

UNIVERSITY OF STIRLING

Adoption of Project Appraisal Practice and Accessibility of Finance:
An Empirical Analysis on Selected Small and Medium-Sized
Manufacturing Companies in Malaysia

(Volume 1)

A Thesis

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DECLARATION

In accordance with the Higher Degree Regulations A5.10 and B5.10, I hereby declare that the whole thesis now submitted for the candidature of Doctor of Philosophy is a result of my own research and independent work except where reference is made to published literature is acknowledged. I also hereby certify that that the work embodied in this thesis has not already been submitted in any substance for any degree and is not being concurrently submitted in candidature for any degree from any other institute of higher learning. I am hereby responsible for any errors and omissions present in the thesis.

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ABSTRACT

The crucial role played by small and medium-sized industries (SMIs) in developing countries is very well acknowledged. In Malaysia, for example, the SMIs are perceived as the backbone of the nation's industrialisation process. However, the promotion and development of these SMIs are often hampered by their lack of access to formal institutional credits.

The lack of access to formal credits is often ascribed to the higher level of perceived risks, moral hazards and transactions costs. At present, banks and SMIs in developing countries do not have the appropriate technology to adequately assess these risks. The present study seeks to suggest that project appraisal practice can and should be adopted by the SMIs in order to assess their project's risks. Banks are recommended to use similar techniques to objectively evaluate their lending risks.

Built upon the theoretical framework of finance and development, the study empirically evaluates the relationship between the adoption of project appraisal practice by the SMIs and their access to formal sector finance. In addition, the study also attempts to identify the factors that can influence the company's decision whether or not to adopt formal project appraisal practice.

A very significant and positive relationship was found between the adoption of project appraisal practice and the SMIs' access to formal sector finance. The following factors were found to be significant in determining whether or not a firm adopts project appraisal practice: (1) access to banks finance, (2) entrepreneur's level of education, (3) training on project appraisal, (4) market classification, and, (5) level of business experience. The study therefore concludes that the adoption of project appraisal practice by SMIs should be encouraged through formal training. Finally, the study suggests that the present system of providing finance to SMIs should be reformed and a more innovative and efficient system is recommended.

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LIST OF ABBREVIATIONS

AJDF	ASEAN-Japan Development Fund
ARCB	Average Rate of Interest Charged by Banks
AROR	Accounting Rate of Return
ASEAN	Association of South East Asian Nations
ASLS	Association Special Loan Scheme
BAFIA	Banks and Financial Institutions Act, 1989
BCIC	Bumiputera Commercial and Industrial Community
BIF	Bumiputera Industrial Fund
BLR	Base Lending Rate
BNM	Bank Negara Malaysia (Central Bank of Malaysia)
CGC	Credit Guarantee Corporation
DCF	Discounted Cash Flow Techniques
DFI	Development Financial Institutions
EPF	Employment Provident Fund
EPU	Economic Planning Unit
EXIM	Export-Import Bank of Malaysia
FMM	Federation of Malaysian Manufacturers
FT	Federal Territory
GDP	Gross Domestic Products
GGG	General Guarantee Scheme
GNP	Gross National Products
HPT	Hawkers and Petty Traders Loans
HRDF	Human Resource Development Fund
IAF	Industrial Adjustment Fund
ICU	Implementation and Coordination Unit
IRR	Internal Rate of Return
ITAF	Industrial Technical Assistance Fund
KLSE	Kuala Lumpur Stock Exchange
LFHPT	Loan Fund for Hawkerc and Petty Traders
MARA	Majlis Amanah Rakyat (The Council Trust of Peoples)

MARDI	Malaysian Agricultural Research and Development Institute
MCA	Malaysian Chinese Associations
MED	Ministry of Entrepreneurship Development
MEDEC	Malaysian Entrepreneurship Development Center
MIC	Malaysian Indian Congress
MIDA	Malaysian industrial Development Authority
MIDF	Malaysian Industrial Development Fund
MIEL	Malaysian Industrial Estates Limited
MITI	Malaysian International Trade and Industry
MNC	Multinational Corporations
MTDC	Malaysian Technology Development Corporation
NDCF	Non-Discounted Cash Flow Techniques
NDP	National Development Plan (1991-2000)
NEF	New Entrepreneurs Fund
NEP	National Economic Policy (1970-1990)
NIC	New Industrialised Country
NIERC	Northern Ireland Economic Research Centre
NPC	National Productivity Corporation
NPGS	New Principal Guarantee Scheme
NPV	Net Present Value
OECD	Organisation for Economic Cooperation and Development
OPP1	First Outline Perspective Plan
OPP2	Second Outline Perspective Plan
PA	Project Appraisal
PGS	Principal Guarantee Scheme
PRA	Probabilistic Risk Analysis
PUNB	Permodalan Usahawan Nasional Berhad (A venture capital company)
RIDA	Rural and Industrial Development Authority
ROA	Return on Assets
ROB	Registrar of Businesses
ROC	Registrar of Companies
ROE	Return on Equity

R & D	Research and Developments
RS	Risk Simulation Methods
SA	Sensitivity Analysis
SFT	Special Fund for Tourism
SIC	Standard Industry Code
SIRIM	Standards and Industrial Research Institute of Malaysia
SLMA	Soft Loan for Modernisation and Automation
SLS	Special Loan Scheme
SME	Small and Medium-sized Enterprise
SMI	Small and Medium-sized Industry
SMIDC	Small and Medium-sized Industry Development Corporation
SMMC	Small and Medium-sized Manufacturing Companies
SPSS	Statistical Package for Social Sciences
SRA	Simple Risk Adjustment Methods
SSE	Small Scale Enterprises
TFP	Total Factor Productivity
UMNO	United Malay Nationalist Organisation
UNIDO	United Nation Industrial Development Organisation
VC	Venture Companies (Investee companies)
VCC	Venture Capital Companies

INTRODUCTION TO THE STUDY

1.1 Introduction

In a rapidly changing and modernising economy as experienced by most developing countries, the role of small and medium-sized industries (SMIs) as 'ancillaries' to the larger firms has become increasingly important¹. However, the growth and development of the SMIs in general and the small and medium-sized manufacturing companies (SMMCs) in particular, are often hampered by the lack of finance extended by the formal sector financial institutions. Based on the researcher's experience in working with small businesses in Malaysia, one may feel very strongly that any efforts to promote the growth and development of the SMIs in the country would not be sustainable unless a pragmatic and systematic way of providing finance to them is formulated. Though this point has been recognised in discussions based on anecdotal evidence, so far we have not come across any study which systematically reviews the real issues and problems associated with financing of small business within the context of developing countries in general and Malaysia in particular.

The present thesis, is set to be the first study which systematically reviews and evaluates the financing problems faced by the SMIs in Malaysia within the theoretical framework of financial innovations and economic development. From our extensive review of the literature on SMI financing, we have found that, the main constraint

¹The acronym, 'SMIs' is used by the present study to describe the small and medium-sized companies in general which operate in different sectors of the economy, while the term 'SMMCs' refers to the small and medium-sized companies involved in the manufacturing sector only. Nevertheless, both terms can be used interchangeably within the context of the present study.

affecting the provision of finance, particularly from the formal sector institutions, is the issue of risks and uncertainties inherent in the nature of the SMI sector itself. Majority of SMIs in Malaysia in the past have relied quite extensively on informal sources such as personal savings and borrowings from friends, relatives or moneylenders. But, with the advent of modernisation since the early seventies, the nature of these SMIs and their sources of financing have gradually changed. Traditionally, these SMIs get their finance from informal sources, but as they become more modernised, they have to seek finance from the formal financial markets and institutions.

Theoretically, when the economy of a country begins to modernise, its financial institutions also go through a similar process of development themselves. In order to cope with the growing demand for finance, majority of these financial institutions introduce various innovative financial products and compete with each other in terms of providing a more efficient and reliable intermediary services to their suppliers and users of funds. The healthy growth of these financial intermediaries is extremely vital to support the process of economic development, by mobilising savings and allocating credit resources. However, the concentration of lending by these intermediaries to the manufacturing sector during the early phase of economic development were usually towards the larger manufacturing firms whereas the 'ancillary industries', the majority of which are SMIs, were left out. The reason for this being the SMIs are perceived by lenders as risky borrowers, partly due to the business risks as well as uncertainties related to their business operations in the future. In other words, the lack of credit flow from the formal sector institutions are basically due to the high lender's and borrower's risks as well as high transactions costs associated with lending to this particular sector.

Given the constraint of formal sector financing, the majority of SMIs have to rely on government agency finance or fall back on their traditional sources of finance. Both of these sources have their own limitations. With regard to government agency finance, the cost of borrowing is heavily subsidised, the size of loan is usually inadequate and the default rate is generally high. Moreover, in Malaysia, this type of financing is ethnically-biased towards the Malays or the *bumiputeras*². The present system of providing subsidised finance to the SMIs is detrimental in two ways. First, it encourages the *bumiputeras* to start their own business without initially making proper assessment of risks involved. Lack of risk assessment usually contributes to the high rate of business failures which in turn leads to higher risk of defaults. Higher risk of defaults pose serious threat to the sustainability of these government funds and we certainly believe that in the long run, it would put unavoidable pressure on the public purse if this policy is allowed to be continued indiscriminately. Secondly, this type of financing policy will cultivate the 'subsidy mentality' and strengthen the 'dependency culture' of the *bumiputera* community on government handouts. If this is allowed to continue, then the principal objective of the national development policy to create a resilient, independent and competitive *Bumiputera Commercial and Industrial Community* (BCIC) will never be accomplished.

With regards to the informal sources of finance, the constraints are primarily due to the cost of finance, the payback period as well as the size of loan that can be obtained from these sources. Obviously, when the size of loan is small, and the cost of the loan is high, it will make it very difficult for a borrower to use the loan for productive

² See footnote 9 on page 12.

purposes. Furthermore, the failure to service these loans within the stipulated time period often leads to serious consequences for the borrower³.

Given the drawbacks of both the government agency finance as well as the informal sources of finance, the present thesis seeks to propose a financing system for the SMIs which we believe can eventually enhance their access to finance from the formal sector financial institutions. As we have mentioned earlier, the underlying reasons for the lack of credit extended to the SMI sector by the formal sector institutions are basically rooted in the high level of perceived risks and uncertainties as well as the high transactions costs. Therefore, a proper strategy to tackle the above issue is to equip the SMIs with a 'technology' by which they can systematically reduce the level of perceived risks while at the same time minimising the transactions costs. The level of perceived risks can be reduced if lenders are given the relevant information required to enable them to adequately assess the risks associated with a proposed project. Much of these information relate to the viability of the project, the background information of the company and their owners as well as the companies capability in managing the proposed project. In this respect, SMIs should be trained on the technology of acquiring, using and giving these information to their prospective lenders so that proper assessment on risks can be undertaken by the latter. In our own assessment, we believe that one of the most effective method to gather the necessary information needed by the lenders (in order to reduce the level of perceived risks and uncertainties) is to encourage the SMIs to adopt project appraisal techniques and procedures.

³ A detailed discussion related to the informal sources of finance is given in Chapter 3.

Project appraisal method and procedure is basically a management decision-making tool which is commonly used by public and private organisations to evaluate the net benefit that can be derived from an investment in a particular project. In other words, the costs and benefits associated with a proposed project are carefully evaluated in order to minimise the risks of commercial failure. Unfortunately however, studies on project appraisal and SMIs in developing countries are almost non-existent⁴. To the best of our knowledge, the present study is the first of its kind to systematically evaluate the link between the adoption of project appraisal and the SMIs' access to formal sector finance in the context of developing countries.

The performance of project appraisal is particularly useful for the SMMCs in terms of identifying and selecting the best 'project' or 'investment' through a systematic evaluation procedure given the limited resources available to these companies. Project appraisal methods and procedures help to reduce risks and uncertainties related to a proposed investment, as relevant information is gathered and analysed and by using various forecasting techniques, the stream of benefits and costs associated with the proposed project can be determined in advance. In other words, the viability of projects can be predetermined well before the actual investment is made.

Since the adoption of project appraisal practices is so relevant and crucial for the SMIs in general, the present study seeks to investigate to what extent these industries, specifically the small and medium-sized manufacturing companies (SMMCs) in Malaysia, adopt or practice project appraisal methods and procedures for their respective companies.

⁴ See Chapter 4 for detailed discussion on project appraisal practice in developing countries.

Apart from assessing the risks and uncertainties of the proposed project, the performance of project appraisal can be crucial in assisting the SMIs to secure financial assistance from the formal sector financial institutions such as banks and government agencies. Formal sector lenders are concerned about the ability of these borrowers (SMIs) to repay the loans and project appraisal documents can certainly help them to objectively evaluate the credibility of the borrowers as well as the viability of the proposed projects. In that sense, project appraisal document can be a valuable instrument for lenders and borrowers to gauge the risks and uncertainties associated with the proposed project which can directly affect their lending and borrowing risks.

The present study also argues that if the performance of project appraisal is considered adequate by the lenders, at least in their judgement about the potential of the borrowers to repay the loan, then their traditional emphasis for the loan to be secured only against excessive amount of collateral should be reduced. In other words, adequate access to finance (or credit) should be made available to the SMIs by the formal institutions if they are satisfied with the appraisal, thus placing less emphasis on collateral. If this proposition is accepted, much of the predicaments suffered by the SMIs (at least in the Malaysian context) in getting adequate access to formal sector finance can be eliminated, since lender's obsession with collateral often deny low risk, viable SMIs from receiving financial assistance at a reasonable cost.

Using the primary data collected from 135 companies, the present study has been able to establish first, the significant relationship between adoption of project appraisal practice and access to formal sector finance and secondly, determine the variables which significantly affects the decision whether or not a particular firm adopts project

appraisal practice. The present study is also able to come out with a set of concrete proposals as to how the Malaysian government can effectively improve the provision of finance to the SMIs without jeopardising the country's financial system in the long-term.

In addition, the present research also incorporates a discussion on the importance of maintaining a 'good and healthy' relationship between SMIs and the banks, especially to dispel the misconceptions derived from prejudices in the past whereby SMIs were considered as highly risky, therefore not worthy of any financial assistance. The study also looks into the importance of non-institutional sources of finance in providing credit to the SMIs.

In this introductory chapter, a general review on the importance of the SMI sector is provided in an attempt to relate and justify the continued commitment from the governments of developed and developing countries to promote this sector. Within the Malaysian scenario, emphasis will be given on the policies which promote SMIs as a backbone to the national industrialisation process as well as their place in a strategy to close the 'wealth gap' between the major ethnic groups in the country.

The chapter then reviews the dilemmas faced by the SMIs in developing countries in terms of their access to external formal finance so much so that the formal sector financial institutions have been heavily criticised for failing to provide the financial assistance needed by the SMIs. It is alleged that, the failure of these institutions to provide adequate access to credit impinges upon the growth of the SMI sector.

After reviewing the financing problem faced by the SMIs, the chapter then describes the purpose of the study in greater detail as well as outlining the significance and the possible contributions of the study to the various field of knowledge, particularly in the subject of small business finance. A snapshot on the profile of the selected sample is also briefly described. This introductory chapter then closes with a preview of the subsequent chapters in the dissertation.

1.2 The Crucial Role of SMIs

The small and medium-sized industries (SMIs) in both developed and developing countries are perceived to play a crucial role in the economic development (Chee, 1992; Bannock and Albach, 1991; Chowdhury, 1990). In the developing countries, SMIs have captured the interest of policy makers as being a solution to the socio-economic predicaments such as unemployment, imbalance in regional growth and income distribution among races and other groups within the society (Little, 1987; White, 1984; Storey, 1983; Bhatt, 1981; Bates, 1964). SMIs are discerned to be not only the most effective and potent vehicle to alleviate poverty but also as an important agent to facilitate an effective mobilisation of resources such as capital and skill which might otherwise remain unutilised (Khanka, 1989; Kohli and Lay, 1982). These beliefs have led to the formulation of various policies and promotional schemes aimed at promoting and nurturing the growth of the sector.

In Malaysia, the present government is fully committed to promote and develop SMIs in the country. This is evidently clear in the following excerpt of the honourable Prime Minister, Dato' Seri Dr. Mahathir Mohamed's speech; "*.....small and medium scale industries have an important role to play in generating employment opportunities, in*

strengthening industrial linkages, in penetrating markets and generating export earning. They have a crucial role as a spawning ground for the birth of tomorrow's entrepreneurs. The Government will devise appropriate assistance schemes and will seek to raise the level of management expertise, technological know-how and skills of the employees in this very important and in many ways neglected sector of our economy. The SMIs will be one of the primary foundations for our future industrial thrust. The Government is fully committed to its healthiest development" (Abdul Hamid, A.S. 1991, pp. 412-413). With the inception of the Small and Medium Industries Development Corporation (SMIDC) in 1996, the government has further strengthened its commitment to promote and accelerate the development of SMIs, in particular the *bumi-controlled* SMIs as the driving force of Malaysia's industrialisation process towards achieving the NIC status by the year 2020.

While the significant role played by the SMIs in developing countries is well acknowledged, industrialised nations like the United States, Germany, Japan, Sweden and Britain are also giving special treatment to their SMIs. They perceived SMIs as a new and important force in the economy particularly in creating new jobs (Reid, 1993; Storey, 1983; Birch, 1981; Bolton, 1971, OECD, 1971). It is also noted that, SMIs in highly industrialised economies can provide the necessary ingredients needed to produce sustainable economic growth due to its ability to innovate and its flexibility to adjust with the ever-changing economic environment (Dewhurst and Burns, 1986). Furthermore, they are able to absorb economic shock transformations more readily as compared to their larger counterparts (Karwouska and Mrozinska, 1993).

1.2.1 Strategic Importance of SMIs in the Malaysian Economy

The strategic importance of the SMI sector in Malaysia is derived primarily from the government's commitment to embark on the industrialisation process in which the nation aspires to become a newly industrialised country (NIC) by the year 2020. SMIs in the country are expected to support the larger corporations by providing efficient link in services as well as products. They are expected to rejuvenate the whole industrialisation process by adopting new technologies and investing in strategic industries where the market potential is not restricted within the country.

As the manufacturing sector is currently considered the 'engine for future economic growth', economic policies for years to come are targeted at strengthening the performance of this sector, particularly in terms of its productivity enhancement and overall effectiveness. In order to achieve the target, the government has recently shifted its industrial strategy from an investment-driven strategy towards a productivity-driven strategy by enhancing the contribution of *total factor productivity* (TFP)⁵. Skills upgrading, capital deepening, technology development and organisational improvements will form the foundation for the transformation of the economy towards productivity-driven growth.

The small and medium-sized industries (SMIs) in the country have always been a formidable economic force in the manufacturing sector, supplying essential inputs, in

⁵Total factor productivity refers to the additional output generated as a result of the introduction of new technology or upgrading of technology, innovation, superior management techniques, gains from specialisation, improvements in efficiency, know-how, worker's education, skills and experience and advancement in information technology.

terms of products and services to the large domestic and foreign multi-national corporations (MNCs). According to a nation-wide study on the SMIs in 1994, (the latest available figure) there were 12,108 SMIs with a paid-up capital of less than RM2.5 million⁶ and employing between 5 to 99 full time workers. Out of the 12,108 SMIs covered by the survey, 10,400 of them were small-scale industries and only 1,708 were considered as medium-scale industries⁷. Malaysians owned about 77 percent of the medium-scale establishments and 97 percent of the small-scale establishments while foreign-owned SMIs made up the remaining percentage (Malaysia: Seventh Malaysia Plan, 1996, p. 281).

Majority of these SMIs are engaged in food, beverages and tobacco, fabricated metal products, machinery and equipment, wood and wood products, textile and wearing apparel as well as leather industries. The heavy concentration of SMIs in these subsectors, suggest that, at the moment, they are not well integrated with mainstream industrialisation. Therefore, a proper realignment strategy is needed for them to be able to provide effective support to the larger scale establishments. About 47 percent of medium-scale establishments export their products as compared with only 15 percent by the small-scale enterprises; indicating that adequate size is a necessary pre-requisite for the development of export-oriented products (Malaysia: Seventh Malaysia Plan, 1996, p. 281).

⁶RM= Ringgit Malaysia. The rate of exchange is approximately RM5.00 to 1 pound sterling.

⁷Small-scale industries are manufacturing establishments with a paid-up capital of less than RM500,000 and employing between 5 and 50 full-time workers. Medium-scale industries are manufacturing establishments with a paid-up capital of between RM500,000 and less than RM2.5 million and employing between 51 and 99 full time workers.

The continued interest in promoting the growth and development of SMIs in the country is not confined to the achievement of the nation's economic objectives, but more importantly, to achieve its social objectives by redressing the issue of wealth distribution among the ethnic groups and regions. Malaysia is a multi-racial country, and as such, it is necessary and important for her to strike a balance between economic growth and social harmony. In the early seventies, following the racial turmoil in 1969, the New Economic Policy⁸ (NEP) was launched with the objectives of eradicating poverty amongst all races and regions as well as restructuring of corporate equity ownership and employment, to ensure more balanced sharing of the economic wealth among the *bumiputeras*⁹ (mainly Malays) and *non-bumiputeras*¹⁰ (mainly Chinese and Indians).

Since independence, the mean income for non-bumiputeras, especially the Chinese has always surpassed the mean income of the bumiputeras (Chart 1.1), despite an increase of the average household income for all ethnic groups over the years. In 1970, the income disparity ratio between the Bumiputeras (i.e. the Malays) and the Chinese and Indians are 1:2.29 and 1:1.78 respectively (Malaysia: Second Outline Perspective Plan, 1991b). It was evident that even after more than three decades of independence, the income gap between these ethnic groups not only persist to exist but has also widened.

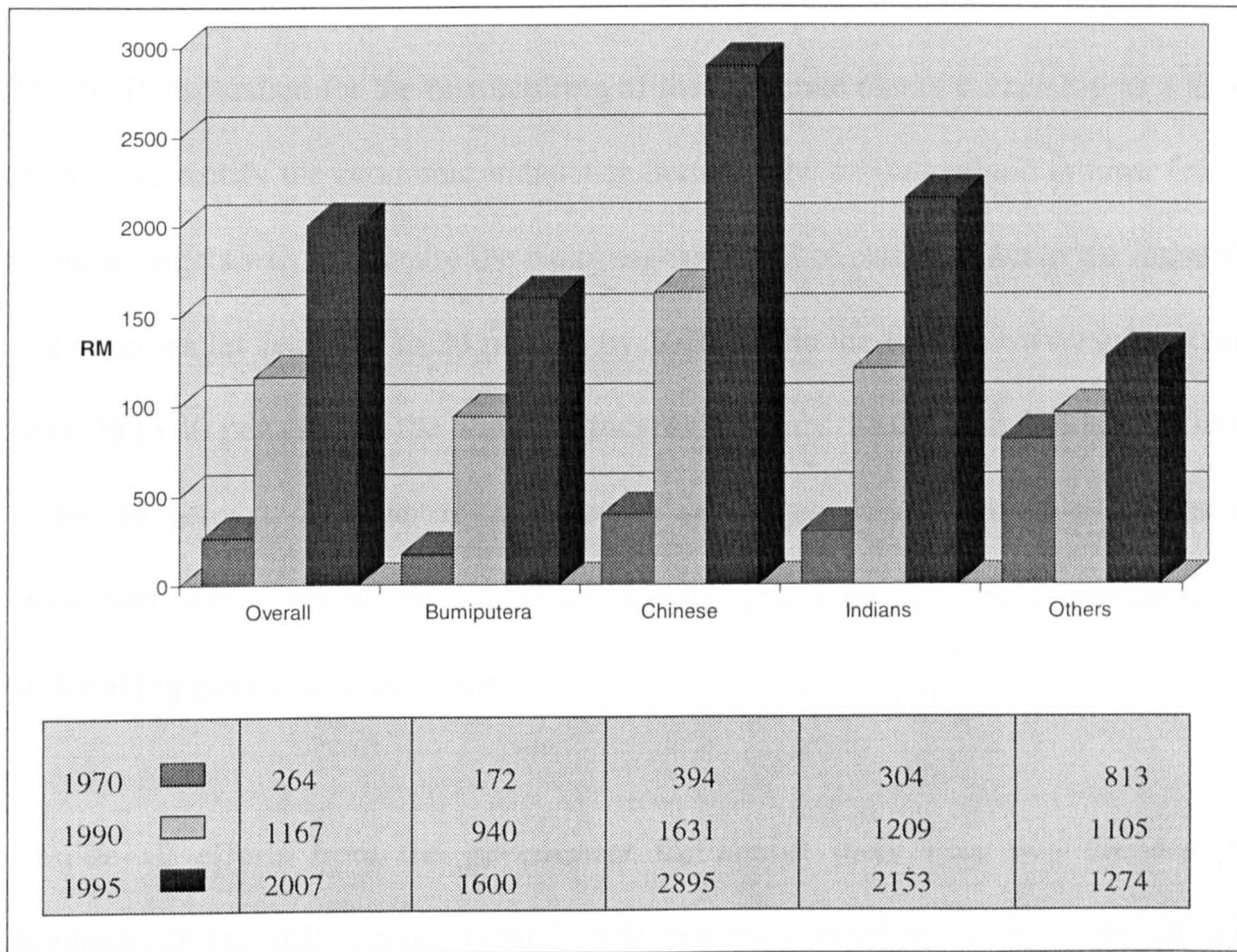
⁸The NEP is also known as the First Outline Perspective Plan (OPP1), 1970-1990.

⁹*Bumiputeras* refer to 'sons of the soil' which mainly covers the Malays in the peninsular as well the natives of Sabah and Sarawak.

¹⁰*Non-bumiputeras* refer mainly to the Chinese and Indians who were previously immigrants from China and India.

Chart 1.1

Malaysia: Mean Monthly Gross Household Income, 1970-1995
(in current prices RM¹)



Note: ¹ RM=Ringgit Malaysia (Exchange rate: 1 pound sterling to 5.00 Ringgit Malaysia).

Source: Figure for 1970 from the Second Outline Perspective Plan, p. 51.

Figure for 1990 and 1995 from the Seventh Malaysia Plan, p. 90.

According to the Economic Report, 1995/6 (the latest available), the income disparity ratio between the Malays and the Chinese had widened from 1:1.74 in 1990 to 1:1.84 in 1995 and the disparity of income between the Malays and the Indians had also increased from 1:1.29 to 1:1.35 during the same period (Malaysia, 1994). The increase in income imbalance between the Malays, the Chinese and the Indians during the period of 1990 to 1995 is due to differential in the growth of income between these ethnic groups. Towards the end of the Sixth Malaysia Plan in 1995, the income of Indians have recorded a growth rate of 10.1 percent, followed by that of the Chinese

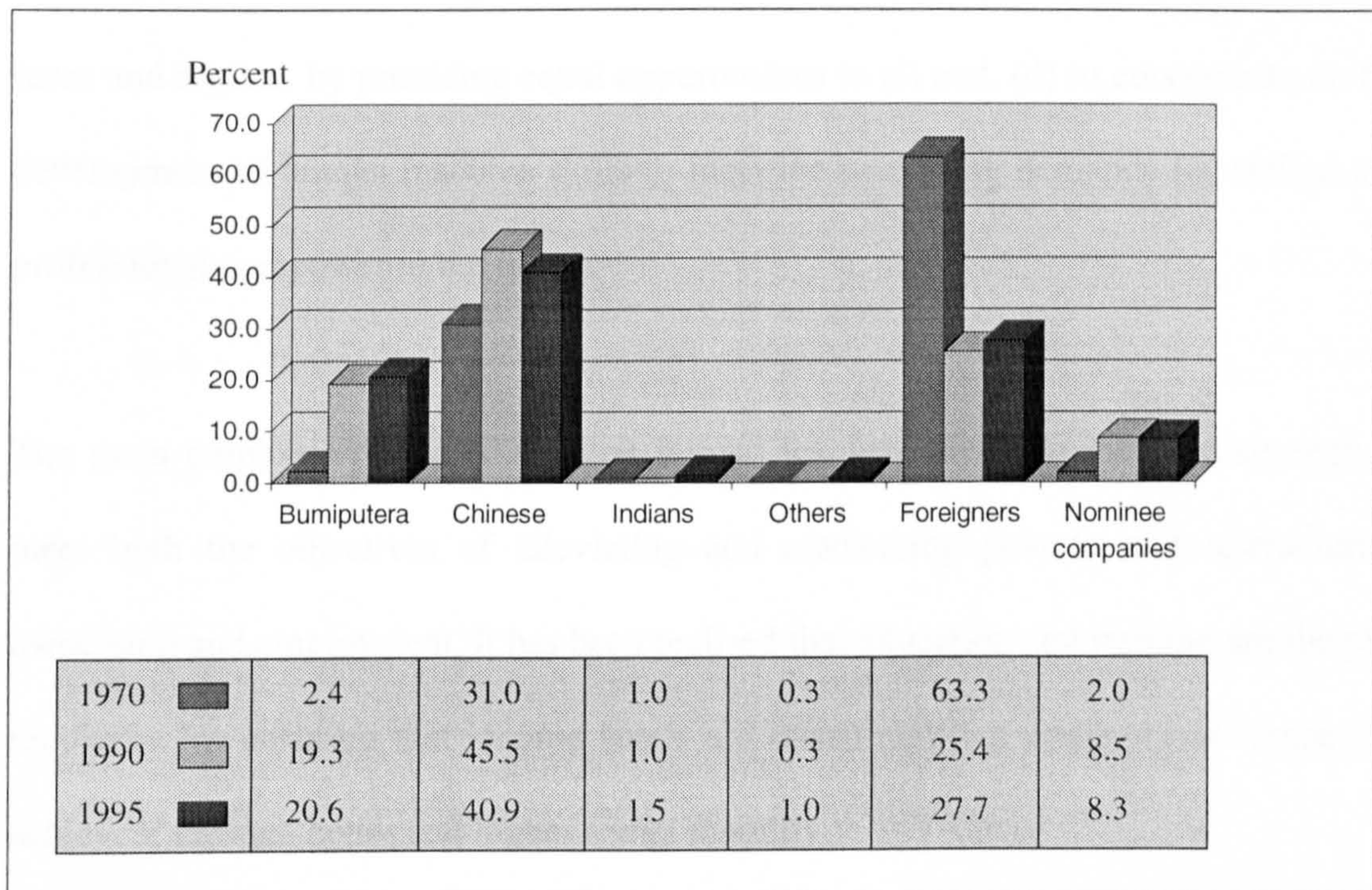
with a growth rate of 10 percent and the Malays had achieved only a growth rate of 9.3 percent (Malaysia: Seventh Malaysia Plan, 1996).

The NEP also called for the restructuring of the corporate equity ownership as a major strategy to rectify the economic imbalance between the various ethnic groups. One of its main targets was to increase the *bumiputeras*' share of participation in the industrial and commercial activities to 30 percent by 1990, while the foreign ownership to drop from 70 to 30 percent and the *non-bumiputeras*' (mainly the Chinese and Indian) share to be 40 percent. In order to achieve the set target, various fiscal and financial incentives were formulated including special priorities for the *bumiputeras* in undertaking government contracts.

Despite all efforts from the government for almost more than two decades, the *bumiputeras* are still lagging behind their *non-bumi* counterparts in terms of their participation in industrial and commercial activities. The reality of the fact can be deduced by looking at the figure related to the ownership and control of the corporate sector as can be seen from Chart 1.2. The NEP which expired in 1990 brought little though significant impact in encouraging the *bumi* participation, despite criticism that such policy was narrowly focused on certain ethnic redistributive issues. The *bumiputeras* holding of equity rose to 20.3 percent but still short of the 30 percent target set, while the *non-bumiputera's* share was 46.2 percent and foreign ownership fell to 33.5 percent (Malaysia: Second Outline Perspective Plan, 1996-2000, p. 55).

Chart 1.2

Malaysia: Comparative Ownership of the Corporate Equity, 1970-1995
(shown as percentage)



Source: Figure for 1970 from the *Second Outline Perspective Plan*, p. 55.

Figure for 1990 and 1995 from the *Seventh Malaysia Plan*, p. 86.

Whatever the criticisms may be, the NEP enabled the economy to prosper with more equitable distribution of wealth among the society and had largely contributed to the steady and sustained socio-economic development for the last twenty years since 1970.

The National Development Policy, 1991-2000 (NDP), which was launched in 1991 to replace the NEP, bear similar objectives to the former NEP; but the main differences between these two major policies are found in the difference of emphasis, priority and timing. Among others, the strategic dimensions of the NDP include (a) to eradicate absolute poverty by refocusing the planners' efforts to alleviate relative poverty, through economic measures (b) to concentrate on the development of the *Bumiputera*

Commercial and Industrial Community (BCIC) which are pro-active and resilient to participate in strategic sectors of the economy (c) to increase the private-sector involvement in restructuring the society and narrowing the economic gap between races and regions by providing equal opportunities to all and, (d) to concentrate on the development of human resource skills to meet the increasing demands for skilled and professional manpower in the future.

The main emphasis of the NDP is on human resource development as a strategy to meet both the objectives of alleviating and eradicating poverty and restructuring ownership and employment. It has been realised that education and training are the pre-requisites for ensuring that income levels are raised and that employment targets are achieved, through better and higher social mobility.

Priority will still be given to the *bumiputeras*, but the creation of BCICs will ensure that only those *bumiputeras* with genuine interest will get the necessary assistance from the government. Stringent entry standards for participation in the BCIC programmes are imposed as these programmes placed stronger emphasis on the quality of *bumiputera* entrepreneurs rather than merely increasing their numbers. So far, the restructuring of corporate equity has been hampered by lack of understanding within the *bumiputera* community that share-holding constitute long-term investment. The majority of these shares were relinquished not very long after they were acquired for short-term gains. It is believed that *bumiputeras* who are better trained and educated are more likely to have the means not only to acquire equity assets, but more importantly, to keep them. This would then constitute longer term investments, which

would generate higher income, ensure sustained ownership and more meaningful participation in the mainstream commercial and industrial activities of the economy.

No specific time-frame has been set in order to achieve the objectives laid down in the NDP which means the policies of restructuring corporate ownership and equitable redistribution of wealth will be pursued so long as the imbalances between the two major ethnics exist. In order to expedite the realisation of the NDP objectives, the SMIs have been given special responsibilities towards achieving the nation's socio-economic objectives. As such, the government will continue to harness its growth and development especially in terms of strengthening the inter and intra-industry linkages as well as facilitating SMIs to penetrate the export markets. Among others, the development strategies for SMIs in the 1990s include:

- i) the formation of the Small and Medium-Scale Industries Development Corporation (SMIDC) in order to provide effective leadership as well as formulate more focused development programmes. This corporation will have authority on operational planning and overall implementation and co-ordination;
- ii) the development of domestic market-oriented projects for the small-scale industries as well as promoting export-oriented projects for the medium-scale industries which have exhibited strong growth potential. Under the export market development scheme, new SMI exporters will be assisted to develop expertise in marketing, promotion, distribution, pricing, packaging and transportation by experts from Malaysian External Trade Development

Corporation (MATRADE). As part of the export initiatives, the newly established EXIM Bank (Export-Import Bank of Malaysia) will provide medium and long-term credit to finance exports of high value-added manufactured products;

- iii) provision of incentives for training in order to upgrade the skills and technical competence of the SMI's workforce. For the small-scale industries, double deduction on expenses incurred can be claimed if their employees are sent for training at approved training institutions (See Appendix 1.1 for a list of approved training institutions). For the medium-scale industries, they can avail themselves for assistance provided by the Human Resource Development Fund (HRDF), however, these companies have to contribute at the rate of one percent of the total wages of the employees;
- iv) to encourage involvement of SMIs in the development of new technologies through research and development (R&D) activities by providing fiscal and financial incentives as well as appropriate infrastructure. The Industrial Technical Assistance Fund (ITAF) was set up for the purpose of providing grants to SMIs which are involved in R&D activities¹¹;
- v) upgrading and expanding the existing programmes to enable more SMIs to be upgraded and integrated into the mainstream of the manufacturing sector. Existing programmes such as vendor development programme, franchise

¹¹ R & D activities for SMIs involve the designing, developing and testing of prototypes before commercialization.

development programme, integrated marketing under the 'umbrella-concept', and nursery factory or incubator schemes will be continued;

- vi) provision of financial assistance to qualified and viable SMIs will be continued with the main source of credit coming from the financial institutions and finance companies. The central bank (Bank Negara Malaysia) will continue its policy to encourage lending by commercial banks and finance companies through its lending guidelines;
- vii) revitalising the existing entrepreneurial development programmes by focusing on nurturing viable entrepreneurs and enterprises through proper training and consultancy; and
- viii) the creation of the *Bumiputera Commercial and Industrial Community* (BCIC) who that is resilient, innovative and competitive to participate in the strategic business activities and industries such as the aerospace and petrochemical industries. The BCIC programmes were specifically outlined in the National Development Policy (NDP) which have gained support from government-owned companies as well as other privately-owned manufacturing companies. More importantly, the programmes have succeeded in gaining the support of financial institutions to provide financial assistance to *bumiputera* SMIs.

1.2.2 Financing Policy for SMIs in Malaysia

Since the period of colonial rule and during the early years of independence, there have been no specific policies that addressed the issue of SMI development in general and

its financing policy in particular. Prior to 1960, the only agency that is known to have some involvement in developing the SMIs is RIDA (Rural Industrial Development Authority) but its involvement was aimed exclusively towards the *bumiputeras*.

The specific policy concerning the SMI financing was first addressed officially by the government in its first five-year plan known as the *First Malaysian Plan (1960-1971)* which has directed few agencies namely MARA (previously known as RIDA), *Bank Bumiputera* (a bank owned by the government) and the Malaysian Industrial Development Finance (MIDF - a development bank) to address the problems of financial inadequacies faced by the *bumi* entrepreneurs. At the same time, the Malaysian Industrial Estate Limited¹² (MIEL) was directed to intensify its activities in building business centres, factories of different sizes and industrial parks. In addition, the rural co-operative movement were instructed to continue assisting its members both financially and technically. However, majority of these co-operatives are involved with the agricultural sector either in production of inputs or processing agricultural products.

