balance sheet</td>
<td>2.72</td>
<td>2.60</td>
<td>2.21</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Cash flow statement</td>
<td>1.84</td>
<td>1.83</td>
<td>1.65</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Budget</td>
<td>1.60</td>
<td>1.61</td>
<td>1.35</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Variance analysis</td>
<td>1.30</td>
<td>1.27</td>
<td>1.21</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Aged debtors balances</td>
<td>1.16</td>
<td>1.06</td>
<td>1.03</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Aged creditors balances</td>
<td>1.15</td>
<td>1.04</td>
<td>1.03</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Current ratio</td>
<td>1.34</td>
<td>1.28</td>
<td>1.19</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Inventory turnover</td>
<td>1.40</td>
<td>1.37</td>
<td>1.31</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Return on assets</td>
<td>1.39</td>
<td>1.34</td>
<td>1.20</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Return on equity</td>
<td>1.38</td>
<td>1.32</td>
<td>1.18</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>1.65</td>
<td>1.61</td>
<td>1.55</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Debt to total assets ratio</td>
<td>1.25</td>
<td>1.22</td>
<td>1.08</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Debt to equity ratio</td>
<td>1.27</td>
<td>1.15</td>
<td>1.01</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Times interest covered</td>
<td>1.29</td>
<td>1.24</td>
<td>1.14</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

From Table 5.10, profit and loss statement and balance sheet were the first two forms of financial information that owner/manager classified as the most accurate and
complete, timely, and consistent. This may be because profit and loss statement and balance sheet are financial information commonly prepared by SMEs for tax purposes. Owner/managers who indicated that they were not aware of or did not prepare other financial information were not in a position to assess the quality of these pieces of financial information. In addition, there were costs involved in preparing these pieces of information. This finding is consistent with those of the study of Palmer (1994) in the United States, in which it was noted that only statutory financial information such as profit and loss statement and balance sheet are routinely prepared and used by small firms. In addition, their preparation and usage of non-statutory financial information such as cash flow, common size balance sheet, and forecasting financial statement, significantly decreased compared with those for statutory requirements.

After these preliminary analyses, based on descriptive statistics, the next sections present the assessment of the measurement and structural models. As discussed in Section 4.4.2, the partial least squares (PLS) approach to structural equation modeling (using PLS graph version 3.00) was used in this study to test the hypotheses formulated. Although PLS simultaneously estimates parameters for the measurement and structural models, the two models are analysed and interpreted separately (Hulland 1999). Therefore, the applications of the two models to this study are discussed separately in the following sections.

5.3 Assessment of the Measurement Model

As identified in Section 4.4.3.3.4, the measurement model is assessed to determine the reliability and validity of the indicators used to represent the constructs. Factor loadings and composite reliability are used to assess the reliability of the measurement models. The validity of the measurement models is measured by the average variance extracted (AVE), and by comparing the correlation matrix of the constructs with the square root of the AVE for each construct (discriminant validity).

From the 407 samples obtained in this study, 158 respondents had sought finance in addition to the start-up capital. Therefore the hypotheses relating to access to finance were analysed using 158 samples. That is, the first, second, and fourth hypotheses
were tested using 158 samples, and the third hypothesis, dealing with the influence of investment readiness on performance, was tested using 407 samples. The results of AVE, factor loading, and composite reliability for measurement models using 158 samples are summarised in Table 5.11 to Table 5.13, and the results based on 407 samples are summarised in Table 5.14 to Table 5.16.

### Table 5.11 Average Variance Extracted (AVE), Factor Loadings, and Composite Reliability Using 158 Samples

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loading</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance (PERF):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.85, AVE = 0.48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Satisfaction with profitability (PERF1)</td>
<td>0.86</td>
<td>0.12</td>
</tr>
<tr>
<td>2. Satisfaction with growth in sales (PERF2)</td>
<td>0.88</td>
<td>0.12</td>
</tr>
<tr>
<td>3. Satisfaction with return on assets (PERF3)</td>
<td>0.78</td>
<td>0.13</td>
</tr>
<tr>
<td>4. Satisfaction with cash flow (PERF4)</td>
<td>0.76</td>
<td>0.10</td>
</tr>
<tr>
<td>5. Satisfaction with lifestyle (PERF5)</td>
<td>0.36</td>
<td>0.24</td>
</tr>
<tr>
<td>6. Satisfaction with independence (PERF6)</td>
<td>0.32</td>
<td>0.25</td>
</tr>
<tr>
<td>7. Satisfaction with job security (PERF7)</td>
<td>0.64</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Access to Finance (ACCESS):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.92, AVE = 0.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Access outside equity capital (ACCESS1)</td>
<td>0.69</td>
<td>0.06</td>
</tr>
<tr>
<td>2. Achieve low costs of accessing outside equity capital (ACCESS2)</td>
<td>0.81</td>
<td>0.04</td>
</tr>
<tr>
<td>3. Achieve low interest rate (ACCESS3)</td>
<td>0.90</td>
<td>0.02</td>
</tr>
<tr>
<td>4. Achieve low processing costs (ACCESS4)</td>
<td>0.88</td>
<td>0.03</td>
</tr>
<tr>
<td>5. Achieve low collateral requirements (ACCESS5)</td>
<td>0.80</td>
<td>0.04</td>
</tr>
<tr>
<td>6. Handle loan application process (ACCESS6)</td>
<td>0.75</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Financial Leverage Ratio (FLR):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.38, AVE = 0.37)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The proportion of debt in start-up capital (FLR1)</td>
<td>0.01</td>
<td>0.46</td>
</tr>
<tr>
<td>2. The proportion of debt in current capital (FLR2)</td>
<td>0.86</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Size (SIZE):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.82, AVE = 0.70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Fixed assets values (SIZE1)</td>
<td>0.99</td>
<td>0.25</td>
</tr>
<tr>
<td>2. Number of employee (SIZE2)</td>
<td>0.65</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>Financial Information (FI):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.78, AVE = 0.57)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Accuracy and completeness (FI1)</td>
<td>0.86</td>
<td>0.29</td>
</tr>
<tr>
<td>2. Timeliness (FI2)</td>
<td>0.91</td>
<td>0.29</td>
</tr>
<tr>
<td>3. Consistency (FI3)</td>
<td>0.40</td>
<td>0.44</td>
</tr>
</tbody>
</table>

**Reliability**

As can be seen from Table 5.11, the composite reliability for every construct except financial leverage ratio is greater than 0.70, the level suggested by Nunnally (1978). These results represent a reliable measurement of all constructs but financial leverage
ratio. Moreover, all indicators, except two performance indicators and one financial leverage ratio indicator, are above or equal to 0.40, the loading level indicating reliable measurement in this study (see Section 4.4.3.3.4). The two performance indicators with loadings of 0.36 (satisfaction with lifestyle) and 0.32 (satisfaction with independence), and the one financial leverage ratio indicator with a factor loading of 0.01 (the proportion of debt in start-up capital) do not contribute substantively to their respective constructs in the measurement model. These results indicate that these indicators should be removed from the performance and financial leverage measurement models in order to improve their reliabilities. Therefore, new measurement models of performance and financial leverage, excluding the indicators with low factor loadings, were tested. The new results for the two measurement models are summarised in Table 5.12.

Table 5.12 Average Variance Extracted (AVE), Factor Loadings, and Composite Reliability of New Measurement Model Using 158 Samples

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loading</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance (PERF):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.89, AVE = 0.63)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Satisfaction with profitability (PERF1)</td>
<td>0.89</td>
<td>0.05</td>
</tr>
<tr>
<td>2. Satisfaction with growth in sales (PERF2)</td>
<td>0.91</td>
<td>0.06</td>
</tr>
<tr>
<td>3. Satisfaction with return on assets (PERF3)</td>
<td>0.78</td>
<td>0.06</td>
</tr>
<tr>
<td>4. Satisfaction with cash flow (PERF4)</td>
<td>0.75</td>
<td>0.10</td>
</tr>
<tr>
<td>5. Satisfaction with job security (PERF7)</td>
<td>0.59</td>
<td>0.16</td>
</tr>
<tr>
<td>Financial Leverage Ratio (FLR):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 1.00, AVE = 1.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The proportion of debt in current capital (FLR2)</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Results of the new performance construct in Table 5.12 reveal a considerable improvement in the reliability of the model as the composite reliability increased from 0.85 to 0.89 and factor loadings of all performance indicators are more than 0.40. This indicates the measures share more variance with the performance construct than with the error variance. Since there is now only one indicator for financial leverage the composite reliability, AVE and factor loading all equal one. The revised measurement models for the performance and financial leverage constructs are used to test a new structural equation model, depicted in Figure 4.17, 4.19 and 4.20. The revised structural model presented in Figure 5.15 to Figure 5.17 relates to the first, second and fourth objectives of this study.
Figure 5.15 Revised Structural Equation Model for the First Objective

- ACCESS1
- ACCESS2
- ACCESS3
- ACCESS4
- ACCESS5
- ACCESS6

Figure 5.16 Revised Structural Equation Model for the Second Objective

- EXP1
- EXP
- EDU1
- EDU
- AGE1
- AGE
- GEN1
- GEN
- FLR2
- FLR
- SIZE1
- SIZE
- SIZE2

where PERF, ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE, F1, PERF1, PERF2, PERF3, PERF4, PERF7, ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5, ACCESS6, EXP1, EDU1, AGE1, GEN1, FLR1, FLR2, SIZE1, SIZE2, F11, F12, and F13 are defined as in Table 4.6
where PERF, ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE, F1, PERF1, PERF2, PERF3, PERF4, PERF7, ACCESS1, ACCESS2, ACCESS3, ACCESS4, ACCESS5, ACCESS6, EXP1, EDU1, AGE1, GEN1, FLR1, FLR2, SIZE1, SIZE2, F11, F12 and F13 are defined as in Table 4.6.
**Validity**

As shown in Table 5.11 and Table 5.12, the AVEs of all the constructs are more than 0.50 (the level suggested by Fornell and Larcker (1981) – see Section 4.4.3.3.4), providing evidence of adequate convergent validity of all constructs. Another assessment for the validity of the measurement model applied in this study is the discriminant validity of the constructs, measured by comparing the square roots of AVEs to the correlation between constructs. This is demonstrated in the correlation matrix in Table 5.13, which includes correlation among constructs in the off-diagonal and the square root of AVE in the diagonal.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>EXP</th>
<th>EDU</th>
<th>AGE</th>
<th>GEN</th>
<th>FLR</th>
<th>SIZE</th>
<th>FI</th>
<th>PERF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESS</td>
<td><strong>0.81</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXP</td>
<td>0.17</td>
<td><strong>1.00</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU</td>
<td>-0.09</td>
<td>-0.11</td>
<td><strong>1.00</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>0.04</td>
<td>0.33</td>
<td>-0.38</td>
<td><strong>1.00</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEN</td>
<td>-0.14</td>
<td>-0.001</td>
<td>-0.04</td>
<td>-0.17</td>
<td><strong>1.00</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLR</td>
<td>0.03</td>
<td>0.19</td>
<td>0.07</td>
<td>0.09</td>
<td>-0.21</td>
<td><strong>1.00</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.25</td>
<td>0.36</td>
<td>0.22</td>
<td>0.017</td>
<td>-0.18</td>
<td>0.08</td>
<td><strong>0.84</strong></td>
<td></td>
</tr>
<tr>
<td>FI</td>
<td>0.07</td>
<td>0.09</td>
<td>0.16</td>
<td>-0.02</td>
<td>0.21</td>
<td>-0.11</td>
<td>0.11</td>
<td><strong>0.76</strong></td>
</tr>
<tr>
<td>PERF</td>
<td>0.17</td>
<td>-0.09</td>
<td>0.14</td>
<td>-0.19</td>
<td>0.02</td>
<td>-0.27</td>
<td>0.06</td>
<td>0.11</td>
</tr>
</tbody>
</table>

The table shows that the diagonal elements are all greater than their respective off-diagonal elements, indicating adequate discriminant validity. The above results demonstrate that the measurement model of the first, second, and fourth hypotheses using 158 samples are reliable and valid.
Table 5.14 Average Variance extracted (AVE), Factor Loadings, and Composite Reliability Using 407 Samples

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loading</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance (PERF):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.84, AVE = 0.48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Satisfaction with profitability (PERF1)</td>
<td>0.88</td>
<td>0.09</td>
</tr>
<tr>
<td>2. Satisfaction with growth in sales (PERF2)</td>
<td>0.92</td>
<td>0.09</td>
</tr>
<tr>
<td>3. Satisfaction with return on assets (PERF3)</td>
<td>0.82</td>
<td>0.08</td>
</tr>
<tr>
<td>4. Satisfaction with cash flow (PERF4)</td>
<td>0.78</td>
<td>0.09</td>
</tr>
<tr>
<td>5. Satisfaction with lifestyle (PERF5)</td>
<td>0.29</td>
<td>0.24</td>
</tr>
<tr>
<td>6. Satisfaction with independence (PERF6)</td>
<td>0.20</td>
<td>0.25</td>
</tr>
<tr>
<td>7. Satisfaction with job security (PERF7)</td>
<td>0.55</td>
<td>0.16</td>
</tr>
<tr>
<td><strong>Financial Leverage Ratio (FLR):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.82, AVE = 0.70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The proportion of debt in start-up capital (FLR1)</td>
<td>0.77</td>
<td>0.17</td>
</tr>
<tr>
<td>4. The proportion of debt in current capital (FLR2)</td>
<td>0.89</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Size (SIZE):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.83, AVE = 0.71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fixed assets values (SIZE1)</td>
<td>0.97</td>
<td>0.17</td>
</tr>
<tr>
<td>4. Number of employees (SIZE2)</td>
<td>0.69</td>
<td>0.26</td>
</tr>
<tr>
<td><strong>Financial Information (FI):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.88, AVE = 0.71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Accuracy and completeness (FI1)</td>
<td>0.37</td>
<td>0.22</td>
</tr>
<tr>
<td>5. Timeliness (FI2)</td>
<td>0.90</td>
<td>0.11</td>
</tr>
<tr>
<td>6. Consistency (FI3)</td>
<td>0.93</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Reliability

From Table 5.14, the composite reliability for every construct is greater than 0.70, the level suggested by Nunnally (1978). These results represent reliable measurements of all constructs. Moreover, all indicators, except two performance indicators and one financial information indicator, are above the 0.40 loading level, the threshold for factor loadings in this study (see Section 4.4.3.3.4). The two performance indicators with loadings of 0.29 (satisfaction with lifestyle) and 0.20 (satisfaction with independence), and one financial information indicator with factor loading of 0.37 (accuracy and completeness) account for the low reliabilities of their respective measurement models. These results require that the indicators with factor loadings of less than 0.40 should be removed from their respective measurement models in order to improve their reliabilities. Therefore, a new measurement model for performance excluding the two indicators was tested. The removal of the performance indicators with loadings below 0.40 also improved the loading for the accuracy and
completeness indicator in the financial information measurement model. The new results for the performance and financial information measurement models using 407 samples are summarised in Table 5.15.