After the racial turmoil in 1969, the Malaysian Government has given its prime attention to reduce the economic imbalance among races by further promoting the small and medium sized industries. This strategy was clearly spelt out in the *Second Malaysia Plan (1971-1975)*, which led to the establishment of the Credit Guarantee Corporation (CGC) in 1972. In addition, an Advisory Council on Consultancy and Advisory Services for Small Scale industries was established in 1973 to make sure that there is a co-ordination of the services provided by the different agencies.

¹²MIEL is wholly owned subsidiary of the Malaysian Industrial Development Finance.

The central bank of Malaysia known as *Bank Negara Malaysia* (BNM) was instructed to formulate strategies to enhance accessibility of credit for the SMIs by commercial banks. *Bank Negara Malaysia* took the early initiatives by organising a series of seminars with the top management of commercial banks to review the role that can be played by them in helping the SMIs. As an outcome of the consultation process, SMIs in this country were marked as the 'priority group' in 1972. The central bank, starting from its annual report in 1974 until today, has included a special column known as *Bank Lending to Special Groups*, in its annual report, to recount the status of bank loans extended to the SMIs.

In the *Third Malaysia Plan (1976-1980)*, policies towards SMI were more concentrated on provision of entrepreneurial training. Many training agencies, among others the Malaysian Entrepreneurship Development Centre (MEDEC), the Council of Trust for the Indigenous People (MARA), the National Productivity Centre (NPC) and the Ministry of Youth, Culture and Sports were requested to provide training for about 17,500 participants. Funds were channelled directly to these organisations.

Policy on SMI financing continued to be given prime attention in the *Fourth Malaysia Plan (1981-1985)* where an amount of RM318 million was allocated to MARA and the DFIs for the purpose of providing financial assistance to the SMIs. The government continues to provide financial assistance to develop the SMIs in their successive five-year plans. In the *Fifth Malaysia Plan (1986-1990)*, a special programme for the development of small industries was launched with a total financial assistance of RM234 million, with the co-operation from the World Bank. A ten-year masterplan known as the Industrial Master Plan (IMP) 1986-1995, was formulated to reshape the

industrialisation process towards outward-looking, export-oriented activities. Thus, the SMIs are expected to play a complementary role with their larger counterparts especially in establishing the necessary up-stream and downstream linkages.

When the NEP expired in 1990, it was replaced by the National Development Policy (NDP) which contained the Second Outlined Perspective Plan (OPP2). The OPP2 encompasses the *Sixth Malaysia Plan* (1991-1995) and the *Seventh Malaysia Plan* (1996-2000). While the NEP was more concerned with quantitative aspects, for example the number of *bumiputera* businesses created, OPP2 was designed to improve the qualitative aspect of it. OPP2 also presents a challenge to the small and medium-sized enterprises owned by *bumiputeras* to compete in the open market, regionally, nationally and internationally given the minimal assistance from the government. However, in all of these policies, lending guidelines as regard to the provision of external finance to SMIs remains operational, although they are no longer considered as 'priority group' since 1990.

1.3 The Financial Dilemmas Faced by SMIs

Despite the various efforts made by the government in promoting and harnessing the development of SMIs, the majority of SMIs are still facing several constraints which severely abate their ability to respond effectively to the government's "call". One of the most commonly cited constraints is the availability of credit (or the lack of it) provided by the formal financial institutions. As a result, many of the SMIs, as common with their counterparts throughout the ASEAN countries, are forced to fall back on their

own savings with shortfalls being met by relatives, friends and other informal credit sources¹³.

Using the informal sector sources of finance like moneylenders, involve great risks. Many of these sources operate illegally and the consequences for non-repayment can sometimes be even fatal. Although these informal sources are easily accessible, the amount of loan are often limited and the cost of these loans are generally much higher than most types of formal institutional credit (U Tun Wai, 1957).

There are several reasons why financial institutions in Malaysia, particularly, the commercial banks, are reluctant to lend to SMIs. Firstly, it is less profitable to lend to small industries than to large establishments because of the higher transactions costs and greater risks involved. Transactions costs tend to be high because of the diseconomies of scale since small industries are typically deficient in equity and lack acceptable collateral. In addition, the risk of business failure is also higher for small industries (Chee, 1990).

Secondly, due to asymmetric information, the banks find it even more difficult to obtain credit information about the applicants and their businesses. Loan applications are often incomplete, not accompanied by financial statements, or, if they are, these are not properly prepared. Lending under these circumstances posed the banks with higher risks.

¹³See for example, Chee 1977; U Tun Wai, 1957 and 1980; Philippines, 1967; and Lee, 1970. ASEAN refers to the Association of Southeast Asia Nations.

Thirdly, lack of 'good' relationship between the small industries and the banks has led to a generally high level of prejudice among both parties. Many of the small industries never approach banks, and even if they do, their limited experience with bank officials often result in their applications being turned down. The bank officers, on the other hand, are generally quite sceptical about the SMIs. The attitudes of the bank managers are often critical. More often than not, they feel that the entrepreneurs lack the skills of managing a business. Thus, they are very hesitant to process loan applications from SMIs. All the difficulties in obtaining credit from the formal financial institutions have reaffirmed their misconceptions that banks are not the 'place' for SMIs to seek financial help.

The lack of access to formal institutional credit, and need to finance expansion and working capital requirements from internally generated funds or non-formal institutional sources have prompted the SMIs to criticise the authorities. Much of the criticisms centred on the allegations that banks favour the large companies and provide them with low cost funds while the SMIs have to pay higher charges for their loans; normally at least one or two percent above the rate the banks charge their most creditworthy customers (Lee, 1970). In addition, most banks also charge 'unofficial commission' on small business loans which make the cost of borrowing even higher for small companies than may appear from the headline interest charge (Chee, 1990).

In light of the above mentioned difficulties facing the SMIs, the government has taken various measures in order to improve the provision of finance to the SMIs by the formal sector. A number of revolving funds were created by the government with support from the various financial institutions. In addition, banks and other financial

institutions were encouraged to increase their lending to the SMIs through various guidelines issued by the central bank (Bank Negara Malaysia). Under these guidelines, the commercial banks have to set aside a proportion of its loanable fund specifically for lending to the SMIs.

Although, government interventions have resulted in improving the provision of finance in the short-term, these interventions tend to create some long term problems to the country's financial system. Continued pressure from the government in forcing the commercial banks to lend to the SMI sector, actually undermine the role of the banks as intermediaries and their allocative functions which in the long run will weaken the nation's financial system. Artificially low ceiling rate as well as subsidised credit encourage SMIs to apply for bank loans even when they are not needed. Furthermore, the various incentives and privileges have created a 'dependency culture', especially among the privileged *bumiputera* entrepreneurs.

It is important, therefore, to search for workable and practical solutions to improve the provision of finance to the SMIs without burdening the financial system with undue risks. The strategy calls for both parties to agree on a procedure which have to be followed by the SMIs before they apply for credit, and if these procedures were adhered to, the bankers should be in a position to approve application for loans without undue delay. Our proposition is to encourage the SMIs to adopt project appraisal practice and utilise them whenever they intend to commit capital expenditures.

Project appraisal methods and procedures have been widely practised by large companies to evaluate the potential or viability of a proposed investment as well as

using it to secure financial assistance. The methods used, ranging from the simple payback and accounting rate of return measures to the more sophisticated stochastic techniques such as the methods of net present value and internal rate of return have enabled company's decision makers to make an informed decision on whether to press ahead or shelve a proposed project.

The use of similar methods and procedures by the SMIs, especially in Malaysia, have not been widespread although there is generally a high level of awareness on the existence of such techniques among SMI entrepreneurs. The undertaking of project appraisal by the SMI benefits both parties in a lending contract; the SMIs as borrowers and financial institutions as lenders. The performance of project appraisal by SMIs helps to increase their probability of success, thus, minimising default risks if they were to borrow from financial institutions. Likewise, the performance of project appraisal by the SMIs, helps the financial institutions to evaluate their potential returns if they were to finance the proposed projects. Furthermore, information contained in the project appraisal document provide the 'extra' information which cannot be collected from the credit application form alone, thus, reducing their lending risks that are normally associated with moral hazards and asymmetric information.

1.4 The Research Design

Within the theoretical framework of finance and development, the present study is designed to empirically evaluate the relationship between the adoption of project appraisal practice by the small and medium-sized industries and their access to external formal institutional finance. In other words, the present study attempts to provide a critical assessment on the practice or performance of project appraisal by the small and

medium-sized manufacturing companies in Malaysia, particularly, in the direction where the adoption of such practice has produced significant result in enhancing the SMIs' accessibility to the formal institutional finance. This is based on the theoretical assumption that the adoption of project appraisal practices help to reduce risks and uncertainties associated to the SMIs and their proposed projects. Subsequently, it may help to enhance the level of confidence among lenders which will improve the SMI's accessibility to formal institutional finance. Eventually in the future, the SMI's dilemma of lack of access to formal credit at reasonable cost can be constructively rectified. It is envisaged that following the conclusion of the study, the adoption of project appraisal methods and procedures should and will be recommended to all SMIs regardless whether they require external finance or not.

1.4.1 The Main Research Objectives

The primary objective of the study is to empirically evaluate the relationship between the adoption of project appraisal practice by the small and medium-sized manufacturing companies and their access to finance; *formal*¹⁴ and *informal finance*¹⁵. In other words, one would expect that those companies which have adopted project appraisal practice should have better access to finance than those companies who did not adopt similar practice. In this context, the study seeks to identify which explanatory variables such as the general level of education, length of business experience as well as special training on project appraisal of the entrepreneurs who owned and run their

¹⁴*Formal* sources of finance refer to finance provided by the formal sector of the economy which include commercial banks, finance companies, development financial institutions as well finance provided by government agencies such as MARA, the Ministry of Youth and Sports and the Ministry of Entrepreneurship Development.

¹⁵*Informal* sources of finance refer to finance provided by relatives and friends, profits saved, borrowings from company directors/officers, moneylenders, advances from customers and trade credits. Finance from personal sources are also included in this category.

business is important in determining whether or not the company adopt project appraisal practice.

The present study propose to seek response from the small and medium-sized manufacturing companies (SMMCs) in Malaysia for its primary data. The reasons for selecting companies from the manufacturing sector are as follows:

- i) The database for the manufacturing sector is more 'complete' than that of the other industrial sectors.
- ii) Manufacturing establishments generally involve large amount of investments in plant, machineries and equipment in addition to relatively high operational costs.
- iii) Ideally, project appraisal should be practised more commonly by the manufacturing entities.
- iv) The manufacturing sector is considered as the 'backbone' of an industrialised country by the Malaysian government and as such various fiscal and monetary incentives have been formulated to expedite the growth of this particular sector.

To summarise, the main research objectives for the present study are as follows:

1. To evaluate the extent to which project appraisal methods and procedures have been adopted by selected SMMCs and to determine whether the adoption of such appraisals has any significance on the access of formal institutional finance to these SMMCs;

2. To identify the factors (variables) which contribute significantly in determining whether or not the SMMCs adopt project appraisal practice, and to present a profile of SMMCs who have actually adopted such appraisal;
3. To examine state of the company-bank relationships and to determine whether the relationships have any significance in enhancing the accessibility of the SMMCs to banks' finances;
4. To examine whether SMMCs rely more heavily on the informal and other non-institutional sources of finance as a result of their lack of access to the formal institutional sources; and
5. To derive some policy guidelines which can significantly improve the overall provision of credit to the SMMCs.

1.4.2 Data Collection and Profile of the Selected Sample

The study uses the response from a sample randomly selected from the two main directories; namely the FMM (Federation of Malaysian Manufacturers) Directory 1995 and the SMI Directory 1995/96 which represent the majority of small and medium-sized manufacturing companies (SMMCs) in Malaysia. Data were collected via postal questionnaires over a period of two months starting from 15th of March to the 15th of May, 1996. Out of the five hundred companies sampled in the population, one hundred and thirty five companies have responded to the questionnaire in full - a response rate of 27.7 percent. All states in the country were represented by the sampled companies, however, their representation was not expected to be evenly distributed. This is due to

the fact that the majority of the industrial estates are located in the west coast. Companies from states in the east coast (which include Kelantan, Terengganu and Pahang) as well as those from the states of Sabah and Sarawak (which is on the Borneo Island, previously known as East Malaysia) are not expected to feature prominently since these states are just starting their industrialisation process.

Nevertheless, it is considered that the one hundred and thirty five companies who responded to the survey are sufficient for the present study as the sampled population is adequately represented. The problem of *non-response bias* that are normally associated to postal questionnaires have been dealt with following recommendations from various prominent authors of research methods¹⁶. The statistical package used for data analysis is the SPSS® for Windows™ Version 6.1. (The specific procedure is explained in detail in Chapter 6).

The initial profile of the one hundred and thirty five companies in terms of location, ownership structure by size of company and industry classification are shown in Table 1.1, Chart 1.3 and Chart 1.4 respectively.

a. Location of respondent companies

It is clearly evident from Table 1.1 that the location of companies who have responded to the survey are concentrated mainly in the west coast states with Selangor and Federal Territory having the highest representation followed by Penang, Johor, Melaka, Negeri Sembilan, Perak, Kedah and Perlis. As for the east coast states, Kelantan had

¹⁶See for example, Moser and Kalton, 1979; Hoinville, Jowell & Associates, 1978 and Jain, Pinson and Ratchford (eds), 1982.

the highest representation followed by Pahang and Terengganu. The states of Sabah and Sarawak had only a few representations.

Table 1.1

Representation of Sample by States

States	No. of selected samples	No. of samples responded	Response percentage
<i>West coast states</i>	456	121	26.5
(1) Selangor	104	32	30.8
(2) Wilayah Persekutuan (FT)	98	28	28.6
(3) Pulau Pinang (Penang)	56	17	30.4
(4) Johor	51	12	23.5
(5) Melaka	48	11	25.0
(6) Negeri Sembilan	44	9	20.4
(7) Perak	23	8	34.8
(8) Kedah	20	2	10.0
(9) Perlis	12	2	16.7
<i>East coast states</i>	29	8	27.6
(10) Kelantan	11	5	45.4
(11) Pahang	10	2	20.0
(12) Terengganu	8	1	12.5
<i>East Malaysian states</i>	15	6	40.0
(13) Sabah	7	3	42.8
(14) Sarawak	8	3	37.5
Total	500	135	27.7

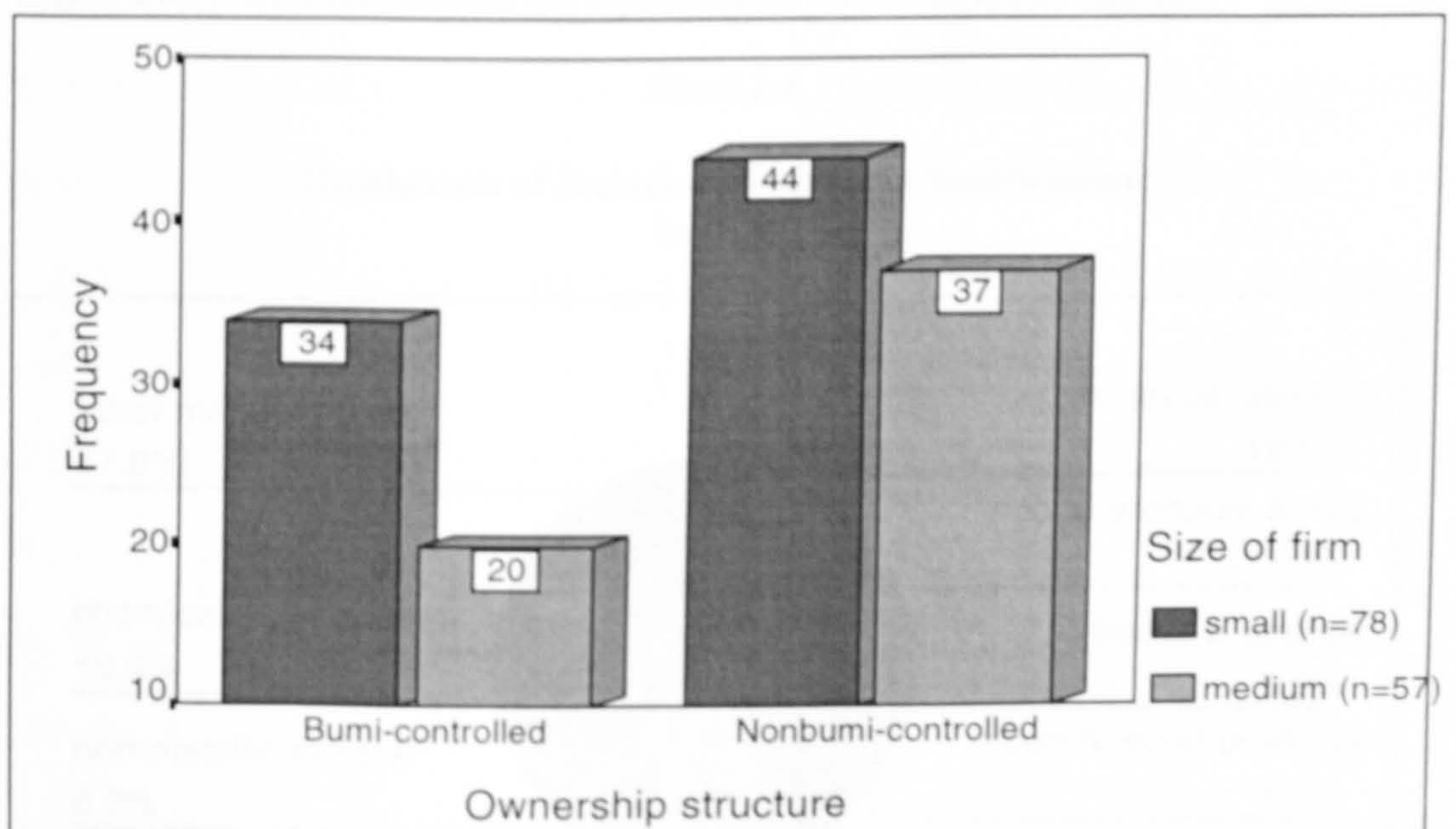
b. Size and Ownership Structure

In terms of company size, out of one hundred and thirty five companies, 78 of them (57.8%) are classified as *small-sized* manufacturing companies while the remaining 57

(42.2%) are classified as *medium-sized* manufacturing companies¹⁷. In terms of ownership structure, the *bumi-controlled*¹⁸ manufacturing companies account for about 40 percent (54 out of 135 companies) of the total companies surveyed whereby 34 of them (43.6%) are small-sized and 20 others (35.1%) are medium-sized manufacturing establishments. On the other hand, the *nonbumi-controlled*¹⁹ companies account for about 60 percent of the total companies covered by the survey whereby 44 of them (56.4 %) are small-sized companies and 37 of them (64.9%) are medium-sized manufacturing establishments (Chart 1.3).

Chart 1.3

Ownership Structure of Sample by Size of Company
(n=135)



¹⁷Small-sized manufacturing companies are establishments employing 50 or less full-time employees while *medium-sized* manufacturing companies are those employing more than 50 but less than 100 full-time employees.

¹⁸*Bumi-controlled* companies are companies either wholly-owned (100 percent) by bumiputeras or bumiputeras are the majority shareholders (more than 50 percent).

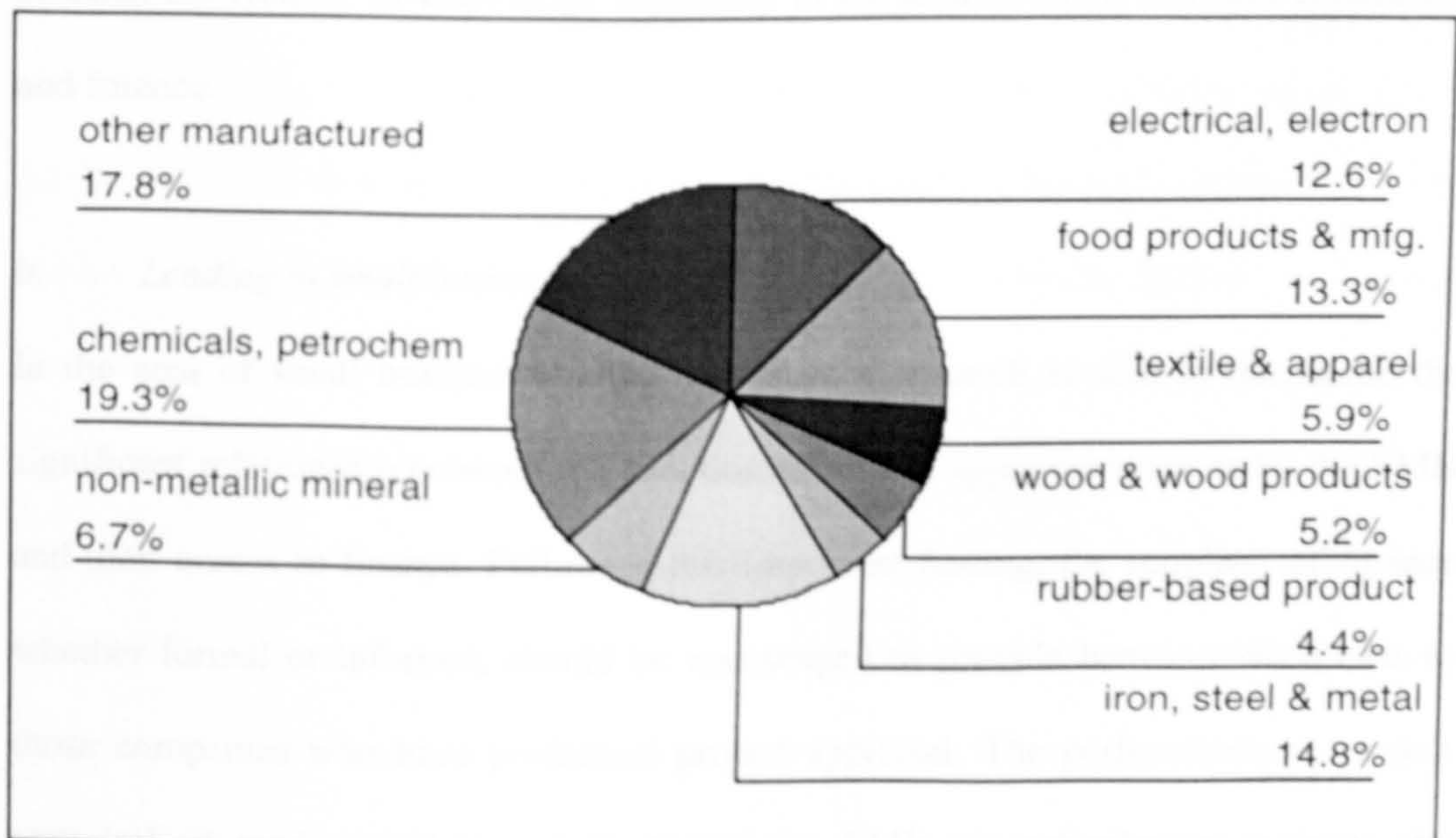
¹⁹*Nonbumi-controlled* companies are companies either wholly-owned (100 percent) by non-bumiputeras or non-bumiputeras are the majority shareholders (more than 50 percent).

c. *Industry classification*

In terms of industry classification, majority of the small and medium-sized manufacturing companies in the sample are concentrated predominantly in the production of chemicals, petrochemicals and plastic products (19.3%). It is then followed by those involved in the food processing or manufacturing (13.3%). A substantial proportion of companies surveyed are involved in the manufacturing of electrical, electronic products and small machineries (12.6%). There is also a high proportion of companies (17.8%) which produced a wide variety of products that cannot be adequately classified within a specific group according to the SIC classification, thus they are classified as others. As can be seen from Chart 1.4 below, almost every SIC classification are represented by the sampled companies.

Chart 1.4

Breakdown of Sample by Industry Classification
(*n*=135)



1.5 Significance of the Study

The present research is important in the following key areas:

a. Project appraisal practice by SMIs in the developing countries

The present research is able to provide some information on the current practice on project appraisal by the small and medium-sized industries in terms of its purpose, methods and procedures employed, the level of sophistication of techniques used and the documentation procedures of the appraisals. From the evaluation on the various aspects of the practice, future researchers in the area can have better understanding (knowledge) on the practice of project appraisal performed by the SMIs in developing countries in general. It must be mentioned here, that such appraisal is often perceived to be insignificant for this particular sector (Abdul Rahman, 1980; Beng, Choudhury and Tee, 1986; Samidi, 1989). Since there are not many studies done in this particular area (none in Malaysia, so far), the findings of the present research would certainly broaden the frontier of knowledge especially in the area of small business economics and finance.

b. Lending to small business

In the area of small business lending, the present research is able to determine the significant relationship between the adoption of project appraisal practice by the SMIs and their access to finance. Following this important finding, the suppliers of finance whether formal or informal, should be encouraged to provide better credit access to those companies who have performed project appraisal. The performance of project appraisal, if made mandatory, will 'force' the SMIs to meticulously evaluate the potential of the proposed projects before making any application for loans. In other words, the performance of project appraisal will enhance the probability of success in

obtaining loans from the formal sector. As for the informal sector, borrowers from this sector should also be encouraged to perform project appraisal practice since one day they might grow bigger and will need larger loans which could not be supplied by the informal sector lenders or can be obtained only at a very high cost.

Since the performance of project appraisal can effectively reduce both, the lenders' and borrowers' risks, the overall provision of finance to the SMI sector should be improved and the 'credit gap' between the larger and smaller industries should be effectively reduced. As such, the small and medium-sized industries should not have any constraints in order to have equal access to the formal sector finance.

c. Assessment of SMI's policies

Another area where the study is of importance is in the area of policy assessment. Findings from this research will help policy-makers in the country to re-evaluate current policies, particularly those policies involving the provision of financial assistance to the SMI sector. Intervention into the nation's financial system should be minimised, especially those policies which compel the financial institutions to meet their lending quotas as imposed by the central bank. Instead, banks and other financial institutions should be encouraged to perform their resource allocative function free of any political intervention. However, the banks should play their role and accept the responsibility (or risks) in ensuring that adequate finance is provided to the SMI sector in order to foster a healthy and sustainable growth in the future. In other words, banks and other financial institutions should be able to balance their prerogative between the prosperity of their shareholders and their socio-economic responsibilities as entrusted by the government.

1.6 Possible Implications from the Study

The information gathered on the project appraisal practice by the SMIs are important to academicians as well as those involved in the promotion and development of the small and medium-sized industries. For the academicians and theorists, these information can help them formulate special procedures or techniques of appraisal which are relevant and focused directly to the needs of such appraisals by the SMIs. In other words, a more practical approach is needed to evaluate projects by using simple procedures which can be easily applied by the SMIs as opposed to sophisticated techniques often adopted by the larger corporations.

For those involved in the promotion and development of SMIs such as extension officers and small business consultants, findings from the present research can assist them in formulating better and more meaningful strategies in preparing the SMIs to cope with demands and challenges of the twenty-first century. Training agencies, which are responsible for increasing the supply of viable entrepreneurs can utilise the findings from this research to develop or upgrade their training modules so that up-to-date technologies, relevant skills and knowledge can be imparted to the entrepreneurs.

The small and medium-sized industries can also benefit from the study in the sense that they can learn the benefits of performing project appraisal as well as understanding the importance of having a proper and systematic procedures in evaluating a proposed investment expenditure. In other words, they should not just merely appreciate the importance of such appraisal but must be able to actually put them into practice. Most important of all, they should be able to put the performance of project appraisal in a 'correct' perspective, i.e. to adequately assess the potential risks and benefits associated

with the proposed project, rather than merely to satisfy lenders' requirement in order to obtain loans from the financial institutions.

1.7 Structure of the Dissertation

The dissertation is in ten chapters. This first chapter serves as an introductory chapter which also provides an overview of the following chapters. It also incorporates the rationale upon which the present study is based as well as discussing its importance and relevance within the context of small and medium-sized industries in developing countries. It also provides justification and rationale for the present study to be undertaken. The specific objectives of the thesis are clearly defined in the chapter.

Chapter 2 provides the background information about Malaysia in terms of its history, structural transformation of the economy from the colonial period and the present structure of the financial system. These information are vital since the development and promotion of SMIs in the country are very much related to them.

Chapter 3 is dedicated to a detailed review on the nature of risks and uncertainties inherent to the SMI sector and how these risks affect their access to external finance. It also includes a discussion on the dualistic nature of the developing countries' economy; i.e. the coexistence of formal and informal providers and users of funds. Discussion on this particular issue is important in determining the extent to which the formal and informal financial sector can be interlinked (if not integrated) into a coherent national system through the development and innovation of financial products that are beneficial to the SMIs as borrowers.

Chapter 4 continues the literature survey by reviewing the concept and methods of project appraisal practice and how the adoption of such practices can improve the accessibility of formal sector finance to SMIs. This chapter critically assesses the relevance for SMIs adopting the project appraisal techniques and procedures especially when making capital investment decisions. The aspects of risks and uncertainties are also discussed in this chapter particularly when discussing the benefits of adopting a project appraisal practice. In addition, the review on their banking relationship, helps in determining whether a 'healthy' relationship can be a substitute to the requirement of project appraisal to be undertaken by the lending institutions.

Chapter 5 then, discusses the theoretical framework upon which the present study is based on. It provides a detailed discussion on the present research framework as well as its limitations. The chapter also outlines the operational research objectives and the derivation of research hypotheses.

Chapter 6 deals specifically with the research methodology adopted by the present study. The present methodology is adopted after a careful review of previous research methodologies in this area.

Chapter 7 provides descriptive analyses on the profile of companies, their project appraisal practice, their banking relationships and profile of the entrepreneurs of the respondent companies. The respondent companies are profiled according to the following classifications; size of company, age of company, ownership structure, business location, type of entity registration, market and industry classifications. This

chapter also provides detailed descriptive analysis on the project appraisal practices of the respondent companies. It provides useful information on the level of awareness and the extent to which project appraisal practice had been adopted. It also provides some insights on the reasons for not adopting project appraisal practice given by some of the respondents. Following that, the discussion is focused on the aspects of company-bank relationship which encompasses the aspects of deposit and credit relationships as well as other non-financial relationships.

In addition to the provision of qualitative assessments on the research findings in the previous chapter, Chapter 8 provides the mechanics for testing the research hypotheses. Both, parametric and non-parametric statistical tests are utilised depending upon the type and distribution of data to be analysed. The results of each hypotheses testing are discussed independently.

While Chapter 8, provides the empirical testing of research hypotheses, Chapter 9 extends the empirical analysis within the multivariate framework. In this particular chapter, the variables that are significant in determining whether or not a company adopts formal project appraisal practices are identified, analysed and discussed.

Finally, Chapter 10 concludes with a summary of the significant findings based on the earlier research objectives. It also provides some implications on the future policies that are relevant for enhancing the provision of finance to SMIs in the developing countries such as Malaysia. In addition, the implications for further research in the similar area (field) are discussed.

Chapter 2

MALAYSIA: THE BACKGROUND INFORMATION

2.1 Historical Review

The Malaysian Peninsula (originally, Malaya) and the Borneo States of Sabah and Sarawak were once targeted by the western European imperial powers for their strategic locations, bridging the trade routes between the eastern and the western traders (Figure 2.1). The port of Malacca (now, Melaka) which was founded in the 15th century had sparked the growth in international trade of that region. Earlier trade with Islamic merchants, particularly the Gujeratis from Indian subcontinent, have brought significant changes and economic prosperity to Malacca. Apart from conducting trade, those Islamic merchants also brought in a new religion called Islam. The Sultan (King) of Melaka was the first ruler in that region to convert to Islam. The new faith had then spread across the Peninsular to Indonesia and Indo China, replacing Buddhism which were brought in by the Indian civilisation in the first millennium AD.

The prosperity of trade in the South Asian region was envied by the Portuguese who had to compete with the Arab merchants for the Indian Ocean trade routes. In 1511, the Portuguese conquered Malacca and gained total control of spice-trade from Molucas Islands. These spices were important to the Portuguese which they exchanged for Chinese silk and porcelain. The Portuguese controlled over Malacca for about 130 years before the Dutch took over in 1641 with the help of the Sultan of Johor, who was a descendent of Sultan Mahmud Shah of Malacca.

Figure 2.1

Map of Malaysia



The British influence in Malaya started when they founded the port of Georgetown on the island of Penang in 1786. In 1819, they founded another colony, Singapore, primarily to safeguard the safe passage of their trade vessels from China. The British were not interested in the local spice trade at that particular period because their imports from China were being paid for with opium from India. In 1824, a treaty was drawn-up between the Dutch and the British who handed over Malacca into British hands while the Dutch gained full control of British settlements in Indonesia.

Despite controlling the three Straits Settlements i.e. Penang, Singapore, and Malacca the British began to influence the rulers of other Malayan states to join in as a federation with Kuala Lumpur as its capital. The British's proposal for a federation was initially seen as a 'protectorate' arrangements whereby the British provide protection

for the rulers from foreign threats, especially from the Siamese. However, shortly after the agreement was signed in 1895, the British began to take control of the four Malay states, namely, Perak, Selangor, Negeri Sembilan and Pahang. Later, when the Siamese empire was forced to give up its dominance on the northern Malay states, the British colonial boundary was enlarged to include Kedah, Perlis, Kelantan and Terengganu. Finally, on the eve of the First World War, the Johor sultanate decided to come under the umbrella of the British (Winstedt, 1944; Jomo, 1990). This completed the British colonisation of the entire Malay States to form the Federation of Malaya, which consequently gave Britain control over the Federation's resources. The sultanates of northern Borneo (Brunei, Sabah and Sarawak, the latter ruled by James Brooke, and his heirs) later became British protectorates, administered from Singapore, but without any formal ties with the Federation of Malaya.

The colonial administration in Malaya had set up a three band education system; each band designed specifically for the Malays, Indians and Chinese - a colonial strategy of disintegration. Even in the economy, the British 'divide and rule' policy remain prominent; the Malays stayed mainly in rural agriculture, while the Chinese worked in tin mines and the urban service sectors and the Indians worked on rubber estates. The British administration had openly encouraged Chinese (and to a lesser degree, Indian) immigration to the ports along the straits which resulted in large numbers of Chinese arriving to work the tin mines and service the urban ports. When rubber cultivation was introduced in Malaya in 1877, the British brought in Indian immigrants to work for the rubber plantations through what is called the 'Kangani system'. Through this system, the proletarianised immigrants had formed a formidable labour force over which the British have direct control.

The political climate of the colony started to change after the brief Japanese occupation during the World War II when the British failed to subdue the nationalists movements of the Malays as well as the movements of the communist guerrillas. Seeking a compromised solution, the British then, proposed the Malayan Union with equal citizenship for the *bumiputeras* and the immigrants. This proposal had threatened the position of the Malays, and the Malay nationalists gathered around the symbolic figure of their sultans forming a new political party known as the United Malays National Organisation (UMNO) in 1946. The Chinese also followed suit to form their own political party named as the Malayan Chinese Association (MCA). In the 1952 municipal elections, UMNO and MCA formed an alliance and defeated the Malayan Independence Party; a pan-ethnic party which was propagated and supported by the British. The alliance was later broadened to include the Malayan Indian Congress (MIC), and winning elections nation-wide, except for Singapore. In Singapore, the Lee Kuan Yew's socialist party was victorious.

Faced with political pressure from the nationalists as well as the insurgence of the communist threat, the British finally decided to negotiate for the colony's own rule which resulted in the Malayan Independence on August 31st, 1957. Tunku Abdul Rahman who led the independence movement became the first Prime Minister. A federation of eleven states was established with a parliamentary system and a monarch chosen every five years from among the nine sultans. After independence, a constitutional 'bargain' was struck by the three main communities, when citizenship was granted to the non-Malays, but the Malays were recognised as the indigenous people. They were accorded with special privileges in education and public sector

employment and 'Bahasa Melayu' was made the official language. The newly independent country had decided to adopt a free market economy and relied substantially on foreign capital in order to finance its development expenditure during the early stages of independence.

In 1963, the other British colonies of Singapore, Sabah and Sarawak obtained their independence and joined Malaya to form a federation of states known as Malaysia. There were major disagreements over ethnic policies and Singapore broke away from the federation in 1965 to become an independent republic.

2.2 The Economic Transformation

2.2.1 The colonial economy

The Malayan economy during the colonial periods as well as in the early years of independence was very much dependent on agriculture and natural resources as its staple products. The production of rubber and tin mining were the main contributors to the colonial economy in terms of the country's GDP as well as its export earnings. Both, rubber and tin were the crucial raw materials required to sustain the rapid developments of manufacturing industries, following the industrial revolution in Britain as well as in the European sub-continent. With the incipient of automobile industries, the demand for these commodities were fast growing.

Exports of tin, rubber and other Malayan products made Malaya the single most profitable colony of the whole British empire at the time. As an example, in 1926, the export trade of Malaya reached its peak with an export value worth 264 million pounds sterling, more than the total exports of all the other British colonies combined; and in

1937, the revenue of Malaya was around 18 million pounds sterling, which gave revenue per head in Malaya slightly over 3 pounds, whereas the average per head revenue in other colonies were only a pound. (Winstedt, 1944).

Tin mining activities had already thrived in the west of Malaya well before colonisation, for which Chinese capital and labour were the main economic inputs. Although, land was comprehensively controlled by the Malay rulers and peasants, attractive prices offered by the European buyers had enabled the Chinese 'Kapitans' to pay higher rents and effectively establish the tin-mining industry which the Malays themselves had failed to capture. When the British expanded their colonial power, control over tin-mining operation was very much on their colonial agenda. The British firms brought in new dredging technology, which were more productive than the Chinese traditional and laborious mining methods. Soon after this, Malaya became the world leading producer of tin. Its production, over 40,000 tonnes a year and valued at more than five million pounds sterling, was more than 50 percent of the world's total output. Production of tin ore grew to 13 million pounds a year between 1924 and 1928 (Winstedt, 1944).

Rubber was introduced to Malaya in 1877, with heaveas seeds smuggled in from Brazil, putting an end to the 'rubber boom' in the South American Amazon. By the early twentieth century, rubber had become another major export commodity of Malaya apart from tin. It was widely cultivated and in order to cope with the growing demands, Tamil migrant workers were brought in from southern India to work in those plantations.