Table 5.15 Average Variance Extracted (AVE), Factor Loadings, and Composite Reliability of New Measurement Model Using 407 Samples

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loading</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance (PERF):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.90, AVE = 0.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Satisfaction with profitability (PERF1)</td>
<td>0.88</td>
<td>0.02</td>
</tr>
<tr>
<td>2. Satisfaction with growth in sales (PERF2)</td>
<td>0.91</td>
<td>0.01</td>
</tr>
<tr>
<td>3. Satisfaction with return on assets (PERF3)</td>
<td>0.83</td>
<td>0.03</td>
</tr>
<tr>
<td>4. Satisfaction with cash flow (PERF4)</td>
<td>0.79</td>
<td>0.03</td>
</tr>
<tr>
<td>5. Satisfaction with job security (PERF7)</td>
<td>0.59</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Financial Information (FI):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Composite Reliability = 0.88, AVE = 0.71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Accuracy and completeness (FI1)</td>
<td>0.68</td>
<td>0.16</td>
</tr>
<tr>
<td>2. Timeliness (FI2)</td>
<td>0.89</td>
<td>0.15</td>
</tr>
<tr>
<td>3. Consistency (FI3)</td>
<td>0.93</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Results of the new performance construct in Table 5.15 reveal considerable improvement in the reliability of the model after removing the two indicators, as the composite reliability of the model increased from 0.84 to 0.90. In addition, the factor loading of accuracy and completeness in the financial information construct increased to more than 0.40. The results show that the measures share more variance with their respective constructs than with the error variance. The revised measurement model for the performance construct is used to derive a new structural equation model for the third objective, depicted in Figure 4.16. The revised structural model is presented in Figure 5.18.
Validity

As shown in Table 5.14 and Table 5.15, the AVEs of all the constructs are more than 0.40 (the threshold applied in this study – see Section 4.4.3.3.4), providing evidence of adequate convergent validity of all constructs. Another assessment for the validity of the measurement models applied in this study is the discriminant validity for constructs, measured by comparing the square roots of AVEs to the correlation between constructs. This is demonstrated in the correlation matrix in Table 5.16, which includes correlation among constructs in the off-diagonal and the square root of AVE in the diagonal.
Table 5.16 Discriminant Validity of Constructs Used in the Measurement Model of the Second Hypothesis

<table>
<thead>
<tr>
<th></th>
<th>PERF</th>
<th>EXP</th>
<th>EDU</th>
<th>AGE</th>
<th>GEN</th>
<th>FLR</th>
<th>SIZE</th>
<th>FI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERF</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXP</td>
<td>-0.10</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU</td>
<td>0.11</td>
<td>-0.21</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>-0.19</td>
<td>0.42</td>
<td>-0.49</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEN</td>
<td>0.05</td>
<td>-0.03</td>
<td>0.01</td>
<td>-0.10</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLR</td>
<td>-0.14</td>
<td>0.12</td>
<td>0.03</td>
<td>0.03</td>
<td>-0.12</td>
<td>0.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.12</td>
<td>0.15</td>
<td>0.17</td>
<td>0.09</td>
<td>-0.06</td>
<td>0.09</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>FI</td>
<td>0.15</td>
<td>-0.02</td>
<td>0.08</td>
<td>-0.05</td>
<td>0.10</td>
<td>-0.08</td>
<td>0.04</td>
<td>0.84</td>
</tr>
</tbody>
</table>

The table shows that the diagonal elements are all greater than their respective off-diagonal elements, indicating adequate discriminant validity. The results presented above demonstrate that the measurement model for the third hypothesis using 407 samples is reliable and valid.

5.4 Assessment of the Structural Model

The structural model was used to test the hypothesised relationships between the theoretical constructs depicted in Figure 4.4. As indicated in Section 4.4.3.3.2, the signs and the magnitudes of the estimated parameters (path coefficients) were applied to assess the structural model. The null hypotheses associated with the alternative hypotheses developed in this study are tested. A summary of the signs, path coefficients, R-squares of the endogenous constructs and results of the hypothesis testing are presented in four sub-sections based on the study objectives. The four main objectives in this study to be examined are the relationship between access to finance and performance; the relationship between investment readiness and access to finance; the relationship between investment readiness and performance; and the indirect influence of investment readiness on performance through access to finance.
5.4.1 Hypothesis Testing of the Influence of Access to Finance on Performance of SMEs in Thailand

This section presents results associated with testing the first objective (H1) of this study, that is, to examine whether access to finance has an influence on performance. The null hypothesis associated with alternative hypothesis H1 is tested. The path coefficients and t-values related to the test of the first hypothesis are presented in Table 5.17.

<table>
<thead>
<tr>
<th>Paths between Unobserved Variables</th>
<th>Hypothesised Signs</th>
<th>Path Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESS ———&gt; PERF (H1)</td>
<td>+</td>
<td>0.22***</td>
<td>3.51</td>
</tr>
</tbody>
</table>

Hypothesis 1 (H1) predicted a positive relationship between access to finance and performance. The path coefficient between access to finance and performance in Table 5.17 is significant in the hypothesised direction. Thus, the null hypothesis is rejected and the results confirm alternative hypothesis H1. That is, access to finance has a significant positive effect on performance. Owner/managers who believed they could overcome the barrier to accessing external finance tended to be more satisfied with their business performance in terms of profitability, sales growth, return on assets, cash flow, and job security.

5.4.2 Hypothesis Testing of the Influence of Investment Readiness on Access to Finance of SMEs in Thailand

This section presents results associated with testing the second objective of this study. That is, to assess whether investment readiness has an influence on access to finance. This objective is converted into hypotheses H2a, H3a, H4a, H5a, H6a, H7a and H8a for empirical testing purposes. The null hypotheses associated with the alternative hypotheses H2a, H3a, H4a, H5a, H6a, H7a and H8a are tested. Table 5.18 summarises the path coefficients and t-values for the tested hypotheses related to this objective.
Table 5.18 Path Coefficients and t-statistics

<table>
<thead>
<tr>
<th>Paths between Unobserved Variables</th>
<th>Hypothesised Signs</th>
<th>Path Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP ➔ ACCESS (H2a)</td>
<td>+</td>
<td>0.09</td>
<td>1.10</td>
</tr>
<tr>
<td>EDU ➔ ACCESS (H3a)</td>
<td>+</td>
<td>-0.21***</td>
<td>2.65</td>
</tr>
<tr>
<td>AGE ➔ ACCESS (H4a)</td>
<td>-</td>
<td>-0.14*</td>
<td>1.59</td>
</tr>
<tr>
<td>GEN ➔ ACCESS (H5a)</td>
<td>-</td>
<td>-0.14**</td>
<td>1.79</td>
</tr>
<tr>
<td>FLR ➔ ACCESS (H6a)</td>
<td>-</td>
<td>0.003</td>
<td>0.03</td>
</tr>
<tr>
<td>SIZE ➔ ACCESS (H7a)</td>
<td>+</td>
<td>0.25*</td>
<td>1.42</td>
</tr>
<tr>
<td>FI ➔ ACCESS (H8a)</td>
<td>+</td>
<td>0.10</td>
<td>0.84</td>
</tr>
</tbody>
</table>

*** - significant at 0.01 level  
** - significant at 0.05 level  
* - significant at 0.10 level

As shown in Table 5.18, the path coefficient for the relationship between experience and access to finance is not significant, as the t-value is 1.10. Thus, the null hypothesis is accepted and the results do not support the alternative hypothesis. This indicates that hypothesis 2a is not confirmed and thus owner/managers’ experience has no significant effect on access to finance.

Hypothesis 3a predicted a positive relationship between owner/managers’ education and access to finance. The path coefficient for the relationship between education and access to finance is significant at 0.01 level, but opposite to the hypothesised direction. This indicates that the null hypothesis is rejected and the alternative hypothesis is supported. However, the effect of owner/managers’ education on access to finance is negative. That is, owner/managers with lower levels of education have greater ability to access finance than owner/managers with higher levels of education.

The null hypothesis is rejected and the results support the alternative hypothesis 4a since the t-value of the path coefficient for the relationship between age and access to finance is significant. This value indicates that the theoretical relationship specified is supported by the data. Therefore, younger owner/managers have greater ability to access finance than their older counterparts.

The path coefficient for the relationship between gender and performance (H5a) is significant at 0.05 level, as the t-value is more than 1.65. Thus, the null hypothesis is rejected and the alternative hypothesis confirmed. This means that, in line with the
hypothesis, male owner/managers have more ability to access finance than female owner/managers as gender was coded 0 for male and 1 for female.

The null hypothesis is accepted and alternative hypothesis 6a is refuted, as the $t$-value of the relationship between financial leverage ratio and access to finance is not significant. This value reveals that business financial leverage ratio has no significant effect on access to finance.

The null hypothesis is rejected and the positive effect of business size on access to finance (H7a) is supported. This is because the path coefficient for the relationship between these two factors is positive and significant at 0.10 level. That is, larger firms have greater ability to access finance than smaller firms.

Even though the path coefficient between financial information and access to finance is in the hypothesised direction it is not significant. This indicates that the null hypothesis is accepted and that the results do not support alternative hypothesis 8a. That is, financial information has no significant effect on access to finance.

The results of the hypotheses tested for the second objective of this study are summarised in Table 5.19:
Table 5.19 Hypotheses for Direct Effect of Investment Readiness on Access to Finance

<table>
<thead>
<tr>
<th>Investment Readiness Variables</th>
<th>Decision Regarding Hypothesis</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>No support found</td>
<td>H2a: Owner/manager’s experience has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>Education</td>
<td>No support found</td>
<td>H3a: Owner/managers’ education has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>Age</td>
<td>Support found</td>
<td>H4a: Younger owner/managers of SMEs in Thailand have a greater ability to access finance than older Thai owner/managers</td>
</tr>
<tr>
<td>Gender</td>
<td>Support found</td>
<td>H5a: Male owner/managers of SMEs in Thailand have a greater ability to access finance than female owner/managers</td>
</tr>
<tr>
<td>Financial Leverage Ratio</td>
<td>No support found</td>
<td>H6a: Financial leverage has a negative effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>Size</td>
<td>Support found</td>
<td>H7a: Business size has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
<tr>
<td>Financial Information</td>
<td>No support found</td>
<td>H8a: Financial information has a positive effect on the access to finance of SMEs in Thailand</td>
</tr>
</tbody>
</table>

5.4.3 Hypothesis Testing of the Influence of Investment Readiness on Performance of SMEs in Thailand

Results associated with testing the third objective of this study are presented in this section. That is, to examine whether there is a relationship between investment readiness and performance. This objective is converted into hypotheses H2b, H3b, H4b, H5b, H6b, H7b and H8b for empirical testing purposes. The null hypotheses associated with alternative hypotheses H2b, H3b, H4b, H5b, H6b, H7b and H8b are tested. Table 5.20 presents the path coefficients and t-values of the hypotheses associated with the second objective.
Table 5.20 Path Coefficients and t-statistics

<table>
<thead>
<tr>
<th>Paths between Unobserved Variables</th>
<th>Hypothesised Signs</th>
<th>Path Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP ➔ PERF (H2b)</td>
<td>+</td>
<td>-0.03</td>
<td>0.52</td>
</tr>
<tr>
<td>EDU ➔ PERF (H3b)</td>
<td>+</td>
<td>-0.02</td>
<td>0.40</td>
</tr>
<tr>
<td>AGE ➔ PERF (H4b)</td>
<td>-</td>
<td>-0.19***</td>
<td>3.69</td>
</tr>
<tr>
<td>GEN ➔ PERF (H5b)</td>
<td>-</td>
<td>0.01</td>
<td>0.20</td>
</tr>
<tr>
<td>FLR ➔ PERF (H6b)</td>
<td>-</td>
<td>-0.13***</td>
<td>3.01</td>
</tr>
<tr>
<td>SIZE ➔ PERF (H7b)</td>
<td>+</td>
<td>0.16***</td>
<td>2.38</td>
</tr>
<tr>
<td>FI ➔ PERF (H8b)</td>
<td>+</td>
<td>0.12**</td>
<td>2.30</td>
</tr>
</tbody>
</table>

*** - significant at 0.01 level  
** - significant at 0.05 level

The null hypothesis is accepted, thus the results do not confirm alternative hypothesis 2b as the t-value of the relationship between experience and performance is not significant. This value indicates that the theoretical relationship specified in hypothesis 2b was not supported by the data. Owner/managers’ experience had no effect on performance.

The path coefficient for the relationship between education and performance is not significant, as the t-value is less than 1.28. It also reveals that the null hypothesis is accepted, and alternative hypothesis 3b is refuted. Education has no significant influence on performance. This may be due to the fact that a large number of respondents have a reasonable level of education - high school and above.

The null hypothesis is rejected and alternative hypothesis 4b is supported as the t-value of the path coefficient for the relationship between age and performance is significant at 0.01 level. These values reveal that younger owner/managers perform better than their older counterparts.

In hypothesis 5b, it was predicted that male owner/managers would perform better than female owner/managers. The path coefficient for this relationship is 0.01 and is not significant. Thus, the null hypothesis is accepted and the alternative hypothesis 5b is refuted: gender has no significant effect on performance.
The negative effect of financial leverage ratio on performance was predicted in hypothesis 6b and is supported as the null hypothesis is rejected. This is because the path coefficient for the relationship between financial leverage ratio and performance is significant at 0.01 level, as the $t$-value is more than 2.33. Hence, financial leverage ratio has a significantly negative effect on performance. In other words, a high debt level has an adverse effect on performance.

The relationship between size and performance is significant. This is evidenced by the $t$-value. This value reveals that business size has a significant effect on performance, confirming the alternative hypothesis 7b. That is, larger size firms perform better than smaller size firms.

In hypothesis 8b, financial information was predicted to be positively related to performance. The path coefficient between financial information and performance provides statistically significant results that rejected the null hypothesis and confirmed the alternative hypothesis. In other words, quality financial information positively affects performance. That is, access to accurate and complete, timely, and consistent financial information enhances owner/managers’ satisfaction with their businesses on the various performance measures.

The results of the hypotheses tested for the third objective of this study are summarised in Table 5.21:
Table 5.21 Hypotheses for Direct Effect of Investment Readiness on Performance

<table>
<thead>
<tr>
<th>Access to finance and investment readiness variables</th>
<th>Decision Regarding Hypothesis</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>No support found</td>
<td>H2b: Owner/manager’s experience has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>Education</td>
<td>No support found</td>
<td>H3b: Owner/managers’ education has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>Age</td>
<td>Support found</td>
<td>H4b: Younger owner/managers of SMEs in Thailand achieve higher performance than older Thai owner/managers</td>
</tr>
<tr>
<td>Gender</td>
<td>No support found</td>
<td>H5b: Male owner/managers of SMEs in Thailand achieve higher performance than female owner/managers</td>
</tr>
<tr>
<td>Financial Leverage Ratio</td>
<td>Support found</td>
<td>H6b: Financial leverage has a negative effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>Size</td>
<td>Support found</td>
<td>H7b: Business size has a positive effect on the performance of SMEs in Thailand</td>
</tr>
<tr>
<td>Financial Information</td>
<td>Support found</td>
<td>H8b: Financial information has a positive effect on the performance of SMEs in Thailand</td>
</tr>
</tbody>
</table>

5.4.4 Hypothesis Testing of the Indirect Effect of Investment Readiness on Performance through Access to Finance of SMEs in Thailand

This section presents results associated with testing the fourth objective of this study. That is, to examine whether there is an indirect influence of investment readiness on performance via access to finance (H2c, H3c, H4c, H5c, H6c, H7c and H8c of Chapter 2). The null hypotheses associated with the alternative hypotheses H2c, H3c, H4c, H5c, H6c, H7c and H8c are tested. The results of the path coefficients, test statistics (t-values), and p-values from the Sobel test used to assess the indirect relationships in this study are summarised in Table 5.22.
Table 5.22 Path Coefficients and t-statistic of Indirect Effect

<table>
<thead>
<tr>
<th>Indirect Effect</th>
<th>Hypothesised Signs</th>
<th>Path Coefficient</th>
<th>Test statistic</th>
<th>P-value (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP → ACCESS → PERF (H2c)</td>
<td>+</td>
<td>0.02</td>
<td>0.93</td>
<td>0.18</td>
</tr>
<tr>
<td>EDU → ACCESS → PERF (H3c)</td>
<td>+</td>
<td>-0.04**</td>
<td>1.63</td>
<td>0.05</td>
</tr>
<tr>
<td>AGE → ACCESS → PERF (H4c)</td>
<td>-</td>
<td>-0.03*</td>
<td>1.32</td>
<td>0.10</td>
</tr>
<tr>
<td>GEN → ACCESS → PERF (H5c)</td>
<td>-</td>
<td>-0.03*</td>
<td>1.34</td>
<td>0.09</td>
</tr>
<tr>
<td>FLR → ACCESS → PERF (H6c)</td>
<td>-</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>SIZE → ACCESS → PERF (H7c)</td>
<td>+</td>
<td>0.05*</td>
<td>1.29</td>
<td>0.10</td>
</tr>
<tr>
<td>FI → ACCESS → PERF (H8c)</td>
<td>+</td>
<td>0.02</td>
<td>0.73</td>
<td>0.23</td>
</tr>
</tbody>
</table>

** - significant at 0.05 level
* - significant at 0.10 level

As depicted in Table 5.22, the path coefficient for the indirect effect of experience on performance via access to finance is not significant. As such, the null hypothesis is accepted and the results do not concur with alternative hypothesis 2c. Thus, there is no indirect effect of experience on performance through access to finance.

The results of hypothesis 3c, the influence of education on performance through access to finance, showed a negative significant effect. This indicates that the null hypothesis is rejected and provides evidence in support of the alternative hypothesis, although the influence of education on performance through access to finance is negative. That is, owner/managers with lower educational levels have better performance than owner/managers with higher educational levels.

The path coefficient for the indirect effect of age on performance through access to finance (H4c) is significant at a one-tailed significance level of 0.10. Thus, the null hypothesis is rejected and the results are not consistent with the alternative hypothesis. As such, younger owner/managers have better performance than older owner/managers through access to finance.

The null hypothesis is rejected and the results provide evidence in support of alternative hypothesis 5c as the t-value of the indirect effect of gender on performance via access to finance is significant. In other words, male owner/managers perform better than female owner/managers since male owner/managers have greater ability to access finance.
The indirect effect of financial leverage ratio on performance through access to finance (H6c) is not supported as the null hypothesis is accepted. This is because the path coefficient for this indirect influence is not significant. Thus, financial leverage ratio has no significant effect on performance via access to finance.

The path coefficient for the indirect effect of business size on performance through access to finance is significant, providing evidence in support of the alternative hypothesis 7c. That is, business size has a significant effect on performance via access to finance.

The path coefficient for the indirect effect of financial information on performance through access to finance is not significant. Thus, the null hypothesis is accepted and the results are not consistent with alternative hypothesis 8c. That is, financial information has no significant effect on performance via access to finance.

The results of the hypotheses tested for the fourth objective of this study are summarised in Table 5.23.
Table 5.23 Hypotheses for Indirect Effect of Investment Readiness on Performance through Access to Finance

<table>
<thead>
<tr>
<th>Investment readiness variables</th>
<th>Decision Regarding Hypothesis</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>No support found</td>
<td>H2c: Owner/managers’ experience has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>Education</td>
<td>No support found</td>
<td>H3c: Owner/managers’ education has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>Age</td>
<td>Support found</td>
<td>H4c: Owner/managers’ age has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>Gender</td>
<td>Support found</td>
<td>H5c: Owner/managers’ gender has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>Financial Leverage Ratio</td>
<td>No support found</td>
<td>H6c: Financial leverage has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>Size</td>
<td>Support found</td>
<td>H7c: Business size has an indirect effect on performance through access to finance</td>
</tr>
<tr>
<td>Financial Information</td>
<td>No support found</td>
<td>H8c: Financial information has an indirect effect on performance through access to finance</td>
</tr>
</tbody>
</table>

A summary of the signs and path coefficients of the endogenous constructs of objectives one, two and three (direct effect) are presented in Figure 5.19.
where PERF, ACCESS, EXP, EDU, AGE, GEN, FLR, SIZE and FI are defined as in Table 4.6

5.5 Conclusion

In this chapter, the descriptive statistics for business characteristics, performance, access to finance, financial information, owner/manager readiness, and business readiness were reported. The hypothesised models (Figures 5.15 to 5.18) were tested using PLS. Based on the factor loadings, some poor performing items were dropped. The measurement and structural models in this study were then assessed. The results of the hypotheses tests were summarised on the basis of the objectives of this study. The results of these hypotheses are discussed in detail in the next chapter.
CHAPTER 6
SUMMARY AND DISCUSSIONS

6.1 Introduction

The purpose of this chapter is to discuss the findings and implications of the study, and their significance for and contribution to theory and practice. The chapter is divided into six sections. In the first section, the findings of the research are discussed, especially with regard to how they relate to the research objectives. This is followed by recommendations and policy implications. The theoretical and research implications are discussed in the third section. The fourth and fifth sections deal with the limitations of the study and suggestions for future research respectively. The last section concludes the study with the key findings presented in the previous sections.

6.2 Research Objectives and Major Findings

Research indicates that there are relationships among the performance, access to finance, and investment readiness of SMEs. However, not much of the research carried out to date has been conducted in the context of developing economies, in particular Thailand. Accordingly, twenty two hypotheses based on four objectives were developed to test the relationships among these variables. To achieve these objectives, 407 individuals were surveyed through face-to-face interviews using a structured questionnaire. Structural Equation Modeling using Partial Least Square (PLS) was used to test the hypotheses and to meet the objectives of the study. The presentation and discussion of the results are the focus of the next sub-sections.

6.2.1 The Influence of Access to Finance on Performance

The first objective of this study is to examine if access to finance influences the performance of SMEs in Thailand. Accordingly, the first hypothesis (H1) was developed to test the relationship between access to finance and performance.
H1: Access to finance has a positive effect on the performance of SMEs in Thailand

This hypothesis was supported. A positive effect between access to finance and performance was indicated in Section 5.4.1. The finding reveals that the owner/managers’ perception of their ability to access finance has a significant influence on their performance. As finance is a fundamental requirement for businesses to thrive, this perception may increase the confidence of owner/managers’ in the firm’s financial situation. Their conviction that they can obtain the funds needed for their business activities and rely on a solid financial shield to provide insulation against managerial mistakes or market downtown allows owner/managers to take advantage of profitable investment opportunities and expand their businesses. These in turn enhance their investment, operations, and ultimately their satisfaction with the firm’s profitability, growth in sales, return on assets, and stability (that is, business performance in this study). It is also possible that owner/managers’ satisfaction with their performance has influence on their perception of their ability to access finance. As performance is a major criterion used by financial providers to assess a firm’s suitability for funding, owner/managers’ satisfaction with their performance may increase their confidence about their ability to access finance. This reverse causality, however, was not tested and is thus a limitation to the study.

The finding of a positive relationship between access to finance and performance is in line with results reported by Iakovleva (2004), Eeden et al. (2004), Indarti and Langenberg (2004) and Pissarides (1999), who also identified access to finance as a key factor in SME performance.

6.2.2 The Influence of Investment Readiness on Access to Finance

The second objective was to assess the relationship between investment readiness and access to finance. As stated in Section 3.6.2, investment readiness comprises owner/managers’ readiness, business readiness, and financial information readiness. For empirical testing purposes, this objective was converted into hypotheses H2a, H3a, H4a, and H5a for the relationship between owner/managers’ readiness and access to
finance; hypotheses H6a and H7a for the relationship between business readiness and access to finance; and hypotheses H8a for the relationship between information readiness and access to finance.

The path coefficient revealed significant values for the effect of owner/managers' age, gender and business size on access to finance. However, no significant result was found for the relationship between owner/managers’ experience, financial leverage ratio or financial information and access to finance. A significant result between owner/managers’ education and access to finance was found, but was not in the expected direction. A discussion of the findings relating to the second objective is presented below.

H2a: Owner/managers’ experience has a positive effect on the access to finance of SMEs in Thailand

This hypothesis was not supported. Contrary to expectation, owner/managers’ industry experience had no effect on access to finance. This finding may suggest that industry experience possessed by Thai owner/managers might not include experience in accessing finance. In other words, even though Thai owner/managers may have managed their businesses for a number of years, they may not be confident in their ability to access external finance, to achieve low costs of accessing outside finance, or to accommodate financial accessing procedures. This may be due to the fact that they do not have much experience in accessing external finance. As shown in Figure 5.3, only 0.19 percent of owner/managers had sought finance from external equity sources, 25.99 percent had sought finance from formal debt (overdraft, short- and long-term from bank, angel financing and hire purchase), while 58.00 percent used internal equity from owners’ savings, family and friends, and/or retained earnings. This lack of experience in accessing external finance may reduce Thai owner/managers’ confidence in their ability to access outside capital, in spite of the length of their experiences in operating their businesses.