In the post-Second World War period, with the boom in commodity prices, Malaya's export earnings were even greater than Britain's - thus making a vital contribution in financing Britain's post-war recovery (Khor, 1983). Furthermore, exports from Malaya to the United States helped to strengthen the British currency in the world foreign exchange markets (Jomo, 1990).

The main objectives for British colonial policies were to exploit the rich natural resources of its colonies as well as to ensure adequate supply of raw materials for Britain's industrial development and to secure the markets for its manufactured product. As such, the industrial development by local industrialists, apart from mining and agriculture sectors, in the colonies were severely impeded by the colonial authorities.

However, manufacturing industries in Malaya did develop, despite the neglect of the colonial administration, in certain areas and were mainly related to tin-smelting and refining as well as rubber processing. A few other industries also emerged, which included, public utilities and communication related industries using imported equipment and materials, and small (cottage) manufacturing industries which produced goods on a small scale such as pineapple canning, and the manufacture of rubber shoes, tyres and toys (Ong, 1995).

There were only a handful of large industrial organisations, each employing more than 200 workers, but majority of them were owned by the British conglomerates such as Fraser and Neave, Malayan Breweries and Cold Storage in the food and beverage

industries; United Engineers, Hume Industries and Metal Box in the construction-related industries and Straits Smelting and Refining in the tin Smelting industry (Fong, 1990a).

While the manufacturing sector were struggling to develop, the agriculture and mining sectors continued to be the forerunners of the Malaysian economy into the early years of independence. In 1955, that is two years before Malaysia's independence, agricultural and mining activities accounted for 46.5 percent of the colony's gross domestic product (GDP), while only 8.2 percent contribution came from the manufacturing sector. But by 1995, forty years later, the manufacturing sector had surpassed the contribution of the agriculture and mining sector combined, with an overall contribution of 33.1 percent of the nation's GDP. (Table 2.1).

The insignificance of the manufacturing sector during the colonial economy can be further deduced from the data on the total employment in the manufacturing sector (Table 2.2). Over the period 1947 to 1957, the percentage share of employment in manufacturing remained constant at approximately 6 percent, implying that the manufacturing sector had hardly expanded. However, since the early sixties, the manufacturing sector began to expand slowly and now became the main sector providing employment opportunities to about 25.9 percent of the total national workforce in 1995.

Table 2.1

Malaysia: Gross Domestic Product by Sector, 1955-1995
(shown as percentage)

SECTOR	1955	1960	1970	1980	1990	1995
Agriculture	40.2	40.5	30.8	22.8	18.7	13.6
Mining	6.3	6.1	6.3	10.0	9.8	7.4
Manufacturing	8.2	8.6	13.4	20.0	26.9	33.1
Others ^a	45.3	44.8	51.3	47.2	44.6	45.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Data for 1955 and 1960 refer to Peninsular Malaysia only.

^a Others include construction and services sectors

Source: Figures for 1955 and 1960, extracted from Jomo, 1990, p. 43.
Annual Economic Report, various issues.

Table 2.2

Malaysia: Employment Provided by the Manufacturing Sector, 1947-1995

Year	Total workforce employed in manufacturing sector ('000)	Manufacturing's share of total employment (%)
1947	126.2	6.7
1957	135.7	6.4
1965	215.0	8.4
1970	386.5	11.4
1980	803.1	15.8
1990	1,333.0	19.9
1995	2,051.6	25.9

Notes: Figures for 1947, 1957 and 1965 refer to Peninsular Malaysia only.

Source: Figures for 1947 to 1965 extracted from Hoffman and Tan, 1971.

1970-1980 figures extracted from the Fourth Malaysia Plan.

1990-1995 figures extracted from the Seventh Malaysia Plan

The lack of development of the manufacturing sector during the colonial rule can be directly attributed to the following reasons:

- i) the colonial monopoly powers deliberately thwarted the development of local manufacturing entities in favour of the large British conglomerates by discouraging development of local capital, and,
- ii) severe limitations and constraints among local industrialists such as the lack of capital, business opportunities and technical know-how had hampered the growth and development of new industries.

Even though the colonial authorities have neglected or suppressed the development of local industries especially the manufacturing industries, their economic policies have provided a stepping stone towards the nature and extent of Malaysia's future economic development. Among others, the Malaysian economy had benefited in the following ways:

- i). The inheritance of tin mining operations and rubber cultivation had enabled Malaysia to sustain her overall economic growth during the early period of independence. Malaysia was the world's largest exporter of tin and rubber from the colonial period until recent years, when exports of natural rubber from Thailand surpassed those of Malaysia in 1989 (Jomo, 1990).
- ii). After independence, Malaysia's export earnings had remained heavily dependent on tin and rubber. These export earnings were a valuable source of funds to finance the imports necessary for the industrial development in the early stages of development. In 1960, rubber and tin accounted for 55.1 percent

and 14 percent of the total value of Malayan commodity exports respectively and ten years later (1970), both commodities together accounted for more than half of Malaysia's export earnings (Table 2.3).

Table 2.3

Malaysia: Exports by Major Sector, 1960-2000
(in percent of value in RM million)

Sector	1960 ^a	1970	1980	1990	2000 ^b
Agriculture (Total):	66.1	59.2	43.6	18.9	4.4
<i>Rubber</i>	55.1	33.4	16.4	3.8	0.7
<i>Timber</i>	5.3	16.5	4.1	8.9	1.4
<i>Palm oil</i>	2.0	5.3	10.3	5.6	2.2
<i>Others</i>	3.7	4.0	2.8	0.6	0.1
Mining (Total):	22.2	25.9	33.8	17.7	3.9
<i>Tin</i>	14.0	19.6	8.9	0.9	0.2
<i>Petroleum</i>	4.0	3.9	23.8	13.4	1.6
<i>Others</i>	4.2	2.4	1.1	3.4	2.1
Manufacturing	8.5	11.9	21.6	58.8	88.6
Other exports	3.2	3.0	3.2	4.6	3.1
Total	100.0	100.0	100.0	100.0	100.0

Notes: ^a Refer to Peninsular Malaysia only.

^b Projected figure in the Seventh Malaysia Plan.

Source: Annual Economic Report, various issues.

- iii). The commodity sectors became the important source of revenue, both to the private and public sector. Besides the export revenue accruing to both tin-mine and rubber plantations owners and export duties accruing to the government, the full employment provided by the two sectors had helped in generating a high level of savings during the developing stage of the Malaysian economy in the early seventies. High domestic capital accumulation through high rate of savings (18.6% of GDP in 1970 to 33.5% of GDP in 1980) was one of the most important factors driving the Malaysian economy during that period.

- iv). The commodity sector had earned for the country more than sufficient foreign exchange to finance its industrial development, especially permitting heavy imports of intermediate and investment products during the import-substitution phase of the industrialisation process without balance of payments problems (Table 2.4).

Table 2.4

Malaysia: Balance of Payments in Current Account, 1960-1995
(RM million- in current prices)

Year	1960	1965	1970	1980	1990	1995
Exports	3,622	3,752	5,020	28,013	77,458	180,956
Less: Imports	2,613	3,226	3,953	22,775	70,365	180,326
Merchandise surplus	1,009	526	1,067	5,238	7,093	630
Less: Net service payments	379	341	862	5,813	9,723	18,845
Net transfer abroad	197	58	180	45	147	400
Current account balance	+433	+127	+25	-620	-2,483	-17,815

Source: Extracted from Table 3.16 in Jomo (1990) p. 68.

Figure for 1980 extracted from Department of Statistics, Annual Report, 1985.

Figures for 1990-1995 extracted from the Seventh Malaysia Plan, p. 62.

- v). The relatively well developed infrastructure such as roads, railways, port facilities, telecommunications and electric power that were built during the British rule has helped to accelerate the industrialisation process. Under the Draft Development Plan for 1950-1955, the British had allocated about 66 percent of total development expenditure for developing the infrastructure.

2.2.2 The post colonial changes

Building on the weak foundation left by colonials, the transformation of the Malaysian economy began with the introduction of various economic and industrial policies

aimed at restructuring the economy from one which was dependent on primary commodities and natural resources to one which concentrated on producing value-added manufactured products for local consumption as well as for exports. These economic policies are well documented in the country's five-year economic plans, starting from the First Malaysia Plan (1965-1970), the Second Malaysia Plan (1970-1975), the Third Malaysia Plan (1976-1980), the Fourth Malaysia Plan (1981-1985), the Fifth Malaysia Plan (1986-1990), the Sixth Malaysia Plan (1991-1995) and until the present Seventh Malaysia Plan (1996 - 2000) as well as in the two longer-term development policies, known as the New Economic Policy (NEP), 1970-1990 and the National Development Policy (NDP), 1991-2000.

The remarkable performance of the Malaysian economy in recent years are due primarily to the contribution of the manufacturing sector to the nation's GDP as well as merchandise exports. In 1995, the manufacturing sector accounted for about one-third of the GDP and more than three-quarters of merchandise exports (Table 2.1 and Table 2.3). Presently, Malaysia is proud to be one of the most advanced countries in the Third World which in recent years has experienced one of the highest growth rates of about 8 percent per annum. Malaysia's rate of economic growth outpaces those of the industrialised nations and compares favourably with the newly emerging economies of East Asia and ASEAN (Table 2.5).

The rapid economic growth, however, has given rise to some economic strains. The economy has been heating-up, which has led to the following difficulties:

Table 2.5

Comparative Performance in Growth of Real GDP, 1993-1995
(in percentage)

Countries	1993	1994	1995
A. Industrialised Countries	1.2	2.6	2.7
United States	3.1	3.7	2.5
Japan	0.1	0.9	2.5
Germany	-1.2	1.7	2.6
United Kingdom	2.0	3.1	3.0
B. Developing Countries	6.1	5.7	5.7
Africa	1.0	3.3	4.5
Asia	8.5	8.0	7.3
Latin America	3.3	2.8	3.2
Middle-East	4.8	2.0	3.2
C. East-Asia Countries	7.6	7.1	6.3
China	13.4	10.5	8
Hong Kong	5.5	5.0	4.0
South Korea	5.5	7.2	6.9
Taiwan	6.1	5.9	6.4
D. ASEAN^a Countries	6.9	7.4	7
Brunei	-4.1	-2.0	-0.5
Indonesia	6.5	6.5	6.4
Philippines	1.7	4.2	5.4
Singapore	9.9	10.0	6.8
Thailand	7.7	8.1	8.2
Malaysia	8.3	8.5	8.5

Note: ^a ASEAN refers to Association of Southeast Asia Nations.

Source: Malaysia: Economic Report 1994/95, p. 48-54.

- i). the balance of payments has been in deficit on its current account since 1980, particularly in the services account (Table 2.4). This is due mainly to the repatriation of profits and dividends as a result of the large presence of foreign investments, and remittances by the immigrant workers. In addition, increased freight and insurance payments as a consequence of the increased trade and payments for contract and professional charges has also contributed to the deficit. As the large deficit in the services balance is the main contributor to the current account deficit, the government had introduced measures to reduce this

deficit in the Sixth and Seventh Malaysia Plan (1991-2000). Among others, the measures include incentives for reinvestment of profits, and encouraged exports on free-on-board (f.o.b) basis. Other strategies include the promotion of exports of the services sector such as finance, construction, engineering, architecture, estate management, recreation and tourism especially to the other developing countries in the Southern countries and the African continent.

- ii). inflationary pressures, currently at the rate of 4 percent, have been building-up since the early eighties, requiring the monetary authorities to raise interest rate in order to absorb the high level of liquidity. As part of the anti-inflationary package, the government has undertaken prudent fiscal policy by restraining operating expenditure, while development expenditure were focused only on projects that would alleviate infrastructure and supply constraints. In addition, import duties on more than 3,700 items were reduced or abolished in 1995 so as to lower the prices of goods as well as the cost of doing business. The government had also launched a comprehensive anti-inflation campaign (zero-inflation or *inflasi sifar*) to further intensify efforts to educate the public on the causes and impact of inflation and on the vital role of consumers in combating unjustified price increases (Malaysia: The Seventh Malaysia Plan, 1996).
- iii). the higher interest rates at about 8.5 percent recently have in turn attracted foreign funds which have raised the exchange rates slightly, especially against the US dollar (Bank Negara Malaysia, Annual Report, 1995). Stronger Malaysian Ringgit would be detrimental to Malaysian exports especially in time when the economy is largely dependent on exports.

- iv). the rapid expansion of the economy had caused labour shortages even at the level of unskilled workers, and efforts have to be made to obtain foreign workers especially from Indonesia and Bangladesh. The massive influx of these immigrant workers have caused various social problems in addition to transferring of substantial funds abroad through remittances which among others contribute to the current account deficits faced by the country today.

As part of the measures to increase the supply of trained manpower, the Human Resource Development Fund (HRDF) was established in 1992. Under this scheme, manufacturing firms employing 50 or more employees (the medium to large-scale industries) were required to contribute one per cent of the monthly wage of their employees to the Fund and after six months of contribution would be eligible for training grants for retraining and upgrading the skills of their employees at approved training institutions (Appendix 1.1). In 1995, the HRDF scheme was extended to firms employing less than 50 workers (the small-scale industries) as well as to firms operating in selected service industries.

- v). capacity of the present infrastructure had also been strained by the rapid and continuous economic expansion. The road, railway, water, electricity, ports and airport systems will therefore have to be considerably enhanced to meet the new demands of an industrialising society. The upgrading and the building of new infrastructures require substantial public expenditure. Nevertheless, the privatisation programmes introduced by the government will ensure that these

facilities will be improved by the private sector without burdening the government with the financing and management of the projects.

Despite all the economic constraints, the Malaysian economy has been able to recover and sustain its growth at the rate of about 8 percent per year since the recession in 1987; making it the longest period of sustained growth experienced by the Malaysian economy. This had been largely due to the pragmatic approach adopted by the government as well as supported by the dynamism and enthusiasm of the nation's policy-makers and dedicated workforce. Furthermore, the social and political stability that the country has enjoyed since the early seventies has created a strong and promising investment climate for the local as well as foreign investors. With the manufacturing sector leading the economic growth, the country is currently embarking on an economic mission to become a newly industrialising country (NIC) by the year 2020.

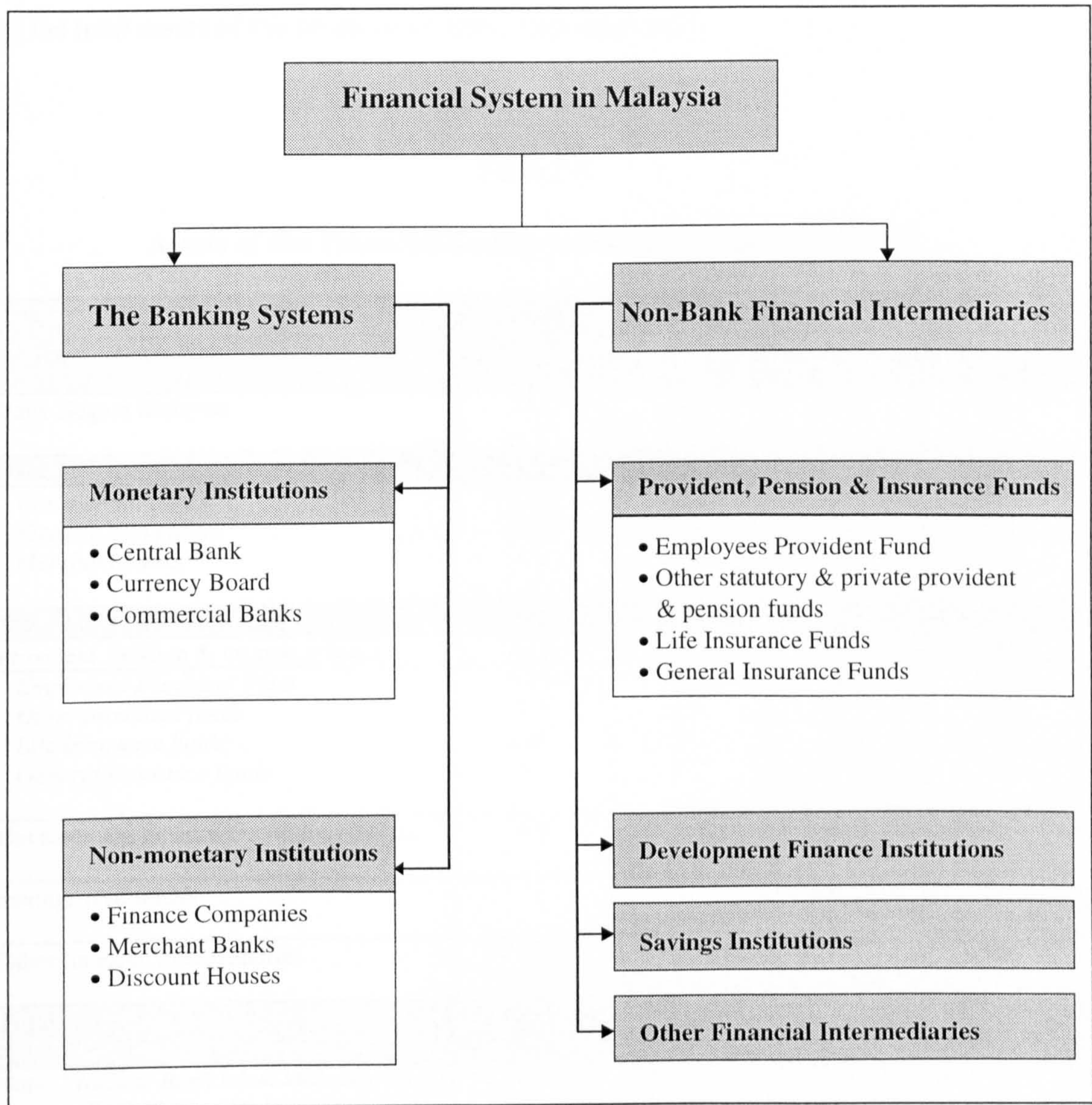
2.3 The Financial System of Malaysia

The economic success that the country is enjoying at present is also attributable to the prudent development and management of the financial systems. The development of the nation's financial institution is absolutely vital for the growing economy not only in terms of mobilising savings and investments, but more importantly to be innovative in allocating financial resources to meet the new demands of the industrialising country. In this regard, the financial system of the country has been continuously reformed, modernised and strengthened in order to enhance its efficiency and competitiveness in the allocation of resources and risk management. The structure of the Malaysian financial system is made up of the banking system as the core component and the non-

bank financial intermediaries, which include provident, pension and insurance funds, as well as the development financial institutions (DFIs) and savings institutions (Chart 2.1).

Chart 2.1

Structure of the Financial System



In 1995, total assets of the financial system increased by RM107.5 billion or 17.2 percent to RM733 billion at the end of 1995 (an increase of RM53.3 billion or 9.3 percent in 1994) which was 3.6 times the nation's Gross National Product (GNP). The

nation's GNP valued at current prices in 1995 was RM202.5 billion (RM113.5 billion at constant price). The banking system remained as the main financial intermediary with its total assets amounting to RM414.5 billion or 56.6 percent of the total assets of the financial system at the end of 1995 (Table 2.6). In the case of non-bank financial intermediaries, the group's total assets accounted for 31.4 percent or RM230.0 billion of the total assets of the financial system in the same year.

Table 2.6

Assets of the Financial System (Annual Change), 1994/1995

Components	Annual Change		As at end	
	1994	1995	1995	
	RM billion (at current prices)		% share	
Bank Negara Malaysia	-7.5	-4.3	88.5	21.1
Banking System	32.9	74.8	414.5	56.5
<i>Commercial banks</i> ¹	17.9	52.9	295.5	40.3
<i>Finance Companies</i>	10.2	18.4	91.9	12.5
<i>Merchant banks</i>	4.8	3.5	27.1	3.7
Non-bank Financial Intermediaries	27.9	37.0	230.0	31.4
Provident, pension & insurance funds	17.5	20.1	138.2	18.9
<i>Employees Provident Fund</i>	11.8	13.6	98.1	13.4
<i>Other provident funds</i>	1.7	2.5	15.0	2.0
<i>Life insurance funds</i>	2.9	2.4	17.4	2.4
<i>General insurance funds</i>	1.1	1.6	7.7	1.1
Development Finance Institutions (DFIs)	0.9	2.3	12.0	1.6
Savings institutions	...	1.4	15.6	2.1
Other financial intermediaries	9.5	13.2	64.2	8.8
Total	53.3	107.5	733.0	100.0

Note: ¹ Include Bank Islam Malaysia Berhad

Source: Bank Negara Malaysia Annual Report, 1995, p.105

2.3.1 The banking system

The core components of the monetary banking system in 1995 are the Central Bank¹ (Bank Negara Malaysia) and 38 commercial banks including Bank Islam (the Islamic Bank) while the non-monetary institutions consist of 40 finance companies, 12 merchant banks and seven discount houses. All these institutions which were referred collectively as licensed institutions by the BAFIA² (1989), are under the direct regulation and supervision of the Central Bank.

In terms of performance, the finance, banking and insurance sector grew significantly at 10.7 percent per annum and accounted for 12.5 percent of the growth in gross domestic product over the period of 1991 to 1995. Its contribution to the GDP had increased from 9.8 percent in 1990 to 10.7 percent by 1995. The sector had also generated 120,500 new jobs during the period. The pre-tax profits of the banking system increased by an average rate of 28.3 percent per annum from RM2 billion in 1990 to RM6.9 billion in 1995 (Table 2.7). At the same time, the return on assets (ROA) and the return on equity (ROE) have also improved. The strong profit performance has enabled banks to set aside a higher general provision on loans which will increase the availability of credit from the banking system. The banking system has shown tremendous improvement in terms of loan management. This is reflected on the declining trend of the non-performing loans from 20.3 percent of total loans in 1990 to 5.4 percent in 1995.

¹The Central Bank was established in 1959. The bank was empowered to regulate and supervise the activities of the whole banking system and the 'scheduled' institutions of the non-bank intermediaries.

²BAFIA refers to the Banking and Financial Institutions Act, 1989.

Table 2.7

Performance of the Malaysian Banking System, 1990-1995

Financial year ending	1990	1991	1992	1993	1994	1995	Average annual growth rate, 90-95 (%)
Net Interest Income (RM) mil.	4,115	4,832	5,658	6,973	8,868	9,957	19.3
Pre-tax Profit (RM) mil.	1,985	2,271	2,657	3,788	5,205	6,906	28.3
Return on Assets (ROA)	1.4	1.3	1.3	1.5	1.7	1.9	
Return on equity (ROE)	21.5	17.6	16.8	20.2	24.2	27.6	
Specific Provision/Total Loans	5.3	3.6	3.4	3.2	2.2	1.4	
General Provision/Total Loans	0.7	0.9	1.1	1.3	1.6	1.5	
Non-performing loans/Total Loans	20.3	15.6	14.9	12.6	8.1	5.4	

Source: *The Seventh Malaysia Plan, 1995-2000*, p. 476

In terms of total assets mobilised by the financial system in 1995, the banking system accounted for 56 percent (RM411.2 billion). The commercial banks continue to hold the largest share of assets, deposits and loans as compared to finance companies and merchant banks (Table 2.8).

Table 2.8

Total Assets, Deposits and Loans of the Banking System, 1990-1995
(RM million)

Institutions	Total Assets			Total Deposits			Total Outstanding Loans ¹		
	1990	1995	Growth rate(%) 90-95	1990	1995	Growth rate(%) 90-95	1990	1995	Growth rate(%) 90-95
Commercial Banks	129,285 (71.9)	292,214 (71.1)	17.7	82,413 (68.2)	196,851 (69.6)	19.0	82,224 (70.9)	182,079 (69.8)	17.2
Finance Companies	39,448 (21.9)	91,885 (22.3)	18.4	31,274 (25.9)	69,951 (24.7)	17.5	27,446 (23.7)	64,629 (24.8)	18.7
Merchant Banks	11,063 (6.2)	27,059 (6.6)	9.6	7,106 (5.9)	16,093 (5.7)	17.8	6,283 (5.4)	14,144 (5.4)	17.6
Total	179,796 (100.0)	411,158 (100.0)	18.0	120,793 (100.0)	282,895 (100.0)	18.6	115,593 (100.0)	260,852 (100.0)	17.6

Note: ¹ Include housing loans sold to Cagamas Berhad
Percentage in parentheses

Source: *The Seventh Malaysia Plan, 1996-2000*

In terms of direction of lending, the manufacturing sector, which led the economic growth is the major beneficiary followed by real estate and construction, housing, finance, insurance and business services sectors. A significant proportion of loans advanced by the banking system were in terms of consumption credit. The loan to the manufacturing sector has increased more than twofold from RM21.5 billion in 1990 to RM48.8 billion in 1995 (Table 2.9).

Table 2.9

**Loans to Major Sectors by the Banking System, 1990-1995
(RM million)**

Sector	1990	%	1995	%	Average Annual Growth Rate, 90-95
Agriculture	5,649	4.9	5,245	2.0	-1.5
Mining & Quarrying	1,069	0.9	1,184	0.5	2.1
Manufacturing	21,540	18.6	48,752	18.7	17.7
Electricity	238	0.2	3,750	1.4	73.5
General Commerce	13,552	11.7	21,400	8.2	9.6
Real Estate & Construction	21,066	18.2	40,201	15.4	13.8
Housing	14,897	12.8	33,092	12.7	17.3
Transport & Storage	2,440	2.1	5,096	2.0	15.9
Finance, Insurance & Business	12,057	10.4	31,815	12.2	21.4
Other Services	1,826	1.6	6,853	2.6	30.3
Purchase of Stocks & Shares	3,021	2.6	30,198	11.6	20.9
Consumption Credit	11,695	10.1	30,198	11.6	20.9
Others	6,903	6.0	19,916	7.6	23.6
Total	115,953	100.0	260,852	100.0	17.6

Source: *The Seventh Malaysia Plan, 1996-2000*, p. 479

The Central Bank is also responsible to ensure that identified 'priority' sectors get access to credit at reasonable costs. This was done by issuing lending guidelines to the banking system. These guidelines covered lending to the *bumiputera* community, housing loans to the low and medium-income groups and loans to the small and

medium-scale enterprises under the New Principal Guarantee Scheme (NPGS) of the Credit Guarantee Corporation³ (CGC).

In addition to the lending guidelines, the government has also set-up special funds to promote investments in the promoted industrial activities⁴. These funds complemented the credit facilities provided by the banking system. Among others, the special funds⁵ that are relevant to the SMIs include the following:

1. New Entrepreneurs Fund (NEF)
2. *Bumiputera* Industrial Fund (BIF)
3. Special Fund for Tourism (SFT)
4. Industrial Adjustment Fund (IAF)
5. ASEAN-Japan Development Fund (AJDF)
6. Soft Loan Schemes for Modernisation and Automation I (SLMA-I)
7. Soft Loan Schemes for Modernisation and Automation II (SLMA-II)
8. Industrial Technical Assistance Fund (ITAF)

2.3.2 The non-bank financial intermediaries

The non-bank financial intermediaries accounted for 31.4 percent of the total assets of the financial system in 1995 (Table 2.6). This group is comprised of the following institutions:

³Lending to *bumiputera* community and the credit schemes of the Credit Guarantee Corporation are discussed in detail in Chapter 3.

⁴Please refer to Appendix 2.1 for a list of the promoted activities and products published by the Ministry of International Trade and Industry (MITI).

⁵Please refer to Appendix 2.2 for the special features of these funds.

- i) the provident, pension and insurance funds which include the Employee Provident Fund (EPF), other provident fund, life insurance funds and general insurance funds;
- ii) the development financial institutions (DFIs) which include Malaysian Industrial Development Finance (MIDF), Agriculture Bank of Malaysia, Borneo Development Corporation (Sabah), Borneo Development Corporation (Sarawak), Sabah Development Bank Berhad, Malaysian Industrial Estates Limited (MIEL), Bank Pembangunan Malaysia Berhad, Bank Industri Malaysia Berhad and Export-Import Bank (Malaysia) Berhad;
- iii) the savings institutions which include National Savings Bank, *Bank Kerjasama Rakyat* and co-operative societies; and
- iv) other financial institutions which include unit trusts, building societies, Pilgrim's Fund Board, Credit Guarantee Corporation, *Cagamas Berhad*, leasing companies, factoring companies, venture capital companies and discount houses.

The above institutions are classified under BAFIA as 'scheduled' or 'non-scheduled' institutions⁶. The scheduled institutions are the major non-bank sources of credit and finance. These include the credit and charge card companies, the building societies, factoring and leasing companies, venture capital companies and the development financial institutions. The non-scheduled institutions are those that are established by statutes and supervised by the statutory bodies. DFIs, factoring and leasing companies

⁶Should it become necessary, the Central Bank can supervise and regulate the scheduled institutions. The Central Bank is also equipped under the law to investigate and take action, including assumption of control over the non-scheduled institutions.

and venture capital companies are among the major sources for long and short-term financing for the SMIs, therefore, they merit further discussions.

Development financial institutions (DFIs)

The DFIs were set-up as specialised government-supported institutions. Their principal functions are:

- i) to provide long-term credit to the industrial sector, mainly for investment in fixed capital;
- ii) to provide equity capital for new ventures, including venture capital and equity participation;
- iii) to encourage long-term resource mobilisation; and
- iv) to promote new ventures.

At present, there are eight DFIs complementing the banking system in providing medium and long-term loans and extending financial, technical and managerial advisory services. Eight of the establishments are the Malaysian Industrial Development Finance (MIDF), Borneo Development Corporation (Sabah), Borneo Development Corporation (Sarawak), Sabah Development Bank Berhad, Malaysian Industrial Estates Limited (MIEL), Bank Pembangunan Malaysia Berhad, Bank Industri Malaysia Berhad and Export-Import Bank (Malaysia) Berhad directed their lending mainly to the industrial sectors⁷. In the Central Bank annual reports they are collectively referred to as industrial finance institutions rather than DFIs.

⁷The Agriculture Bank of Malaysia is one of the DFIs that dedicates its lending to the agriculture sector.

The combined resources of all DFIs at the end of 1995 was RM7.2 billion. The Development Bank of Malaysia (Bank Pembangunan Malaysia Berhad) still remained the largest industrial finance institution within the group with its total resources amounting to RM2.2 billion at the end of 1995. However, the Malaysian Industrial Development Finance Berhad had maintained its position as the leading provider of industrial finance, extending a total of RM685.8 million in 1995 or 31.8 percent of total loans provided by the DFIs in 1995 to the industrial sector (Table 2.10).

Table 2.10

Loans to the Industrial Sector (Annual Change), 1994/1995

Composition	1994	1995	At end 1995
	Annual Change in %		RM million
Banking System	18.7	30.2	48,602.7 (95%)
<i>Commercial banks</i>	19.7	31.4	42,344.2
<i>Finance Companies</i>	16.6	36.0	4,004.7
<i>Merchant banks</i>	7.6	4.3	2,253.8
Industrial Finance Institutions	12.0	17.3	2,158.0 (5%)
<i>Malaysian Industrial Development Finance</i>	4.3	16.1	685.8
<i>Development Bank of Malaysia</i>	18.5	16.3	631.1
<i>Bank Industri Malaysia</i>	12.9	13.3	594.0
<i>Sabah Development Bank</i>	21.6	17.7	189.5
<i>Export-Import Bank of Malaysia</i>	-	-	38.5
<i>Borneo Development Corporation (Sabah)</i>	-0.9	-1.9	14.8
<i>Borneo Development Corporation (Sarawak)</i>	-8.3	-1.9	4.1
<i>Malaysian Industrial Estates Limited</i>	-18.9	-16.7	0.3
Total	18.3	29.6	50,760.7

Source: Bank Negara Malaysia Annual Report, 1995, p. 152

The manufacturing sector still remains the principal recipient of the credit extended by the DFIs, followed by the real estate and construction sector. By the end of 1995, total lending to the manufacturing sector accounted for more than two-fifth of the outstanding loans of the industrial finance institutions. In addition, the industrial finance institutions are expected to provide medium and long-term credit at lower cost than the banking systems since they are able to resource fund at a cheaper cost from

government and other international sources. Interest rate charged by these institutions vary across the type of credit (fund) as well as size of the firms. For example, MIDF has continued to maintain different interest rate structures for loan schemes granted under its own from those under the ASEAN-Japan Development Fund. Under their own loan scheme, the interest rates charged are between 8.5 to 10.% per annum, almost identical to the commercial bank rates. However, for loans granted under the AJDF scheme to the small and medium enterprises, the rate charged was at 6.6% while the rate charged on loan to the larger enterprises were fixed at a flat rate of 7.75% per annum. For loans granted under the New Entrepreneurs Fund, Bumiputera Industrial Fund and Industrial Adjustment Fund, the rates charged were prescribed at 5%, 5% and 7.5% per annum respectively. Interest rate for leasing facilities were at a flat rate of 5.69% per annum (Bank Negara Annual Report, 1995).

On the other hand, the Development Bank of Malaysia has reduced its interest rate charged for all its loan from the range of 4 to 13.5% per annum in 1994 to the range of 4-9.5% per annum in 1995, with the exception of loans granted under the New Entrepreneur Fund, *Bumiputera* Industrial Fund and Special Fund for Tourism, where the rates charged were at the prescribed at 5%, 5% and 6.5% per annum respectively (Bank Negara Annual Report, 1995).

Although the industrial financial institutions were entrusted to promote the growth and development of the industrial sector by extending medium to long-term loans at concessional rate, their contribution were very limited. The banking system remains as the main provider of loans to the industrial sector contributing more than 95 percent of

the total loans extended to the sector while the remaining percentage (5 percent) were made-up of loans extended by the aggregate industrial finance institutions (Table 2.10).

It is to be noted that the bulk of the loan advanced by the banking system to the industrial sector are directed towards the larger companies where the average size of loan would be substantial. The industrial financial institutions, on the other hand, should target the SMIs as their potential clients as these firms would have relatively difficult access to medium and long-term finance from the banking sector due to lack of collateral and higher risk factor. Unless, these institutions refocused their strategy, their role to promote and sustain the development of modern industries, especially the SMIs, would be meaningless.

Leasing and Factoring Companies

Under the Banking and Financial Institutions Act, 1989 (BAFIA), companies conducting leasing and factoring business are required to register with the Central Bank and to submit periodic statistics to them for purposes of monitoring the institutions. In 1995, a total of 172 companies of which 154 are leasing companies and 18 factoring companies, have submitted statistics pertaining to their operation to the Central Bank. However, out of the 154 leasing companies, 53 were pure leasing companies while of the total 18 factoring companies, only 13 were pure factoring companies⁸.

Total assets of the 154 leasing companies amounted to RM12 billion while the total assets for 18 factoring companies is valued at RM1.8 billion as at the end of 1995.

⁸Pure leasing and pure factoring companies are defined as those companies whose principal business activities are in leasing and factoring respectively.

Borrowings from financial institutions as well as from intercompany borrowings were the main source of funds for these leasing and factoring companies as they are not allowed to accept deposits under the law (Table 2.11).

Table 2.11

**Leasing and Factoring Companies: Sources and Uses of Funds
(as at end 1995)¹**

SOURCES	Leasing Companies	Factoring Companies
	(RM Million)	(RM Million)
Capital reserves	430	70
Borrowings from financial institutions	2,779	384
Inter-company borrowings	841	227
Others	2,039	445
TOTAL RESOURCES	6,089	1,126
USES		
Cash and bank balances	20	12
Investments	161	4
Receivables	4,851	1,066
<i>Leasing</i>	3,013	1
<i>Factoring</i>	187	1,006
<i>Hire purchase</i>	1536	1
<i>Others</i>	115	58
Others	1,057	44
TOTAL USES	6,089	1,126

Note: ¹ Figures shown are for 53 pure leasing and 13 pure factoring companies
Source: Bank Negara Malaysia Annual Report, 1995, pp. 161 & 162.

Hire purchase and lease financing (for leasing companies) and factoring (for factoring companies) formed the bulk of the business activities of these companies. The credit extended by the leasing companies in 1995, were mainly channelled to finance manufacturing (30.3%), broad property (14.1%), finance, insurance and business services (14%) and the transport and storage sectors (12.2%) while the bulk of the factoring debt finance was channelled to the broad property (29.4%), general commerce (24.5%) and manufacturing (15.8%) sectors. The bulk of the lease finance

was used to finance plant and machinery (32.1%), commercial vehicles (14.6%) and construction equipment (17.3%) (Bank Negara Malaysia Annual Report, 1995).

Venture capital companies (VCCs)

Venture capital financing has become an increasingly important source of non-bank finance to the SMIs. In 1990, there were only three venture capital companies operating with a total fund size of RM47.8 million. By the end of 1995, the total fund size has increased to RM781 million with 20 companies in operation. In terms of investment, the VCCs as a group had expanded their activities and invested a total of RM191 million in 91 investee companies in 1995 as compared to RM147 million in 71 investee companies⁹ in the previous year.

The manufacturing sector accounted for RM172 million (90%) of the total investment of which 69.8 percent or RM120 million of the total investment in the sector was represented by the manufacturing of electrical and electronic products, plastic products, transport equipment and higher-technology-based products. Majority of the investments in the investee companies are for acquisition/buy-out¹⁰ funding, (RM67 million), followed by investments for the financing of company start-ups¹¹ (RM46 million), second-stage¹² funding (RM41 million) and bridge financing¹³ (RM22

⁹Investee companies are companies in which venture capitalists invest their equity.

¹⁰For companies seeking money for plant expansion, marketing and increasing working capital.

¹¹Start-ups refer to companies with complete business plan seeking funds to launch both product development and marketing.

¹²Second-stage funding refers to the period during the expansion stage when the company requires assistance in the actual making and distributing product while the company's account receivables and inventories are growing.

¹³Bridge financing refers to the involvement of venture capital when synergistic partners are sought for the company.

million). Nevertheless, the VCCs remained reluctant to provide seed capital¹⁴ to investee companies due mainly to the uncertainty and the high risk involved (Table 2.12).

Table 2.12

Venture Capital Companies: Investments, 1993-1995

	1993	1994	1995
BY SECTORS	(RM Million)		
Manufacturing	60	80	172
Others ¹	4	67	19
TOTAL	64	147	191
BY TYPE			
Seed capital	-	-	-
Start-ups	6	40	46
Second-stage	5	11	41
Acquisition/buy-outs	7	86	67
Bridge financing	44	10	22
Others	2	0	15
TOTAL	64	147	191

Note: ¹ Include services sector

Source: Bank Negara Malaysia Annual Report, 1995, p. 163

The Malaysian Technology Development Corporation (MTDC) was established in 1992 to pave the way in providing finance in the form of venture capital and risk financing and to persuade VCCs to invest in high-risk and new technology projects. By the end of 1995, MTDC had invested about RM54.6 million in 28 investee companies, covering activities such as consumer electronics, computer peripherals and software, and advanced high-tech manufacturing (Malaysia: Seventh Malaysia Plan, 1996-2000).

¹⁴Seed capital refers to the stage where relatively small amounts of capital are required, mainly in research and development activities.

Apart from the establishment of MTDC, other measures to promote the development of VCCs include the granting of special tax incentives and relaxation of the qualifying criteria for the tax incentives. To qualify for the tax incentives, the previous requirement for VCCs to invest 100 percent of their funds in venture companies¹⁵ (VCs) was relaxed to at least 70 percent. In addition, the qualifying criteria that VCCs should not invest more than 10 percent of their funds in venture companies and not more than 25 percent in any one industry were abolished. The following incentives are available provided the VCCs are registered with the Ministry of Finance for VCC status and submit their investment plans for prior approval:

- i) where a VCC receives gains from the disposal of shares in an investee company, it is exempted from tax for that year of assessment. However, capital gain realised more than 3 consecutive years after a KLSE¹⁶ listing will not be exempted;
- ii) where a VCC incurs a loss on the disposal of shares or the liquidation of one of its venture companies, it is allowed to set off such losses against other income, in accordance with the formula;

¹⁵According to Boocock (1995), this terminology is quite confusing. However, the Ministry of Finance defines VCs as companies involved in 'high risk' ventures or ventures in 'new technology' in relation to a product or activity which the Minister of Finance is satisfied would enhance the economic or technological development of Malaysia. High risk ventures include firms which encounter excessive risks due to high costs and facing long payback period on the initial investment; firms launching a new product or entering a new market and receiving little or no government protection against competition. New technology is defined as incremental improvements in existing processes and products, and the use of technologies which are new to Malaysia. Examples include automated manufacturing technologies such as robotics, biotechnology and renewable energy technology (Boocock, 1995, pp. 376-377).

¹⁶Kuala Lumpur Stock Exchange.

$$\text{Deduction} = E * I/4C$$

where E = expenses not normally deductible against income,

I = gross income arising from dividends, interest and rents, and

C = gross income plus gains made from the disposal of shares in a VC.

This formula results in a tax saving of a maximum of 25 percent of the of expenses which would not normally be allowable for tax purposes (Boocock, 1995, p. 376); and

- iii) where the cost of managing a fund would have to be charged to investors rather than offset against profits, permitted expenses¹⁷ in any year of assessment can be carried forward to the following year.

Despite the encouraging number of deal registered by the VCCs in 1995, the venture capital industry as a whole has great potential for further growth. The lack of awareness of the availability of venture capital financing and the reluctance of most new companies to accept venture capitalists as partners have affected the progress of the industry. The Malaysian Venture Capital Association was established on 27 February 1995 to overcome these problems as well as to provide a platform for members to meet and exchange ideas on the development of new technologies, innovations as well as products. The objectives of the Association are to promote and develop the venture capital as a source of equity financing for business enterprises, principally for the

¹⁷Permitted expenses include directors' fees, wages and salaries, rent and other overhead expenses.

start-up as well as development of SMI; to stimulate the promotion, research and analysis of venture capital; and to establish network with government agencies, policy makers, research institutions, universities, trade associations and other relevant institutions for the promotion and betterment of the venture capital industry in the country. There is to date no account in the literature about the activities of informal venture capitalists or 'business angels' in Malaysia. It is however believed that such activities do operate in a very tight and close networks.

2.4 Summary

The discussion in this chapter sets in context of the strategic importance of the Malay Peninsular to international traders, particularly the settlements along the Straits of Malacca which gave rise to rivalry with European imperialism for centuries. The British influence is of extreme importance because it moulded the future of Malaya's social, political and economic endeavours. Whereas colonial administration was blamed for identifying race with economic functions, the NEP was aimed at erasing the demarcation. The lack of *bumiputera* participation in the commercial and industrial activities was partially attributed to the segregation of functions with the Malays encouraged to engage in agricultural activities, the Indians in the rubber plantations and the Chinese in the commercial urban sectors as well in mainstream industrial activities.

Building from its colonial economic base, the country had been able to transform its economy, from producing basic commodities to producing manufactured value-added products, through its pragmatic approach in planning and managing the economy. Presently, Malaysia is one of the rapidly growing economies in the Third World. Its

growth, averaging about 8 percent per annum. Malaysia's vision is to be a fully industrialised country by 2020.

The development of the nation's financial system has been supportive of the overall growth of the economy by efficiently mobilising resources and allocating them in line with planned priorities. By relaxing the control on the financial system through the Central Bank, it is hoped that the financial sector will be more competitive and innovative, providing financial services that are relevant to the needs of its clients. The manufacturing sector, in general, have been given the priority, in terms of financial provision, although allocation for the SMIs by the formal financial system is still very limited. Recognising this deficiency, the government has taken various measures in order to encourage lending by the financial system to the SMI sector. Among the measures are the setting-up of various funds, lending guidelines to priority sectors, and promoting the non-bank sources of funding such as leasing, factoring and venture capital financing.

Chapter 3

THE IMPLICATIONS OF RISK, UNCERTAINTY AND FINANCIAL DUALISM FOR SMI FINANCING

3.1 Introduction

In order to provide a better understanding of the predicaments faced by SMIs in having adequate access to external finance comparable to their larger counterparts, it is crucial to understand the nature of risks and uncertainties inherent in the SMI sector itself. Thus, this chapter begins by reviewing the nature of the SMIs and the risks and uncertainties that are generally associated with them. It is the contention of the study that if the perceived risks associated with the SMIs are minimised, the logical consequence of this is that their access to external finance should be improved. Access to finance is defined in this study as the ability for the borrower (SMIs) to obtain short or long-term credit regardless of whether the credit has to be secured or otherwise. In other words, as long as the borrowers are successful in their application for credit, then it can be considered that a particular borrower has access to external finance (although in some cases the full amount of credit applied may not be granted). Discussion will then focus on the consequence of risks and uncertainties as it relates to provision of finance to the SMIs. The chapter also examines the contention that small firms are usually riskier than large firms, and how lenders respond to these risks before they decide to approve the loan. Since the economies of most developing countries are characterised as having dualistic financial structure, that is the existence of formal and informal providers and users of fund, it is appropriate then to discuss whether the existence of the financial dualism actually impedes the speed and efficiency of these countries' economic development process. As such, this chapter also analyses the role played by both formal and informal sectors particularly in relation to the mobilisation of

financial resources. Towards the end, a critical review on SMI financing in Malaysia will be provided to illustrate whether the lack of provision of finance from the formal sector finance is caused by market failure/inefficiency or simply because financial institutions rationed/denied due to the perceived riskiness 'stamped' to the sector.

3.2 Understanding the Concept of Risk and Uncertainty

The word risk is believed to have its origin either in the Arabic word *risq* or the Latin word *risicum*. Not only there exist some similarities in the pronunciation of these two words, their meanings also manifest the very basic concept of risk. In Arabic, the word *risq* means " anything that has been given to you [by God] and from which you draw profit" whereas the Latin word *risicum* referred to the challenge that a barrier reef presents to a sailor. Both interpretations do not by any means connote a fortuitous or an unfavourable outcome. According to Kedar (1970), the Arabic *risq* that appears as a Greek derivative in the twelfth century relates to the chance outcomes in general and has neither positive nor negative implications.

It is also believed that before the word *risk* existed, the word *hazard* appears to have had the closest meaning to it as in Shakespeare's *Merchant of Venice*:

'Men that hazard all do it in hope of fair advantage'

Again in this expression, even Shakespeare reminds us that *risk* is connected not only with the possibility of loss or harm, but also the hope of some benefit or gain. Hence, the word *risk* originally does not indicate unfavourable outcome alone but it also connotes some positive countenance. The English usage of the word *risk* is believed to

have started only in the mid-seventeenth century originating from the French word *risqué* (Moore, 1983).

However, in recent literature, the word *risk* has lost most of its positive connotations. Several authors and researchers on the subject recognised *risk* as undesirable, unwanted and having adverse effects. For examples, Rowe (1977) defines risk as “*the potential for unwanted negative consequences of an event or activity*” whilst Lowrance (1976) defines *risk* as “*a measure of the probability and severity of adverse effects*” (Ansell and Wharton, 1992, p. 4-5). Rescher (1983) explains that “*risk is the chancing of negative outcome. To measure risk we must accordingly measure both of its defining components, the chance and the negativity*” (Ansell and Wharton, 1992, p. 4-5). Hertz and Thomas (1983, p. 3) refer risk to “*a lack of predictability about problem structure, outcomes or consequences in a decision or planning situation*”. Since none of these recent definitions came close to the medieval Greek and Arabic interpretation of risk, Wharton (1992, p. 5) defines risk as “*...any unintended or unexpected outcome of a decision or course of action*”. Clearly in his definition, the outcome option remains open. According to him, the outcomes can be either positive or negative.

To many of us risk and uncertainty mean the same thing. But, to those involved in risk analysis, assessment and management, these words carry different meanings. In most dictionaries, the word risk is conveyed as having the chance of negative outcomes such as hazards, loss, bad, injury, disadvantage, destruction and so on whereas uncertainty is often referred to as insecurity, scepticism, doubtfulness, incertitude, suspicion, etc.....¹.

¹ Among the dictionaries consulted are the Concise Oxford Dictionary (1976), Webster's Dictionary (1981), Collins Dictionary (1988).

In one dictionary of economics, risk is defined as “*a state in which the number of possible future events exceeds the number of events that will actually occur, and some measure of probability can be attached to them*” (Bannock, Baxter and Davis, 1992, p. 375). This definition distinguishes risk from uncertainty, in which no probability can be attached to the possible outcomes. From these definitions, it is evident that the dividing line between risk and uncertainty is whether the probability of the outcome can be determined in advance or not. If the probability of an outcome can be determined or measured, it will be considered as risk and some sort of insurance can be taken to cover the worst contingencies. But if the probability of the outcome cannot be measured, it will then be considered as uncertainty. However, uncertainty cannot be insured against since there is no insurance company in the world that could adequately assess what premium to charge to cover for unfavourable outcomes. It is simply a possibility that has to be faced. Therefore, the state of uncertainty is merely described as the state of unsurety, sceptical, unpredictable, chancy, doubtful and ambiguous. It is the human perception that makes those states of uncertainties into perceived-risk situation rather than the real or actual risk. The entrepreneurs who started their own businesses are often confronted with uncertainties, but justify their actions with the anticipation of profit as a reward.

Frank H. Knight (1957) defines uncertainty as a risk which cannot be insured against and is incalculable. Knight therefore acknowledges the unforeseen, unsure unpredictable and unexpected outcomes as risk in itself (Khanka et.al., 1989, p. 22) Much of the risk associated with finance are of this type of uncertainty, therefore, any attempt to extrapolate into the future would always be a questionable exercise (Kitchen, 1986). Knight’s view, however, is very much consistent with that of Richard

Cantillon's concept of an entrepreneur whom he conceived to be the bearer of non-insurable risk (Kilby, 1971, p. 2). Since, most of the financial risk cannot be quantified accurately, much of the risk assessments depend on ones' perception of risks as well as the quantity and quality of information ones possesses. In other words, these risks can only be measured subjectively using some kind of indicators to reflect the degree of uncertainty. The difference in interest rates between two loans, or the difference in maturities, or the difference in gross yields on stocks or the *spread*² on bonds are some examples of the numerical indicators that can be used to measure financial risk (Kitchen, 1986).

3.2.1 Types of risks

There are various types of risks which are commonly faced by the SMIs such as the following:

a. Business risk

The suppliers (lenders and equity-holders) as well as users (entrepreneur, manager or its management team) of finance often face business risk almost every moment in the course of running their business. Business risks normally include variability in costs, sales volume, price, competition from other products, technical obsolescence, strikes, disruption of supplies, fire etc. This invariability affects the firms' return on its assets and therefore represents risks to the suppliers and users alike. For majority of the SMIs, where the entrepreneur is both the supplier and users of fund, the business risks faced by the SMIs are entirely dependent on the decisions of the entrepreneurs (Casson, 1982).

²Spread is the premium on interest rate over the inter-bank offer rate.

b. Financial risk

This risk relates to the capital structure of an entity in terms of its financial assets. Firms having higher debt-to-equity ratio (highly geared) generally faced higher financial risk than firms with lower debt-to-equity ratio (lowly geared). To the suppliers of capital, financing a highly geared company presents a very high risk and they normally require collaterals as security in the event of default. Therefore, the higher the risk perceived, the higher will be the rate of return required by the suppliers of capital. On the other hand, users of capital will face financial risk if income is not sufficient to service the regular debt instalments. Debt has to be serviced regardless of fluctuation in income.

Most SMIs in developed as well as in developing countries are generally highly geared companies (Berry, et. al., 1993). This means that majority of them rely on external finance to supplement their capital requirement. Thus, their capital structure is largely comprised of loans and advances. In terms of asset composition, the majority of their assets are in working capital with only a small proportion in fixed assets, thus making it less attractive to lenders. Looking at the compositions of assets and equity of the SMIs, it can be deduced that lending to them can be very risky.

c. Money risk or interest rate risk

This kind of risk is associated with the fluctuation of interest rate. For borrowers, loans that are fixed at a certain rate will be at a disadvantage if the interest rate goes down but will be at an advantage if the interest rate goes up while for lenders, it is the other way round. But anyone who borrows at variable interest rate will face this kind of risk if the

interest rate increases. SMIs who rely extensively on external borrowing are often faced with this kind of risk. In Malaysia, however, majority of loans to the SMI sector are charged at a fixed rate, thus minimising the risk if the general level of interest rate rises.

d. Project (or investment) risk

This kind of risk arises when pure project finance (whether by debt or equity) is used. Finance is secured against the assets of the project and debt is serviced out of the project's income. Therefore, the risk is entirely dependent on the success of the project. In some cases, the government itself acts as guarantor to the project that is being financed. This is largely true in terms of financing large infrastructure projects. When finance for the project is guaranteed by the government, the lender is faced with country risk rather than project risk (Kitchen, 1986). To a lesser extent, SMIs would face project risk if their proposed project did not yield the expected (forecasted) revenue which in turn might affect the firm's ability to service its debt out of the project's income.

e. Country risk

This kind of risk refers to the specific conditions of a particular country in terms of economic, political and social risks. In addition, it also includes the risk caused by the environmental changes and natural disasters. Countries that are highly exposed to this kind of risk will face difficulties in securing international loans or attracting direct foreign investments. Furthermore, their international trade will be adversely affected. SMIs operating in this type of environment are expected to be riskier than their counterparts operating in a more secure environment.

f. Exchange rate risk

Exchange rate risk poses a serious threat if SMIs are involved in international trading. The foreign currencies might appreciate in value (foreign exchange liability) in relation to local currencies or conversely, the local currencies might depreciate in value (foreign exchange asset) in relation to foreign currencies. For example, the current financial crisis in Southeast Asia has rendered many business insolvent. However, this kind of risk can be covered or at least minimised by hedging on options and forward currency markets (Prindl, 1976).

3.2.2 Types of uncertainties

Closely related to the notion of risk is uncertainty. According to Storey and Sykes (1996), there are three types of uncertainty that are likely to confront SMIs more than their larger counterparts. They are market uncertainty, customer and supplier uncertainty and aspirational uncertainty.

a. Market uncertainty

Market uncertainty refers to the uncertainty associated with the small firm's inability to influence price within a market by changing the quantity of output which it produces. This impotence is due basically to the nature of the small firm itself. First, small firms operate in a single market or limited range of markets and offer limited range of products and services, thus, small firms are unlikely to be able to exert much influence on their market (Burns, 1996). The lack of market power inevitably forces the small firms to be price takers instead of price setters in the classic economics sense (Storey and Sykes, 1996). This type of uncertainty is greater for newly established firms or start-ups.

Second, small firms do not have the resources to compete on the '*deep-pocket*' grounds with their large competitors (Storey and Sykes, 1996). Therefore, they are unable to expand their market share as quickly as their larger counterparts. Since profitability of a company is always positively linked to the market share, it follows that larger firms are likely to be more profitable than small firms. Baumol (1967) has argued that large capitalised firms have the option of competing with small firms, but that small firms cannot easily choose to compete with large firms.

Finally, small firms cannot put up entry barriers to prevent other competitors; large or small; to offer the same type of products or services to the same customer or markets as theirs. In other words, small firms have to operate in conditions of classic perfect competition. Even if they are successful to create a niche in a market or offer a highly differentiated product, it is unlikely that their leading position can last for very long. Soon they will be joined by other competitors which will eventually lessen their competitive advantage.

b. Customer and supplier uncertainty

Small firms are also faced with customer uncertainty. This uncertainty stems from the fact that small firms usually have no more than a handful of key customers and some may rely only on a single customer (Storey, 1982). Davies and Kelly (1972) have indicated in their study that more than one third of all small manufacturers in the UK sell more than 25 percent of their output to one customer. This case is usually common in a sub-contract exchange manufacturing arrangement, where a small firm acts as subcontractor producing solely for its purchaser who is its only customer. Under these

circumstances, the small firm's operation is vulnerable to any changes in the principal company operations. In addition, the bargaining power of the SMIs as subcontractors are restricted. They are not able to dictate the contract price because most of the input prices are already known to their customer. Consequently, their profit margins are narrowed. Thus it is very difficult for these small firms to retain enough profits for future investments.

The risk of losing the 'only customer' or the 'only business' is high for those SMIs involved in the subcontract exchange schemes. The subcontract arrangement may be terminated at any time by the principal company (this type of provision may exist in the contract). The principal company may decide to award the contract to a different company, or in the worst case, orders may be terminated following reorganisation or liquidation of the principal company. Hence, offering a single product to a single customer can cause greater uncertainty as compared to offering a diversified range of products or markets.

Apart from facing customer uncertainty, small firms are sometimes faced with supplier uncertainty. Supplier uncertainty refers to a situation where the productivity of the small firm is disrupted due to lack of supply of raw materials and other inputs from the supplier. There will be greater supplier uncertainty if the firms rely only on one or few suppliers. According to Mead (1992), increased specialisation can lead to an increased expected return but it also entails a new set of risks, which come about from an increased reliance on persons and businesses outside the enterprise. Therefore, the fragile linkages of SMIs with their customers and suppliers may increase the level of uncertainty (hazards) that they have to bear (McPherson, 1995).

c. Aspirational uncertainty

This type of uncertainty is related to the psychological, motivation and abilities of the entrepreneur who owns the small firm. Some entrepreneurs purposely prefer to remain small, thus making no attempt to make the firm grow larger - the risk-averse entrepreneurs. Some may avoid the possibility of getting bigger through injection of external equity because they fear of losing control of the firm. This type of companies usually grow very slowly and in some cases they do not grow at all. As slow growing companies are often associated to low income companies and low income companies are often unable to survive in the long term, these companies may be perceived as risky (Phillips and Kirchhoff, 1988).

In other situations, there are entrepreneurs who are willing to drive their companies to grow as fast as possible; sometimes without paying enough attention to their cash flow positions. In the end, most of these companies end-up in trouble as their sales could not cope up with their growing working capital requirements. These examples demonstrate that irrational aspirations on part of the entrepreneur may put their business at serious jeopardy. This type of uncertainty often increases the level of risks perceived by lenders and this is reflected in the interest rates at which financial institutions make funds available to the SMI sector (Storey and Sykes, 1996).

The growth of small firms is not only constrained by certain economic factors (such as fall in demand) or by the 'craze' of the entrepreneurs to expedite the growth of their firms but it is rather due to the short-sighted view (short-termism) of the entrepreneurs themselves. In other words, the profits generated from the business are not channelled

towards reinvestment. There is nothing wrong for the entrepreneur to appropriate a portion of the profit as reward for his or her efforts, but the rest should be ploughed back into the business, otherwise the business would not be able to grow. This uncertainty which is due to the entrepreneur's short-sightedness represents a risk to potential lenders. The SMIs are generally risk prone operating in competitive markets and therefore lenders are reluctant to extend loans of them. Lenders are also risk averse and are suspicious to extend loans to these small firms as they fear that the loan will be utilised by the entrepreneur for 'other purposes' than the business itself.

3.3 Are Small and Medium-Sized Firms Riskier Than Larger Firms?

3.3.1 Inherent risks of SMIs

The perception of risk in lending to the SMIs is often associated with the nature of the SMIs themselves. This is particularly true since SMIs are very diverse in their nature, function and operation. They can range from a very small coffee shop in a corner of street to a modernly equipped, high technology manufacturing concern. Some of these SMIs are established specifically as vendors or sub-contractors, producing goods and services exclusively for their main contractors or large companies while others exist on their own, serving a niche in the market. Some are registered formally (i.e. the formal sector, at least from a legal point of view) while majority of them operate without any official license or permit (i.e. the informal sector). These diversities have made it very difficult to measure exactly the sector's tangible contribution to the economy as a whole and to assess the risk they pose to the lending institutions.

SMIs possess special characteristics that make them quite different from their larger counterparts. According to Konig and Koch (1990, p. 233), SMIs in developing

countries have specific advantages such as “...labour intensive production in the context of abundant labour supply and capital scarcity, promotion of entrepreneurship, low propensity to import, development of indigenous technologies, strong intersectoral linkages enhancing vertical and horizontal division of labour, decentralised production reducing rural-urban migration and supply of goods and services according to local markets demand”. In addition, SMIs are very versatile and capable to respond quickly to any change in the environment than their larger counterparts (Deakins, 1996; Ross, 1996). Nevertheless, contrary to these strong characteristics, there are other features of the SMIs that have made them inherently riskier than larger firms, especially in terms of extending financial assistance. These detrimental attributes include inter alia management by single owner, limited access to capital markets, questionable collateral positions, limited capital intensity, limited range of markets and/or products and high risk of failure.

a. Owner-manager operated

This is one of the most common characteristic of SMIs. Almost all of them are owned and managed by the same individuals or partners or shareholders. Under these circumstances, most of the business decisions often become personal decisions; and personal decisions often undermine the logic of the balance sheet. Small firms are also perceived to be riskier because they are more vulnerable to business and financial risk as well as to ‘poor’ decisions than larger firms (Walker and Petty, 1978). There is also the risk of over-dependence upon one or few individuals for the well-being of the firm (Burns, 1996). The firm might also face the risk of short-termism of their owners.

On the other hand, larger firms are normally managed by a team of professionals appointed by the shareholders of the firms. Although, the shareholders cannot interfere in the daily management of the firm, at least they can provide the check and balance on the firm affairs through the board of directors' meeting or the annual general meeting of the shareholders. In other words, the management team cannot go beyond their expected duties and responsibilities to maximise the wealth of their shareholders through prudent and ethical management practices. In this way, the risks associated with mis-management are greatly reduced.

b. Limited access to capital market

SIMs because of their size and inability to portray viability (sometimes due to information asymmetry or restriction by law), could not get financing from the public by issuing ordinary shares and debt securities. Even if they could, the floatation cost would be astronomical (Hutchinson & McKillop, 1992). Moreover, the majority of SIM owners do not wish to dilute their position to 'outsiders' (Hutchinson, 1995), thus, raising capital through external equity is only an option of last resort. In addition, raising capital in this way has significantly constrained their choice of management strategies. In order to avoid the problem, SIMs often rely on borrowing (external debt rather than equity) from the formal sector financial institutions or other informal sector sources.

Large corporations do not normally face any constraints while issuing shares to the public, provided they satisfy the conditions set by the relevant authorities. Not only they are able to issue shares, they can also issue debt securities. Therefore, compared to the smaller firms, their financing option is certainly wider. Large corporations are able to

absorb the costs of issuing shares or debt, since the size of financing involved is quite substantial. The success of floatation usually depends on the confidence of the potential subscribers, and logically, they have more confidence in larger companies than smaller ones.

c. Questionable collateral position

SMI's ability to borrow from the formal financial institutions is often restricted because they normally do not have sufficient collateral to secure the loans. More often than not, formal financial institutions demand specific types of collateral as pre-condition for loan applications. Alternative or additional to the collateral requirements, they often have to rely on a third party to stand as guarantors. Inaccessibility of formal sector finance may 'force' SMIs to borrow from the informal sector since no collateral is needed except that of personal guarantee.

Large firms usually do not face with collateral problems. This is because most of these firms have investment in fixed assets such as land, property, plant and equipment. In addition, larger firms are perceived to be more stable and reliable than smaller firms, particularly in terms of assets endowments. Lenders usually do not demand collateral and they generally charge minimum lending rates to the larger firms since they consider them as their most creditworthy customers (Chee, 1990).

d. Limited capital intensity

Due to lack of capital from internal (personal equity) and external sources (borrowings), the majority of SMIs do not engage in capital intensive manufacturing processes. Instead, they concentrate in the production of goods and services that do not require a

large sum of investment in plant, machinery and equipment. This handicap makes the SMIs less competitive than their larger counterparts due to lack of economies of scale and lack of consistency of quality outputs. Lack of capital also constrained the potential of these SMIs to grow and develop into larger businesses (Binks and Ennew, 1996; Chittenden, Hall and Hutchinson, 1996).

Larger firms, on the other hand, usually engage in capital intensive method of production, employing up-to-date technologies and therefore able to enjoy economies of scale. This assertion is fair considering the fact that large firms have better resources than small firms. As such they are able to produce standard, quality products and are able to compete effectively in the open market, thus making them less susceptible to business and market risks.

e. Limited range of markets and products

SMIs tend to concentrate into clusters, especially in designated industrial areas while some may be localised in major towns and cities (Horvitz and Pettit, 1984). Therefore, their services are normally local and geographically concentrated. The majority of them have single or at the most a limited range of products. With limited product and market coverage, their business operations will be more susceptible to business risk than their larger counterparts.

Limited product and market coverage may imply limited market share and limited market share means lower sales capacity. Large firms, on the other hand, often have a wide range of products and have a wider market coverage. In addition, they are able to utilise marketing intermediaries (such as wholesalers and retailers) in distributing their

products more efficiently. Furthermore, large firms can reduce its business risks by diversifying into other business or product lines.

f. High risk of failure

Kitchen (1989) characterised SMIs as entities with relatively high risk. The high risks are normally associated with the lack of management skills and experience, lack of track record, lack of accounting information, lack of vision and majority of the SMIs are usually undiversified. Furthermore, the casualty rate, especially among young firms is quite high (Siropolis, 1977; Smallbone, 1990; Hall and Young, 1991; Cromie, 1991), although according to Scott (1982), the failure statistics of SMIs may have been extremely exaggerated.

Laitinen (1992) have categorised the reasons for failure into financial and non-financial causes. Financial causes are usually related to undercapitalisation and high indebtedness while non-financial causes are largely due to lack of management skills such as inexperienced or incompetent management. Problem of undercapitalisation usually stems from the lack of money to finance fixed and working capital (Storey, 1985) while high indebtedness is caused by inefficiency in debt collection (Haswell and Holmes, 1989). These high risks of failures have made the lenders more cautious in extending financial assistance to the SMIs. Some financial institutions may exercise stringent loan monitoring procedures in order to minimise default while others may either ration or refrain from extending credit to the sector.

3.3.2 Are small business risks unbearable?

The negative characteristics of the SMIs discussed above, undoubtedly, enhance the perception of risk associated with this sector. Accordingly, lending to this sector is perceived to be risky. Since SMIs in developing countries can operate formally or informally, it is widely acknowledged that SMIs operating in the *informal sector* are riskier than those operating in the *formal sector*³ (Meyer and Nagarajan, 1988). Formal sectors SMIs are usually bound by the law and their activities are normally accounted for by the authorities. Furthermore, from the legal point of view, it is easier to enforce a contract with the formal sector SMIs than with the SMIs in the informal sector. This partially explains the reason why the formal financial institutions are very reluctant to extend credit to the informal sector SMIs. The reluctance of the formal sector finance to extend credit to the informal sector SMIs is easier to comprehend, but unfortunately, the formal sector SMIs also claim that they are denied access to credit by the formal financial institutions, often for exactly the same reasons as encountered by their informal counterparts (Chee, 1990). So far, previous studies (at least in the Malaysian context) on this issue were only able to provide anecdotal evidence of the above allegation made by the formal sector SMIs. The present study is believed to be the first of its kind, to quantify the formal sector financial institutions' behaviour towards to the formal sector SMIs, particularly on the issue of SMIs' access to formal institutional finance.

Though it can be argued that SMIs should first start small and manage according to their limited resources, new opportunities might come at times when their resource is

³Formal sector SMIs are referred to as those SMIs registered formally with the relevant authorities while informal sector SMIs are not registered but operate in the same environment as their formal counterparts.

insufficient. This is often the time when they urgently need external funding. But SMIs' applications for external funding are often not successful because of the 'unbearable risks' perceived by the lenders. Moreover, as already been pointed out, formal sector lenders usually insist on collaterals which the majority SMIs do not have at their disposal. SMIs' plight in getting the loan is often aggravated by the bureaucratic procedures in processing loan applications, evaluation and disbursement of approved loans; let alone preparing lengthy business plan and filling-up complicated application forms. A study in Sri Lanka, indicates that lack of collateral and lack of good accounting system are the major obstacles faced by SMIs when seeking to borrow from commercial banks. The study concludes that the lack of collateral and complicated lending procedures are the two main reasons given by SMI's owners for not applying for a loan from the formal sector lenders (Dias, 1990).

Lending to large firms may be profitable considering the firm's size of borrowing and their lower 'perceived' risks. However, lending a substantial amount to a single borrower can also be riskier than lending to a portfolio of smaller borrowers. Default risk is higher when lending to a single borrower in spite of the low transactions costs, but it is lower when lending to a portfolio of borrowers although the transactions costs may be higher. But the high transactions cost can be easily compensated by charging higher premium on the loans. It is quite difficult to imagine that in the small business loan portfolio, all borrowers will default at the same time; in most cases, lenders are able to diversify the risk to other borrowers in the portfolio. In other words, lending to small business can be even more profitable than lending to bigger firms, provided lenders always exercise caution and are meticulous in their lending process (Hagaman, 1995).

Inevitably, if lenders continue to abstain from lending to this high risk sector, SMIs will either have to rely on self-finance or borrow from informal sector sources such as loan sharks, chettiars and unlicensed moneylenders, often at a very high cost (Drake, 1980). This, of course, will lead to a slower growth of the SMI sector, and government's aspiration to promote this sector will be adversely affected.

3.3.3 Implications of risk and uncertainty for SMI access to finance

The obvious implications of the risk and uncertainty facing the smaller firms include the rationing of credit and the high premium on loans charged by the financial intermediaries. Due to the risk and uncertainty, financial intermediaries (notably, commercial banks) often rationed the provision of credit (limited access or no access at all) or charged a premium for making loans to the SMI sector (Cressy, 1993). Since banks are unable to assess accurately as to which firms have higher risk potential, the higher premium charged can become a burden to the SMIs, leading possibly to its demise (Storey and Sykes, 1996). The banks have to charge higher premium on loans to SMIs in order to cover the high transactions costs involved. The high transactions costs are due primarily to the cost of acquiring and assessing quality information as well as the cost of monitoring the loans.

Financial contracts, generally, involve credit risk, price risk and liquidity risk (World Bank, 1989). Credit risks refer to the danger of borrower defaulting on the loan commitment while price risk is usually associated with losses due to price changes such as changes in interest rate or exchange rate. Liquidity risk refers to the risk of the borrower being unable to dispose financial assets quickly without suffering substantial losses in terms of discounts. It seems that these kinds of financial risk are inherent

within the financial framework of developing countries which might contribute to higher transactions costs.

To cover for the financial risks, banks can adopt any of the two measures; one of raising the interest rate cost and the other of rationing the credit. Both measures have their own major drawbacks. If banks increase the interest rate charged on loans, creditworthy borrowers will abstain from borrowing and will prefer to rely on self-finance (an adverse selection effect). As a result, the lenders will be left with the less creditworthy borrowers who in turn will take on riskier investments in order to cover the higher cost of borrowing (a moral hazard problem). On the other hand, if the banks decide to ration credit and start to demand collateral as security, many of the more creditworthy borrowers with inadequate collaterals but having viable projects will be deprived of access to loans (Stiglitz and Weiss, 1981). It is also contended that problems of moral hazard can be reduced by the taking of collateral by the banks, particularly personal collateral, as it can provide an incentive for the borrower to perform to the best of their ability in undertaking the project (Bester, 1987).

It has been suggested that a better way to reduce these risks (thus reducing transactions cost indirectly) is for the lenders to develop and acquire their own expertise and technology; a technology that can improve the lender's ability to identify credible borrowers as well as a technology that can reduce informational asymmetries. Otherwise, another logical solution would be to rely on secondary information from other institutions; formal (e.g. credit rating agencies) and informal (e.g. personal introduction). The credit information package that is relevant to local environment such

as the Business Credit Information Package⁴ (BCIP) should be developed. This information package should provide the standard financial information needed for meaningful evaluation by bankers; and for business owners, it should satisfy a banker's information need without having to incur significant costs.

Other suggestions include, improving the design and enforcement of loan contracts, introduction of personal guarantees, insurance on loans and also by enlarging the range of financial instruments (financial innovation and technology) and diversifying the loan portfolios (World Bank, 1989).

3.4 Lender's Risk, Borrower's Risk and Transactions Costs

3.4.1 Understanding their relationships

In any financial transactions, consideration is given to the extent lenders and borrowers are exposed to risk and uncertainties the extent of which this might affect the loan performance. Therefore, any costs incurred in the provision of credit, beginning from the application stage until full recovery of the loan, are considered as transactions costs. Since, high lender's and borrower's risk and high transactions costs can lead to high premiums or cost of finance, it is important to understand their relationship with each other (Bhatt, 1986).

⁴The BCIP was developed jointly by The Robert Morris Associates and the American Institute of CPAs in 1993. It is made-up of a 19-page workbook to be used by borrowers and their accountants to apply for bank credit.

a. Lender's risk

Lender's risks are risks faced by the lender associated with their lending transactions⁵. These relate to the likelihood that their money will be repaid by the borrower as agreed in the lending contract (if such contract exists) within the stipulated time-frame. The greater the likelihood of the money being recovered together with interest charges within the agreed time limit, the lower will be the risk faced by that particular lender. On the other hand, the reverse is true if the likelihood of recovering the money is low.

b. Borrower's risk

Borrower's risks are risks faced by the borrower in association with his/her ability to repay the debt obligation. Obviously, the borrower's ability to repay the loan depends on the success of his proposed investment financed by the loan. The risk will be high if the real outcome of the proposed project falls short of the forecast figures. The risk to the borrower also increases when the loan is secured against company or personal assets, as the inability to service the loan out of the revenue from the proposed projects will also put the tendered collateral at risk. Other incidents, such as illness, changes in political and economic factors which are beyond the control of the borrower can also increase the borrower's risks but many of these risks can be covered by general insurance.

⁵Lenders can be categorised as formal and informal sector lenders as shall be explained in Section 3.5. Formal sector lenders are mainly commercial banks and finance companies while informal lenders include money-lenders, itinerant bankers and others. Whenever, the word lenders is used, it usually refers to lenders in both sectors, unless otherwise specified.

c. Transactions costs

Transactions costs are costs associated with the lending process. Both lenders and borrowers have to incur these costs. For the lenders, costs associated with acquiring the relevant information about the borrower represents the core of their transactions costs. The more difficult it is to obtain the required information, the higher will be the transactions costs and vice-versa. In addition, lenders administrative costs which include the paper-work and loan contracts are also part of their transactions costs. Then, when it comes to monitoring, lenders again have to incur additional costs. Sometimes, the costs of monitoring outweigh the benefit so much so that some lenders sometimes avoid monitoring their loans (especially when the loan is secured or guaranteed). The cost of recovery, in case of default, is also part of the transactions cost that a lender should consider.

For the borrowers, their transactions costs include transportation costs, out of pocket expenses in searching for the loans, costs related to the supply of information and of course the opportunity cost associated with the application process. Higher transactions cost means higher cost of finance to the borrower. Transaction costs are not the only costs that a borrower has to bear. They also have to bear the cost associated to the viability of the investment, namely the risk-premium, the lender's risk, and the pure interest cost.

Similarly, for the lender to price-up the loan, so long as the interest charged on loans exceeds or covers their own cost of funds, plus the transactions costs plus the premium they charge to cover for the risk associated to moral hazard; they should be able to participate in the credit transactions.

The standard condition for which a credit transactions is likely to take place is given in Bhatt (1986, pp. 3-4). Suppose the borrower's subjective risk premium is r_1 , and the lender's risk is $r_1 + ar_1$, (a being less than one, as the lender is assumed to be more conservative in his expectations of the project being successful than the borrower), plus r_2 , the lender's subjective risk with regard to the borrower's willingness to repay - the moral hazard problem, then the total risk premium associated would be $r_1 + ar_1 + r_2$ or $r_1(a + 1) + r_2$. Both parties have to bear some kind of transactions cost, t_l (lender's transactions cost) and t_b (borrower's transactions cost).

It follows that, the borrower's expected rate of return or profit, p , must be greater than the pure interest cost, i , plus lender's transactions cost, t_l and their own transactions costs, t_b , plus the total risk premium $r_1(a + 1)$. In other words, for a credit transactions to take place, the following condition must be satisfied:

$$p \geq r_1(a + 1) + r_2 + (t_l + t_b) + i$$

where, p = the expected rate of return

$r_1(a + 1)$ = total subjective risk premium on the project

r_2 = risk associated to moral hazard

t_l = lender's transactions cost

t_b = borrower's transactions cost, and

i = pure interest cost.