It may also be that Thai owner/managers do not have the network required for information and knowledge about how to access finance. This in turn may decrease their confidence in their ability to access finance.
H3a: Owner/managers’ education has a positive effect on the access to finance of SMEs in Thailand

This hypothesis was not supported. A significant result was found, but the relationship was not in the expected direction. Owner/managers with higher education levels indicated that they had a lower ability to access finance, that is, ability to access outside equity finance and achieve low interest rate, than owner/managers with lower educational levels. A potential explanation for this finding relates to how ‘access to finance’ was measured in this study. As indicated in Section 4.2.1.1.2, owner/managers were asked to evaluate their ability to access finance. This self-evaluation method may be influenced by their educational levels. That is, highly educated respondents may be more realistic or conservative about their ability to access finance than lower educated owner/managers. Accordingly, higher-educated respondents’ ratings on ability to access finance were lower than for those with lower educational levels. This potential explanation concurs with the suggestion of Eeden et al. (2004) and Sinha (1996) that owner/managers with higher educational backgrounds are in a better position to analyse the real business situation. They perceive it is harder to accomplish their day-to-day business activities than owner/managers with lower educational levels.

H4a: Younger owner/managers of SMEs in Thailand have a greater ability to access finance than older owner/managers

This hypothesis was supported. The finding shows that younger owner/managers rate higher on their ability to access external finance than do their older counterparts. Younger Thai owner/managers are more likely to be flexible, risk-taking, to have realistic expectations about making financing decisions, and to be more willing to share ownership with investors in order to obtain additional capital. This may lead younger Thai owner/managers to perceive that they have more choices from which to access finance, and thus higher chances of successfully accessing finance than older owner/managers. The explanation for this result reflects the findings of Low and Mazzarol (2006), Coleman (2002) and Kabacoff and Stoffey (2001) that older owner/managers are more risk averse than younger owner/managers.
**H5a: Male owner/managers of SMEs in Thailand have a greater ability to access finance than female owner/managers**

This hypothesis was supported. The finding that male owner/managers have a greater ability to access finance than their female counterparts was not surprising. This finding may suggest that female owner/managers in Thailand have a lower perception in their ability to access finance than their male counterparts because they may not have a legal right to property. A general lack of property and thus collateral (derived from an inadequate legal and institutional framework that denies property rights to women) may reduce female owner/managers’ confidence in accessing finance. Research indicates that women’s businesses tend to be smaller than their male counterparts (Bird and Sapp 2004; Verheul, Risseeuw, and Bartelse 2002), also indicating that they may not have adequate assets to appeal to finance providers.

Another potential explanation for this result is based on feminist theory, which suggests that finance providers make their decisions based on society’s attitudes towards the gender of owner/managers (Loscocco and Robinson 1991). In other words, female owner/managers may assume that finance providers are less willing to invest in their business since finance providers are of the view that Thai female owner/managers lack the skills necessary for effective management of monies invested in their businesses compared to their male counterparts. Women owned business are generally considered more risky to invest in, and accordingly, female owner/managers in Thailand perceive that they have less ability to access finance than male owner/managers. The inability of women to access finance compared to their male counterparts was also reported by Loscocco et al. (1991), Saffu and Manu (2004) and Kitakule, Limburg, and Weisert (2006).

**H6a: Financial leverage has a negative effect on the access to finance of SMEs in Thailand**

This hypothesis was not supported. The finding suggests that owner/managers of SMEs in Thailand may not consider financial leverage as important in accessing finance. They may perceive that other factors such as business assets and owner/managers’ networks are more important in accessing external finance. For
instance, they may believe that, as long as they have enough assets to guarantee their loans, they will be able to access external finance.

This may imply a lack of awareness among owner/managers of the usefulness of this ratio in assisting them to access finance. That is, owner/managers may not realise that a higher level of debt in the firm’s financial structure may signal an increased magnitude of liquidity risk, and that their firm’s ability to service financial provider requirements is decreased. This in turn may reduce the willingness of finance providers to invest in their business. Lack of knowledge about the importance of financial leverage explains the absence of a significant association between financial leverage ratio and the ability to access external finance.

**H7a: Business size has a positive effect on the access to finance of SMEs in Thailand**

This hypothesis was supported. Documentation from Business Thailand (2002), Naetiniyoom (2003) and Small Industry Credit Guarantee Corporation (2005) highlight that finance providers require Thai SMEs to provide assets to back up monies lent to them in order to reduce potential losses to the lenders. As firm size in this study was measured by the value of fixed assets and the number of employees (see Section 4.2.1.1.10), respondents with higher fixed assets are likely to have more confidence in their ability to achieve low interest rates and low processing costs, and to handle loan application procedures effectively. Since they have more tangible assets to pledge as collateral, these larger firms are able to reduce the risks associated with investing in or lending to them. This argument is supported by the study of Bukvic and Bartlett (2003) who concluded that, as far as the firm’s assets are concerned, the ability of SMEs with lower fixed assets to access finance is consistently less than that of their counterparts with larger fixed assets.

In addition, respondents may perceive that with higher fixed assets and a greater number of employees, they are able to show potential external equity investors that they have better prospects for management and a higher potential for success, all of which make them attractive to equity providers. This perception in turn increases their confidence in their ability to access external finance at lower costs.
The positive effect of business size on access to finance is consistent with the findings of Bukvic and Bartlett (2003) and Godfried and Song (2000), who argued that firm size plays a crucial role in accessing finance.

H8a: Financial information has a positive effect on the access to finance of SMEs in Thailand

This hypothesis was not supported. Owner/managers of SMEs in Thailand may perceive that finance providers do not always use financial information to support their decision to invest in their businesses. This is because finance providers consider that the quality of financial information is generally low. It may be out of date, incomplete, or inaccurate. Owner/managers might perceive that finance providers focus more on other factors, such as the value of fixed assets and the number of employees, as they are tangible evidence of SMEs’ ability to meet the finance requirements.

The finding may also suggest that the financial information required for accessing finance is not limited to profit and loss statement and balance sheet. As discussed in Section 4.2.1.1.3, financial information in this study covers 15 types of financial information acknowledged by previous studies as useful for small business, such as profit and loss statement, balance sheet, cash flow statement, budgets and variance analyses. The analysis conducted in this study, however, indicates that profit and loss and balance sheet are the most widely prepared and used pieces of financial information (see Table 5.10). Other pieces of financial information were hardly prepared and used by SMEs in Thailand, even though they are also useful for accessing finance. For instance, a budget can provide guidelines for financing decisions since it presents information about future actions, strategies, and the results of these decisions. This information allows SMEs to evaluate their future financial situation, to identify if they need money, and how much money they need in the future. By knowing these in advance, SMEs will be able to prepare themselves beforehand, and in turn will be able to increase their ability to access finance.
6.2.3 The Influence of Investment Readiness on Performance

To test the effect of investment readiness on performance, three constructs were developed to capture investment readiness in this study: owner/manager readiness, consisting of owner/managers’ experience, education, age, gender; business readiness, comprising financial leverage ratio, and size; and information readiness, measured in terms of financial information.

As indicated in Section 5.4.3, this objective was further developed into seven hypotheses (H2b, H3b, H4b, H5b, H6b, H7b, and H8b) for empirical testing purposes. It was expected that owner/managers’ experience, education, business size and financial information would have a positive effect on performance, and that the relationship between owner/managers’ age, gender and financial leverage and performance would be negative. The path coefficient confirmed the hypotheses for the effect of owner/managers’ age, financial leverage, business size and financial information on performance, but not the relationships between owner/managers’ experience, education, gender, and performance. The findings for each of the hypothesised relationships associated with the third objective are discussed below.

H2b: Owner/managers’ experience has a positive effect on the performance of SMEs in Thailand

Although Bosma et al. (2004) reported that industry experience has a significant impact on performance, this finding was not confirmed in this study. The potential explanation for this in the Thai context is that the number of years that Thai owner/managers have operated their businesses (industry experience) may not be the only type of experience needed to enhance their business performance. As indicated in Section 4.2.1.1.3, experience in this study is measured by industry experience. This may suggest that other forms of experience such as managerial experience may also be needed to oversee and coordinate business activities successfully. Skills from these experiences may increase owner/managers’ confidence in managing their business, and ultimately enhance their business performance in areas such as profitability, sales growth, and cash flow.
The findings also imply that industry experience may contribute to successful start-up of small firms, but not necessarily to their growth, when more specific skills necessary for managing growth are required. The finding that owner/managers' industry experience has no influence on performance is in keeping with the findings of Papadaki and Chami (2002) for SMEs in Canada.

**H3b: Owner/managers’ education has a positive effect on the performance of SMEs in Thailand**

This hypothesis was not supported. The finding was surprising given that past research indicates that higher education is associated with higher business performance (Bates 1997; Mitra and Matlay 2004; Parker 2004). Nevertheless, it is consistent with the suggestions of Panpiamrat (2005) that the performance of Thai SMEs does not depend on the educational level of owner/managers. He pointed out that owner/managers need to have knowledge that enables them to understand their businesses. This knowledge cannot be gained only from formal education but also from training on-the-job. Thus, irrespective of their educational levels, owner/managers have to seek practical knowledge relevant to their businesses by continuously reading and listening to experts, attending seminars and learning from other people’s experiences. This knowledge in turn assists them to manage their business and ultimately enhance their firm’s performance. The trading sector in Thailand differs from the professional sectors such as medicine, accounting, law and engineering in that higher education is not a necessary requirement for performance improvement. The expected effect of education on performance was therefore less for owner/managers operating in the trading sector.

In addition, education may not assist performance where the area of owner/managers’ education is not related to their businesses. According to Blackwood and Mowl (2000), education will not contribute to business performance where the owner/managers’ area of specialisation is not related to the type of business in which they are involved. Finally, this finding may be explained by the fact that the majority of respondents in this study (74.7 percent) had a base education level of high school and above, which should be adequate to operate a business successfully. In other
words, higher education will be unlikely to provide a significant performance advantage.

**H4b: Younger owner/managers of SMEs in Thailand achieve better performance than older owner/managers**

This hypothesis was supported. The result reveals that younger owner/managers of SMEs in Thailand are more satisfied with their business performance in terms of profitability, growth in sales, return on assets, cash flow, and job security than their older counterparts. This may be because younger owner/managers are more likely to be risk-taking and self-confident than their older counterparts while older owner/managers are more realistic and conservative. Thus, older owner/managers are likely to rate their satisfaction lower on the business performance indicators than their younger counterparts.

This finding concurs with the studies of characteristics of successful entrepreneurs in Thailand (Department of Industrial Promotion 2003) and characteristics of successful entrepreneurs in the southern region of Thailand (Institute for Small and Medium Enterprises Development 2003a). These studies indicate that owner/managers who rate higher on the risk-taking scale are more likely to achieve higher performance. The finding is also in consonance with that of Coleman (2002) in the United States, who reported that younger owner/managers are less risk-averse than their older counterparts and thus perform better than older owner/managers.

**H5b: Male owner/managers of SMEs in Thailand achieve higher performance than female owner/managers**

This hypothesis was not supported. The results of testing this hypothesis were reported in Section 5.5, and indicated that there was no difference in performance between male and female owner/managers. There are two potential explanations for this finding in the Thai context. Firstly, female owner/managers may be less likely to display characteristics regarded as essential to enhance firm performance than male owner/managers. For example, they may be less likely to be confident or aggressive and less inclined to take risks. Female owner/managers, however, are more adaptable
to change, more sensitive to the needs of employees, multi-skilled, and have stronger communication skills (Carter, Williams, and Reynolds 1997; Folker 1999; Knight 2006). The results indicate that, in spite of gender differences in personality, women are as well suited to business ownership as men and are capable of matching their male counterparts on business performance.

Although the hypothesis was not supported, the finding of this research is consistent with those of a number of studies, such as Johnsen and McMahon (2005), Coleman and Cohn (2000), Masters and Meier (1988) and Sexton and Bowman (1988), who did not also find performance differences between male- and female-owned and operated businesses.

H6b: Financial leverage has a negative effect on the performance of SMEs in Thailand

This hypothesis was supported. The findings suggest that the higher the financial leverage, the higher the costs of capital to SMEs. Thai SMEs with higher financial leverage have greater costs of credit financing, and consequently have less money to invest in managing and growing their businesses. Furthermore, if the leverage is too high, the firm will be exposed to higher financial risk as the ability to service debt is reduced. High credit cost and consequent poor performance hamper owner/managers’ satisfaction with their firms’ performance on measures such as profitability, return on assets and cash flow.

H7b: Business size has a positive effect on the performance of SMEs in Thailand

This hypothesis was supported. The relationship between business size and performance can be explained as follows. As firms grow, the disadvantages of newness and smallness are lessened (Bird 1989). Growing firms have greater access to resources, as resource providers feel more confident about dealing with them. Greater resources in the form of employees and assets enable owner/managers to pursue profitable opportunities, adding to the firm’s performance. Access to resources also provide room for management error, enhancing owner/managers’ confidence
about business continuity and performance. All of these factors increase owner/managers’ satisfaction with their business performance in areas such as profitability, sales growth and job security.

**H8b: Financial information has a positive effect on the performance of SMEs in Thailand**

This hypothesis was supported. As stated on page 203 for hypothesis 8a, the analysis indicates that, of the 15 types of financial information considered in this study, profit and loss statement and balance sheet are the most widely prepared and used for decision-making by Thai SMEs. It was also argued in Section 3.9.2 that, for financial information to be useful for decision-making, it must meet certain quality criteria such as accuracy and completeness, timeliness and consistency. The findings therefore indicate that good management requires good quality financial information for effective decisions. Such information supports management activities in areas such as planning, monitoring operations, and taking corrective actions where necessary. Effective management enhances performances and thus owner/managers’ satisfaction in areas such as job security, profitability, and sales growth. Therefore, to improve the performance of SMEs in Thailand, there is a need for the use of good quality financial information in managing SMEs.

The positive relationship between financial information and performance in this study is consistent with the results of McMahon (2001a) and Weinstein (1982), who also concluded that financial information makes a major contribution to SME performance. Timely and relevant financial information enables owner/managers to examine what has been achieved and monitor if firms’ resources are being used effectively and efficiently in pursuit of their goals.
6.2.4 The Indirect Effect of Investment Readiness on Performance through Access to Finance

The fourth objective of this study was to examine the indirect effect of investment readiness on the performance of SMEs in Thailand through access to finance. As indicated in Section 5.4.4, seven hypotheses (H2c, H3c, H4c, H5c, H6c, H7c, and H8c) reflecting these indirect relationships were tested. Results from testing these hypotheses, summarised in Table 5.23, showed that the relationships with significant paths are the indirect effects of owner/managers’ education, age, gender, and business size on performance through access to finance. However, no significant results were found for the indirect influence of owner/managers’ experience, financial leverage or financial information on performance through access to finance. The results of these tested hypotheses are discussed below.

H2c: Owner/managers’ experience has an indirect effect on performance through access to finance

This hypothesis was not supported. Although the results indicate that access to finance enhances performance (H1), industry experience has no impact on access to finance. Therefore, industry experience as an indicator of owner/manager readiness does not enhance performance by enabling access to finance. The number of years the owner/managers have operated the business may not provide an adequate indication of their ability and preparedness to access finance and to improve business performance.

H3c: Owner/managers’ education has an indirect effect on performance through access to finance

This hypothesis was not supported. The results of this hypothesis were reported in Section 5.4.3, and suggested a significant indirect relationship between owner/managers’ educational levels and firm performance through access to finance. However, the relationship was not in the expected direction. Owner/managers of SMEs in Thailand with lower educational levels have a greater belief in their ability to
access finance. The perception of ability to access finance in turn leads to pursuit of and satisfaction with the goals that represent performance in this study. As discussed in the finding of H3a, owner/managers with lower educational backgrounds may be less conservative and less risk-averse compared to those with higher educational background. The former have greater confidence in their ability to access finance, to undertake ambitious strategies, and to upgrade or replace facilities and equipments. This in turn enhances their performance in terms of profitability, growth in sales, return on assets, cash flow, and job security. Nevertheless, as noted on page 199, owner/managers with lower educational qualifications may be overly confident and less realistic about their firms’ financial situation and ability to access finance compared with those with higher educational backgrounds.

**H4c: Owner/managers’ age has an indirect effect on performance through access to finance**

This hypothesis was supported. The test of hypothesis 4a indicated that younger owner/managers rate higher on their ability to access finance (that is, achieve lower interest rates, minimise loan processing costs, access finance with low collateral requirements and so on) than their older counterparts. In addition, the test of hypothesis 1 indicates that ability to access finance enhances performance. Therefore, younger owner/managers have greater value for and satisfaction with the goals that comprise performance in this study than older owner/managers, because they have greater confidence in their ability to access finance.

**H5c: Owner/managers’ gender has an indirect effect on performance through access to finance**

This hypothesis was supported. The results reveal that male owner/managers have more confidence in their ability to access finance than their female counterparts in the trading sector in Thailand. As suggested for H5a, female owner/managers in Thailand may be of the view that finance providers are likely to discriminate against them in their assessment of applications for finance on account of their general lack of property and thus collateral. The lower confidence of female owner/managers in their ability to access finance may explain their relatively low performance in terms of their
value for and satisfaction with performance goals such as profitability, growth in sales, return on assets, cash flow, and job security.

**H6c: Financial leverage has an indirect effect on performance through access to finance**

This hypothesis was not supported. The results suggest that financial leverage ratio has no effect on the access to finance of SMEs in Thailand. As discussed in the findings for H6a, owner/managers of SMEs in Thailand may perceive that finance providers consider other factors such as the assets of the business rather than financial leverage when making decisions about investing in SMEs. Accordingly, there is no performance advantage to SMEs with lower financial leverage ratios through access to finance, as owner/managers do not perceive that having a lower financial leverage will enhance their ability to access finance. This may reflect a level of ignorance on the part of owner/managers regarding what finance providers consider in making their investment decisions, and justifies the importance of training as a means of enhancing investment readiness.

**H7c: Business size has an indirect effect on performance through access to finance**

This hypothesis was supported. The finding follows from Hypothesis 7a, which indicates that Thai owner/managers with higher fixed asset values and more employees rate higher on their ability to access outside capital than those with lower fixed asset values and fewer employees. Growth, as indicated by asset value and number of employees, enhances owner/managers’ confidence in their ability to access resources. They may believe that, the larger their businesses the better they will be at convincing finance providers that they will be able to meet the terms of debt and equity investments in their businesses. In addition, firms with more fixed assets have greater ability to meet the collateral requirements of lenders. This perception may lead to greater confidence in the pursuit of goals of and owner/managers’ satisfaction with their business performance in terms of profitability, growth in sales, return on assets, cash flow, and job security.
H8c: Financial information has an indirect effect on performance through access to finance

This hypothesis was not supported. As indicated in the finding for H8a, higher quality financial information has no effect on access to finance for SMEs in Thailand. This is because owner/managers of SMEs in Thailand may perceive that finance providers do not use financial information to support their decision to invest in their businesses because of the general low quality of such information. As a result, owner/managers may not place any importance on the role of financial information in enhancing their access to finance. In addition, other financial information apart from profit and loss statement and balance sheet may be needed to enhance access to finance. Owner/managers, however, may not be able to provide such information since it is rarely prepared by Thai SMEs. As owner/managers do not perceive any benefit in quality financial information as far as accessing finance is concerned, there is no performance advantage for SMEs with better quality financial information.

To sum up the findings, significant values were found for a direct effect of access to finance on performance; direct effects of owner/managers’ age, gender and business size on access to finance; direct effects of owner/managers’ age, business financial leverage ratio, size and financial information on performance; and indirect effects of owner/managers’ age, gender and business size on performance through access to finance. While significant results were found for the relationship between owner/managers’ education and access to finance and between owner/managers’ education and performance via access to finance, the results were not in the expected direction.

In addition, no significant result was found for the direct relationship between owner/managers’ experience, business financial leverage ratio or financial information and access to finance; the direct relationship between owner/managers’ experience, education or gender and performance; and the indirect relationship between owner/managers’ experience, business financial leverage ratio, or financial information and performance through access to finance. The number of years owner/managers have operated their businesses was the only investment readiness variable with no significant impact on both access to finance and performance.
6.3 Recommendations and Policy Implications

The findings indicate that owner/managers of SMEs in Thailand feel more confident about their ability to contribute to economic development by operating profitable, efficient and growing businesses if they also have confidence in their ability to access finance. Ability to access finance is therefore important if SMEs are to contribute to the economic development of Thailand. In addition to addressing issues relevant to the supply of finance, the Thai government must also pay attention to demand-side factors. A disproportionate focus on supply-side factors by subsidising finance to SMEs may interfere with free operations of the market. This will, in turn, encourage inefficient firms to persist, reducing the sector’s contribution to economic development. The external funding process will be more efficient if attention is given to the investment readiness of owner-managers. This means attention to owner/manager readiness, business readiness and information readiness will enhance owner/managers’ ability to present and support a convincing case to investors and lenders.

In terms of owner/manager readiness, the results indicate that younger, male and lower-educated owner managers have greater confidence in their ability to access finance. It is explained that the impact of age and educational level on owner/managers’ perception of their ability to access finance may be associated with psychological factors such as risk-taking propensity, conservatism, and willingness to share control of the business. In addition, older and more educated owner-managers may be more pragmatic about their business situations and the performance implications. These psychological barriers could be reduced through education and training. Younger and lower-educated owner/managers can be trained to make more realistic evaluations of their business capabilities, while older and more educated owner/managers who wish to grow their businesses can be encouraged through training to do so. Female owner/managers are not confident about their ability to access finance, and therefore do not contribute as much to economic development as their male counterparts. The Thai government must pay attention to any discrimination women may face in their ability to access resources, so that they can compete on an equal footing with their male counterparts. Removing social and
economic impediments to women’s access to resources should enhance their ability to contribute to economic development.

For business readiness, the results show that business size (fixed assets and employees) enables businesses to overcome the disadvantages of smallness and newness, and increases their ability to access finance. The more business resources owner/managers have, the greater their confidence in their ability to access further resources. In addition, resource providers are more at ease when dealing with growing businesses as they are assured of the continuity of the business and of lower default risk. Again, in relation to business readiness, it appears from the present study that owner/managers of SMEs in Thailand lack awareness of the impact of financial leverage on their ability to access finance, although high leverage was found to have a negative impact on owner/managers’ ability to formulate and achieve goals that contribute to economic development. In both cases training is required to enhance owner-managers’ confidence in accessing finance. It is important that small businesses are made aware of their disadvantaged position in accessing finance by reason of their size. In addition, owner/managers must be made aware of the increased financial risk to their business as financial leverages increase, and that this in turn reduces their attractiveness to finance providers.

Whilst financial information was found to be important to pursuit of the performance goals of growth and profitability, it appears from this study that owner/managers do not consider it to be relevant to accessing finance. This may be due to the fact that firms do not generally prepare and use this information for managing their businesses. Where they do, the quality is so low that they cannot be relied on for effective decisions. Again this calls for training in proper record-keeping and effective use of the information from financial records to make and support decisions for finance and to monitor the use of finance.

In summary, the Thai government can support SMEs by providing assistance programs to enhance investment readiness amongst SMEs. For such programs to be effective, it is important that the concept of investment readiness is itself clearly defined and understood (Mason and Harrison 2001). Developing an effective integrated program to support SMEs to become investment-ready, and hence realise
their development potential through an appropriate funding structure, will require more than just a simple package. Given that there is extensive experience in developing and running such programs in countries such as Australia, the United Kingdom and Canada (Mason and Harrison 2001), the Thai government could take the opportunity to learn from these existing programs and adapt them to the Thai situation. According to Mason and Harrison (2001) such programs should take the form of a series of seminars, workshops and one-to-one consultancy sessions, and should encompass the following five elements (Mason and Harrison 2001 p.665):

1) information seminar
2) investment-ready review
3) investment-ready development
4) investment-ready presentation
5) investment networking

Figure 6.1 depicts a model of an investment-ready program adapted from Mason and Harrison (2001 p.666) for the Thai context based on the findings of this study.
Figure 6.1 A Modified Model of an Investment-ready Program

1. SMEs
   - Finance-seeking SMEs
     - Investment Readiness Seminar

2. SMEs willing to seek external finance
   - Investment-ready Review
     - Owner/manager Readiness
     - Business Readiness
     - Information Readiness

3. Investment-ready Development
   - Fails to meet benchmark
     - External Debt Finance
   - Meets the benchmark
     - External Equity Finance

Source: Adapted from Mason and Harrison (2001 p.666)
The first element is the information seminar. It is a broadly-targeted seminar designed to provide knowledge about alternative sources of finance for SMEs in Thailand. The purpose of the seminar is to help SMEs to understand the different forms of financing that they are able to access. The second element, the investment-ready review, provides general information on investment readiness covering the readiness issues related to owner/managers, businesses and information. The third element accelerates SMEs to an investment-ready level in three areas (readiness of owner/managers, businesses and information) so that they are attractive to finance providers. The fourth element, the investment-ready presentation, aims to teach SMEs how to make a good presentation to potential providers of finance. The last element, investment networking, is developed to provide a link between those SMEs that have completed the program and potential finance providers.

Government intervention is also required to make finance available for businesses in the financial market that are ignored by the private sector, such as high technology ideas with clear potential for success. Intervention in this area will involve encouraging people and organisations with surplus funds to invest in such opportunities by providing incentives such as tax concessions. The ‘Nut Cracker’ position of Thailand in relation to the competitiveness of its products and services on the international arena was noted in Section 2.5.2. Investment in high-technology projects and knowledge, where the private sector is not interested in providing funds, is necessary if Thailand is to enhance its position on the differentiated and high value-added dimensions rather than the cost dimension.

Well-designed and effective delivery of investment-ready programs will improve owner/managers’ understanding of external sources of finance available to them, enhance their willingness to access external finance, and prepare them to make convincing presentations to finance providers. These in turn will increase their ability to access finance and improve their performance.
6.4 Contribution to Knowledge

The contributions of this study to knowledge are highlighted in this section. The discussion focuses on the development of the underlying theory, the research design, and the method of analysis.

6.4.1 Theoretical Framework

The study provides support for the existence of a finance gap among SMEs in Thailand. In other words, Thai SMEs indicated that they faced difficulty in accessing finance (See Figure 5.5). It was proposed that the finance gap could be narrowed if Thai SMEs became investment-ready. The study showed that investment readiness has a significant effect on owner/managers’ perception of their ability to access finance and on performance of their businesses. In addition, it was noted that access to finance enhances performance. These findings suggest that improving the investment readiness of SMEs in Thailand not only increases their ability to access finance but also enhances their performance.