The moral hazard risk, r_2 , with regard to the borrower's willingness to repay the loan, has significant effect in increasing the lender's risk. This type of risk has to be borne

solely by the lender. The borrower may default simply because his proposed business or investment does not prove fruitful, or he may be unlucky, or unwise in utilising the loan money. The borrower may be overcome by sickness or incapacitated due to accidents - all of which will increase the lender's risk. But, in the case of moral hazard, the borrower, wilfully defaults the loans even when the project is successful - he may simply refuse to repay although he is capable of paying. In this instance, the borrower is simply a dishonest person and for the lender to identify with this type of borrower is almost impossible. The borrower can also deviate from the loan contract with regards to the purpose of the loan and use it for something other than that stipulated in the contract - another example of moral hazard.

For both borrowers and lenders alike, their expected profit will increase if they are able to keep the cost associated with their respective total subjective risk (r_1 - for borrowers and the total of r for lenders- representing $r_1 + ar_1 + r_2$) and transactions costs at low levels. Much of the cost associated with the project risk relates to the viability of the project itself. If the proposed project can portray its viability in terms of positive cash flows after taking into consideration all the expected variables that might affect the projection of these cash flows, the cost associated with this risk can be minimised.

One way to reduce the subjective risk, is to increase transactions costs. For example, lender's subjective risk can be reduced by the lenders having a better and more accurate information about the credit worthiness of the borrowers (which will reduce r_2). This, however, would involve an increase in transactions costs either to the lender or borrower or even both. Therefore, some kind of innovation has to be made in order to reduce the lender's subjective risk to a much greater extent than they tend to increase

transactions costs of lending and borrowing. In other words, any effort to reduce the subjective risk should ensure that its risk reducing effect of the effort is much greater than its cost increasing effect. Bhatt (1986) has suggested the following ways to reduce the subjective risks without having much increase in the transactions costs:

- a) the use of personal guarantee, where loans were guaranteed by a third party, who is generally a person/firm with well known history and business reputation for financial integrity. The guarantor normally knows the character and nature of the prospective borrower.
- b) provide shorter-term credit that is renewable or can be rolled over, as long as repayments are made regularly. A person who borrows and pays regularly poses less risk than new borrower without previous history.
- c) provide loan size as a function of the value of assets owned by the borrower, thus forcing the borrower to use his own money to make-up the finance-gap. This will undoubtedly reduce the risk associated to moral hazard as well as the other subjective risk since his equity is at stake, thus, inducing him to manage his business as efficiently as he can.
- d) by specializing in certain class of transactions, lenders can acquire certain technology or expertise which can eventually reduce risk and transactions costs. For example, if informal lenders are much more efficient than commercial banks in providing credit to informal sector SMIs, it would be advisable for commercial banks to lend to these lenders rather than to lend directly to the primary borrowers.

Apart from reducing subjective risk without increasing so much on the transactions costs, financial innovations will also lead to a more efficient allocation and use of

investible resources. But, for these innovations to be successful, certain pre-conditions have to be fulfilled which include, among others, the existence of a trusting climate and confidence among the market participants as well as the existence of an effective enforceable legal framework. In addition, it has to be supported with monetary stability, without which the confidence of the market participants would be shaken. Finally, there should be no legal or customary obstacle to inhibit the experimentation and innovation of new financial instruments (Bhatt, 1986).

Much of the costs associated with the transactions costs to lenders, in particular, are the cost involved in obtaining and verifying information (often most of these information are incomplete or asymmetric in nature). For borrowers, these costs are often associated with the search and provision of the required information. This can be reduced if both parties can agree on which information about the project is shared between them. This allows both parties to evaluate the potential of the project before any loan decision is made. Of course, in this situation the borrower might risk 'losing' their investment idea to the other party, but if there can be a binding agreement between them not to leak the information, this approach will help reduce transactions costs. The present study seeks to investigate the extent of which project appraisal documents can be used by both parties in order to provide better and accurate information needed to reduce the overall transactions costs.

With a lending transaction, both the lenders and borrowers should regard the money (lent or borrowed) as an investment. The lender invests, lends money to the borrower, with the expectation of profit (interest payments), and the borrower invests the borrowed money in his proposed business, also with the expectation of profit (the

residual after payment of interest and operating expenses). Therefore, in order to safeguard their respective investments, there should be an incentive for both parties to make sure that the loan is used effectively. The borrower, on one hand, will work very hard to ensure the success of his proposed business, otherwise, he will have to face humiliation of bankruptcy and his creditworthiness may be severely affected. He may be denied of any credit in the future. Faced with all this possible degradation, it is only logical for the borrower to be concerned with the proposed project's viability and genuinely motivated to ensure the project generates enough return so that the loan can be repaid as well as the value of the firm will be increased.

On the other hand, the lender should also be concerned with the viability of the project, because it will give an indication on the borrower's ability to repay the loan. As such, they have to perform some kind of appraisals on their own concerning the viability of the proposed project and sometimes require the potential borrower to do the same. However, the decision to give the loan cannot be based solely on the prospect and predictions of future outcomes⁶ (some of the cashflow projections can be too optimistic, according to the lenders point of view). Other factors have to be considered such as the competence of the entrepreneur and his management team. Once the loan is disbursed, the lender has no power to interfere or take control of the borrower's management of the project, except, they can only monitor the progress by examining the 'sign' of the borrower's cashflows as well the regularity in loan repayments. Although, in some cases, lenders can involve in the ownership or part-ownership of businesses (such as in venture capital schemes), it is always not the best choice for commercial banks.

⁶This is captured in the factor ' α ' in the above equation.

Apart from their inability to control, lenders also cannot ensure that the money lent is invested prudently on the proposed project. In addition, they cannot ensure that the information given at the time of application by the borrower about himself, or the company or about the proposed project are totally true and complete. The uncertainty which surrounds the viability of the proposed project and the possibility of loan misuse as well as the quality of information supplied by the borrower often augment unnecessary risk to the lender. Of course, an ideal situation would be the intention of the lenders and borrowers both be made transparent, and so does the information exchange between the two parties. Unfortunately, this ideal situation can only exist in a hypothetical world.

For all these reasons, it is extremely important for the lender to assess these risks before making the lending decision because once made the process is reversible (although some kind of monitoring and enforcement is feasible at the later stage). The lender cannot simply recall its loan (although there can be such provision in the loan contract) without undue reasons or cancel its decision to disburse the approved loan. Since total elimination of risks is impossible, how can lenders at least minimise their lending risk?

3.4.2 How do the banks react to lending risks and transactions costs?

In Malaysia, the most popular traditional method of appraising a loan application, often adopted by credit officers in financial institutions and still practised today is the 5 C's (Haron, 1994). The 5 C's is basically a subjective assessment by the credit officers based on five basic factors - *character, capacity, capital, condition and collateral*. 'Character' involves attitude, level of knowledge in all aspects of business, and the way the borrower thinks. Domestic commercial banks in Malaysia are reported to regard

character as the most important factor in their credit appraisal (Haron, 1990). 'Capacity' relates to the ability of the borrower to repay the loan, his/her physiological status and age. 'Capital' means the owners own equity participation in the business. Banks would be reluctant to extend loans to highly geared companies (proportion of debt exceeds that of equity contribution). In some cases, lenders use the debt-equity criterion to determine the maximum loan amount that can be approved for a particular lender. Also, with own capital invested, the borrower will be expected to be more careful. 'Condition' deals with the environment in which the business operates which can affect the performance of the business, and finally, 'collateral' refers to the assets that the borrower offers the bank as a security in case of default.

The assessment based on 5 C's is often influenced by the attitude of the credit officer as well as the representation made by the borrower at the time of the interview. The interview is only a process to verify the information given in the application form as well as to evaluate mainly the character of the borrower. Based on the interview, together with the evaluation of the loan proposal, the credit officer then make his own proposal to the loan committee whether to approve the loan or not. At this point, the recommendations put forward by the credit officer is most important. That is why, many credit officers are often subjected to bribery and other unethical accusations by the public. Although the 5 C's judgement is now considered obsolete with the advancement of more sophisticated procedures, it is still used because of its simplicity for the smaller loan amounts.

Storey and Cressy (1996) suggest that commercial banks can deal with small business risk in the following ways:

- a) Banks can minimise default risk due to business failure by securing the loans against either the assets of the business or against the personal assets of the business owner (e.g. by securing the loan against personal and company's assets) or by risk transfer (e.g. having a third party to guarantee the loans).
- b) Banks should be able to identify *low risk businesses* by monitoring and assessing cases where loans are repaid and target their policy in favour of these groups. This strategy requires banks to build their own database on their own clients so that they can segregate the 'good' and the 'doubtful' borrowers.
- c) Banks should closely monitor the loan by requiring the borrower to submit periodically to the bank certain indicators of performance. From these performance reports, banks are able to evaluate whether their loan is at risk or not. Although the cost of monitoring can be expensive, it should be undertaken regardless of loan size.
- d) Banks can charge a risk-premium by adjusting the margin and other terms and conditions in the loan contract. Although, this strategy can be counter productive in the sense that under conditions of asymmetric information, raising interest rates would only deter low risk and low return borrowers but not the high risk and high return borrowers (Stiglitz and Weiss, 1981). Therefore, banks should be careful in pursuing this particular option.

Storey and Cressy (1996) suggest that the terms and conditions in a loan contract be amended provided that the borrower met certain pre-requisites. They

cited an example where several banks involved in an experiment undertaken with Norwich City College, where the owners of small firms who complete a relevant course (e.g. financial management course) at the College are eligible for a reduction in interest charged on their loans.

- e) Banks should establish longer-term relationship with a portfolio of small business owners whom they feel are creditworthy and carry low risk. Although, this strategy can create a bilateral monopoly situation (Sharpe, 1990), it allows banks to provide tailor-made products for their clients. This type of the so called 'relationship banking' provides the banks with quality, up-to-date and relevant information about the status of the borrower. This information is very valuable to the banks as it can be used to overcome information asymmetries in their future lending decisions.

With all the above propositions, one question still remains, can banks allow small businesses ready access to credit without requiring them to put up some kind of collateral? The answer relies on the willingness of the lenders to accept other types of 'surety' rather than pure physical 'security'. This means that if the borrower manages to convince the lender that his/her business proposal is worth financing, then the formal sector lender should not need their loan to be secured. In other words, formal sector lenders should put priority into the 'viability' of a project rather than on the security the borrower can offer.

The viability of a project can be assessed using various kinds of techniques, ranging from the simple *payback method* to the more complicated and sophisticated techniques

such as *mathematical programming*. The question is not so much on the sophistication of methods used, rather, how well the methods can provide the lender with useful information for them to justify their credit decisions. Therefore, in this study, an attempt will be made to investigate whether the application of project appraisal methods and procedures can be adopted by the SMIs in order to provide the formal sector lender with a more accurate and reliable information so that the lender's risks can be effectively reduced. Undertaking a comprehensive appraisal might not be feasible for the SMIs as it is costly, but a simpler version of the appraisal can be undertaken without losing the essence of the appraisal itself. It is believed, that the performance of project appraisal by the SMIs could serve as an alternative to their collateral deficiencies, and may be able to reduce the lender's risk to a much greater extent than it tends to increase the transactions costs of lending and borrowing.

3.5 Financial Dualism and Provision of SMI Finance

As has already been pointed out before (*please refer to Section 3.3.2*), one of the most important characteristic of the developing countries is the existence of a dual economic system within the SMI and the financial sector; i.e. the existence of the formal and informal providers and users of fund (Figure 3.1). This section reviews the importance of both the formal and informal sector finance with regards to the provision of finance to the small and medium-sized industries in the developing countries.

With regard to the causes of financial dualism, there are basically two main views. The first view sees the emergence of informal financial sector as a response to the shortcomings of the formal financial sector. These shortcomings are seen as the side-effects of 'financial intervention' that is, the close regulation of the financial system and

Figure 3.1

Some Examples of the Formal/Informal Providers and Users of Fund

Supplier/user of funds	Formal Institutions	Informal Institutions
Suppliers of Fund	<u>Group 1:</u> <ul style="list-style-type: none"> • Commercial banks • Finance companies • Merchant banks 	<u>Group 1:</u> <ul style="list-style-type: none"> • Moneylenders • Pawnbrokers • Itinerant bankers • Landlords • Indigenous bankers • Merchant/traders • Business angels • Friends, Relatives, Neighbours
	<u>Group 2:</u> <ul style="list-style-type: none"> • Development financial institutions (DFIs) • Specialised government agencies 	<u>Group 2:</u> <ul style="list-style-type: none"> • Roscas • Informal credit unions • Informal savings and loan associations
	<u>Group 3:</u> <ul style="list-style-type: none"> • Factoring and Leasing companies • Venture capital companies 	<u>Group 3:</u> <ul style="list-style-type: none"> • Finance companies • Hire-purchase companies • Chit-fund companies
Users of Fund	<u>Group 1:</u> Formal and informal sector SMIs in <ul style="list-style-type: none"> • Agriculture • Mining • Manufacturing • Construction • General commerce • Transport, storage and communications • Finance, insurance and business services • Property including real estate and housing • Other sectors 	
	<u>Group 2:</u> Households, generally for personal consumption	

the various restrictions that the government imposes on the activity of financial institutions such as interest rate controls, exchange rate controls, reserve requirements, regulation of competition, and so on. According to this view, strict credit controls lead to credit rationing by formal institutions which translates into reduced access to funds for a large section of the population that cannot fulfil the stringent eligibility criteria.

The proponents of this view which include Ronald McKinnon and Edward Shaw and others, contend that 'financial liberalisation' or deregulation of the financial system will increase their efficiency in credit allocation function. The emergence of the informal markets is seen as direct response to the needs of borrowers who are unable to borrow from the formal sectors.

The second view argues that the existence of financial dualism can be better explained by understanding the intrinsic dualism of economic and social structures of the developing countries and its population's attachment to traditional values and customs rather than blaming the inefficiency of the formal sector institutions. Those who subscribe to this view favour a more regulated financial system and argue that even in a liberalised financial system, the informal financial sector still continues to exist.

However, a more recent view is to combine the above two views regarding the causes of financial dualism. According to this view, a liberalised financial market does not always lead to a perfect financial market simply because 'free financial markets' cannot function in an optimal way due to asymmetry of information that exists in the financial contracts. Under these circumstances, one could expect credit rationing and other forms of capital rationing to be pervasive if markets were deregulated completely (Stiglitz and Weiss, 1981). According to Kitchen (1989, p. 289), the availability of credit for small businesses is far from assured, even within a perfect capital market. This is due to the level of risk perceived by the putative lender may be so high that the compensating return may also be too high for the project to bear comfortably, which will only increase the risk of failure even further. Theoretically speaking, an increase in the interest rate will increase the expected net present value of the loan up to an optimum point; beyond

that point the expected net present value would fall. If the expected net present value at the optimum point is too low, the bank will not lend.

At this juncture, it is important to bring out the point that the alleged lack of availability of credit flowing from the formal financial sector to certain segments of the population (e.g. SMIs) does not necessarily reflect the 'failure' of these institutions in performing their credit allocation function. A segment of the population may simply prefer to obtain informal credit because of its flexibility and speed of delivery, or perhaps they already have access to formal sources but seek to supplement bank loans with informal fund, or they might think that by participating in neighbourhood associations, they can be better integrated with the community. In these instances, the use of informal sector credits does not indicate that they 'lack access' to formal sector credit, rather, the formal sector institutions are simply not their choice. In other words, according to Germidis (1990, p.8), *financial dualism can be ascribed just as much to financial repression as to the population's attachment to traditional modes of behaviour*. This view proposed that some form of financial innovations is necessary in order to minimise the problems of information and incentives that affect the operations of the financial markets. This view does not favour 'total deregulation' nor 'total control' of the financial institutions, rather it suggests, intervention should aim at improving the way institutions function and it should try to improve the relevant system of incentives. This intermediate view which has given rise to a broader conceptual framework in the microeconomic theory of organisation, finance and markets known as 'new theoretical institutionalism' (Krahn and Schmidt, 1994).

3.5.1 Formal sector finance/institutions

Formal sector providers of finance include those institutions that are formed legally, either by act of Parliament or by specific act of legislation, charters or registered with the specific authorities. They are officially monitored and regulated by the authorities, normally the central bank. Plus, they are characterised by their large scale of operations, offer a wide array of financial services and cover vast geographical areas (regional, national and international markets) and are often located in the business and industrial districts.

3.5.1.1 Types of formal sector institutions

Basically, the formal sector financial institutions can be grouped into three distinctive categories as follows:

- a. the banking institutions,
- b. the non-bank financial intermediaries, which normally include provident, pension and insurance funds, development financial institutions and savings institutions.
- c. other financial intermediaries, which include leasing, factoring and registered venture capital companies.

The banking institutions

The banking institutions normally comprise of the commercial banks, finance companies, merchant banks and discount houses. These institutions represent the core of the financial system and are normally supervised and regulated by the central bank. It is not difficult to differentiate between the various types of institutions in the banking system. Their functions and services as well as the types of liabilities that they are legally allowed to mobilise and the types of assets they can hold are normally defined

by law, therefore their markets are highly segmented. Commercial banks normally offer a full range of standard banking services which include accepting deposits of various maturities, offer short and long-term financing, deals with foreign exchange and gold and provide investment advisory services. As for finance companies, beside their deposit-taking activities⁷, their main market is in the medium to long term credit market. A bulk of their business involve in offering credit facilities such as leasing finance and hire purchase. Merchant banks specialises in underwriting, loan syndication and portfolio management services. They can accept only term deposits from other financial intermediaries, corporations and foreign currency deposits from non-residents. Merchant banks are allowed to make direct loans but cannot accept deposits from individuals.

Within the banking institutions, commercial banks seemed to be the most prominent source of formal finance to the industrial sector. In Malaysia, for example, the commercial banks alone accounted for almost 87 percent of the total loans extended to the industrial sector (formal sector) in 1995 by the banking system, valued at RM42.3 billion while the finance companies and merchant banks accounted for 8 percent (RM4 billion) and 5 percent (RM2.2 billion) respectively (Bank Negara Malaysia Annual Report, 1995/6).

Non-bank financial intermediaries

Among all the institutions referred to as non-bank financial intermediaries, the only institution that has some relevance to the provision of finance is the development

⁷In Malaysia, finance companies are not permitted to accept deposits for less than three months in maturity and prohibited from accepting deposits which are payable on demand.

financial institutions (DFIs). They are specialised institutions set-up to cater for the financing needs of specific industries that are important to the nation development process. In Malaysia, for example, the Development Bank of Malaysia is supposed to direct most of its lending to the manufacturing sector while the Industrial Bank of Malaysia is responsible to provide financial assistance to the shipping industry. However, as a group, these DFIs have concentrated most of their lending in the manufacturing, real estate and construction sectors as well as financing transport and storage facilities. The difference between the DFIs and the other banking institutions is that they are not allowed to take deposit from the public and cannot offer full-range banking services. DFIs in Malaysia derived about seventy-five percent of their funds from government sources and international sources while shareholders' equity accounted for about twenty-five percent of their total resources in 1995 (Bank Negara Malaysia Annual Report, 1995). Majority of their loans are in the form of term loans and equity financing.

Other financial intermediaries

Other financial intermediaries that are relevant to the SMIs include the leasing, factoring and venture capital companies. Leasing companies involved in financing the lease of capital assets as well as financing assets purchase under hire-purchase. Through leasing, SMIs do not have to actually purchase the asset although this can be an option at the end of the leasing period. Furthermore, SMIs do not have to worry about the maintenance of the leased assets as this would normally be carried out by the leasing companies. This facility is very useful for SMIs involved in short term-contracts or to those involved in a rapidly changing technology.

Factoring companies, on the other hand, provide liquidity to SMIs by purchasing their receivable in advance of the maturity date. However, some factoring companies set a minimum value of receivable that can be factored and this value is often very high and beyond the SMIs' normal level of receivable. Despite losing the face-value, due to discounting, SMIs still use the service, especially in times of tight cashflows.

Venture capital companies (VCCs) have gained their importance in providing risk capital to the potential and high growth SMIs. In the scheme, the VCCs allocate their share of equity in the investee companies and therefore become active partners in the firms' decision making. However, VCCs do not intend to stay long with a particular investee and are not as much interested in the companies' long-term profit. Rather, they will soon leave the company by liquidating their shareholdings by selling it in the open market or to the investee itself. They normally do so when the growth in the investee company is high enough to generate high value to their shares, and by liquidating it, they earned a lot in terms of capital gain. Participation by VCCs is often restricted by the investee themselves since they fear that they might lose control of the company to the venture capitalists. In some cases these venture capitalists had transformed into 'vulture capitalists'. Nevertheless, with the existence of VCCs, new SMIs with great potential for growth can have access to risk capital, of which seldom can be made available by the conventional banking system.

Specialised government agencies

The two most commonly noted agencies involved with providing financial assistance to SMIs in Malaysia are MARA (The Council of Trust for the Indigenous People) and KBS (Kementerian Belia dan Sukan or Ministry of Youth and Sports). MARA's main

source of fund is the government as well as profits generated by its own subsidiaries. In 1986, more than ninety-four percent of MARA's loans were those not exceeding RM10,000 (about 2,000 pounds sterling) and nearly sixty percent of its loans were given without any collateral (Onn, 1995). MARA loans are exclusively for the bumiputera communities. The actual value of MARA's outstanding loans to date is not readily available, however, at the end of 1992, (the latest figure available) MARA had granted loans to 102,968 small businesses with a total value of RM586 million (Haron, 1994).

The Ministry of Youth and Sports provide financial assistance to youth club members between the ages of 18 and 35 who want to start their own business. The maximum amount of loan that one can apply for is RM30,000 with a repayment period of 10 years at 4 percent interest rate. Most of these loans applications are vetted by senior officers in the Ministry and most of the loans are unsecured, but has to be guaranteed by two credible guarantors.

Both MARA and the Ministry of Youth and Sports have SMI divisions in their respective organisation for the processing of loan applications and supervision of loan usage and repayment service. While MARA's loans are mainly to finance working capital requirements, KBS's loans are mainly for start-ups (Onn, 1995).

3.5.1.2 Types of formal sector loans and advances

Loans and advances extended by the formal sector can broadly be classified into overdraft, term loan, trade bill, revolving credit, hire-purchase, leasing, factoring and equity financing.

(i) Overdrafts

An overdraft is an advance or facility granted under a current account whereby the customer is authorised to draw on the account up to an approved limit. It can be granted either on a clean basis, that is, unsecured or secured by fixed deposits, shares, property, deed of assignment and loan agreement, letter of guarantee or any other security acceptable to the bank.

(ii) Term loans

A term loan is an advance that is granted for a fixed term and is normally used to finance one-off transactions and for productive investments, such the purchase of capital goods, fixed assets and machinery. Term loans are normally secured against collateral while there are other which are non-secured depending on the bank.

(iii) Trade bills

Trade bills are normally used to finance short-term trade transactions. In Malaysia, the most common type of trade bills are trust receipts, bankers acceptances and export credit refinancing facilities. Trust receipt is a method of financing imports while banker's acceptance is basically a negotiable bill of exchange drawn on a bank to finance and underlying trade transactions. Export credit refinancing is a special facility to finance export. It offers two types of credits; one for the refinancing of post-shipment for exporters to obtain immediate funds upon the shipment of eligible goods sold on credit and the other the refinancing of pre-shipment.

(iv) Revolving credits

A revolving credit is a formal commitment by a bank to lend up to a certain amount of money to a company over a specified period of time. Most of the revolving credit arrangements last for more than a year and the interest rate is usually higher than the rate at which the firm can borrow on a short-term basis under a line of credit.

(v) Hire-purchase

Hire-purchase is a medium-term finance extended to companies for the acquisition of capital goods by means of instalment of payments. This type of finance is normally provided by finance companies for the purchase of capital assets such as machinery and equipment. The financier retains the ownership of the assets until the final instalment is paid. This type of financing allows SMIs to utilise the assets and at the same time pay for the use of such assets, thus preserving the liquidity of the SMIs.

(vi) Leasing

Leasing is a type of financing often extended by leasing companies where a lease contract is drawn between the owner of the asset (the lessor) and another party (the lessee), granting the lessee the exclusive right to use the assets for an agreed period of time and in return the lessee pays rent or lease for the duration of the lease period. This type of financing is particularly useful for SMIs who do not have the resources to buy the asset. The extent of burden and risk of ownership such as repairs and maintenance depend on the lease agreement, but the lessor usually assumes the risk of obsolescence.

(vii) Factoring

Factoring is a relatively new form of financing, whereby companies can sell off their invoices or receivable to the factoring companies known as the 'factor', either with or without recourse. The factor then advance up to ninety percent of the gross value of invoices to the company, while the company has to inform their debtors so that payments can be made directly to the factor. This form of financing is very attractive since the risk of bad debts can be transferred to a third party, especially when the factoring arrangement is without recourse.

(viii) Equity financing

Equity financing is only common to the development financial institutions as well as to the private venture capital companies. In this form of financing, equity is shared and the provider of equity is technically a shareholder in the company, although they may decide to be 'silent' partners. But in most cases, equity providers are normally active in the management of the companies they have invested in.

3.5.2 Informal sector finance/institutions

There is no clear-cut definition on informal sector finance because of its fragmentation, heterogeneity and complexity. However, it can be categorised as provision of finance by informal intermediaries and these intermediaries can be in the form of individuals, group of individuals, firms, associations and organisations. In terms of operation, it is highly localised and does not follow any formal or uniform procedures as it depends entirely on the intermediaries themselves. Most of their transactions are beyond government control and are not recorded in official statistics (Bouman, 1989).

The informal sector finance is also known as the unregulated, unorganised, parallel or indigenous financial market (Bouman, 1989), non-monetised sector (Ghosh, 1986), informal financial market (Bolnick, 1992), informal credit market (Acharya and Madhur, 1984), shadow economy (Evers, 1991) and non-institutional financial sector (Chandavarkar, 1985). Quite recently, there is a renewed awareness on the contribution and the role played by the informal institutions, especially in the provision of finance to the small and medium-sized businesses (Islam, Von Pischke and Waard, 1994;

McLeod, 1980), so much so that they have been recognised with the same degree of importance as their formal counterparts⁸ (World Bank, 1989).

In the context of the present study, the issue is to determine whether the small and medium-sized manufacturing companies (SMMCs) in Malaysia utilise informal sources of finance, and if they do, for what reasons. This is important in order to determine whether the alleged lack of access to formal finance by SMIs in Malaysia is caused by the failure of these financial institutions to allocate credit efficiently.

3.5.2.1 Types of informal sector finance/institutions

Informal institutions can be artificially categorised into three groups; moneylending, such as professional moneylenders, friends and relatives; mutual groups or associations, such as mutual savings and loans and rotating savings and credit associations (ROSCAs), and private financing firms, such as credit and hire-purchase companies (Figure 3.1).

A more comprehensive classification is given by Germidis (1990). He categorised the informal financial operators according to their savings and credit arrangements: individual moneylenders, groups of individuals organised mutually (associations) and partnership firms⁹ (Figure 3.2). The first category includes those who lend money as the professional money lender, pawnshops, merchant and petty traders, landlords, shopkeepers, itinerant bankers, friends, relatives and neighbours. Their credit

⁸However, there are some scepticism about the significance of its contribution (Cole and Park, 1983) as well as the limit of their intermediation power (Christensen, 1993).

⁹The table was adapted by Germidis (1990) from the earlier categorisation by Holst (1985).

arrangements can either be non-commercial, i.e. interest-free or commercial. In commercial arrangements, credit transactions may be money-based (professional lenders), land-based (farmer-landlords) or commodity-based (trader-supplier).

Figure 3.2

Informal Savings and Credit Arrangements

Types of Operators	Types of Links	Lenders	Borrowers
INDIVIDUAL MONEYLENDERS	Non-commercial arrangements	-friends -neighbours -relatives	-small farmers -small businesses -households
	Commercial credit arrangements <i>a. money-based</i>	-professional moneylenders -mobile bankers -private individuals from upper-income groups	-small farmers -small businesses -households
	<i>b. land-based</i>	-landlords -farmer moneylenders	-tenants -small farmers
	<i>c. commodity-based</i>	-trader-moneylenders -agricultural input dealers -equipment suppliers -processors (rice millers) -produce traders -itinerant traders -market vendors -storeowners	-small farmers -small businesses -households
ASSOCIATIONS	Savings arrangements	-fixed-fund associations -mutual-aid associations -savings clubs	-small farmers -small businesses -households
	Combined savings and credit arrangements	-informal credit unions -informal savings and loans associations -ROSCAs (and variants)	-small farmers -small businesses -households
PARTNERSHIP FIRMS	Financial intermediation	-indigenous bankers -pawnbrokers -finance companies -investment companies -leasing companies -hire-purchase companies	-small businesses -households

Source: Germidis (1990), p. 11.

In the second category, it includes informal associations or other self-help groups such as guilds and other professionals, informal savings and loans associations, informal credit unions and rotating and non-rotating savings and credit associations (ROSCAS). The two main types of informal associations are (i) savings arrangements only (e.g. fixed-fund associations, savings clubs), and (ii) combined savings and credit arrangements where regular participation in the savings accumulation process entitles a member to credit facilities, with or without interest (e.g. mutual aid associations and ROSCAs).

The third category includes firms that carry out similar activities as the other non-bank financial intermediaries such as investment companies, chit-fund companies and hire-purchase companies. The reason for their categorisation in the formal sector is due to their exemption, to a greater or lesser degree, from central bank controls (Germidis, 1990).

3.5.2.2 Examples of informal sector finance in developing countries

There are various types of informal finance which are quite common in terms of its operation in some developing countries but are called by different labels (Chandavarkar, 1985). According to the World Bank (1989), rotating savings and credit associations (ROSCAs) are the most popular form of informal finance in many countries but bearing different labels: *tanda* in Mexico, *pasanaku* in Bolivia, *san* in the Dominican Republic, *syndicate* in Belize, *gamaiyah* in Egypt, *isusu* in Nigeria, *susu* in Ghana, *tontine* in Niger, *hagbad* in Somalia, *xitique* in Mozambique, *arisan* in Indonesia, *paluwagan* in the Philippines, *chit-fund* in India and Sri Lanka, *pia huey* in Thailand, *hui* in China, *kye* in Korea, *ko* in Japan. In Malaysia, the most common of the

ROSCAs is known as *kutu* - originated from a Tamil term, "*kuthu*". There are three types of ROSCAs as found in many countries. The most common ROSCAs is that, the leader or the organiser has no special privileges except voted to get the first fund. In commission ROSCAs, leaders are paid and therefore they have to assume liability for defaults. Finally, promotional ROSCAs are used by merchants to sell goods, especially consumer durables. The activities of ROSCAs are said to be evolving, transforming itself from an informal association to a more formal entity as the financial system of the country becomes more organised (Ardener and Burman, 1995).

In the semi-rural area of Bay Laguna in the island of Luzon of the *Philippines*, there are at least five different types of informal finance utilised by local households and businessmen (Adams and Sandoval, 1992). One of the most popular form of informal finance is *Jueteng* or lottery. Although strictly speaking, it is not a form of financial intermediation, the lottery is perceived as a form of saving that occasionally pays off.

Another form of informal finance is *Sanlaan* or pawning. This form of financing is quite common in other developing countries too where item of value is pawned to a pawnbroker and in return for a loan. If the loanee fails to pay back within the specified time, he or she will lose the collateral pawned to the pawnbroker and the pawnbroker can sell the item in order to recover his loan. In most cases, the informal pawnbrokers also go from door-to-door to seek for clients and also to sell off items that are not redeemed.

Paluwagan or rotating savings and credit associations (ROSCAs) is another form of informal finance but its popularity has been diminishing due to the lack of steady flows

of member's income. Most businessmen use ROSCAs as forced-savings so that the money saved can be used to purchase fixed investments or just as an additional source of income. *Pahulugan* or instalment buying is another form of informal finance popular among households and businessmen. This system enables them to stretch their purchasing power as they can buy now and pay later in instalments (daily, weekly or bimonthly). In this case, the providers of merchandise (informal financiers) offer door-step services and no questions are asked about the buyers' occupation or income.

Other forms of informal finance involve credit arrangements where local farmers, landlords and traders take loans from the informal financiers and pay back during the harvest time. In other cases, livestock were given to someone else to raise with the understanding that when the livestock reach maturity and can be sold, the sale value will be shared between the lender and raiser.

In *Malawi*, moneylending is by far the most important form of informal finance. It is known as *katapila* loan. Traditionally, the term referred to loans co-signed by a third party, the *mboni* (witness). The interest charged, which is subject to negotiation can be as high as 100 percent over the life of the loan (Chimango, 1977 in Bolnick, 1992). Debt relationship between individuals and groups such as the *kalata* (a form of promissory note as bridewealth payments to newlywed couples) and *ngongole* (cash debts - often to finance trips to jobs in the city or neighbouring territories) have been part of the Malawian tradition and any disputes regarding the claims can be tried in

traditional courts. Because of financial constraints¹⁰, many Malawian businessmen have to rely on self finance and any other form of informal financing. In a sample survey of more than 1,300 non-agricultural SMEs, it was found that self-finance was the predominant source funds for both start-ups and expansions. Eighty-five percent of the respondents started out with no external finance, including even relatives and friends (READI, 1987 in Bolnick, 1992). Bolnick (1992) also reported another study by Chipeta and Mkandawire in 1989, where it was recorded that a large volume of informal finance was provided by employers, landlords, friends and relatives and these loans were given at zero or near-zero interest rates. Survey responses also indicate that informal loans are often used to finance business spending, including farm fertiliser purchases.

ROSCAs are not yet popular in Malawi and its status is also mixed. However, Chipeta and Mkandawire (1989) survey found an increasing number of SCAs (savings and credit associations) in Malawi and some of them have been able to generate income through lending to non-members by duplicating the *katapila*-like terms. Although, informal finance is widespread in Malawi, Bolnick (1992) felt that effective informal financial services have not yet been readily available for SMIs as many informal intermediaries such as market banks, deposit collectors and pawnshops have not yet come into existence.

¹⁰A survey by Wood and Robinson (1963) revealed that only 5% of the African business can buy on credit; all others have to pay up in cash. Yet, most businessmen often extended credit to final consumers at zero interest rate.

In *Niger*, informal credit accounts for 84% of total loans and was equal to 17 percent of agricultural income (World Bank, 1989). Among the major forms of informal finance are the *tontines*, *money guards* and *merchant finance*. The *tontines* operate in a similar way as in any other ROSCAs but *merchant finance* are used to secure formal financing. Large wholesalers borrow from formal banks, purchase a range of consumer goods, and then consign these goods through a network of small village retailers. These retailers, in turn, may sell the products to their customers on credit. Money guard is often provided by traders who offers deposit and pawnbroking services, and market goods in other regions. Money guards neither pay interest on the deposits nor charge fees for safekeeping but they can use the money to provide loans.

In *Zambia*, the informal financial sector is classified according to the ownership and control of informal financial activities (Mrak, 1989). These activities could be either proprietary (non-commercial arrangements among individuals and commercial credit arrangements) or mutual (savings and credit arrangements). Listed below, are some of the different types of informal finance arrangements in Zambia:

a. *Self-help Work Organisation*

There are three types of self-help work organisation. The first being the oldest, still being practised by the Bemba tribe in the Northern Province. It is known as *icima* (rotating work association) where everybody participates in the work for each member of the tribe without expecting to be paid (except, hoping that others will in turn help them to do their work when the time comes).

The other type is known as *ukutumya* (hired work association). In this type of arrangement, remuneration for labour is paid in kind, for example by maize or beer parties¹¹. Finally, the non-reciprocal work association, where work is done collectively for the village chief (*umulasa*) or for community development (*ukuyafwilisha*) and no payments for labour should be expected.

b. *Non-Commercial Arrangements among Relatives, Neighbours and Friends*

This kind of credit arrangement involves money but is payable with zero interest rate. In other words, it is a free credit. According to a study by the World Bank on agricultural credit in Zambia, it was found that non-commercial credits from friends, relatives and parents accounted for 99% of the total agricultural credit in the period of 1967-1971 (Kessler and Ullmo, 1985 in Mrak, 1989). However, Mrak (1989) believes that the percentage was probably lower due to the availability of finance from moneylenders, traders etc.

c. *Savings Associations*

In this scheme, members contribute periodically (monthly or weekly) to a treasurer who keeps the money at his home or in the banks. The amount of contributions is agreed upon among members and the fund collected is used to finance members' needs in case of emergencies only.

¹¹One reason for the widespread and traditional acceptance of beer parties being the payment for labour and communal work is because, it strengthens the friendship, social kinship and linkages within the community.

d. *Rotating Savings and Credit Associations*

In Zambia, ROSCAs are known as *chilimba* or *icilimba*. It operates on the same basic principles as any other ROSCAs but in Zambia the scheme is very popular not only in the rural but also in urban areas. The scheme is believed to be so widespread because of the two main factors; high responsiveness¹² of *chilimbas* to their members' economic and social requirements, and high economic efficiency¹³.

e. *Moneylenders and Traders*

As in Malawi, moneylending in Zambia is one of the most important form of informal finance. Known locally as *kaloba* and *lundapo*, money lending activities exist in both rural and urban areas. However, there is one significant difference between the money-lending in urban and rural areas. In rural areas, the money borrowed from money lenders are used for consumption and productive purposes whereas in urban areas, money lending is exclusively for consumption purposes.

Another significant form of money lending intermediaries are the traders whose main activity is trading but they also provide credits for different purposes such as establishing or enlarging business activities, to smoothing out cash flow problems and so forth.

¹²Due to number of participants, short duration of the credit and savings, manageable amounts of contributions, interest free, complete freedom of joining, easy rules and procedures etc.

¹³Due to low transaction costs since no expenses incurred for office space and personnel, no need to investigate creditworthiness of participants, high repayment rates etc.