The results from the descriptive statistics also indicated that the Pecking Order Framework (POF) and the agency theory, developed in the Western literature (see Chapter 3), are applicable in the Thai context. In Section 5.2.3, it was noted that internal equity is the predominant source of finance for growing SMEs in Thailand (see Figure 5.3). Once the various sources of internal equity become exhausted, firms resort to debt finance and then to external equity, only if absolutely necessary and if this option is available to them. Their particular preference order for the choices of financing is consistent with the Pecking Order Framework. As there is limited research on the effect of demand-side issues on access to finance for SMEs in Thailand, a major contribution of this study is its analyses of the application of the above theories to SMEs’ in Thailand, in particular the extent to which access to finance is influenced by investment readiness of SMEs in Thailand.
6.4.2 Research Design and Variables Measurement

As stated in Section 2.3, although this study covers the trading sector there is limited information on the activities of firms in this sector. The study fills some of the information gaps in this area, in particular, the percentage of firms in the sample engaged in various trading activities. Furthermore, it was noted that access to finance is a key factor contributing to SME performance, but that there is limited empirical research on the relationship among the demand-side factors (investment readiness), access to finance and performance. This study develops a model that links the demand-side factors to access to finance and performance. It integrates various views on the direct effect of investment readiness on access to finance, the direct effect of investment readiness on performance, and the indirect effect of investment readiness on performance via access to finance. To examine the relationships among these factors, the study produced an empirical model to test the hypothesised relationship proposed in the theoretical model. The proposed three dimensions of investment readiness provided a holistic analysis of the impact of demand-side factors on SME access to finance.

Given the lack of empirical research in this area in Thailand, this study developed observed variables (indicators) by reference to previous literature after taking into consideration their relevance to Thai SMEs. For example, observed variables for performance in this study were measured in terms of both financial and non-financial goals in order to capture the whole picture of SME performance in Thailand. The observed variables for financial information were developed on the basis of quality dimensions suggested by Ballou et al. (1998). Based on Ballou et al.’s (1998) quality dimensions and the financial information practices of SMEs in Thailand, three dimensions (preparation, use and quality) were developed to measure the quality of financial information. A comprehensive measure of financial information, acknowledging the large variation in both statutory and non-statutory financial information used in previous studies, was employed to measure financial information in this study. Further, observed variables for access to finance were developed from existing literature. The following constraints to accessing finance were identified and adopted: access to outside equity capital, costs of issuing public shares, costs of credit,
loan processing costs, collateral requirements, and loan accessing procedures. Similarly, the observed variables for investment readiness were developed from prior literature. From the review of the literature, three dimensions were developed to measure investment readiness: owner/manager readiness, business readiness and information readiness. This study contributes to knowledge by applying the variables developed for research in the West to the Thai context.

6.4.3 Method of Analysis

The structural equation modeling technique (SEM) is particularly suitable for achieving the objective of this study as it overcomes the problem of imperfect measurement of contextual variables, particularly controversial variables such as performance. Furthermore, even though SEM is receiving extensive attention as a standard approach to testing research hypotheses, few empirical studies of SMEs in Thailand involve the use of SEM. A further contribution of this study is that it uses SEM for analysing the relationships in the Thai context.

6.5 Limitations of the Study

As is true of most research, there are limitations to this study. Firstly, the study focused on one industry sector: the trading sector. The results of this study are therefore limited to the trading sector in Thailand. However, it is noted that focusing on a single industry provides more in-depth information than is possible from cross-sectional analyses. The use of convenience sampling may pose another limitation to this study. Although this method is less reliable than other sampling methods, it was the most feasible method due to the lack of a ready made sampling frame and resource constraints.

In addition, the use of self-reported data (subjective data) for measuring the variables in this study constitutes a limitation. The findings must therefore be interpreted with this limitation in mind. Furthermore, as stated in Section 6.2.1, that it is possible that owner/managers’ satisfaction with their performance influences their perception of
their ability to access finance. This reverse causality, however, was not tested and thus is a limitation to the study.

It must be noted that the limitations discussed above do not make the results and findings of this study less significant. They are outlined to acknowledge their existence and to stress the need for further research which is discussed in the following section.

6.6 Suggestions for Future Research

The findings of this study have implications for the direction of future research. Future research should also explore whether the investment readiness effect (demand-side factors) is applicable to other industry sectors in the country. This could provide further insight into the role of governments, particularly in the Thai context, in enhancing SMEs’ ability to access finance and hence their performance.

Another interesting extension to this study that could be pursued would be to examine whether investment readiness has an important influence on the access to finance and performance of SMEs using objective data. Such an investigation may be able to contribute better to the debate on demand-side deficiencies in access to finance and performance.

The results of the hypotheses testing reveal that owner/managers’ experience has no influence on access to finance or on performance. In addition, the impact of owner/managers’ educational levels on access to finance was in the opposite direction to that predicted. This may be an indication that other observed variables may have to be developed and re-examined for these dimensions in future research. For instance, as discussed for hypothesis H2a and H2b, the observed variables for owner/managers’ experience may include general, industry and entrepreneurial experience. Observed variables for owner/managers’ education may have to include their area of specialisation.
6.7 Conclusion

A growing interest in the factors associated with the access to finance and performance of SMEs has long been recognised. Based on the results of this study, it is reasonable to conclude that the ability of Thai enterprises to access finance can be explained by Western theories. As expected, access to finance is significantly related to the performance of SMEs in Thailand. Moreover, some of the investment readiness variables are directly and indirectly associated with performance of SMEs in Thailand. Direct influences of several investment readiness variables on access to finance were also found.

It can be concluded that investment readiness is a crucial factor influencing the access to finance of SMEs in Thailand. In addition, investment readiness and access to finance determine the performance of SMEs, ultimately enhancing the country's economy. An understanding of such factors would enable public policymakers and SME support agencies to better serve the needs of SMEs. The findings of this study have broad implications for the Thai economy as a whole, as well as providing theoretical support for the need to pay attention to demand-side issues. Future research should build on and expand these findings.
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- 231 -


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The United Nations Development Programme.


- 238 -


July 2005

Dear Owner/Manager,

I am writing to ask for your help with my research on the relationship among capability to access capital, the use of financial information and performance of small and medium enterprises in Thailand’s trading sector. This study seeks to ascertain whether these factors influence small business performance.

I would be grateful if you could spare about 40 minutes to answer a few questions on this research. Participation is voluntary and if at any point you wish to discontinue with this interview do let me know. In the event that anything is published from this research no information supplied during the interview will be identifiable to your business since only aggregated data will be reported in this study. It is expected that the findings of this research will have implications for economic development, policy formulation and programme support for small and medium businesses in Thailand, and for business owners in particular.

The data collected for this research will be kept for 5 years in the New England Business School, University of New England, Armidale, Australia and then destroyed.

Thank you for your valuable time and input.

PS. If you have any queries about my research or its use, you can contact:

Naruanard Sarapaivanich  
Accounting Department  
Faculty of Business Administration  
Chiang Mai University  
Chiang Mai 50200  
Thailand  
Tel: 053811279  
Email: nsarapai@une.edu.au  
(From July 2005-December 2005)

Dr Bernice Kotey  
Senior Lecturer  
New England Business School  
University of New England  
Armidale, NSW 2351  
Australia  
Tel: 612 6773 2830  
Fax: 612 6773 3148  
Email: bkotey@une.edu.au
This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No. HE05/143, Valid to 22/06/2006).

Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at the following address:

Research Services
University of New England
Armidale, NSW 2351.
Telephone: (02) 6773 3449 Facsimile (02) 6773 3543
Email: Ethics@une.edu.au

Yours sincerely,

Naruanard Sarapaivanich
THE QUESTIONNAIRE

SECTION 1: BUSINESS INFORMATION

Please tick the appropriate box that corresponds to your answer to each question.

1. How many businesses have you owned or managed? Please specify the numbers of business.
   .................................... business (es)

2. How long have you owned or managed this business?
   □ 0-3 years  □ 4-6 years  □ 7-10 years  □ 11-15 years  □ More than 15 years

3. Which of the following best describes the form of your business organisation?
   □ Sole trader  □ Non-registered partnership  □ Registered partnership  □ Company
   □ Other (Please specify) ..........................................................

4. What is your business type(s)? (Please tick as many as are relevant to you)
   □ Retail  □ Wholesale  □ Service  □ Production

5. What is your business area(s)? (Please tick as many as are relevant to you)
   □ Grocery  □ Agricultural products  □ Health products
   □ Vehicle  □ Clothing, textile, jewellery, and gems  □ Furniture, wood and paper
   □ Fuel  □ Other (Please specify) ...........................................

6. What is the estimate of market value of fixed assets in your business?
   □ Not exceeding Baht 1 million  □ Baht 1,000,001-5,000,000  □ Baht 5,000,001-10,000,000
   □ Baht 10,000,001-30,000,000  □ Baht 30,000,001-50,000,000  □ Baht 50,000,001-60,000,000
   □ Baht 60,000,001-100,000,000  □ More than Baht 100 million

7. How many employees do you currently have in the business? Please specify the numbers for each of the following:
   □ Full time..........................  □ Part time and Casual ......................
   □ Other (Please specify) ..........................

SECTION 2: CAPABILITY TO ACCESS CAPITAL

8. What proportion of your start-up or take-over capital is debt (both long- and short-term)?
   (Please tick the appropriate box)
   □ 0%  □ 1-10%  □ 11-20%  □ 21-30%  □ 31-40%  □ 41-50%
   □ 51-60%  □ 61-70%  □ 71-80%  □ 81-90%  □ 91-100%

9. What were the sources and proportion of debt when you started-up or took-over this business?
   (Please tick % and complete as many as are relevant to you)
   □ Trade credit ( ____ %)  □ Overdraft ( ____ %)
   □ Tontines ( ____ %)  □ Pawnbroker or middle man ( ____ %)
   □ Family loan ( ____ %)  □ Hire purchase ( ____ %)
   □ Short-term loan ( ____ %)  □ Long-term loan ( ____ %)
   □ Others (Please specify) ............................................... ( ____ %)
10. What were the sources and proportion of equity when you started-up or took-over this business? (Please tick □ and complete as many as are relevant to you)

□ Owner's saving ( ___ %) □ Family and friends ( ___ %) □ Angel financing ( ___ %)
□ Venture capital ( ___ %) □ Public share ( ___ %)
□ Others (Please specify) .......................................................... ( ___ %)

11. Has the business ever sought capital in addition to the start-up or take-over capital?
□ Yes □ No (Go to question 21)

12. What was the purpose(s) of seeking capital in addition to the start-up or take-over capital? (Please tick □ as many as are relevant to you)

□ Prevent liquidity problem □ Increase the level of current assets □ Purchase fixed assets
□ Replace existing assets □ Refinancing current debt
□ Other (Please specify) ..........................................................

13. What proportion of your current capital is debt (both long- and short-term)? (Please tick □ the appropriate box)

□ 0% □ 1-10% □ 11-20% □ 21-30% □ 31-40% □ 41-50%
□ 51-60% □ 61-70% □ 71-80% □ 81-90% □ 91-100%

14. What are the sources and proportion of debt currently used in your business? (Please tick □ and complete as many as are relevant to you)

□ Trade credit ( ___ %) □ Overdraft ( ___ %)
□ Tontines ( ___ %) □ Pawnbroker or middle man ( ___ %)
□ Family loan ( ___ %) □ Hire purchase ( ___ %)
□ Short-term loan ( ___ %) □ Long-term loan ( ___ %)
□ Others (Please specify) .......................................................... ( ___ %)

15. What are the sources and proportion of equity currently used in your business? (Please tick □ and complete as many as are relevant to you)

□ Owner's saving ( ___ %) □ Retained earning ( ___ %) □ Family and friends ( ___ %)
□ Angel financing ( ___ %) □ Venture capital ( ___ %) □ Public share ( ___ %)
□ Others (Please specify) .......................................................... ( ___ %)

16. What types of capital did you seek in addition to the start-up capital? (Please tick □ all applicable boxes whether or not you were successful in obtaining additional capital)

□ Owner's saving □ Retained earning □ Family and friends □ Angel financing
□ Venture capital □ Public share □ Trade credit □ Overdraft
□ Tontines □ Family loan □ Hire purchase □ Pawnbroker or middle man
□ Short-term loan □ Long-term loan
□ Others (Please specify) ..........................................................

- 251 -
17. What problems have you encountered when trying to obtaining capital (if any) in addition to the start-up or take-over capital? (Please tick ✓ as many as are relevant to you)

- High costs of accessing outside equity
- High interest rates
- Banks are not interested in small businesses
- High collateral requirements
- Complex application and processing procedures
- Lack of understanding of the various sources of capital available
- Other (Please specify)

18. If you failed to access capital in addition to the start-up capital, what were the reasons given by capital providers? (Please tick ✓ as many as are relevant to you)

- Lack of collateral
- Poor quality financial information
- Poor business performance
- Lack of experience
- New business start-up
- Other (Please specify)

19. How would you classify the importance of the following factors in accessing capital in addition to the start-up capital?

(Please circle a number for each of the statements below, using the following scale)

1=Not at all Important  2=Somewhat Important  3=Moderately Important  4=Important  5=Very Important

<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Easy of accessing outside equity capital</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. Low costs of accessing outside equity capital</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. Low interest rates</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. Low processing costs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e. Low collateral requirements</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f. Simple loan application procedures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g. Other (Please specify)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
20. How would you indicate the ability of your business to access capital in addition to the start-up capital?

(Please circle a number for each of the statements below, using the following scale)

<table>
<thead>
<tr>
<th>Ability to access outside equity capital</th>
<th>1 = Very poor</th>
<th>2 = Poor</th>
<th>3 = Average</th>
<th>4 = Good</th>
<th>5 = Very good</th>
<th>9 = Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to achieve low costs of accessing outside equity capital</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Ability to achieve low interest rates</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Ability to achieve low processing costs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Ability to achieve low collateral requirements</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Easy to handle loan application procedures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
</tbody>
</table>

21. What is the reason(s) that your business has never sought capital in addition to the start-up capital?

(Please tick ✓ as many as are relevant to you)

- Would like to keep business small
- Cost of capital is high
- Time to raise capital is long
- Business is not growing
- Assume application would be denied

- Would like to maintain control of the business
- Seeking process is complicated
- Can get money from retained earnings
- Do not know how to access capital
- Do not have information about sources of capital

Other (Please specify) ........................................................................................................