Mrak (1989) has also outlined a few reasons as to why money lending activities are very much popular despite the high interest rate charged. Firstly, money lenders are highly accessible at local level and they are very responsive to borrowers' needs. The loan application is simple, normally without any forms to be filled in and more often than not, no collaterals are demanded as security for the loan. Secondly, short repayment periods, allow the borrowers to use the money borrowed to bridge financing needs such as paying for an immediate consumption need or to buy some fast selling goods. Thirdly, moneylending activities involve low transactions costs and has very high recovery rates. Low transactions costs are due to low overhead and operation costs. Borrowers are well known to the lenders, therefore there are no needs for assessing creditworthiness and there are also no need for appraising the purpose of the loan (as formal creditors always do). High recovery rates are due to mutual trust and interdependence (social and cultural ties), the revolving nature of the scheme (one can borrow again immediately after repaying the original loan), and increasing creditworthiness which allow the borrowers to increase the amount of loan. Finally, despite very high interest rates, normally in the range from 50% to 100% (per month in some cases) people still borrow from moneylenders simply because they have no access to the formal institutional sources. High interest rate charged by moneylenders are often monopolistic in nature since borrowers are left with only two alternatives; pay high prices for credit or not to get any credit at all. Another reason for the high interest rate is the limited availability of credit. Since demand constantly exceeds supply, interest rate can be charged at will.

In a study of rural financial markets in *Nepal*, Yadav, Otsuka and David (1992) found that informal lenders (relatives & friends and moneylenders) tend to provide more

consumption loans without explicit collateral while the formal lenders (agricultural development bank, agricultural co-operatives and commercial banks) tend to provide productive loans against definite collateral requirements. It was also noted that those who have access to the formal credits are the large farmers and those who live in the nearby towns are linked by well maintained highways. It is also interesting to note that the big farmers choose to borrow less from the formal source relative to their cultivated area because of the lower production efficiency on larger farms¹⁴. Interlinked credits normally provided by traders and landlords are less important in Nepal because the formal institutions have done quite a good job in providing credits in *kinds* such as fertilisers and tractors. In the study, it was revealed that cost of loans from relatives and friends are almost the same as from the formal sector (formal sector: 17%; relatives and friends: 18%; moneylenders: 37%) while in many other countries, this type of loan is normally considered as non-commercial bearing near zero interest. The formal sources require physical collateral such as land and jewellery whereas the informal financiers most of the time do not require collateral other than promissory notes.

This study also confirmed that regulated interest rates and the problems of adverse selection and moral hazard which arises from the asymmetric information have led to credit rationing by the formal sectors who favours borrowers with collaterals. In addition, the formal sector lenders only concentrate in the provision of loans for productive purposes. Since regulated interest rates favour the collateral-rich, inefficient farms, it was suggested that interest rate should be raised (particularly to large farmers)

¹⁴Another reason is that public sector credit programs were designed at least theoretically to serve the small and poor farmers.

so that greater production efficiency and a more equitable distribution of income in rural societies can be achieved (Yadav, Otsuka and David, 1992).

In a study of *Colombian* microenterprises¹⁵ by Konig and Koch (1990), it was found that microenterprise credits by formal banks still suffer a substantially larger default rate than those provided by informal moneylenders. About 40 percent of the respondents have borrowed from informal moneylenders and state that the average interest rate can be as high as 100 percent or more per annum. It was also found that percentage share of informal credits is higher in the urban areas as compared to that in the rural areas implying poor financial structure (formal and informal) in the rural areas of the country. Furthermore, Konig and Koch (1990) have suggested the following nine measures which will improve banks' profitability on small scale loans while at the same time improving microenterprises' creditworthiness and increasing their share of credit in the country's markets:

1. Separate conditions for small scale retailers as opposed to larger businesses.
2. Restrictive financing of new enterprises.
3. Extension of evaluation criteria.
4. Stepwise increase of loan volume.
5. Formation of mutual guarantee associations.
6. Additional group-based saving.
7. Modified repayment enforcement.
8. Technical and organising assistance.
9. Formation of guarantee funds.

In *Indonesia*, it is typical for business owners to borrow or lend money to circles of family members, friends and fellow businessman (McLeod, 1991). In this case, source of funds comes from individuals who have idle funds and not from a "set-up fund" as in

¹⁵According to DANE's (Departamento Nacional de Planeacion - Department of National Planning) (1988) definition, microenterprise includes units with less than 10 employees, monthly sales up to Pesos 1.5 million and total assets not exceeding Pesos 6 million.

ROSCAs. Most of the times, these transactions are free from “money-cost” but it is often an implied obligation on part of the borrower to provide similar assistance in the future to the same lender or another member of the group. Moneylenders are still an important source of finance to businessmen in Indonesia. It was estimated that about one-third of all the traders in Yogyakarta borrowed from moneylenders to finance their stocks (McLeod, 1991). The nature of financing from moneylenders is normally a revolving short-term credit with interest cost of about 7.5 per cent per month. Although, it may seem that the rate of interest is very high, but to the borrowers, interest cost is considered as appropriate given the personalised and non-bureaucratic service provided by the moneylender.

In a more recent study¹⁶ by Evers and Mehmet (1994), it was revealed that 44.4 percent of their respondents had borrowed money for business purposes, but mainly from informal sources such as friends (21%), family (4.8%) and money lenders (21.1%). Lack of access to credit has led SMEs and the informal trade-sector to borrow money from the informal sources (Evers and Mehmet, 1994; Schrader, 1992). Another important form of informal financing is provided by private firms in the form of supplier credit for capital items and trade credits (McLeod, 1991). In the case of capital items, the borrowers pay-up the loans in instalments for an amount and period as agreed between them and the supplier of capital items.

These suppliers provide credit in order to boost their own sales. The interest charges are normally implicit; built into the purchase price and agreed payment schedule. In the case of trade credits, SMEs can purchase stocks or inputs on credit from their suppliers

and then pay-up when the time comes. The credit terms vary from case to case. The terms are designed in a way to give some time for the SMEs to make a quick turnover and roll their working capital more efficiently.

In *India*, private financing firms¹⁷ have gained relative importance for providing financial assistance to the SMIs. A study¹⁸ by Prakash (1984) revealed that most of these firms are in the form of partnership and mainly engaged in two types of money business; money borrowing and money lending. Majority of these firms have only two full-time staffs; one manager and one bill collector. They attempt to keep the overhead cost very low. These firms are able to attract large amounts of deposits because of two reasons: Firstly, the firms offer a much higher rate of interest to depositors than that by the commercial banks and also the interests are paid monthly and money can be withdrawn at a very short notice. The second reason is that, depositors get legally valid documents, such as promissory notes. They also receive a guarantee from the firms about getting their money back, if the firms face any crisis.

In terms of their lending operations, majority of the clients of these firms are business people, mainly traders who require short-term loans generally for 90 to 100 days. The interest charged is between the range 29.5 to 42 per cent throughout the life of the loan although the maximum limit allowable under the Moneylenders' Act is only 12 percent. In this study, it was also found that no industrialist has availed of the credit facility from these firms. The reason for this could be either the amount needed exceed the capacity

¹⁶This study was done to measure the impact of informal trade sector in Indonesia.

¹⁷These firms provide parallel banking services but on a limited scale.

¹⁸The study was based on a survey of 24 private partnership firms in Trichur town in central Kerala.

of the firms or may be they were restrained by the high cost of financing. Yet, another reason could be, that they can obtain finance from the formal sources with relative ease.

In *Malaysia*, however, evidence on the activity of informal credit market is extremely limited. A survey in Peninsular Malaysia in 1986 found that 62 percent of all loans (mainly in agriculture) were from informal sources (Martien, 1986) and most of these credits were in the form of interlinked credit. With regard to interlinkages between credit and markets, it has been documented that rubber dealers in Malaysia lend money in order to secure favourable terms in product transactions i.e. they are able to buy output at predetermined but lower than market prices (Wharton, 1962). There is also evidence that shopkeepers, dealers and rice millers in Malaysia provide almost two thirds of the rural informal credit (Wells, 1980). Traditional moneylenders such as the chettiers were once a common provider of informal loans in the urban areas but their activities are severely restricted by the authorities, and majority of them have now diversified into other businesses such as money-changing. The activity of ROSCA is also quite common in the rural as well as in the urban areas, despite being outlawed by the government (Shanmugam, 1989).

In summary, the informal finance can be easily categorised into two categories: commercial and non-commercial credit arrangements. By commercial credit arrangements, we meant that money or other inputs that are lent or advanced to a particular borrower with a profit-motive i.e. in anticipation of extra-gain¹⁹ out of the lending operations. It does not matter whether the cost of borrowing is implicitly or

¹⁹Extra-gain as defined here may include monetary repayments such as interest payments, payment as token of appreciation, payment in kind and also the seizure of collaterals.

explicitly charged to the borrower. Occupational moneylenders, part-time moneylenders, traders, shopkeepers and landlords are among the types of informal financiers included in this category²⁰. It is also assumed that the amount of money borrowed in this category are normally larger than the amount borrowed under the non-commercial category.

In the non-commercial credit arrangements, the borrowers can borrow money at zero cost i.e. they do not have to pay any extra than what they have borrowed. The borrowing is normally based on certain criteria like availability to members only or to someone that is related to the lender's family, workplace, business locations, race, ethnic origin or some other social bondage. Furthermore, the lending operation is totally based on mutual trust, confidence and understanding. Among the informal financing agents belong to this category are the ROSCAs, self-help organisations, family, friends, relatives and neighbours.

3.5.3 Financial dualism and the efficacy provision of finance.

Findings from the present study (as will be explained in Chapters 7 and 8) show that SMIs could have access (although not an easy one) either to the formal financing provided by the formal financial intermediaries or to the informal finance provided by the informal intermediaries, depending on evaluation and assessment of the respective lenders. Generally speaking, formal sector SMIs should have better access to the formal lending institutions than to their informal counterparts; and informal sector SMIs have

²⁰Schrader (1992) distinguished the occupational moneylenders from the part-time moneylenders based on his hypothesis that occupational moneylenders during the colonial period are a structural phenomenon of extending capitalism its function and activities have been curtailed deliberately with the introduction of market economy after independence while the part-time moneylenders are a structural phenomena of the contemporary market economy (p. 79).

better access to informal than to formal sector lenders. There are cases where formal sector SMIs are denied access to formal credit, and are forced to turn to the informal lenders for financial assistance despite having to pay much higher cost for funds. Access to formal and informal financing is very much dependent upon the degree of risks faced by the lenders and borrowers as well as the transactions costs.

The efficacy of the formal and informal sector institutions in providing financial assistance can be gauged in terms of the following:

- (i) operational aspects
- (ii) minimisation of risk and lower transactions cost

Operational aspects

Formal sector institutions are more rigid in terms of their operation than their informal sector counterparts. Their activities are often regulated by law and supervised closely by the relevant authorities. These had translated into bureaucratic procedures, cumbersome and time-consuming paperworks with regard to their loan processing activities. Furthermore, they seek to exert control over the use of fund, notably to ensure that they are used for productive, long-term investment projects. Access to credit is also limited to those who can fulfil the eligibility criteria, which leads to the so-called 'triple bias' i.e. the preference for the public over the private sector, for large scale enterprises over small-scale enterprises and for non-agricultural (such as industry, commerce, manufacturing, construction) over agricultural loans with regard to both mobilisation and allocation of resources (Germidis, 1990, p. 14). Moreover, formal sector institutions lack personalised service, usually demand excessive collateral and since they are more concerned with profit, they prefer to lend out large sums rather than in

smaller sums. All of these operational constraints or biases have made SMIs' access to formal sector credit relatively difficult.

In contrast to the formal sector institutions, access to informal sector finance is relatively easy due to the flexibility of operations, and loan terms (size and maturity) to meet specific needs, less bureaucratic procedures, easily understood terms and conditions, the rapid processing of requests and delivery of credit and most importantly, the willingness to handle the small amounts which correspond to the requirements and the capacity of clients (Ghate, 1988; Germidis, 1990). Beside easy access and availability of credit, informal financiers provide extremely flexible alternatives in cases where the borrowers have problems in servicing their loans. Loans repayment can always be rescheduled as long as the interest is serviced (McLeod, 1980) and sometimes payment can be made in kind. Furthermore, loan can be renewed at any time provided that the borrower has paid-up the previous loan. But in the case of formal institutions' loans, defaulted borrowers have very little option. Many of them ended in courts. Loans can, however, be rescheduled if the financiers perceived that the business has some prospects in the future. There will be no opportunity for borrowers to make loan repayment in kind.

In the context of loan appraisals, formal lenders usually insist on information about the firms past performance which are generally based on the previous financial statements. Therefore, they are very much interested in looking at the past rather than the companies' prospect/potential in the future (the so-called short-termism). Most SMIs lack financial records, thus making it extremely difficult for the formal financial intermediaries to make an assessment of them. To assess the future one has to look into

the past. Therefore, it has been suggested that a comprehensive project/investment appraisal should be undertaken before any loan is approved. SMIs should be trained on how to conduct investment appraisals before seeking for any financial assistance.

Surprisingly, the informal lenders normally do not require such appraisals to be made. They are not concerned with projects, rather they are more concerned with the person running the projects (their customers). It does not matter whether the project is successful or not as long as the loan is repaid by the borrower. In simple terms, the informal lenders are more concerned with the viability of the borrower whereas formal lenders are more concerned with the viability of the projects. Moreover, transactions are usually based on the confidence engendered by face-to-face relationships between the creditor and debtor; there is usually no collateral involved, except in some cases where tangible guarantees (such as jewellery, house appliances etc.,) or a promissory note, mortgage deed, or post-dated cheque are required by lenders.

Risk minimisation and lower transactions cost

It has been argued earlier that formal sector lenders minimised their lending risk either by demanding security or/and by charging a risk-premium to the cost of loans. Despite these measures, formal sector lenders still face a relatively high level of default risk. However, default risks faced by informal lenders are relatively low. This is because informal lenders usually have 'first hand' information on the creditworthiness of their potential borrowers as this information can be obtained easily since lenders usually live in the same vicinity as their borrowers. In addition, the close proximity between them allows lenders not only to effectively monitor the borrowers' activities but also allow them to follow-up on outstanding loans. None of the above risk reduction measures can

be effectively pursued by formal sector lenders without having to incur higher cost. Furthermore, shorter repayment schedule allows informal sector lenders to gauge the performance of their loans on a regular basis, thus, giving them an early 'signal' before the loan is defaulted.

In terms of transactions costs, formal sector lenders usually incur high transactions costs when dealing with small borrowers. The high transactions costs are usually associated with the cost of acquiring information from the borrowers and also cost relating to loan appraisal, documentation and legal fees. The high transactions costs are also due to the monitoring the loans as well as cost of recovering non-performing loans. The transactions cost is also expected to be higher when lending to informal sector SMIs as compared to the formal ones.

Informal lenders are able to reduce their transactions costs by operating within a restricted area, or in markets where personal knowledge of the borrowers is possible (Ghate, 1988). Transaction costs that are normally associated to loan appraisal, documentation and legal fees are virtually non-existent since informal sector lenders usually do not adopt the rigorous lending procedures as in the formal sector. Therefore, as far as provisions of finance by informal sector lenders are concerned, both borrowers and lenders enjoy a low transactions cost.

The above discussion seem to suggest that informal sector lenders are better suited to provide credit to the SMIs than formal sector lenders, since they can effectively minimise default risk and enjoy low transactions cost. However, the cost of informal sector credit (i.e. interest they charged) is generally higher than that of formal sector

credit. Regarding the interest rate differential, two main arguments have emerged in the literature (Germidis 1990). The first one asserts that informal credit markets are non-competitive and that lenders who have monopolistic control are able to extract substantial rents by taking advantage of the relative inelasticity of demand for credit by informal sector clients (for example, a borrower pressured by time-constraints, would willingly accept higher cost of finance as long as the credit is instantaneously available). The second view stresses that the informal sector credit markets are competitive, therefore, the interest rates reflect the real cost of loanable funds. According to this view, informal lenders face a higher risk since most of their lending is unsecured, therefore charging a higher risk-premium is justified. In addition, the high rate charged by informal lenders also reflect the opportunity cost of funds to the lenders (Ghate, 1988).

Borrowing from the informal sector may be expedient but not necessarily efficient. Although, it seems that informal sector lenders have more leverage than formal sector lenders, both of them are said to have complementary roles in the provision of finance. For example, for large-sum and long-term finance for fixed capital can only be provided by the formal sector, whereas small-sum and short-term finance required in a hurry can be met by the informal sector. In this respect, there is a growing support for the two sectors to be linked together. Some have even suggested that formal sector lenders to emulate or co-opt some of the practices of the informal sector lenders, especially in the area where default risk and transactions costs can be lowered (Germidis, 1990; Mrak, 1990; Ghate, 1988). It is also believed that by interlinking the formal and informal sectors, the access of SMIs to credit can be improved.

According to Mrak (1990) there are generally three basic approaches in linking the two sectors together: the traditional approach, the socio-economic approach and the middle-of-the-road approach. The *traditional approach* is to formalise the informal sector but it is argued that this approach will eradicate certain advantages that this sector have over the formal sector. The *socio-economic approach* is to allow the informal sector to retain its strong role in an economy but again this approach neglects social and economic impacts (such as usurious interest rates and misallocation of credits). The more preferred approach is the *middle-of-the-road approach*, that is accepting the co-existence of both financial sectors and recognising the useful role they play in a country's financial sector²¹.

To encourage a speedy integration between the sectors, it has been suggested that the formal sector should be more accessible by adopting the practices of the informal sector such as flexibility of operations and loan terms (short, medium and long-term) to meet specific needs of their clientele, minimised red-tapes, easily understood procedures, fast and efficient delivery of credit and most importantly the willingness to disburse fund in smaller quantities according to the requirements and capacity of borrowers (Germidis, 1990). Besides that, formal sectors can elect the informal operators as agents or representatives²²; firstly, by providing them with access to credit (so that they can lend out to their own clients, thus reducing the formal sectors transactions costs and information asymmetry), secondly, by asking them to recommend potential borrowers directly to the formal institutions (therefore, reducing the problem of adverse selection) and thirdly, by encouraging them to mobilise savings (especially from the informal

²¹The three types of approaches have been previously discussed by Holst, 1985.

²²Germidis, 1990 termed it as "financial retailers".

sector to the formal sector). Informal operators can also be trained on how to handle savings and allocate credits most efficiently. It has also been suggested that in lieu of adapting the practices of informal financial operators, the formal financial intermediaries should be willing to overhaul its lending policy particularly in the aspects of repayment and collateral requirements.

Whatever the approach to link the two sectors would be, it must address the following issues. First, it must be understood that SMIs usually operate in a volatile and uncertain environment and owing to this nature, their business risks are relatively high. But high risks are usually associated with high returns. Lenders (formal or informal) must accept this fact and a proper way to respond is to find ways and means of reducing their lending risk to the sector, not simply by charging higher premium or demanding excessive collateral. One way to reduce this kind of risks is through proper assessment of the viability of the proposed project. This can be done by requiring the prospective borrower to carry out a comprehensive appraisal of the proposed project before their loan application can be considered. No doubt, this requirement may lead to higher borrower's transactions cost, but to majority of SMIs (particularly in Malaysia), access to finance is considered more important than the cost of finance (Chee, 1986; Kanbur, Boocock and Hwa, 1996).

Second, both sectors must be able to find ways and means to reduce their transactions costs which will eventually reduce the cost of finance itself. One of the ways, as already been discussed, is through financial innovation. Financial innovation is a process of introducing new ways and methods of reducing transactions costs as well as financial risks that would eventually bring about widening, deepening and integration of the

financial markets (Bhatt, 1986). Since negative policy intervention, such as financial repression is shown to be counterproductive, a more positive approach would be to encourage financial innovations by lenders (especially the formal institutions) by giving them the incentives to acquire new financial technology²³.

In the context of Malaysian financial system, it is believed that SMIs' access to finance can be enhanced if the financial institutions are given the proper incentives such as abolishing the preferential interest rate, thus allowing them to set their own competitive rates and eliminating the lending quotas of which the financial institutions have to fulfilled. The present lending guidelines and the penalty imposed on those institutions who do not comply with these guidelines have only aggravated the problem of SMIs' access to external finance (Haron 1990, 1994).

3.6 Provision of Finance to SMIs in Malaysia

SMIs in Malaysia can obtain their finance from various formal and informal sources. Formal sources include the core banking system (commercial banks and finance companies), government and its specialised agencies and from non-bank sources such as private leasing, factoring and venture capital companies. SMIs in Malaysia also obtain their finance requirement from informal sources such as money lenders and informal venture capitalists (Boocock, 1994; Chee, 1986). It has been estimated that outstanding credit facilities from outside the core banking system at the end of 1994 are about RM 9 to RM 10 billion i.e. about 5 percent of total loans outstanding (Lin, 1994).

²³Financial technology can be defined as a mechanism consisting of a spectrum of financial assets with wide-ranging variety of liquidity, risks, maturity, yield etc. (Mody, 1984).

As discussed earlier, commercial banks are still the main suppliers of external funds to the SMIs despite allegations that they are hardly accessible to SMIs. Prior to 1990, the amount of loan extended to SMIs by the commercial banks has been steadily decreasing (Kanbur, Boocock and Hwa, 1996; Haron, 1990). The lowest being in 1987 when the Malaysian economy was hit by a severe recession. In 1988, the amount of bank lending appeared to increase sharply from RM2.98 billion in 1987 to RM3.79 billion in 1988. The sudden increase in these figures is believed to be caused by the redefinition of a small-scale enterprise as well as new loans extended to finance the recovery period (Table 3.1). Bank lending to SMIs can be in the form of conventional loans²⁴ (SSE loans) as well as loans extended under the guarantee of the Credit Guarantee Corporation (CGC) generally known as CGC loans.

Table 3.1

Loans Extended to SMIs by Commercial Banks Only (1984-1990)

<i>Year</i>	<i>Total Outstanding Loans (RM bil)</i>	<i>Loans to SMIs¹ (RM bil)</i>	<i>Percent of Total Loans Outstanding</i>
1984	43.5	3.7	8.4
1985	50.3	3.5	6.9
1986	53.6	3.2	6.0
1987	52.4	2.9	5.7
1988	56.8	3.8	6.7
1989	67.1	3.7	5.5
1990	80.8	3.8	4.7

Note: ¹ inclusive of CGC loans

Source: Kanbur, Boocock and Hwa (1996) p. 168

However, recently other financial institutions, particularly the finance companies, have aggressively sought lending opportunities in the small business sector. This has brought about the increase in the value of loan outstanding by the core banking system in recent

²⁴Conventional loans or SSE loans are loans given by the bank under its own loan portfolio. SSE loans refer to loans extended the small scale enterprises. SSE is currently defined as enterprise (not only manufacturing) with either a net assets of up to RM 500,000 or shareholders' fund up to similar amount.

years. The value of credit extended by this core banking system (i.e. the commercial banks and finance companies) to the SMI sector has shown an increasing trend (about 12% per annum) the value of which had by the end of 1995, reached the RM14 billion mark (Table 3.2). However, despite the rapid growth, the value of loans extended to the SMI sector as compared to the total loans outstanding from the core banking system remained relatively small - about 5.7 percent in 1995²⁵. Apart from loans extended by the core banking system, outstanding credit facilities extended by non-bank sources has been estimated to be in the region of RM18-19 billion at the end of 1995, about two-fold increase from the previous estimate in 1994 (Lin, 1996).

Table 3.2

Loans Extended by the Core Banking System (1990-1995)

<i>Year</i>	<i>Total Outstanding Loans (RM bil)</i>	<i>Loans to SMIs¹ (RM bil)</i>	<i>Percent of Total Loans Outstanding</i>
1990	101.2	8.1	8.0
1991	121.8	9.5	7.8
1992	136.1	9.8	7.2
1993	151.5	10.0	6.6
1994	194.6	10.9	5.6
1995	247.4	14.1	5.7

Note: ¹ inclusive of CGC loans

Source: Bank Negara Malaysia Annual Reports.

Moreover, in spite of the increasing trend and the wide ranging funding options available, SMIs in Malaysia are still facing with the problem of ready access to bank financing at reasonable cost, quickly and with the minimum of paperwork (Chee, 1986; Salleh and Esderts, 1990; Lin, 1996). The government is said to be aware of this problem and has responded by introducing various guidelines over years, to ensure that the mainstream banking sector offers all commercially viable SMIs ready access to

²⁵Total amount of loans outstanding with the core banking system in 1995 is RM247.4 billion.

banking facilities at reasonable cost. The first guideline was introduced in 1972 after the inception of the Credit Guarantee Corporation (CGC), where small businesses and the agriculture sectors were recognised as 'priority sector' by the central bank. At that time, the only guarantee scheme provided by CGC was the General Guarantee Scheme (GGS). Another guideline was introduced in 1979 which required commercial banks to channel at least 20 per cent of their loanable funds to small borrowers. Two years later, a new guideline required commercial banks to extend at least 12 percent of their loans outstanding as of December 31, 1980 to small businesses of which 5 percent should be granted under the 'Special Loan Scheme' (SLS) which was introduced by CGC to replace the semi-dormant General Guarantee Scheme. Prior to 1981, there was no such directive for commercial banks to allocate loans under the CGC loan schemes. Within the period 1981 to 1989, at least four new guidelines were introduced, all of which required the commercial banks to meet the lending quotas set by the Central Bank. In 1989, with the inception of a new guarantee scheme known as the Principal Guarantee Scheme (to supersede the SLS), the commercial banks were required to extend at least RM600 million to small businesses of which RM200 million was to be extended under the new scheme. In 1990, the small business sector was no longer considered a priority sector but the lending guidelines under the CGC loan schemes are still continued until the present day.

The effectiveness of these lending guidelines may be measured simply by looking at the ratio of the total outstanding SMI loans to the total loans granted by the core banking system (Struck and Glassman, 1983; Haron, 1990). The higher the percentage of the outstanding loans, the more 'committed' are the financial institutions towards the SMIs. Table 3.1 provides the information prior to 1990 where the small businesses were still

considered as a priority group while Table 3.2 provides the information post 1990 where small businesses no longer regarded a priority group. By looking at the figures in Table 3.1, one can easily conclude that the lending guidelines were not effective to induce commercial bank lending to small business since the amount of outstanding loans of the SMI sector was at least stagnant if not declining over this period (Col. 3). Although, one can argue that the decreased lending could be due to the economic slowdown (1985-1987), the declining ratio of SMI loans to total outstanding loans (Col. 4) suggests that commercial banks' attitudes toward small business have not changed. The same scenario can be seen from Table 3.2, where the lending guidelines have failed to improve the ratio despite the increasing value of outstanding loans extended to the SMIs. Based on these observations, the following deductions can be made:

- (i) the inclusion of SMIs as a 'priority group' did not automatically encourage or improve commercial banks lending to the sector, and
- (ii) the lending guidelines or quotas do not necessarily encourage commercial bank lending beyond what is required. In other words, credit is extended merely to fulfil quotas or to avoid paying penalties.

Apart from the above lending guidelines, another form of intervention undertaken by the government was to fix the interest rate that can be charged on loans extended to the SMI sector. The main aim for this intervention is to ensure that SMIs can access bank credits at a 'reasonable' cost. Prior to 1986, the interest rate set by the authority was well below the average rates applied to other borrowers. During that period (1972-1986), commercial banks were effectively lending at a loss because the banks' own cost of funds was higher; the BLR (base lending rate) was above the rate that they could charge SMI borrowers Table (3.3). The situation was made worse by the economic

slow-down and made commercial banks even more reluctant to extend loans to the SMIs, except in cases where they have to fulfil the lending guidelines under CGC loan schemes. The default rate was so high that the once popular Special Loan Scheme (SLS) had become a joke to the banking community at that time when they synonymously refer it as a "Sure Lose Scheme". It was only in the post 1986 era that the banks could achieve a satisfactory return on conventional and CGC loans; owing it to the decline in the BLR (Kanbur, Boocock and Hwa, 1996).

Table 3.3

Bank Lending Rates, (1984-1993)

Year	ARCB %	SSEs %	CGC %	ARCB-CGC %	BLR %
1984	12.8	7.5	7.5	5.3	12.3
1985	12.1	10.0	10.0	2.1	10.8
1986	12.0	10.0	10.0	2.0	10.0
1987	9.7	8.75*	8.75*	0.95	7.5
1988	9.0	8.5*	8.5*	0.5	7.0
1989**	8.7	n/a	8.5+	0.2	7.0
1990	9.0	n/a	9.0+	0.0	7.5
1991	9.7	n/a	9.0+	0.7	9.0
1992	10.3	n/a	11.0+	(0.7)	9.5
1993	9.7	n/a	9.8+	(0.1)	8.3

Note: ARCB: average rate charged by commercial banks (all borrowers)

SSEs: rate charged on conventional loans to small scale enterprises

CGC: rate charged on CGC loans

BLR: base lending rate

* Rate was the lower of BLR plus 1.75 percent or maximum 9.0 percent

** CGC and SSE loans were charged at the same rate until April 1989, when the preferential rate for SSEs was abolished.

+ Rate for the Principal Guarantee Scheme was BLR plus 1.5 percent except for part of 1991/2 when a ceiling rate was imposed.

Source: Kanbur, Boocock and Hwa (1996), p.165

The SMIs continued to enjoy preferential rate of interest until it was abolished in April 1989. This coincided with the introduction of the Principal Guarantee Scheme (PGS) where PGS loans were charged at a variable rate of interest - BLR plus 1.5 percent.

However, in 1991, a ceiling rate of 9 percent was imposed which gave incentive for borrowers to utilise CGC loans. By 1992, the ceiling rate was abolished.

The impact of interest rate control seemed to be felt most by the lenders than the borrowers. With interest rate fixed at a certain level, banks usually suffer losses when the general level of interest rate rises. An artificially low ceiling rate does not create any incentive to lend, rather it leads credit to be rationed as the returns do not reflect the risks involved (Greenwald, Weiss and Stigliz, 1984; Stigliz and Weiss, 1981). Again by examining Table 3.1 and Table 3.2, it can be deduced that the preferential rate imposed by the authority prior to 1989, did not encourage lending by commercial banks as indicated by the steady fall in the volume and share of loans outstanding to the SMI sector. However, there was a slight improvement in the provision for credit in the post 1989 era (i.e. after the preferential rate was abolished) although it did not lead to a significant increase in the proportion of loans extended to the SMI sector as compared to the total volume of loans outstanding to commercial banks. Given the above observations, it can be confirmed to a certain extent that control on interest rate cannot be an effective mechanism to increase the overall supply of credit to SMIs, at least in the Malaysian context. These interventions are said to be ineffective and have failed to make significant impact in improving the overall provision finance to SMIs (Fong, 1990b).

To the proponents of financial market liberalisation (such as Shaw, 1973 and McKinnon, 1973), the logical way to improve the overall provision of finance to SMIs by financial institutions is to lift up all interventions so that the financial market can perform optimally. But according to some authors (see for example, Stigliz (1987);

Greenwald, Weiss and Stigliz, 1984; Stigliz and Weiss, 1981; McLeod, 1980), financial liberalisation does not necessarily lead to a more efficient markets; in fact, there will not be a perfect financial market so long as the credit market is characterised with heterogeneity and distorted with imperfect information. Interventions from the relevant authority in Malaysia have somewhat pressurised the local financial market (Salleh, 1990). However, those interventions are necessary, otherwise the provision of finance to SMIs would have been worsened (Haron, 1990).

In order to seek for a more meaningful solution to the problems related to the provision of finance to SMIs in Malaysia, it is important to address the following issues. *First*, it is important to verify the claims made by SMIs about the alleged lack of fund made available by the banking institutions. A decreasing trend in the provision of finance to SMIs does not necessarily mean that there is less fund available. It may simply be due to the falling demand for credit by the SMIs. However, if these allegations are justified, then the next step is to determine whether the lack of fund is caused by market failure, in which case the relevant authority should intervene, or is it due to the prejudices and perceived riskiness in lending to this sector, in which case, governments should provide an incentive to the banking institutions to find a mechanism that can eventually eradicate the prejudices and minimised the risk of lending. Whatever it is, financial institutions should be allowed to carry out their functions freely, and any form of intervention should only be used as action of the last resort.

As discussed in the earlier sections, the high perceived risk as well as prejudices against the small firms are usually associated with the nature of the small firms themselves. Therefore, financial institutions have to 'live' with this fact and consider their financing

risk as secondary (and more so if the loan is secured by collaterals or deeds of assignments) since the primary risk is already borne by the entrepreneurs themselves.

The existence of asymmetric information in the financial contract as well as the high transactions cost in obtaining and evaluating the relevant information has aggravated the 'risk perception' and prejudices among the financial community. It has been suggested that in order to reduce the degree of information asymmetry (and transactions cost to some extent), the relationship between the lenders (banks and other financial institutions) and the borrowers (SMIs) should be made transparent (Storey and Sykes, 1996; Petersen and Rajan, 1994). This can be achieved in several ways; through the deposit relationship, credit relationship and through personal relationship. In a deposit relationship, the banks can have the initial (basic) information about the clients, their businesses, their business contacts and so on. Banks can also verify this information by contacting any of their clients' business contacts. In a credit relationship (which normally follows a deposit relationship, as banks do not normally extend credit to non-account holders), the banks can usually accumulate more information, particularly about the 'creditworthiness' of their clients as well as strength and weakness of their clients' businesses. Personal relationship, refers to the normal working relationship between bank's officers and their clients. This form of relation can help bank officers to evaluate the character of their clients (Chaston, 1996). On the other hand, a good and healthy working relationship between bankers and borrowers can certainly help to reduce the level of prejudice normally associated with SMIs. A healthy relationship can only be achieved through mutual understanding between them. Otherwise, SMIs will have to borrow from their "*lender of last resort*", that is from the non-institutional sources.

Second, it is important to determine the specific problems faced by SMIs; whether it is lack of fund (unavailability), or problem of access (inaccessibility) or cost of finance (interest rate). If it is due to lack of fund, then it will be justified for the government to issue lending quotas, or create special funds to supplement the lack of fund. However, such interventions are not usually welcomed by the financial institutions. Moreover, such interventions usually promote the habit of borrowing among SMIs, in that they will apply for loans even at times when they are not needed, thus creating more of a moral hazard problem.

However, if the problem faced is one of access, then efforts must be made to improve SMI's access to credit by tackling the issues which will make the SMIs more 'credible' or 'bankable' such as improving their business and management skills through training and consultancy. Apart from that, SMIs themselves should be encouraged and assisted to perform project appraisals before they decide to make any capital expenditure or invest in new projects. It is strongly believed that by adopting such appraisal, SMIs can effectively reduce the risk and uncertainty associated with the investment as well as improving their prospect in getting loans from the financial institutions. If interest rates represent the main problem confronting SMIs, then governments can redress this issue by introducing the ceiling on interest rate. However, Chee (1986) noted that access to finance, rather its cost, was the major problem faced by small firms in Malaysia. It is also noted by Kanbur, Boocock and Hwa (1996) that demand for small business loans are quite inelastic, which means that demand is less sensitive to price of loans. Therefore, as discussed earlier, control on interest rate is probably not a good strategy to improve the overall provision of finance to SMIs in Malaysia.

The *third* issue to be resolved relates to the loans provided by the financial institutions but guaranteed by the Credit Guarantee Corporation - the CGC loans. It must be remembered that the initial intention of the CGC loans scheme was to enable SMIs to have access to funding at reasonable cost after their request for conventional loans are denied. In other words, there should be 'additionality' in the provision of finance to SMIs. The essence of 'finance additionality' is that government guarantees should not support borrowing which fails to qualify for conventional bank finance. However, SMIs nowadays can opt for CGC loans by not disclosing their assets that can be secured against conventional borrowing. Sometimes, banks can use the scheme to refinance existing (usually, high risk) loans given earlier under conventional funding. These practices often led to zero 'finance additionality'²⁶ and are at odds the original goals of the scheme (Boocock, 1994).

Since its inception in 1972, CGC has been offering at least seven types of facilities as follows:

- (i) the General Guarantee Scheme (GGS): 1972-1981
- (ii) the Special Loan Scheme (SLS): 1981-1988
- (iii) the Hawkers and Petty Traders Loans (HPT): 1986-1990
- (iv) the Principal Guarantee Scheme (PGS): 1989-1994
- (v) the Loan Fund for Hawkers and Petty Traders (LFHPT): 1990-present
- (vi) the Association Special Loan Scheme (ASLS): 1990-present
- (vii) the New Principal Guarantee Scheme (NPGS): 1994-present

²⁶'Finance additionality' can either be zero or 100 percent. Zero additionality occurs when alternative sources of finance were not utilised, even though eligible; while 100 percent additionality refers to lending to entrepreneurs with no record of achievement or obvious business skills and/or to businesses with little prospect of generating high returns (Boocock, 1994).

As of September 1994, the CGC guarantee was extended to cover loans provided by finance companies. Although, the previous General Guarantee Scheme (1973), Special Loan Scheme (1981) and the Hawkers and Petty Traders Loan Scheme (1986) have ceased to operate, outstanding loans under these schemes are still guaranteed by CGC. (The value of loans approved by CGC is given in Table 3.4).

Table 3.4

Value of Approved CGC Loans (1980-1995)
(RM mil)

Year	GGS	SLS	PGS	NPGS	HPT	LFHPT	ASLS	Total
1980	124.3							124.3
1981	25.8	498.2						524.0
1982	9.7	519.3						529.0
1983	7.2	298.3						305.5
1984	4.0	208.2						212.2
1985	2.7	140.0						142.7
1986	1.8	122.5			3.7			128.0
1987	1.3	75.2			7.3			83.8
1988	0.7	49.8			7.4			57.9
1989	0.3	21.4	78.5		4.9			105.1
1990			313.3		1.0	6.0	4.2	324.5
1991			206.3			6.8	5.2	218.3
1992			174.7			1.5	1.8	178.0
1993			205.8			8.1	1.6	215.5
1994				551.4		n.a	n.a	551.4
1995				1758.7		91.7	5.7	1856.1

Note: GGS - General Guarantee Scheme
 SLS - Special Loan Scheme
 PGS - Principal Guarantee Scheme
 NPGS - New Principal Guarantee Scheme
 HPT - Hawkers and Petty Traders Loans
 LFHPT - Loan Fund for Hawkers and Petty Traders
 ASLS - Association Special Loan Scheme

Source: Credit Guarantee Corporation

It is believed that provision of CGC loans by participating financial institutions can be improved if, for example, interest charged on CGC loans, and the procedures regarding the settlement of the non-performing loans are resolved. Furthermore, banks will not be encouraged to extend CGC loans if they perceive that their level of bad debts arising

from CGC loans is high and if they cannot be assured that the guarantees will be honoured. (The default rate and the settlement of claims are provided in Table 3.5).

Table 3.5

Credit Guarantee Corporation Liabilities

Year	Non Performing Loans ^a			Claims Processed		Claims Paid
	Number	Value (RM mil)	Percent (%) ^b	Number	Value (RM mil)	Value (RM mil)
1984	n.a	114.8	12.3	232	1.32	0.13
1985	n.a	151.4	17.8	202	1.87	0.10
1986	12,208	201.2	26.8	210	1.99	0.25
1987	13,902	229.3	34.2	221	2.02	0.54
1988	12,709	239.5	40.7	228	2.74	0.65
1989	11,589	236.3	49.2	604	2.92	1.04
1990	10,515	223.2	38.9	909	9.10	1.19
1991	9,588	215.0	35.7	641	8.40	2.02
1992	8,467	209.0	36.0	301	3.90	1.30
1993	7,787	184.8	34.0	449	5.30	2.40

Note: ^a Bank's estimate of potential bad debts.

^b Non performing loans as a percentage of outstanding CGC loans

Source: Kanbur, Boocock and Hwa (1996), p.169.

Since much of the criticisms of CGC schemes are related to operational and administrative deficiencies (Levistky and Prasad, 1987), rather than the lending guidelines issued by the Central Bank, it is expected the overall utilisation of CGC loans can be improved and operational deficiencies are rectified if banks are allowed to earn a reasonable return on loans. The terms and conditions of the New Principal Guarantee Scheme (NPGS) have addressed many of the weaknesses of the previous schemes. For example, the banks can now receive a return of 2 percent over Base Lending Rate on NPGS loans. In addition, the Central Bank guideline, issued to the commercial banks is much more achievable than in the past, thus easing off the pressure to approve CGC loans simply to meet loan quotas. Moreover, since the procedures to be followed in the event of the borrower's default have been clearly

specified in the NPGS, it is expected that the overall utilisation of CGC loans will eventually increase and that will translate into an overall improvement in the provision of finance to SMIs in Malaysia.

From the above discussions, it can be deduced that the main financing problem faced by SMIs in Malaysia is very much related to the question of accessibility of finance rather than the availability of it. Hence, the present study is focused to examine mechanisms that are capable of enhancing the access of the small and medium-sized industries in Malaysia to formal institutional finance. In particular, the present study shall explore the possibility of SMIs in Malaysia adopting the project appraisal practice as a formal means or tools in assessing the viability (in terms of risks, costs and benefits) of their proposed investment (projects) and whether the adoption of such practice can improve SMIs' accessibility to formal institutional finance.

3.7 Summary

In this chapter, discussion was focused on the various implications of risk, uncertainty and financial dualism for the provision of finance to SMIs. The risk and uncertainty inherent in the SMIs are believed to be the consequence of the nature of the SMIs and their business operations. Issues such as lender and borrower's risk and transactions costs are also discussed particularly in relation to how banks and other financial institutions have responded to these issues.

A significant part of this chapter was devoted to discuss the impact of financial market dualism, particularly the role played by the formal and informal sectors in terms of providing credit to the SMIs. The efficacy of these institutions is judged by their ability

to minimise default risk as well as reducing transactions cost without having to ration credit.

Towards the end of the chapter, discussion is focused on the issues and problems related to the provision of finance to SMIs in Malaysia. Among the issues discussed include the alleged lack of access to institutional finance by SMIs and why the effects of the government interventions in the financial market have been insignificant (relatively unsuccessful) in improving the flow of credit. The discussions also include suggestions on how SMI's access to institutional finance can be enhanced. In particular, we sought to determine the extent of which the adoption of project appraisal practice and procedures by SMIs can improve their accessibility to external finance.

The present study firmly asserts that by adopting project appraisal practice, SMIs accessibility to formal institutional finance can be enhanced since information about the proposed projects and their owners are now available to be shared by prospective lenders. By evaluating the information contained in the project appraisal documents, formal sector lenders can arrive at a better judgement about the risks and prospects associated to projects and will be able to make an informed decision whether to extend credit or otherwise. Hence, in the next chapter, a detailed review of the concept and the various methods that can be used in determining the viability of proposed projects (investments) will be given. It will also include a discussion of how such practice can help in reducing the risk and uncertainty associated with the proposed projects and in enhancing the access of firms proposing projects to external financiers.

Chapter 4

ADOPTION OF PROJECT APPRAISAL PRACTICE BY SMALL AND MEDIUM-SIZED INDUSTRIES

4.1 Introduction

The main purpose of this chapter is to examine whether adoption of the project appraisal practice can help small and medium-sized firms (SMIs) to acquire the capability to reduce the risks of commercial failure. As has already been pointed out, project appraisal can help SMIs in monitoring the progress of proposed investments and provide early signal of any unanticipated problems in the future, so that appropriate remedial actions can be taken as soon as possible. In other words, project appraisal practice can help to reduce risk and uncertainty, ensure the viability of the proposed investment projects, and boost the confidence of potential lenders to extend loans to finance the proposed project.

By performing the appraisal, it is believed that information asymmetries, which has always been one of the main factor which has restrained formal financial institutions from lending to SMIs, can be reduced significantly. As a consequence, it is expected that the collateral requirements can be gradually relaxed, as lenders now have more confidence on the SMIs' ability to service the loans from the project's own cashflows. Eventually, by adopting a formal project appraisal practice, it is anticipated that the access of SMIs to the formal financial institutions finance can be improved over the long term.

Formal project appraisal¹ practices, in most cases, are adopted by large public and private organisations for the primary purpose of assessing future benefits that can be derived from investing in a certain project. In other words, it is an *ex-ante analysis* of a proposed project or investment. Basically, the analysis involves a four-stage process, namely, the identification of investment ideas, development of ideas, selection of projects and finally the control (performance evaluation) or post-audit stage. The process itself, involves a very tedious and time consuming exercise (sometimes, very costly too). However, it must also be remembered that the accuracy of the assessment can sometimes be questionable (King, 1974).

Project appraisal techniques have been extensively used by large organisations for various reasons. The most obvious reason being to select a project that could yield the maximum benefit with the least amount of investment in the shortest time possible. By performing project appraisals, decision-makers in a firm are able to decide whether or not to invest in a proposed project or choose among alternative projects. Due to scarce resources available to firms, they have to be extra careful and rationally allocate these resources. In addition, by adopting formal project appraisal practices, firms can constantly scan their environment for investment opportunities. Moreover, risks associated with a particular investment project can be effectively reduced by performing appraisal of that project.

¹Throughout the thesis, project appraisal is synonymously referred to as investment appraisal, capital budgeting, or project evaluation. Formal project appraisal practice refers to the various methods and procedures officially adopted by a specific company.

4.2 The Significance of Project Appraisal Practice

The importance of project appraisal as a basis for investment decisions is well acknowledged (see for example, McIntyre and Coulthurst, 1986; Lapsley, 1986; Haka, Gordon and Pinches, 1985; and Pike, 1982). Acquisitions of more sophisticated equipment, plants and machinery are seen to help reduce cost of production through increase in efficiency and productivity. In addition, project appraisals can help those enterprises to arrive at a “*better decision*” especially in analysing new market potentials or diversifying into new ventures.

Although it is true that project appraisals are more commonly performed by large corporations, that does not imply that the same processes and techniques are totally irrelevant to small and medium-sized industries. Small and medium-sized industries also invest in capital assets some time during the life span of their business (especially in the start-up phase) although the magnitude of the investment is smaller than that of larger firms. Nevertheless, however small the value of investment in absolute terms, these are still very significant to the small and medium sized firms considering their limited financial resources.

Capital expenditures² by business entities, whether large or small; whether public or private, in turn help a nation’s economy to accelerate its growth rate. Since permanent investment plays a vital and decisive role in determining the rate of growth as well as having multiplier effect on the overall performance of an economy (Hanson, 1965; Gullick, 1981; Armstrong and Taylor, 1985), the Malaysian government is very keen to

²Capital expenditures refer to investment in tangible assets with terminable life for the purpose of production or distribution of products or services

foster the development of SMIs and to encourage them to adopt increasingly higher standards of technology for their operational systems.

However, despite the strong commitments and aspirations from the governments towards promoting the SMI sector, problems and issues pertaining to the provision of finance in general and long-term finance in particular, still remain the major factor constraining the sector's growth and development. Most of the criticisms in this regard go to the local financial institutions for not being responsive to the financial needs of the SMIs. Since investment in projects require a substantial amount of capital, SMIs which plan to grow cannot rely solely on self financing or borrow from the informal sector lenders. Inevitably, they have to seek external finance from the formal financial institutions. But, as has been discussed earlier, seeking finance (especially long-term finance) from financial institutions is not easy as it seems to be, particularly for the small and medium-sized firms.

As discussed in the previous chapter, the lack of provision for finance to SMIs in developing countries are caused by the imperfection of their financial markets. We have also explained earlier, with regard to the causes of imperfection of the credit market, the literature provide two broad sets of views. The first view relates to the repercussions of *financial repression* as put forward by McKinnon in 1973 who maintains that the governments' interventionist policies in the less developed countries have caused imperfections in their financial markets which ultimately disturb the effective allocation of credit by the financial system. As a consequence of financial repression, financial institutions in these countries have rationed credit availability and avoid lending to the "high risk sectors" such as the SMIs.

Apart from disrupting the allocative efficiency of the financial system, the interventionist policies have also influenced the way financial institutions carry out their standard loan assessment procedures and project appraisals where these institutions are forced by law to lend a certain amount to the SMIs. Under those circumstances, these institutions felt that there is no point of scrutinising loan applications when these are “guaranteed” by the government or when “disapproving” the loans can have serious personal and political ramifications. Another serious side-effect to the interventionist policies is that it discourages financial institutions to innovate, in the sense of offering the right financial product according to the specific needs of its clients. Proponents of this view call for the monetary authorities of the relevant governments to liberalise their financial system.

The second view argues that imperfections of the financial markets are caused by the asymmetry of information between the parties in a financial contract. The existence of information asymmetry has aggravated the perception of risk, especially when lending to the high risk SMI sector. The high perception of risk on the SMIs stems from the nature and the characteristics of the SMIs themselves. SMIs are perceived to be high risk-takers, unreliable, untrustworthy and their integrity are highly questionable. In addition, a majority of them lack managerial and technical competence needed for efficient management of the enterprise. Furthermore, they lack resources and are not technology oriented, thus producing sub-standard products in terms of quality and physical appearance. They also lack information, not because they do not have it but because they do not keep those information properly. In short, majority of the SMIs do not seem to have the “*criteria*” that are bankable with the financial institutions. As a

consequence, banks are very sceptical and reluctant to extend loan³ to this sector, particularly to those who do not have established reputation and could not offer the required collateral (McLeod, 1991).

In discussing the importance of project appraisal, considerable attention will be given to the second view. This is due to the fact that the result of empirical studies of financial repression in developing countries tends to be mixed. While some studies tend to provide positive support for the repression theory, there are others which do not support the theory and yet there are some studies which found no conclusive evidence one way or the other. For example, research by Gupta (1987)) on 22 Asian and Latin American countries over the period of 1967-76 suggest that there is little support for the “repressionist” policies to work in these countries. Similarly, in another study by Cho and Khatkhate (1990) concludes that, financial reform, whether comprehensive and sweeping or measured and gradual does not seem to have made any significant difference to the saving and investment activities in the liberalised countries.

Furthermore, the lack of financing of SMIs by financial institutions is claimed to exist in both developed and developing countries, testifying the fact that credit misallocation which adversely affect SMIs is not due to repressed financial policies, a view supported by many (see for example, Bolton, 1971; Gupta, 1984, Chee, 1990). Therefore, the present study holds the view that the provision of finance to SMIs can be improved significantly if appropriate measures that can reduce risk and minimise uncertainties to levels acceptable to the financial institutions can be found. Hence, the present study suggests that, *risk reducing measures* as opposed to *financial liberalisation* should be

³Especially long-term loans or financing innovative investments.

adopted in order to encourage bank lending to the SMIs. Such risk-reducing measures can include, among other measures, encouragement and incentives to the financial institutions to improve their financial technology by making provision for lenders to accept non-physical collateral (e.g. personal guarantee) or collateral in-kind (e.g. livestock), tri-partite agreement (guarantees) and more importantly to persuade them to accept project appraisal as an important alternative as one of their credit eligibility requirements.

4.3 Basic Concepts in Project Appraisal

The term, *project appraisal* is often used interchangeably with several other jargons such as project evaluation, investment appraisal, business appraisal, feasibility studies etc. Therefore, it is rather important to clarify certain concepts of project appraisal as found in the literature which are more meaningful to the present discussion at the outset.

4.3.1 What is a 'Project'?

The World Bank definition of a project is more focused on the optimality of investment-oriented actions based on comprehensive and coherent sector planning that would maximise the social welfare function (Chadenet and King, 1972). The sector planning encompasses both public and private projects at the national level. On the other hand, UNIDO (1980) defined 'project' as a proposal for an investment to create, expand and/or develop certain facilities in order to increase the production of goods and/or services in a community during a certain period of time. A project is also considered as a *unit of investment* which can be distinguished technically, commercially and economically from other investments. This definition provides a narrower focus on

the purpose of project appraisal. Little and Mirrlees (1974) arbitrarily defined project as any scheme, or part of a scheme, for investing resources which can reasonably be analysed and evaluated as an independent unit.

A *unit of investment* or 'project' can be further characterised by an *activity or decision* (actual or planned) which represent the purpose of an appraisal/evaluation exercise (Imboden, 1978). The investment activities/decisions include a whole spectrum of investment situations such as expanding existing product lines, diversifying into new products or industries, replacing old and obsolete technology with new technology, thus reducing operating cost and wastage (cost saving) and deciding whether to lease or buy a fixed asset (Mott, 1993). Each of the above investment decisions⁴ does require initial *capital outlays*⁵ in order to acquire fixed assets and/or to finance initial working capital requirements, and, the source of fund can be either internally (e.g. company's savings) or externally (e.g. bank loans) generated.

In the present study, a 'project' is defined as an investment in tangible fixed assets and the initial working capital with given operational life span on which appraisals can be performed before an investment decision can be made and the investment is carried out with the object of maximising the firm's profit. In other words, the project is confined at the individual enterprise level (and not at the national or sectoral level) with emphasis on the preparation and appraisal of specific individual investment projects. However, collectively, appraisals performed by the individual firms on specific projects

⁴Investment decision is sometimes referred to as the capital budgeting decision (Pike and Dobbins, 1986), decisions concerning the investment of capital funds (Brockington, 1987) and also as capital investment decision (Levy and Sarnat, 1986).

⁵Capital outlay is also commonly known as capital expenditure.

can have general implication for the small and medium-sized industries at the sub-sectoral level.

4.3.2 Definition of project appraisal

According to Todaro (1989), project appraisal is the quantitative analysis of the relative desirability/profitability of investing a given sum of public and/or private funds in alternative projects such as building a steel mill or a textile factory. Investment in alternative projects could also mean investing in a different kind of technology or processes or even replacing obsolete technology. Bridger and Winpenny (1987, p. 227) defined project appraisal as the process of examining the attractiveness of a project from its economic, technical, financial, social and other points of view, before the actual investment is made. According to Frohlich et al. (1994), project appraisal generally consists two of sets of studies; the first is the opportunity study and second, the feasibility study. Once, an opportunity is identified in the opportunity study stage, the next step is to determine the feasibility or the viability of the identified project.

All of the above definitions on project appraisal seem to share a common purpose; that is, project appraisal involves a process of identifying an investment opportunity and by using certain quantitative evaluation techniques, select the best investment alternative that will maximise the firms' as well as their shareholders' wealth. In the context of the present study, project appraisal is defined as identifying investment opportunity as well as assessing the future stream of benefits (viability) that could possibly be realised from that investment opportunity through the use of quantitative as well as qualitative evaluations methods before any actual resource is committed to the project with the objective to maximise the shareholder's wealth. Since there are no significant

differences between a 'project' and an 'investment' given by the above definitions (except in the context of sectoral and sub-sectoral level), the term 'project appraisal' will be used interchangeably with 'investment appraisal' throughout the thesis. This practice of making no distinction between project appraisal and investment appraisal is fairly common in the literature (See for example, Mills, 1988a; Lumby, 1994).

4.3.3 Capital budgeting and project appraisal practice

In some studies, project appraisal practice and capital budgeting practice are synonymous. For example, Mills (1988a) does not make any clear distinction between the two. Brockington (1987), however, defined capital budgeting as the process of providing information which will assist the making of decisions concerning the investment of capital funds. Weston and Brigham (1987), on the other hand, defined capital budgeting as the process of planning expenditures on assets whose returns are expected to extend beyond one year. A more comprehensive definition of capital budgeting was provided by Gurnani (1984). According to him, capital budgeting is essentially a process which involves determining size of a budget and its financing, investigating and identifying the prospective investment opportunities, classifying them according to some scheme, collect data and information on the viable alternatives, defining and estimating the cashflows, followed by economic analysis (i.e. assessing the effect of different assumptions, considering the risks, weighing the benefits and the strategic purpose of the project against its risks and constraints) according to a pre-developed selection procedure. An accepted normative approach to rational selection of capital expenditure proposals is to rank them with regard to some established performance index (indices) conforming to the objectives of the firm and hence select those which meet the required criteria, allowing for intangible and resource constraints.

Gurnani's definition seem to be all encompassing. However, what comes out is that the basic ingredient in a capital budgeting practice is basically similar to that of a project appraisal practice.

For the purpose of this dissertation, it is assumed that capital budgeting practice is similar to the project appraisal practice, therefore, both terms are going to be used interchangeably throughout the dissertation. Both practice share a common purpose that is to provide some detailed information about the investment proposals (opportunities) so that a well-informed investment decision can be made by the firms. Hence, in this thesis, no attempt will be made to provide a distinction between the two.

4.3.4 Framework for project appraisal process

Mintzberg et. al. (1976) have developed a four-stage framework of the appraisal process which was applied later by Pinches (1982). The four stages are (1) identification of an investment opportunity (2) development of an initial idea into a specific proposal (3) selection of a project and (4) control, including post-audit, to assess forecast accuracy. Each of these stages has been a subject area of research⁶, especially in the selection stage (Figure 4.1).

McIntyre and Coulthurst (1986, p. 3) have condensed the process of appraisal into three phases and was adopted later by Mills (1988a). The three phases are (1) the creation phase (2) the decision phase (3) the implementation phase (Figure 4.2). The creation phase is concerned with the search for ideas, their sources and screening. The decision

⁶See Mukherjee and Henderson (1987) for a more detailed description on the area of research.

phase includes the classification of proposals, clearance of their feasibility and evaluation. The implementation phase includes the operational framework, budgetary controls and the post-audit of projects. The above classification of project appraisal phases seemed to be more relevant to the small and medium-sized companies.

Figure 4.1

The Capital Budgeting Process

Stage I	Project Identification
	<ul style="list-style-type: none"> • Source of idea/opportunity • Process to generate the idea • Process is continuous or periodic
Stage II	Development and Screening
	<ul style="list-style-type: none"> • Screening level (departmental, regional, or central) • Screening process • Budget responsibility • Cash-flow estimation
Stage III	Project Selection
	<ul style="list-style-type: none"> • Project classification • Responsible personnel • Techniques used • Risk assessment • Capital rationing • Origin of rationing • Analysis of rationing • Cost of capital • Approving authority
Stage IV	Implementation and Control
	<ul style="list-style-type: none"> • Postaudit • Audit process • Performance measures • Performance incentives

Source: Adapted from Mukherjee and Henderson (1987), p.79.

According to Mills (1988a), the decision phase has received most attention in the literature particularly with regard to the proposal evaluation stage where there has been continuing emphasis on the use of greater sophistication in project appraisal techniques.

Figure 4.2

Phases of Project Appraisal

Phase I	The Creation Phase
	<ul style="list-style-type: none"> • Search for investment ideas • Sources of ideas • Initial screening of ideas
Phase II	The Decision Phase
	<ul style="list-style-type: none"> • Classification of proposals • Proposal feasibility clearance • Proposal Evaluation
Phase III	The Implementation Phase
	<ul style="list-style-type: none"> • Operational framework • Budgetary controls • Project post audit

Source: McIntyre and Coulthurst (1986), p. 3.

The discussion on the phases of project appraisal is relevant to the present study in the sense that it reflects the comprehensiveness of the appraisal process which entails serious commitment from the whole organisation, particularly from the owner of the firm. It also requires dedication, meticulousness and vigilance from everyone who is involved in the process, otherwise the performance of the project appraisal would be meaningless and just a waste of time and energy. It has to be remembered that the effectiveness or the accuracy of the appraisal is very much dependent on the quality of inputs that were put in the appraisal process itself.

4.3.5 Capital rationing in project appraisal

Capital rationing refers to the stage whereby a firm is constrained by its limited fund and not be able to undertake all investment opportunities that are expected to improve its earning performance. Most SMIs find themselves in this situation. As compared to larger firms, SMIs often have to rely on retained profits as this is only source of additional capital (considering limited access to debt and equity financing) whereas larger firms stand a better chance of securing external debts.

In theory, capital rationing should not exist in efficient capital markets (Mukherjee and Henderson, 1987). In such a market, funds should be available for any project that promises returns in excess of an appropriate risk-adjusted, required return rate. Mukherjee and Henderson (1987, p. 85) also argue that if a firm faces capital shortage, it encounters a rising cost of capital, not capital rationing. This increasing marginal cost of capital may be applicable to public-owned firms and where the capital markets are assumed to be efficient, but not so relevant to privately owned small and medium-sized firms in developing countries. This is because financial markets in developing countries are generally speaking inefficient. Furthermore, SMIs in developing countries have to face capital rationing whether they like it or not, as their opportunity to obtain credit from the financial institutions are often rather limited (This issue has been discussed in detail in Chapter 3).

4.3.6 Type of investment projects

Mott (1993, p.3) has classified investment projects according to its nature and purpose as follows:

- a. Legal requirements i.e. to comply with health/safety regulations;
- b. Replacements i.e. the renewal of existing plant and vehicles;
- c. Cost saving i.e. the substitution of new equipment for less cost-effective methods;
- d. Expansion i.e. provisions of more working capital and/or fixed assets to increase sales volume of existing product lines; and
- e. Diversification i.e. the introduction of new products requiring both working capital and fixed assets.

Following the classification made earlier by Dean (1951), Purohit, Lall and Panda (1994, p.12) have reclassified investment projects into the following:

- a. Replacement investment i.e. include like-for-like and obsolescence replacements;
- b. Expansion investment i.e. expanding the capacity to produce and sale of the existing products;
- c. Product investment i.e. include improvements of existing products and/or addition to the product line; and
- d. Other investments i.e. include indirect investments that are not revenue generating like investing in statutory pollution devices or investment in roads.

Another classification is provided by Kreps and Wacht (1975), in which they categorised projects as independent investments, mutually exclusive investments, pre-requisite investments and replacement investments. Yet, another classification was given by Edwards (1970) which include replacement, cost reduction, expansion and the introduction of new way of processing services or products. In the present study, any form of capital expenditure projects proposed by the firms should be evaluated using the project appraisal techniques and procedures.

4.3.7 Risk, return and cost of capital

A central aspect of any theory on project appraisal is the concept of risk (Gitman and Forrester, 1977; Petty, Scott and Bird, 1985; Klammer and Walker, 1984). According to Mao (1970), most financial writers argue that firms should choose portfolios (Markowitz, 1959 model) rather than projects, and they measure the risk of a portfolio by the variance of its return⁷. While the portfolio approaches may very well suit the large corporations, SMIs on the other hand do not have considerably many investment choices. Furthermore, in a number of studies on capital budgeting practices by small firms, it is clearly revealed that capital expenditures are not undertaken unless it is really necessary (Soldofsky, 1964 and Scott et al, 1972). To the small businessman, risk is perceived as the possibility of not getting back what has been invested (fixed and current assets) in terms of money in a particular business or project. In other words, a business is considered risky when the cash flow is very inconsistent, turnover is slow and when the business regularly fails to service its short-term obligation. The above outcomes represent the risk potential of a business investment based on the perception and experience of the entrepreneur himself or by learning from the experience of his colleagues. The longer it takes for a business to recover its cost of investment, the higher will be the perceived risk to the entrepreneur. Since, early recovery of capital and liquidity are the main concern of entrepreneurs, they are likely to disregard the long-term potential benefit that could be generated by the project in the future. This explains why the SMIs prefer the payback method and the accounting rate of return⁸ in

⁷Return could refer to either internal rate of return, net present value, payback period, or some other measure (Mao, 1970)

⁸This is sometimes called the return on investment (ROI) and represents the annual average profit expressed as some percentage of the investment outlay (Mills, 1988b).

appraising a business proposal apart from the informal criteria⁹ (Soldofsky, 1964; Louma, 1967; Scott et al, 1972, McIntyre and Coulthurst, 1986; Nimako, 1987; Sheehan, 1993b).

Risk and return have a positive relationship which means that the higher the risk the higher will be the expected or required rate of return. However, there is a cut-off point, where the business proposal is considered to be beyond the level of acceptable risk (absolute risk). Investment risk to the SMIs can be of two fold; firstly, the risk associated with the project itself (liquidity risk) and secondly, the financing risk, especially when the project is financed by external loans (default risk). Although, the risks are related to one another, it is an important consideration especially at the time when the entrepreneur is making the investment (in which project?) and financing (from which source?) decisions. In other words, some projects could be viable, when internal funds are used, but the reverse is true when external fund is secured¹⁰. Furthermore, the degree of investment risks that are acceptable very much depend on the risk-taking propensity of the entrepreneurs (Brockhaus, 1980).

As discussed above, capital (funds) for investments can be acquired from internal and external sources. Internal funds are in the form of retained earnings and depreciation-generated funds. External funds can be acquired by issuing shares, preferred stock or from bank borrowings. For small firms, the sources of long term finance is limited primarily to retained earnings and bank borrowings only¹¹. Funds from these sources

⁹Informal criterias include those which cannot be quantified in any uniform measurement such as risk averseness, intuition, gut-feeling and so on.

¹⁰This is based on the comparison of using 100 per cent internal financing to using 100 per cent external financing on a similar investment project.

¹¹In some cases, funds can also be secured from specialised agencies such as venture capitalists.

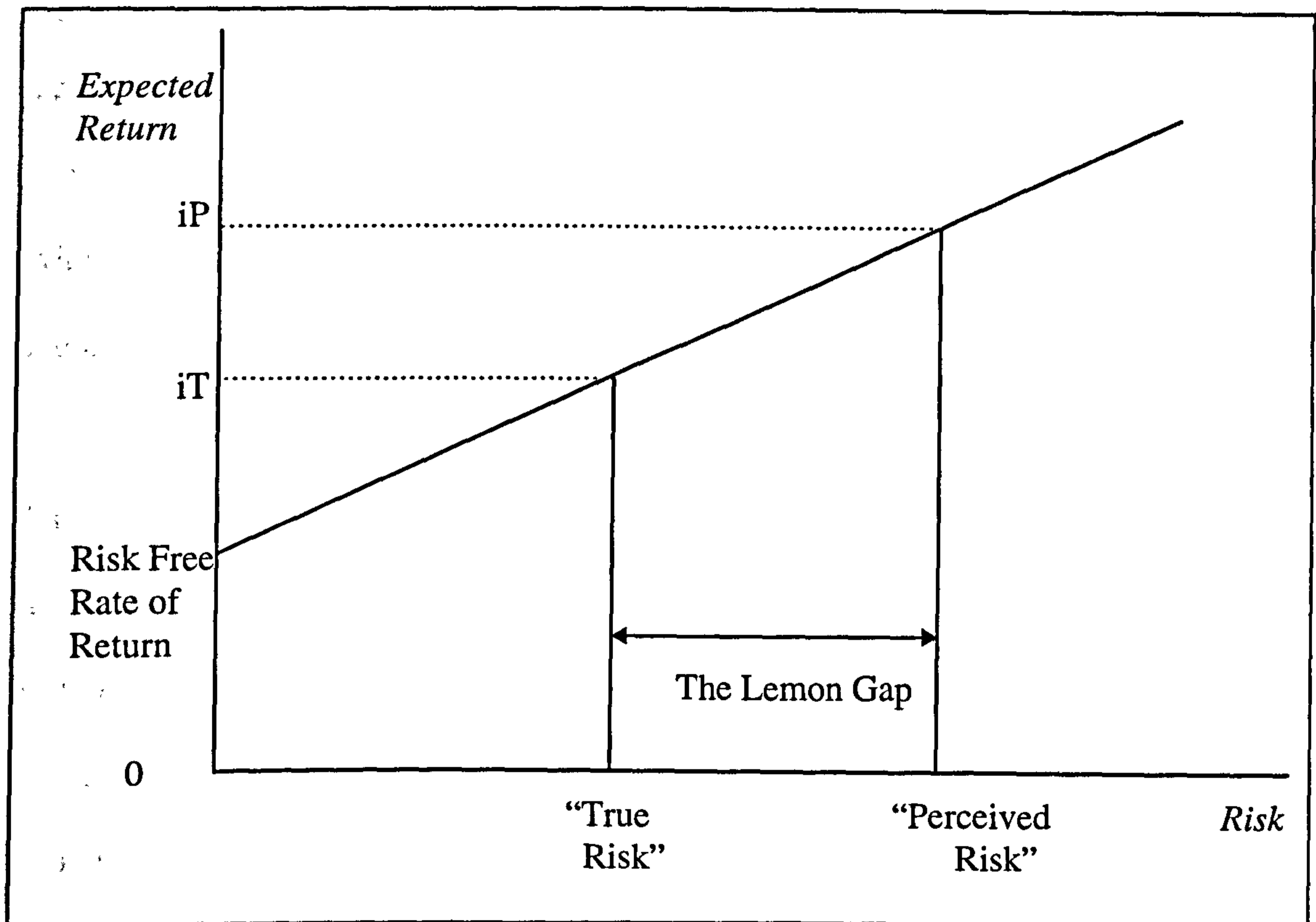
are not free. Even, the internally generated fund has some kind of an opportunity cost (Soldofsky, 1964). In terms of equity financing, the cost of fund is higher for external as compared to internal sources. High floatation cost renders external equity financing unattractive to small firms, evidently so, in emerging stock markets of the developing countries (Hutchinson and McKillop, 1992). As for debt financing, the cost of funds is much higher for smaller firms as compared to that for larger firms because lending to the small firms are considered riskier (Ahmad, 1991). Therefore, in general, small firms have to bear a higher cost of capital due to some level of risk that has to be assumed by the provider of capital. In other words, if the entrepreneur decides to use external source of financing to finance an investment proposal, a higher expected return has to be anticipated from that particular project (due to a higher cost of capital).

The higher cost of capital that has to be paid by the SMIs is theoretically related the so called "lemon gap"¹² (Figure 4.3). According to Kitchen (1989), SMIs, especially in developing countries are regarded as 'high risk' ventures. Therefore, the level of risk associated with the riskiest small business tend to be applied to all small businesses. As a consequence, bad businesses tend to drive the good out of the financial markets, as the latter have to raise equity or debt on terms which exaggerate their risk. Since financial institutions can seldom assess carefully the 'true risk' as opposed to local moneylenders, they tend to charge a higher premium on their loans in order to eliminate the lemon gap. In the end, all SMIs (not just the 'bad ones'), have to pay a higher cost on their loans.

¹²The 'lemon gap' refers to the gap between the true risk and the perceived risk of the financial market. Akerlof (1970) has provided a foundation work on the market for higher risk assets.

Figure 4.3

True risk and Perceived risk



Source: Kitchen (1989), p. 290.

However, one of the main problems in small firms' investment practices is that they do not employ a proper method in computing the rate of return and the cost of capital. How do small firms determine their required rate of return, if they do not know their own cost of capital?

McMahon and Holmes (1991), found no evidence on the methods of determination and the use of capital project hurdle or screening rates by SMIs. For example, he cited in Soldofsky (1964) study, that only four firms have attempted to calculate some variation of the average cost of capital for use as a hurdle rate. He also cited a study by Scott et.

al. (1972) which indicated about 61 per cent of the respondents screened capital expenditures by comparing the expected rate of return on investment with the cost of capital or some cost of financing. Some firms utilise a simple yardstick by comparing the expected return on investment with the return if the same money is invested in risk-free securities such as government securities, trust shares and fixed deposits. The above evidence suggests that the state of knowledge about financial management, and the exercise of financial controls and techniques remain inadequate in small businesses.

4.4 Project Appraisal Methodologies

Basically, there are three primary methods of project appraisal, namely the *OECD method* developed by Little and Mirrlees (1974), the *World Bank Method* developed by Squire and Van Der Tak (1975) and the *UNIDO method* developed by Dasgupta and Sen (1972).

In the *OECD method*, industrial projects are evaluated from the point of view of society as a whole and also from that of the firm i.e. to consider the evaluation of projects at macro as well as micro level. Discussion on this method is concentrated on the price mechanism which according to Little and Mirrlees does not work well in developing countries; profits do not represent a good measure of net social benefit in developing economies, for several reasons, such as inflation, very imperfect markets etc. Therefore, they recommend shadow prices and shadow wages to be used in the analysis. However, if we are concerned more towards commercial profitability to the firms, it has been suggested that the use of market prices and market wages in analysis at the micro level would be more appropriate.

Under the *World Bank method*, project appraisal is performed according to the following three steps:

- a. *Financial/Commercial appraisal* where the analysis is done by using market prices.
- b. *Efficiency appraisal* where optimal allocation rationale is used in order to select projects.
- c. *Social appraisal* where distribution and growth objectives of policy makers are explicitly allowed for. This is done by assigning appropriate weights to private costs and benefits.

Finally, the *UNIDO method*. This method provides developing countries with useful guidelines which could incorporate the evaluation and approval of new industrial projects in their overall industrial strategy. The theoretical aspects of social cost-benefit analysis are dealt with, and they compared commercial profitability analysis with profitability analysis. The method recommends the use of social rate of discount, social value of investment and shadow wage rate.

All of the above methodologies employ project appraisal techniques and procedures as a platform of deriving the best suitable projects which correspond to the needs of the developing nations. As such, their appraisal is focused on the socio-economic impact on the society and the nation as a whole. That is why, in all these methods, accomplishment of social objectives is far more important than just a single firm's profit maximisation objective. In the context of the present study, project appraisal is intended to provide SMIs with the maximum information concerning the investment project so that the firms investment risks can be reduced, thus reducing rate of SMI

failure. It is also intended to be used as guidelines by the entrepreneurs especially in the decision and implementation phases. Therefore, the present study will focus primarily on the financial/commercial appraisals of investment projects.

4.5 Approaches to Project Appraisal

The two most common approaches to project appraisal are the *cost-benefit analysis* approach and the *commercial profitability analysis*. The *cost-benefit analysis*¹³ can be further sub-categorised into *social* and *private* cost-benefit analysis. In the social cost-benefit analysis, the social and economic merits of an investment project is examined by quantifying the costs and benefits in financial terms using shadow prices with the objective to maximise the net benefits to the society. In this approach, both the social and financial costs are taken into consideration and the criterion for accepting (rejecting) is based on whether the expected project benefits exceed the costs by a sufficient (usually predetermined) margin.

On the other hand, the commercial profitability analysis focuses on the income potential (earning power) of a particular project. According to the UNIDO (1980), commercial profitability analysis consists of two components, namely the *investment profitability analysis* which measures the profitability of the resources committed to the project or alternatively, it is a measure on the rate of return on the capital no matter what the sources of financing are; and, the *financial analysis*, which includes liquidity and capital structure analysis.

¹³For general background readings on cost-benefit analysis, see Mishan (1982), Irvin (1978), Sugden and Williams (1978), Layard (1974), Little and Tipping (1972).

The social cost-benefit analysis is more appropriate when making comparisons between large economic projects which will have a significant impact on the society as a whole. However, its relevance in assessing individual/private firms' investment, is very much doubted for the simple reason that it does not take into account the earning potential of the investment. In addition, both approaches do not have a common objective. On that score, it is suggested that the more appropriate project appraisal approach to the SMIs is the commercial profitability approach.

4.6 Evaluation Techniques in Project Appraisal

Basically, there are four main evaluation techniques used in appraising a project, namely project evaluation techniques, risk-assessment techniques, risk-adjustment techniques and management science techniques (Kim and Farragher, 1981). The most common methods in project evaluation techniques are the *conventional* methods (payback method and return on capital employed [ROCE]) and the *sophisticated* methods¹⁴ (the internal rate of return [IRR] and the net present value [NPV]).

4.6.1 Non-discounted cashflow techniques (NDCF)

The payback period method and the return on capital employed are among the two most commonly used by firms in evaluating a proposed project. These techniques are known as NDCF techniques because they do not incorporate the time value of money into the evaluation process.

¹⁴Also popularly known as the discounted cashflow methods or time-adjusted measures.

The payback method

This method uses the payback period as the evaluation criteria. Payback period is the length of time (usually in years or months) for the net revenues (or cash operating surpluses) generated by a particular investment to equate the cost of the investment. If the payback period is less than the one set by the firm, the proposed project will be undertaken. Despite its simplicity, this method has two major drawbacks. One, it ignores any future cashflows beyond the payback period and second it does not take into account the time value of money.

Return on capital employed (ROCE) method

This method is also commonly known as accounting rate of return (AROR) or return on investment (ROI) and has a wide variety of different methods of computation. According to Lumby (1994), there are two common ways of expressing the ROCE in practice. One is the ratio of the average annual profit generated over the life of the project to its average capital employed. The other approach is to take the average annual profit as a ratio of the initial outlay. In using this method, a firm sets a certain percentage return which the investment project must generate in order to be accepted, that is the required rate of return. Therefore, if the rate of return on capital employed is higher than the required rate of return set by the firm, the proposed project should be undertaken. However, this method also suffers the same drawbacks as the payback method.