Go to section 3
### SECTION 3: USE OF FINANCIAL INFORMATION

22. Do you prepare financial information?
- [ ] Yes
- [ ] No (Go to Section 4)

23. What is the purpose of preparing financial information? (Please tick as many as are relevant to you)
- [ ] Tax purpose
- [ ] Management
- [ ] Other (Please specify) .................................................................

24. Did you use financial information to support your business decisions?
- [ ] Yes (Go to question 26)
- [ ] No

25. Why did you not use financial information to support your business decisions? Please evaluate the extent to which you agree or disagree with the following reasons.

(Please circle a number for each of the statements below, using the following scale)

1 = Strongly Disagree  2 = Disagree  3 = Neutral  4 = Agree  5 = Strongly Agree

<table>
<thead>
<tr>
<th>Reason</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>
a. Business did not keep financial information records                  |   |   |   |   |   |
b. Financial information was inaccurate and incomplete                  |   |   |   |   |   |
c. Financial information was not up to date                             |   |   |   |   |   |
d. Financial information contained inadequate information              |   |   |   |   |   |
e. Did not understand financial information provided                    |   |   |   |   |   |
f. Inadequate knowledge and skill for using financial information provided |   |   |   |   |   |
g. Other (Please specify) ................................................................. |   |   |   |   |   |

26. How would you classify the importance of the following financial information?

(Please circle a number for each of the statements below, using the following scale)

1 = Not at All Important  2 = Somewhat Important  3 = Moderately Important  4 = Important  9 = Not Applicable

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>9</th>
</tr>
</thead>
</table>
a. Profit and loss statement       |   |   |   |   |   | 9 |
b. Balance sheet                   |   |   |   |   |   | 9 |
c. Cash flow statement             |   |   |   |   |   | 9 |
d. Budget                          |   |   |   |   |   | 9 |
e. Variance analysis               |   |   |   |   |   | 9 |
f. Aged debtors balances           |   |   |   |   |   | 9 |
g. Aged creditors balances         |   |   |   |   |   | 9 |
h. Current ratio                   |   |   |   |   |   | 9 |
i. Inventory turnover              |   |   |   |   |   | 9 |
j. Return on assets                |   |   |   |   |   | 9 |
k. Return on equity                |   |   |   |   |   | 9 |
l. Net profit margin               |   |   |   |   |   | 9 |
m. Debt to total assets ratio      |   |   |   |   |   | 9 |
n. Debt to equity ratio            |   |   |   |   |   | 9 |
o. Times interest covered          |   |   |   |   |   | 9 |
p. Other (Please specify)          |   |   |   |   |   | 9 |
27. What is the most frequent basis on which your business prepares and computes the following financial information?

(please circle a number for each of the statements below, using the following scale)

<table>
<thead>
<tr>
<th>0=Never</th>
<th>1=Irregularly</th>
<th>2=Annually</th>
<th>3=Half Yearly</th>
<th>4=Quarterly</th>
<th>5=Monthly</th>
</tr>
</thead>
</table>

a. Profit and loss statement 0 1 2 3 4 5
b. Balance sheet 0 1 2 3 4 5
c. Cash flow statement 0 1 2 3 4 5
d. Budget 0 1 2 3 4 5
e. Variance analysis 0 1 2 3 4 5
f. Aged debtors balances 0 1 2 3 4 5
g. Aged creditors balances 0 1 2 3 4 5
h. Current ratio 0 1 2 3 4 5
i. Inventory turnover 0 1 2 3 4 5
j. Return on assets 0 1 2 3 4 5
k. Return on equity 0 1 2 3 4 5
l. Net profit margin 0 1 2 3 4 5
m. Debt to total assets ratio 0 1 2 3 4 5
n. Debt to equity ratio 0 1 2 3 4 5
o. Times interest covered 0 1 2 3 4 5
p. Other (Please specify) ................................................ 0 1 2 3 4 5

28. How would you classify the accuracy and completeness of the following financial information in your business?

(please circle a number for each of the statements below, using the following scale)

<table>
<thead>
<tr>
<th>1=Not at All Accurate and Complete</th>
<th>2=Somewhat Accurate and Complete</th>
<th>3=Moderately Accurate and Complete</th>
<th>4=Accurate and Complete</th>
<th>5=Very Accurate and Complete</th>
<th>9=Not Applicable</th>
</tr>
</thead>
</table>

a. Profit and loss statement 1 2 3 4 5 9
b. Balance sheet 1 2 3 4 5 9
c. Cash flow statement 1 2 3 4 5 9
d. Budget 1 2 3 4 5 9
e. Variance analysis 1 2 3 4 5 9
f. Aged debtors balances 1 2 3 4 5 9
g. Aged creditors balances 1 2 3 4 5 9
h. Current ratio 1 2 3 4 5 9
i. Inventory turnover 1 2 3 4 5 9
j. Return on assets 1 2 3 4 5 9
k. Return on equity 1 2 3 4 5 9
l. Net profit margin 1 2 3 4 5 9
m. Debt to total assets ratio 1 2 3 4 5 9
n. Debt to equity ratio 1 2 3 4 5 9
o. Times interest covered 1 2 3 4 5 9
p. Other (Please specify) ................................................ 1 2 3 4 5 9
29. Is the following financial information in your business available on **timely** basis?

(Please circle a number for each of the statements below, using the following scale)

<table>
<thead>
<tr>
<th>1=Not at All on Time</th>
<th>2=Somewhat on Time</th>
<th>3=Moderately on Time</th>
<th>4=On Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>5=Always on Time</td>
<td>9=Not Applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- a. Profit and loss statement
- b. Balance sheet
- c. Cash flow statement
- d. Budget
- e. Variance analysis
- f. Aged debtors balances
- g. Aged creditors balances
- h. Current ratio
- i. Inventory turnover
- j. Return on assets
- k. Return on equity
- l. Net profit margin
- m. Debt to total assets ratio
- n. Debt to equity ratio
- o. Times interest covered
- p. Other (Please specify) .................................................................

If you answered **NO** to question 24 go to **section 4**
30. Did your business use the following financial information when 1) seeking capital in addition to the start-up or take-over capital and 2) making other decisions besides seeking capital in addition to the start-up or take-over capital?

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>Seeking additional capital</th>
<th>Making other decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>a. Profit and loss statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Balance sheet</td>
<td></td>
<td></td>
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<td>c. Cash flow statement</td>
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<td>d. Budget</td>
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<tr>
<td>e. Variance analysis</td>
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<tr>
<td>f. Aged debtors balances</td>
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<td>g. Aged creditors balances</td>
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<td>h. Current ratio</td>
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<td>i. Inventory turnover</td>
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<td>j. Return on assets</td>
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<td>k. Return on equity</td>
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<tr>
<td>l. Net profit margin</td>
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<td>m. Debt to total assets ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Debt to equity ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. Times interest covered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p. Other (Please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. Please evaluate the extent to which you agree or disagree with the following reasons for explaining why you used financial information to support your business decisions?

(Please circle a number for each of the statements below, using the following scale)

<table>
<thead>
<tr>
<th>Reason</th>
<th>1=Strongly Disagree</th>
<th>2=Disagree</th>
<th>3=Neutral</th>
<th>4=Agree</th>
<th>5=Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. It provided useful information to making decisions</td>
<td></td>
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</tr>
<tr>
<td>b. Financial information was available</td>
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<tr>
<td>c. Financial information was accurate</td>
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<tr>
<td>d. Financial information was up to date</td>
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<tr>
<td>e. Financial information contained adequate information needed</td>
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<tr>
<td>f. Other (Please specify)</td>
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</tbody>
</table>

- 257 -
SECTION 4: MEASURES OF PERFORMANCE

32. How would you classify the importance of the following motives in running your business?

(Please circle a number for each of the statements below, using the following scale)

1 = Not at All Important  2 = Somewhat Important  3 = Moderately Important  4 = Important  5 = Very Important

a. Profitability
b. Growth in sales
c. Return on assets
d. Cash Flow
e. Lifestyle
f. Independence
g. Job security

33. How would you indicate your satisfaction in regard to the following factors over the previous two financial years?

(Please circle a number for each of the statements below, using the following scale)

1 = Strongly Dissatisfied  2 = Dissatisfied  3 = Neutral  4 = Satisfied  5 = Very Satisfied  9 = Not Applicable

a. Satisfaction with profitability
b. Satisfaction with growth in sales
c. Satisfaction with return on assets
d. Satisfaction with cash flow
e. Satisfaction with your lifestyle
f. Satisfaction with your independence
g. Satisfaction with security in your job

34. How likely is it that you will still be running this business in two years' time?

☐ Not at All Likely ☐ Somewhat Likely ☐ Moderate Likely ☐ Likely ☐ Very Likely

SECTION 5: PERSONAL INFORMATION

35. What is your sex?
☐ Male ☐ Female

36. In which one of the following age groups are you?

☐ Up to 20 years  ☐ 21-25 years  ☐ 26-30 years  ☐ 31-35 years  ☐ 36-40 ☐
☐ 41-45 years  ☐ 46-50 years  ☐ 51-55 years  ☐ 56-60 years  ☐ 60 years and over

37. What is your HIGHEST educational qualification or nearest equivalent?

☐ No education  ☐ Primary school  ☐ Junior high school or equal  ☐ Senior high school or equal
☐ Diploma  ☐ Bachelor  ☐ Master  ☐ Doctorate
☐ Other (Please specify) .................................................................

THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE
Appendix 2 Cover Letter and Survey Questionnaire (Thai Version)

New England Business School
Armidale, NSW 2351 Australia
Telephone +61 2 6773 2201 Facsimile +61 2 6773 3148
e-mail: nebs@une.edu.au
Internet: http://www.nebs.une.edu.au

กรกฎาคม 2548

เรียน ท่านอธิการบดี ท่านผู้จัดการ

ดิฉันขอขอบคุณท่านที่อนุญาตให้ทีมงานวิจัยของดิฉันที่เกี่ยวกับ
ความสามารถในการเข้าถึงแหล่งข้อมูล, การใช้ข้อมูลทาง
การเงิน, และที่เสนอการดำเนินงานของธุรกิจ ขาดผลกระทบอย่าง
ในกลุ่มอุตสาหกรรม (Trading sector) ในประเทศไทย

กับวินิจฉัยนี้ มีวัตถุประสงค์เพื่อศึกษาเกี่ยวกับความสามารถในการเข้าถึงแหล่งข้อมูล และการใช้ข้อมูลทางการเงิน ที่มีต่อผล
การดำเนินงานของธุรกิจขนาดย่อมและยักษ์

ดิฉันขอขอบพระคุณเป็นอย่างสูง หากท่านจะกรุณาสอบถามประเด็น หากเป็นไปได้โดยที่มีเกี่ยวข้อง, ท่านสามารถขอให้ทีมงานวิจัยนี้ที่มีอยู่ก่อนหน้านี้, ซึ่งมีต่อผล
จากที่ได้รับจุลินทรพิทักษ์

ขอขอบพระคุณเป็นอย่างสูงที่ท่านได้ให้ความสามารถและความบริการตอบสนองท่าน

Dr. Bernice Kotey
Senior Lecturer
New England Business School
University of New England
Armidale, NSW 2351
Australia
Tel: 61 2 6773 2830
Fax: 61 2 6773 3148
Email: bkotey@une.edu.au

Human Research Ethics Committee ของ University of New England
(หมายเลข HE05/143, วันที่ 22 มิถุนายน 2549)
Human Research Ethics Committee คือที่อยู่ด้านล่างนี้
Research Services
University of New England
Armidale, NSW 2351.
Australia
โทรศัพท์: (02) 6773 3449 แฟกซ์: (02) 6773 3543
Email: Ethics@une.edu.au

ขอแสดงความรับผิด

คุณสมบูรณ์ ทรงภักดี
แบบสำรวจความคิดเห็น

๑. ข้อมูลทั่วไป

๒. ตัวอย่างที่ส่งเสริมเมื่อเป็นระยะเวลาต่อไป

๓. อัตราและช่วงเวลาพักงานในอนาคต

๔. ประเภทติดต่อ (ตอบได้มากกว่าหนึ่งข้อ)

๕. ประเภทติดต่อ (ตอบได้มากกว่าหนึ่งข้อ)

๖. การพักผ่อนของกิจกรรมตามมูลค่าใหญ่ในช่วงเวลา (ให้ถือตามองค์กร และสถิติในไม่ฝ่ายหรือการตลาด, หน่วยงาน, งาน)

๗. ความสมาร์ทในการเข้าสู่ตลาด

๘. ตัวอย่างของ หลักสูตร, คุณสมบัติทั่วไปของ, เพื่อเรียนเข้าสู่การพัฒนาในอนาคต อย่างไรก็ตาม

๙. เอกลักษณ์และการสื่อสารของ หลักสูตร, คุณสมบัติทั่วไปของ เพื่อเตรียมความพร้อมในการพัฒนาในอนาคต (ตอบได้มากกว่าหนึ่งข้อ)

๑๐. เอกลักษณ์และการสื่อสารของ หลักสูตร, คุณสมบัติทั่วไปของ เพื่อเตรียมความพร้อมในการพัฒนาในอนาคต (ตอบได้มากกว่าหนึ่งข้อ)
11. ถ้าการผสมข้าวผักมีผักเพิ่ม หลังจากผลลัพธ์ที่ได้ หรือ หลังจากมีข้าวหน้าเพิ่ม ไม่ว่าจะเป็น ไม่ใส่

12. ความคิดเห็นที่ต้องการของความต้องการทุนเพื่อ (ตอบได้มากกว่านี้ที่)

<table>
<thead>
<tr>
<th>ปัจจัยทางการตลาด</th>
<th>ที่จะระดับสินทรัพย์ทุนวิทยา</th>
</tr>
</thead>
<tbody>
<tr>
<td>ข้อเสริมสร้างการเติบโต</td>
<td>ที่จะทำให้สินทรัพย์เพิ่มเติม</td>
</tr>
<tr>
<td>วิสัยทัศน์ (การผู้บริหารเพื่อให้การเงินผู้ถืองาน)</td>
<td>อื่นๆ (โปรดระบุ)</td>
</tr>
<tr>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
</tr>
</tbody>
</table>

13. ถ้าความต้องการทุนเพื่อ (ตอบได้มากกว่านี้ที่)

<table>
<thead>
<tr>
<th>0%</th>
<th>1 - 10%</th>
<th>11 - 20%</th>
<th>21 - 30%</th>
<th>31 - 40%</th>
<th>41 - 50%</th>
<th>51 - 60%</th>
<th>61 - 70%</th>
<th>71 - 80%</th>
<th>81 - 90%</th>
<th>91 - 100%</th>
</tr>
</thead>
</table>

14. ความต้องการทุนเพื่อ (ตอบได้มากกว่านี้ที่)

<table>
<thead>
<tr>
<th>แสดงการเติบโต (%)</th>
<th>รองรับการเติบโต (%)</th>
<th>การเตรียมการเติบโต (%)</th>
<th>ผู้จัดสรร (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>รายได้พิเศษ (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
</tr>
<tr>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
</tr>
<tr>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
</tr>
</tbody>
</table>

15. ความต้องการทุนเพื่อ (ตอบได้มากกว่านี้ที่)

<table>
<thead>
<tr>
<th>รายได้พิเศษ (%)</th>
<th>รายได้ต้นทุน (%)</th>
<th>รายได้ต้นทุน (%)</th>
<th>รายได้ต้นทุน (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
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<tr>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
</tr>
<tr>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
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<td>อื่นๆ (โปรดระบุ)</td>
</tr>
</tbody>
</table>

16. ความต้องการทุนเพื่อ (ตอบได้มากกว่านี้ที่)

<table>
<thead>
<tr>
<th>รายได้พิเศษ (%)</th>
<th>รายได้ต้นทุน (%)</th>
<th>รายได้ต้นทุน (%)</th>
<th>รายได้ต้นทุน (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
<td>รายได้ต้นทุน (%)</td>
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<td>รายได้ต้นทุน (%)</td>
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<tr>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
</tr>
</tbody>
</table>

17. ปัญหาในการจัดหาทุนเพื่อ (ตั้งต้น) คืออะไร (ตอบได้มากกว่านี้ที่)

<table>
<thead>
<tr>
<th>ปัญหาในการจัดหาทุนเพื่อ</th>
<th>ปัญหาในการจัดหาทุนเพื่อ</th>
<th>ปัญหาในการจัดหาทุนเพื่อ</th>
</tr>
</thead>
<tbody>
<tr>
<td>ไม่มีการจัดหาทุน</td>
<td>ไม่มีการจัดหาทุน</td>
<td>ไม่มีการจัดหาทุน</td>
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<td>ไม่มีการจัดหาทุน</td>
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<td>ไม่มีการจัดหาทุน</td>
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<td>ไม่มีการจัดหาทุน</td>
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<tr>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
<td>อื่นๆ (โปรดระบุ)</td>
</tr>
</tbody>
</table>
18. หากผู้ตอบมีเหตุผลในการส่งทุนเพิ่ม อะไรคือเหตุผลที่คุณจะส่งทำหน้า (ตอบได้มากกว่าหนึ่งข้อ)

- ต้องการให้กิจกรรมขยายตัว
- คุณสมบัติไม่ครบถ้วน
- คุณสมบัติไม่ครบถ้วน
- ความมั่นใจในการบริหารไม่ดี
- ขาดแคลนเงินทุนไม่พอ
- ไม่มีประสบการณ์
- กำไรต่างประเทศ
- ไม่ได้ใช้เหตุผลใดๆ

อื่นๆ (โปรดระบุ) .................................................................

19. ท่านจัดลำดับความสัมพันธ์ของผู้จัดให้ในการจำแนกแหล่งทุนเพิ่มไปนี้ (โปรดระบุ)
   (กรุณาจงลงลำดับแบบушอขในแต่ละข้อตามลำดับ โดยใช้ระดับที่ให้ไว้โดยไปโน่น)
   1-ไม่สำคัญอย่างยิ่ง 2-สำคัญย่อมน้อย 3-สำคัญปานกลาง 4-สำคัญ 5-สำคัญอย่างยิ่ง

<table>
<thead>
<tr>
<th>ลำดับ</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
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<tr>
<td>d.</td>
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<tr>
<td>e.</td>
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<td>f.</td>
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<td>g.</td>
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</table>

20. ท่านประเมินความสามารถของผู้จัดให้ท่านในการจำแนกแหล่งทุน ไปในระดับใด
   (กรุณาลงคะแนนที่ชอบมากสุดลงไปและท้ายข้อต่อลงก่อน โดยใช้ระดับที่ให้ไว้โดยไปโน่น)

<table>
<thead>
<tr>
<th>ลำดับ</th>
<th>1</th>
<th>2-3</th>
<th>4</th>
<th>5</th>
<th>6-9</th>
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<tbody>
<tr>
<td>a.</td>
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<tr>
<td>f.</td>
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<td>g.</td>
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</tbody>
</table>

ข้อ ให้ ลำดับ 3

21. สมาชิกได้ต้องดังนี้ที่ให้ได้แก่แตก ตามความจำเป็นทุกข้อ (ตอบได้มากกว่าหนึ่งข้อ)

- ต้องการให้กิจกรรมขยายตัว
- คุณสมบัติไม่ครบถ้วน
- คุณสมบัติไม่ครบถ้วน
- ความมั่นใจในการบริหารไม่ดี
- ขาดแคลนเงินทุนไม่พอ
- ไม่มีประสบการณ์
- กำไรต่างประเทศ
- ไม่ได้ใช้เหตุผลใดๆ

อื่นๆ (โปรดระบุ) ..................................................................
ส่วนที่ 3: การใช้ข้อมูลทางการเงิน

22. ท่านจัดทำข้อมูลทางการเงินหรือไม่
   □ ใช่ (ไปยังคำถามส่วนที่ 4)
   □ ไม่ใช่ (รับไปยังคำถามส่วนที่ 4)

23. คุณมีประสบการณ์ในการจัดทำข้อมูลทางการเงินของท่านต่อไปนี้ (ตอบได้มากกว่าหนึ่งข้อ)
   □ ประสบการณ์ทั้งหมด
   □ ไม่ใช่ในบริเวณที่อยู่
   □ อื่นๆ (โปรดระบุ)

24. ท่านใช้ข้อมูลทางการเงินประกอบการตัดสินใจในเรื่องน้อยกว่าหนึ่งต่อหนึ่ง
   □ ใช่ (รับไปยังคำถาม 26)
   □ ไม่ใช่

25. คุณมีความต้องการที่ต้องใช้ข้อมูลทางการเงินประกอบการตัดสินใจในการตัดสินใจต่อไปนี้ในระดับใด

   | 1 =ไม่ต้อง | 2 =ต้องครั้งละ | 3 =ไม่ต้องครั้งละ | 4 =ต้องครั้งละ | 5 =ต้องครั้งละอย่างน้อย | 6 =ต้องครั้งละอย่างน้อย
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ตัดสินการไถ่ถอนเงินกู้</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. จัดหาข้อมูลทางการเงินไม่ต้องสงสัยอยู่แล้ว</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ข้อมูลทางการเงินไม่ต้องดูดุลย์</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. ข้อมูลทางการเงินต้องการที่ต้องการตัดสินใจ</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>e. ไม่จำเป็นต้องมีข้อมูลทางการเงินข้อมูลดังกล่าว</td>
<td></td>
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</tr>
<tr>
<td>f. ไม่จำเป็นต้องมีข้อมูลทางการเงินเพื่อมิติข้อมูลลิขิตุติย์</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>g. อื่นๆ (โปรดระบุ)</td>
<td></td>
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</tr>
</tbody>
</table>

26. ท่านจัดทำบัญชีตามสัญญาของข้อมูลทางการเงินต่อไปนี้ในระดับใด

<table>
<thead>
<tr>
<th>1 =ไม่ต้อง</th>
<th>2 =ต้องครั้งละ</th>
<th>3 =ต้องครั้งละอย่างน้อย</th>
<th>4 =ต้องครั้งละอย่างน้อย</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. บัญชีขาดทุน</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>d. บัญชีเงินสด</td>
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27. ตัวอย่างค่าสัดส่วนของข้อมูลทางการเงินในปีที่ผ่านมา
(กรุณาเลือกข้อมูลทางการเงินแต่ละหัวข้อต่อไปนี้ โดยวิเคราะห์ที่จะให้ผลตอบ)

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28. ตัวอย่างค่าสัดส่วนของข้อมูลทางการเงินในปีที่ผ่านมา (กรุณาเลือกข้อมูลทางการเงินแต่ละหัวข้อต่อไปนี้ โดยวิเคราะห์ที่จะให้ผลตอบ)

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- 265 -
29. ตั้นจัดตั้งความเห็นของผู้ตรวจสอบสถานการณ์ของแผนภูมิ 2 โดยวิธีที่จะต้องจัดการให้ได้แผนภูมิที่แสดงให้ได้แผนภูมิที่แสดงตามแผนภูมิที่แสดงได้

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ทั้งหมด ไม่ใช้ ในค่าข้อมูล 24 ให้ขึ้นไว้ สามารถ อ่านที่ 4
30. กิจการของผู้ให้ข้อมูลทางการเงินต่อไปนี้กระทำจริงไปในระดับเปอร์เซ็นต์ไม่ถึง 1) จัดหาเงินทุน และ 2) ตัดสินใจในด้านอื่น ๆ นอกจากนี้ยังต้องจัดหาเงินทุน หรือไม่

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31. ข้อมูลทางการเงินที่ผู้ให้ข้อมูลทางการเงินที่มีการคัดเลือกไปในระดับต่ำที่สุดไม่ได้ใช้ระดับที่ให้ไว้ก่อนไปนี้ โดยใช้ระดับที่ให้ไว้ก่อนไปนี้

|  |  |  |  |  |  |
|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
| a.  | 1 | 2 | 3 | 4 | 5 |
| b.  | 1 | 2 | 3 | 4 | 5 |
| c.  | 1 | 2 | 3 | 4 | 5 |
| d.  | 1 | 2 | 3 | 4 | 5 |
| e.  | 1 | 2 | 3 | 4 | 5 |
| f.  | 1 | 2 | 3 | 4 | 5 |

- 267 -
### ลักษณะที่ 4: การประเมินผลการดำเนินงาน

32. ผู้บังคับบัญชา ตามสัญญา ของโรงเรียนต่อไปนี้ ในการดำเนินการของตัวประจำปี

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33. ผู้บังคับบัญชา ตามต่อไปนี้ ในช่วง 2 ปีที่ผ่านมาในระดับพนักงาน

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<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>g.</td>
<td>ความพอใจในความมั่นคงทางการเงิน</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

34. ความพอใจที่ได้ที่ท่านจะอย่างดีที่มีมีต่อปีที่ผ่านมาในช่วง 2 ปีที่ผ่านมาในเขตพื้นที่ต่อไปนี้

- เป็นไปตามความต้องการ
- เป็นไปด้วยการที่
- เป็นไปไม่ได้ตามที่
- เป็นไปไม่ได้ตามที่
- เป็นไปไม่ได้ตามที่

### ลักษณะที่ 5: ข้อมูลต่อมา

35. เพศ ชาย หญิง

36. อายุ

<table>
<thead>
<tr>
<th>อายุ</th>
<th>21 - 25 ปี</th>
<th>26 - 30 ปี</th>
<th>31 - 35 ปี</th>
<th>36 - 40 ปี</th>
<th>41 - 45 ปี</th>
<th>46 - 50 ปี</th>
<th>51 - 55 ปี</th>
<th>56 - 60 ปี</th>
</tr>
</thead>
</table>
- 21 - 25 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 26 - 30 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 31 - 35 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 36 - 40 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 41 - 45 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 46 - 50 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 51 - 55 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
- 56 - 60 ปี | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

37. การพิจารณาสุทธิผลสัมฤทธิ์ของท่าน

- ไม่ได้รับการพิจารณา
- ประมวลผลสัมฤทธิ์ผ่าน
- ประมวลผลสัมฤทธิ์ผ่าน
- ประมวลผลสัมฤทธิ์ผ่าน
- ประมวลผลสัมฤทธิ์ผ่าน
- ประมวลผลสัมฤทธิ์ผ่าน
- ประมวลผลสัมฤทธิ์ผ่าน
- ประมวลผลสัมฤทธิ์ผ่าน

ขอขอบคุณท่านเป็นอย่างยิ่งที่โปรดใช้ในการตอบแบบสอบถามนี้