4.6.2 Discounted cashflow technique (DCF)

The DCF techniques are the more preferred than the NDCF techniques because these methods provide the basis for ranking proposals by employing the time value of money

concepts. The two most common methods under DCF are the internal rate of return (IRR) and the net present value (NPV).

The internal rate of return (IRR)

Under the internal rate of return (IRR) method, a firm calculates the projected rate of return on the capital invested in the project over its life. The aim of the IRR method is to find a percentage rate of discount that will reduce the present values of the sequence of cash inflows to equate the value of the cash invested in the project. The formula for IRR is as follows:

$$\sum_{t=1}^N \frac{C_t}{(1+r)^t} - K_0 = 0$$

where: r = the rate of return which yields a zero to net present value of future inflows.

C_t = the projected net cash inflow (usually after tax) at time t

N = the number of years of the project's life

K_0 = the initial investment cost.

The standard IRR decision rule for mutually exclusive investments is: (1) select the project which has the highest IRR; and (2) accept the project if its IRR is greater than or equal to some predetermined 'cut-off' rate usually the required rate of return set earlier by the firm. Despite its mathematical sophistication and incorporation of time value of money, this particular method suffers one major criticism - that is it can produce multiple IRRs which impede the decision making process.

The net present value method (NPV)

Under the net present value method (NPV), a firm chooses a minimum acceptable rate of return, and, using that rate, calculates the present values of the future cashflows generated by the project. If the sum of the present values of the cashflows calculated exceeds the amount of original investment outlay, it shows that the project earns more than the minimum rate and should be accepted. But if the sum of the present values is less than amount of original investment, the project does not meet the minimum rate of return required and therefore should be rejected. The formula for NPV is as follows:

$$\text{NPV} = \sum_{t=1}^N \frac{C_t}{(1+i)^t} - K_0$$

where: i = the minimum acceptable rate of return

C_t = the projected net cash inflow (usually after tax) at time t

N = the number of years of the project's life

K_0 = the initial investment cost

According to Mukherjee and Henderson (1987, p.84), the net present value method is considered to be superior to the IRR method because (1) it conforms to the value-additivity principle - wealth maximisation (2) its assumed reinvestment is consistent with valuation theory and uniform across projects, and (3) it avoids multiple rates for a single project which sometimes result from using IRR.

4.6.3 Risk-adjusted measures

There are two broad approaches under the risk assessment techniques; the simple risk adjustment (SRA) and the probabilistic risk analysis (PRA) approaches. Shortening the

acceptable payback period and adjusting the required rate of return are the two most common methods used under the simple risk-adjustment techniques. However, the probabilistic risk analysis techniques are becoming increasingly important especially the use of sensitivity analysis (SA), probability analysis (PA) and the Hertz-type risk simulation (RS) methods (Blazouske, Carlin and Kim, 1988; Ho and Pike, 1992). The PRA approach usually involves estimating the uncertainty surrounding forecasts and then deriving probability distributions and other derived statistics for performance criteria such as NPV and IRR. The added information gives the owner better insight into the risk situation so that they can make a more effective risk/return trade-off decision.

Using sensitivity analysis (SA), the goal is to identify the uncertain factors which have a significant impact on project's return. This technique usually involves a series of 'what if' questions by giving a percentage change to each key assumption one at a time. Probability analysis (PA) technique usually includes all probability-based analytical methods such as the decision trees, critical path method etc. It provides answers to questions such as what is the probability for the project to have a given NPV or IRR?. One simple example is to assign probability distributions of future period-by-period cash flows and produce a probability distribution of NPV/IRR. Risk simulation (RS) technique usually involves varying the key variables which impinge on a project via computer in order to generate a series of possible returns for the various combinations of those key variables, and obtain a probability distribution achieved for the project's NPV/IRR.

All of the above methods under each different techniques are actually aimed at reducing risk and uncertainties associated to a particular project as well as to provide an estimation about the future benefit (incremental cashflow) that could be derived by the firm undertaking the project. In other words, they provide as much information as possible about the future of the investment in terms of profitability and viability. Risk analysis enables decision makers to examine, discuss and eventually understand why one course of action might be more desirable than another. If applied properly, risk analysis techniques should foster managerial/entrepreneurial judgement rather than replacing it in the decision-making process (Ho and Pike, 1992).

4.7 Adoption of Project Appraisal Practice by SMIs

In this section, a special literature review is provided in order to observe the adoption of project appraisal practices by the small and medium-sized industries in both developed and developing countries. This review is undertaken in order to determine the significance of adopting these practices to assess the firms' performance which we considered as vital in assessing their access to external funding.

4.7.1 Project Appraisal Practice by SMIs in Developed Countries

Numerous studies in the past have focused on the practices of large corporations (and their subsidiaries) in performing project/investment appraisals and many of these surveys were conducted in the developed countries. Only a handful of studies have been conducted on the SMIs. In the United States, for example, prior to 1980, all surveys on capital budgeting were concentrated on large industrial firms (except a study by Mao,

1970 which included sample of the medium-sized firms)¹⁵. In the United Kingdom, prior to 1987, only three surveys on capital budgeting practice, involving SMIs, have been reported¹⁶.

The study by Mao (1970), only focused on the essential points of disparity between the theory and practice of capital budgeting. According to him, in theory, the scientific methods of assessing and measuring risk (investment appraisals) are regarded as more precise than the conventional methods but, in practice, financial executives still prefer the later. However, no comparisons were made between the practices of the large companies and those of the medium-sized firms in this particular study.

Nimako (1987), found that the majority of small businesses surveyed do not engage any technique at all. This finding is not surprising since these companies do not have proper accounting records and formal investment procedures. Where companies do perform the appraisal, they only use the conventional methods such as the payback method. The lack of a more sophisticated methods being utilised might reflect either the impracticality of purpose or SMIs themselves have limited knowledge about the techniques. The conventional methods are more preferred because of their simplicity and furthermore SMIs prefer a shorter period to recover back their investment due to lack of long-term resources. Since there is no evidence for the use of the more sophisticated methods by SMIs, it can be assumed that the risk-assessment and risk-adjustment procedures were never used in appraising the investment projects.

¹⁵See Mukherjee (1987), p. 38

¹⁶See Mills (1988b), p. 77

In another survey on medium-sized companies in the UK, McIntyre and Coulthurst (1986), found that the payback method is overwhelmingly popular where single evaluation systems were in use. It was also reported that the payback was the most common partner to other methods of evaluation where multiple criteria were in use¹⁷. From a sample of 141 firms, about 80 per cent of the firms were found to use the payback method while 44 per cent of them use the discounted cashflow techniques. This observation reveals that small and medium-sized firms prefer 'simple' methods as opposed to 'sophisticated methods'. The reason for this is quite straightforward. Many of these firms do not have the technology or expertise to perform complicated appraisal, let alone the time and cost (resources) needed to carry out the appraisal. This survey confirms the earlier findings by Westwick and Sohet (1976) except in the DCF methods used, where they have found the internal rate of return (IRR) method is more popular than the net present value (NPV) method.

From the above studies, it seems that "*firm size*" has some influence on the use of the more sophisticated method i.e. as size of the firm grows bigger, there is a tendency for the use of more formal and advanced techniques. Mills and Herbert (1987), McIntyre and Coulthurst (1987) and Nimako (1987) confirmed the influence of size on the types of method used. Pope (1987) and Mills and Herbert (1987) have found that there was no association between the use of discounted cashflow technique and the type of industry. However, it has been reported in some studies that more "*technologically-oriented*" industries tend to be more advanced in the use of sophisticated capital budgeting practices (Kim and Farragher, 1981). There is also no evidence to suggest the

¹⁷It was reported that sixty eight firms use single criteria while seventy three firms use multiple criteria.

existence of any significant correlation between investment appraisal techniques and the firm's performance (Klammer, 1973; Haka, Gordon and Pinches, 1985).

Hankinson (1984) has provided an excellent analysis regarding the investment behaviour of small firms. His analysis is basically based on the findings of 1979-1982 South Wessex Survey on 52 small engineering firms which was aimed at examining the motivations and weaknesses behind the firms' investment decision making. The major findings are as follows:

- (a) small firms tended to ignore certain opportunities to reach the highest attainable return on investment and diversification is seen as impracticable and regarded as very risky rather than risk spreading¹⁸;
- (b) in terms of goals strategies, it was found that small firms have very narrow goal strategies. The two most important objectives are satisfactory profit and survival;
- (c) the majority of firms did not have a comprehensive and formal investment strategy and even if they do, most investments that were undertaken are non-strategic, piecemeal, non-anticipatory and geared to survival only;
- (d) most investment was inspired by the necessity criterion and consideration on the cost of borrowing, credit availability and government investment incentives were revealed to be secondary;
- (e) the majority of firms used banking facilities for investment purposes only when their own, or private funds, had been inadequate;

¹⁸In the portfolio approach, the object of diversification is to spread the risk, but in practice, diversification is perceived by the executives as a long-term growth strategy (See Mao, 1970, p. 357)

- (f) credit availability had little or no effect on 73 per cent of the sample, and where some influence was discernible, this occurred only under special circumstances; and,
- (g) in terms of investment appraisal methods, 44 per cent employed traditional approaches; only 8 per cent used discounted cashflow but 48 per cent either used trial and error methods or none at all.

The above findings evidently underlined the fact that small firms lack investment initiatives especially visionary investments. The lack of initiative detected was not due to insufficient support by the government or banking institutions, rather it reflected a low risk taking propensity of the entrepreneurs as well as their contentment with the present operation. Investment was undertaken only under the circumstances of necessity or survival. Furthermore, the main objective of these SMIs is not profit maximisation rather it is more on survival and satisfactory profits. This observation bears a very important implication on the supply of funds to the SMIs by the banking institutions. Should banks be forced to set aside some funds, while the SMIs themselves (particularly , the risk-averse entrepreneurs) are not really in need of them?

A more recent survey on the related subject of investment appraisal by SMIs in the UK was conducted by Sheehan (1993b), where she found that 91 per cent of the small and 78 per cent of the medium-sized firms in her sample do perform and used formal investment appraisal techniques. However, the majority of these firms in her sample are subsidiaries of larger corporations which require them to carry out a formal investment appraisal before undertaking any investment projects. What is of interest to the present study is that she had also found that independent companies and family-run businesses

do not normally perform project appraisal as they “*did not believe in such formalities*” (Sheehan, 1993b, p. 514).

4.7.2 Project Appraisal Practice by SMIs in Developing Countries

In the previous section, we have discussed the experience of SMIs in the developed nations. How about SMIs in the developing countries? Do they perform project appraisal before undertaking any kind of investments? Unfortunately, the evidence from the literature on this is extremely limited. Up to date, we have found only two references. Beng, Choudhury and Tee (1986) carried a survey on Singaporean small private firms¹⁹ engaged in manufacture, service and trade. In this survey, they have found that 38 per cent of the small firms surveyed were not aware of the capital budgeting techniques and they have suspected that it could be due to the *impracticality* rather than pure ignorance of the methods. Also, about 25 per cent of the sample indicated that they were aware but did not use the method because of the inapplicability of the technique to their own firm. This finding has led the authors to argue that project appraisal techniques are large-firm orientated and not appropriate for small firms. Following this observation, it has been suggested that a more appropriate project appraisal’s technique for SMIs needs to be developed.

In the second study conducted by Velez and Nieto (1986) in Bogota, Colombia, they found that the extent of use of the more sophisticated capital budgeting techniques is much higher in larger firms than in the smaller firms. This particular study was initially

¹⁹Small firm in Singapore is defined as firms having less than S\$8 million invested in fixed operating assets (Chng, 1983). Subsidiaries of multinationals were not included on the assumption that they may readily adopt their head-office management accounting practices.

intended for the top 100 firms of the country but, since they only had access to 42 of them, they increased the sample size by adding 17 small firms and 11 medium-sized firms to arrive at a total sample of 70 firms. The above finding is quite consistent with previous studies elsewhere, (see for example, Mills and Herbert, 1987; Beng, Choudhury and Tee, 1986). One possible explanation for the adoption of more sophisticated techniques by the larger companies could be due to the nature and size of their investments, thus requiring them to be more meticulous in performing the project appraisal.

From the above limited references, only very little information can be obtained about the project appraisal practice of the SMIs in the developing countries. Furthermore, these surveys focused only on the practice or process i.e. the application of techniques and methods and do not mention explicitly the main reason for conducting project appraisal. None of the above studies have seriously examined the applicability of project appraisal practice by SMIs within the context of improving access of these SMIs to formal institutional finance. The present study is designed to fill this gap and intends to demonstrate that wider application of project appraisal practice by SMIs can and should reduce the element of risk and uncertainty associated with the long-term prospect of the sector. This object is viable, (as confirmed by the result of the present study), since SMIs adopting project appraisal practice are found to face less difficulty to access the formal sector finance than those who do not adopt similar practice.

The pessimistic attitude of the entrepreneurs as mentioned by Hankinson (1984), and the impracticality of purpose (Beng, Choudhury and Tee, 1986) and also the lack of belief in such formalities (Sheehan, 1993b), should not be seen as an impediment to the

whole exercise of project appraisal. Rather, it should strengthen the case for SMIs to be more vigilant and receptive to adopt the practice for their own benefits.

The present study is intended to investigate the hypothesis that perceived risks and uncertainties that are usually associated to SMIs' will be minimised in the long-run without having to considerably increase the transactions costs if project appraisal practice is undertaken by the SMIs. This hypothesis is based on the presumption that the 'lemon gap' (i.e. the gap between the perceived risk and the true risk) can be reduced in the long term as financial institutions become more knowledgeable and more informed about the risks and uncertainties inherent in the SMI sector, as more information are now available from the project appraisals' documents.

At the micro level (i.e. at the individual firm's level), project appraisal can be a very useful and important management tool, primarily in providing useful information (particularly in determining the project's potential viability) that can be used for effective decision-making, thus minimising the risk associated with the proposed project. It can also be helpful to the SMIs seeking finance from the formal financial institutions as the latter will be more informed (through the assessment of project appraisal document), thus increasing the possibility of the proposed project to get external finance (improved accessibility). However, in the short run, the firm might have to initially bear the cost of the appraisal (which may increase its transactions costs of borrowing), but this initial increase in cost shall be compensated with the substantial reduction on its own subjective risks as perceived by the lenders. Hence, in the longer-term, the firm's overall costs of borrowing will be reduced; first, the costs associated to the firm's subjective risks will be reduced as lenders become more knowledgeable and informed

about these risks, and second, the firm's transactions costs will be reduced as they become more efficient in performing the appraisal. This outcome can be seen as an added advantage to the SMIs in Malaysia, since, by performing the project appraisal, not only their access to formal sector finance is improved, their costs of borrowing will also be lowered in the long-term.

The performance of project appraisal at the sectoral level can help reduce the costs of preparing individual project appraisal, as the information and data collected and analysed at the sectoral level could be shared by a number of prospective entrepreneurs at little or no cost. The performance of project appraisal at the sectoral level is recommended to be undertaken by agencies or institutions that are specifically related to the development of small and medium-scale projects at the national or regional levels. According to Frohlich et.al. (1994, p. 39), the project appraisal at the sectoral level should be able to provide essential information on the opportunities existing in a particular sector as a whole as well as on factors that might have significant influence on the success or failure of the identified projects within that particular sector. It must also provide a critical background information with emphasis on sector-typical factor inputs and project characteristics, including critical variables, risks, competitiveness, profitability and other conditions for success. The preparation of project appraisal at the macro level, will reduce the cost of specific firm's project appraisal because much of the data required for the design and appraisal of the latter would already have been collected and could be made available at minimum cost or free. In addition, those who are interested in the particular sector, (for example, banks considering loan application from an SMI firm), can also have access to these information, which, would substantially reduce their transactions costs, if they were to collect the information by

themselves. The benefits derived can be passed on to their prospective clients (such as the SMIs) in terms of relatively easy access to debt finance as well as reducing the higher costs of risk-premium usually levied on SMIs' loans.

4.8 The Role of Project Appraisal in Reducing Risk and Uncertainty

As indicated in the preceding paragraph, the perceived risks and uncertainties associated with the SMI sector can be reduced in the long-term, provided that SMIs perform project appraisal before investing in any capital expenditure projects. It has been discussed before that the perceived risks faced by financial institutions in extending long-term finance to the SMI sector is very high due to a number of factors such as high transactions costs, information asymmetries, moral hazard etc. (lenders' risks). All these factors lead to higher risk and lower profitability. To compensate for the higher risk as well as to improve profitability, the majority of banks have adopted several measures such as tighter control on funds allocated to small business lending, strict eligibility criteria, physical and non-physical collateral requirement and charging higher interest rates. All these measures are detrimental to the growth and development of SMIs, especially in a country where the industrialisation process is speeding up.

The interest charged by banks constitute as one of the main components in the cost of capital of the SMIs project appraisal exercise. As discussed earlier (in Section 4.3.7), the relationship between risk and return for a particular investment proposal is very much reflected in the cost of fund used to finance the investment. If internal financing is used, which means lower cost of capital for the firm, then by holding the project risk constant, the required rate of return from the project can be lowered. On the other hand, if external financing is used, by holding the risk constant once again, the required rate

of return has to be higher (to compensate for a higher costs of borrowing). In other words, the higher the cost of funds, the higher the cost of capital will be and the higher will be the expected return required from a particular investment by the firms. In theory, so long as the expected return is higher than the cost of funds, the firm will be better off. But in practice, the cost of fund is almost fixed whereas the forecast return can have a very large variance in its actual outcome. If the cost of funds can be reduced, then the expected return can be improved and this in turn will help borrowers to service its debt more easily. (This issue which relates to the discussion of lender's and borrower's risk has been dealt with quite extensively in Chapter 3).

How can the cost of funds to SMIs be reduced? Looking at the relationship, the cost of funds can be reduced if the lenders' risk can be reduced. One of the ways to reduce lenders' risk (which will eventually reduce the costs of lending) is to reduce their transactions costs; that is, to reduce the costs of acquiring accurate and reliable information about the borrower and his/her proposed project, apart from the common measure of getting some kind surety/guarantee to compensate for the incomplete information. To demand collateral in order to compensate for information asymmetry will only result in higher transactions costs for both borrowers and lenders, without having significant impact in reducing the subjective risk premium in the proposed project. Therefore, a more effective way of reducing the overall cost of fund is to reduce the costs subjected to the subjective risk component, with none or minimal increase in the transactions cost's component. The essence of the present study is trying to establish the practical role or applicability of project appraisal in widening the access to finance and reducing the cost of finance to the SMI sector in developing countries, particularly in the Malaysian context.

In this dissertation, it is suggested that project appraisal methods should be adopted by SMIs in order to reduce their overall risks which in the long-term will enhance their prospect of relatively easy access to long-term finance from the formal sector. Project appraisal methods have been widely used by large corporations in selecting and evaluating investment proposals and in assessing the potential risk associated with the project. Since current available practices of appraising techniques are better suited to larger corporations than SMIs, because they are expensive and time-consuming to SMIs, it is time simpler and more effective appraising techniques tailored to the needs of the SMIs are developed. It is believed that all information gathered at the macro and micro levels about the projects, in terms of their potential viability (commercial, technical and financial viability), as well as a comprehensive description about the firm's history and experiences, together with the background of the key personnel, will help to reduce information asymmetries to the financial institutions and also could cut information costs to the minimum. It will also enable formal sector lenders to make their own objective assessment on the potential borrower and the proposed project.

SMIs in developing countries should be motivated and encouraged to learn and adopt project appraisal methods and procedures through training and consultancy by the relevant governmental agencies. It will be a better strategy for the governments to spend money on providing the relevant training scheme (such as training on project appraisal) rather than "forcing" the financial institutions to lend money to the priority sectors or subsidising the interest rates.

4.9 Summary

In this chapter, an extensive review on the adoption of formal project appraisal practices by the small and medium-sized industries has been carried out. At the beginning, the importance of performing project appraisal by these SMIs has been explained. By adopting a formal project appraisal practices, SMIs can arrive at better, well-informed investment decisions so that scarce resources can be effectively allocated. In addition, project appraisal documents can be used as a guide in the project's implementation programme. By adopting formal project appraisal practices, the risk and uncertainties associated with the proposed project can be minimised, thus, increasing the probability of getting external finance from banks and other financial institutions.

Following the discussion on the importance of project appraisal, various terminologies related to project appraisal were explained. Shortly after that, an extensive review of the literature concerning the project appraisal practices of SMIs in both developed as well as developing countries were provided. While there are considerable number of research done on this area in the developed countries, the number of research in developing countries is far too limited. It is our hope that, this particular research can add to the body of knowledge on project appraisal practices by the SMIs especially for the developing countries.

In order to relate the importance of project appraisal practices to the firms performance as well as the firms' access to external finance, the relationship between risk and rate of return was briefly discussed. The discussion on the perceived risk from the view of SMIs as potential borrowers and bankers as potential lenders was given next. Finally,

the chapter closes with the discussion on the feasibility of reducing the risk borne by the borrowers and lenders by adopting of formal project appraisal practices, by bridging the information gap between the two sides.

Chapter 5

THEORETICAL FRAMEWORK, OPERATIONAL RESEARCH OBJECTIVES AND DERIVATION OF HYPOTHESES

5.1 Introduction

In this chapter, discussion is focused on the theoretical framework and the development of operational research objectives and hypotheses that will be utilised for the purpose of the study. The discussion is divided primarily into four sections. The first section will discuss the theoretical backdrop upon which the current research is based. In the second section, discussion will focus on the development of the present research framework. The third section deals with the development of the operational research objectives and research hypotheses. Finally, at the end of the chapter, a summary is provided.

5.2 Theoretical Framework

Much of the literature on the provision of finance to small and medium-sized industries tend to focus on the lack of access of these SMIs to institutional finance (see for example, Macmillan, 1931; Radcliffe, 1959; Bolton, 1971; Wilson, 1979; Bates, 1964; Binks, 1979; Hutchinson and McKillop, 1992; Chee, 1992; Horvitz and Pettit, eds.; 1984; Keasey and Watson, 1993a, 1993b; Hugh and Storey, 1994; Lin, 1996; Cowling and Westhead, 1996). For lack of access to finance, the growth of the small and medium-sized industries has been hampered (Binks, 1979; Binks and Ennew, 1996). Usually, small and medium-sized industries rely heavily on self-financing or obtain finance from some other informal sources at a higher cost (Meyer and Nagarajan, 1988; Dias, 1990).

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The lack of access to institutional finance has been constantly attributed to the failure of these institutions to respond adequately to the financial needs of the small and medium-sized industries. Much of the relentless criticisms are centred on the unfairness of banks in rationing credit to these companies. Furthermore, many of these SMIs have been unable to secure funding, either because they are not able to provide adequate collateral as demanded by the suppliers of finance or because they cannot afford the cost of finance (Godley and Ross, 1996).

Numerous studies in the past have tried to provide some explanations to the above allegations (see for example, McKinnon, 1973; Bhatt, 1981; Stiglitz and Weiss, 1981, 1990; Greenwald et. al., 1984; Binks et. al., 1992; Berry et. al., 1993; Petersen and Rajan, 1994; Binks and Ennew, 1996; Cowling and Westhead, 1996; Godley and Ross, 1996; Chittenden et. al., 1996). Many of the theoretical and empirical explanations revolve around the imperfections found in the financial markets. There are three major causes for the financial market imperfections which include: (i) governments interventionist policies; (ii) imbalances of market power; and (iii) imperfect information or information asymmetries. Each one of the above causes is discussed in detail below.

5.2.1 Interventionist policies

One of the major causes of the financial market imperfections is the government's interventionist policies in the financial system (McKinnon, 1973; Bhatt, 1981; Kitchen, 1989). Controlled interest rates and compulsory lending to certain priority sectors are among the common examples of government interventionist policies. Government-induced imperfections may encourage or discourage SMI financing (Kitchen, 1989).

Financial intervention through controlled interest rates and high bank deposit requirements with the central bank will generally lead to credit rationing and the favouring of large, well established borrowers with a good track record and valuable collateral, and therefore discriminate against smaller, younger, more innovative and, essentially riskier businesses. On the other hand, the direction of lending to SMIs, the creation of special (and usually subsidised) arrangements for SMI financing, and the provision of subsidised loans and subsidised loan guarantee schemes tend to favour SMIs. These interventionist policies are said to undermine the role of the financial system to allocate scarce resources efficiently.

In Malaysia, for example, small and medium-sized industries were recognised as one of the 'priority sector' in 1972 alongside the agriculture sector. Interest rate on loans extended to these sectors was set by the central bank, usually at levels below the variable rates that banks normally charge to larger borrowers. Apart from controlling the interest rate, the Central Bank (Bank Negara Malaysia) also issued various lending guidelines requiring commercial banks to allocate a proportion of its loanable funds to these priority sectors. In 1990, the SMI sector was no longer considered a priority sector, and the preferential rate of interest on SMI loans was abolished. However, the Central Bank still issues lending guidelines (from time to time) for government-backed loans of the Credit Guarantee Corporation. The loans extended under the CGC schemes are reported specifically in the Central Bank's annual report under a special column entitled "Bank Lending under the CGC Scheme".

The lending guidelines introduced by the Central Bank are intended to encourage commercial banks to change their attitude towards the small and medium-sized

industries. Nonetheless, the opposite effect was encountered. Over the years, the ratio of total outstanding small business loans to the total loans granted by banks was found to be decreasing. For example, in 1980, the total loans extended by commercial banks to small businesses was at RM3,330.7 million or 17.7 percent of the total outstanding loans (Haron, 1990) but by the end of 1995, the ratio was only 5.7 percent¹ (Lin, 1996)

The reluctance of commercial banks to comply fully with the lending guidelines is also evident in the numbers of commercial banks which were penalised for their non-compliance. In 1983, twenty three banks were reported to have failed to comply with the lending directives and this figure increased to thirty two in 1984 and 1985. By the end of 1989, the number had reduced to twelve (Haron, 1990) and by the end of 1995, the number of non-compliance further fell down to four banks. Although the number of non-compliance continues to decline, the fact that there are still cases of non-compliance indicate a very strong resentment on the part of the banks to the interventions by the Central Bank.

As discussed in Chapter 3, the policy of controlling interest rate by the Central Bank in Malaysia does not significantly improve the provision of finance by the formal financial institutions. Therefore any policies to impose directed lending at preferential interest rate will only worsen the provision of finance to the SMIs. Since the artificial rates imposed on bank loans do not reflect the risks involved, banks are forced to ration credit to this particular sector while concentrating its lending to the more profitable sectors. Another serious side-effect of interventionist policy (such as financial repression and credit rationing), is that it encouraged unprofessional lending practices,

¹The ratio in 1995 includes loans extended by finance companies.

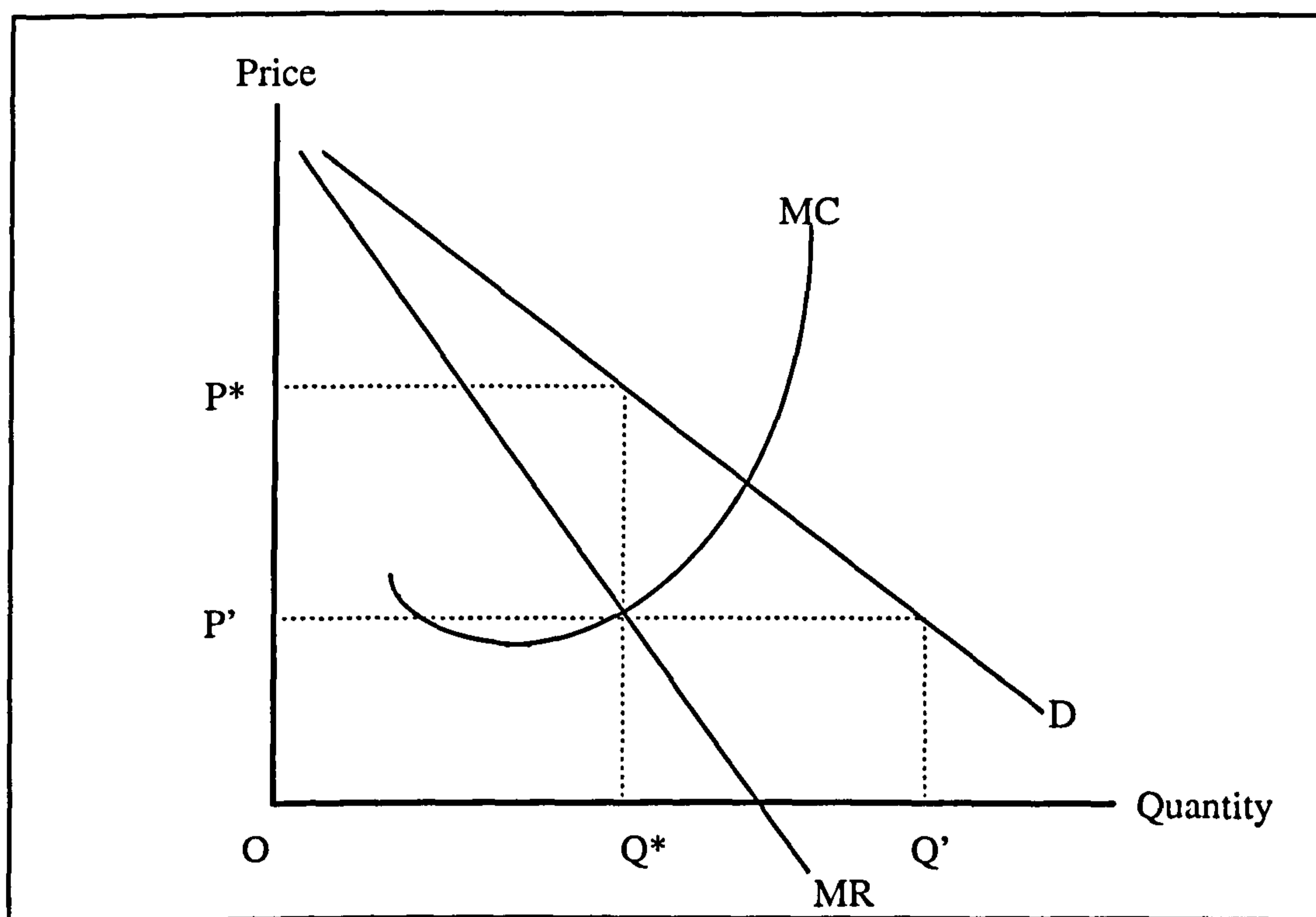
such as collusion and corruption among bank officers. Many authors (see for example, Anderson and Khambata, 1985; Von Pischke, Adams and Donald, 1983; Howell, 1980; and Lipton, 1976) have stressed the point that unprofessional practices lead to higher default rates, thereby increasing the risk of lending. It is therefore argued that instead of intervening in the financial system, it would be more appropriate for the government to focus on efforts that will enable small and medium-sized industries to have more and better access to institutional finance. One such effort could be providing specialised training on project evaluation and improving the relationship between the small-companies and the suppliers of finance (Marshall et.al, 1995).

5.2.2 Imbalances in market power

Market power basically refers to the ability of an agent in a transaction to act as a price-maker (Cowling and Westhead, 1996, p. 53). In the credit market for small companies, the power to influence the lending contract lay in the hands of the suppliers of credit. That is to say, the providers of finance are able to decree the price and quantity of loans. This is particularly true since banks are seen to have greater monopoly power over small businesses than larger. Theoretically, if the market for credits is assumed to be competitive, the equilibrium price will be at P' and the equilibrium quantity of loans will be at Q' (Figure 5.1). But the credit market, particularly for the small companies, is often characterised by dominance of the supplier (e.g. banks and other financial institutions). If the supplier of credit is assumed to have monopoly over the borrower, then the equilibrium price of loans will rise to P^* and the number of loans will reduced to Q^* . For small companies who are unable to access other sources of external finance, the bank becomes a virtual monopolist over lending, thus the price of loans will be in the upper bound of the $OP'OP^*$ axis. But if the same companies are capable to secure

other sources of external finance (such as venture capital), the monopoly power of banks is significantly reduced as banks begin to compete with the other suppliers of fund and therefore the price will be in the lower bound of the $OP'OP^*$ axis (Cowling and Westhead, 1996, p.54).

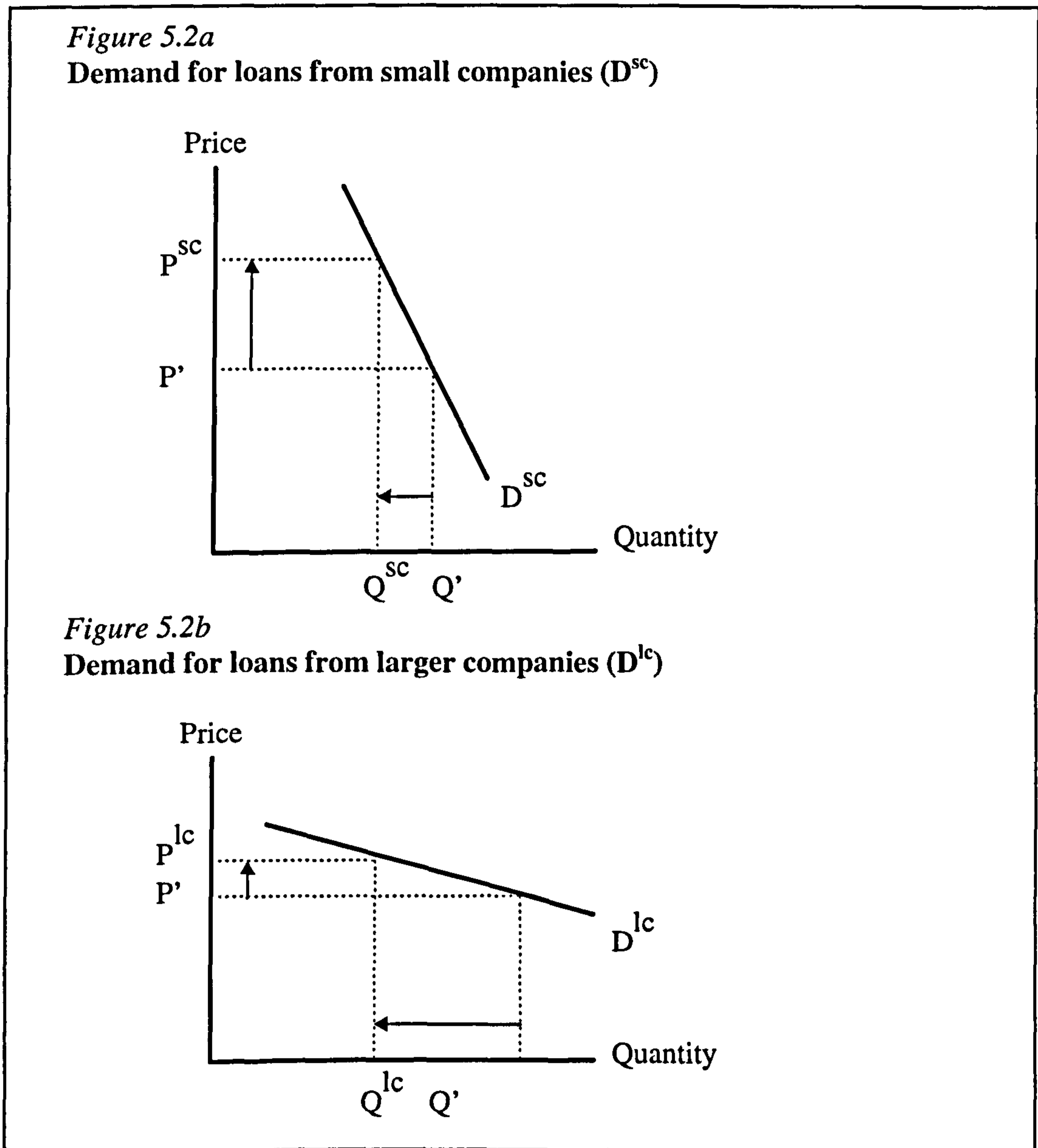
Figure 5.1
Market forces affecting the credit market for small companies



Source: Cowling and Westhead (1996, p.54)

Furthermore, the demand for loans by smaller companies are said to be inelastic (i.e. demand is insensitive to changes in price) owing to the fact that they are not able to obtain finance from other external sources (Figure 5.2a). In this situation, banks can raise the price without having to suffer significant reduction in demand for loans. On the other hand, demand for loans by larger companies are said to be quite elastic i.e. a small increase in price will lead to a substantial reduction in demand (Figure 5.2b). This

is due to the fact that larger companies will seek alternative source of financing if they feel that the banks' charges are invariably high (Cowling and Westhead, 1996, p.54).



Source: Cowling and Westhead (1996), p.55.

The above theoretical explanations suggest that imbalances exist in the market power which have led to small companies being unfairly discriminated against by banks. Knowing this, how then can these imbalances in the market power be rectified so that small companies can have a fair chance to secure external funding? In many countries,

various strategies have been introduced to enhance the SMI's power in the credit market. One of the most popular strategy is to increase the small companies' endowments by introducing a third party (usually a government agency) to provide some kind of guarantee for loans advanced to small companies. In the UK, the scheme is known as the Loan Guarantee Scheme which has been in operation since 1981. Since its introduction, the scheme has undergone various changes (particularly, in the rate of premium charged and the proportion of loan that is guaranteed) to suit the changing circumstances, but its principal objective still remain the same, which is to enable companies with fewer than 200 employees to obtain medium-term loan from the banks. Many types of businesses are eligible for the scheme and it can be used to finance most purposes such as working capital and the purchase of fixed assets. However, the repayment of existing bank borrowing is specifically excluded (Boocock, 1994). Similar schemes have been found to operate in a number of developed and developing countries (Levistky and Prasad, 1987).

In Malaysia, for example, the credit guarantee scheme was introduced in 1972, which gave birth to the Credit Guarantee Corporation² (CGC). The main objective is to enable the SMIs who are unable to secure conventional bank funding to obtain finance under the scheme. As in other countries, the types of guarantee scheme have been modified to ensure its effectiveness in boosting the power of small companies to institutional finance credits. Since its inception, CGC have introduced at least seven types of guarantee schemes which include the General Guarantee Scheme (1972 - 1989), Special

²The Credit Guarantee Corporation was established in 1972 to provide guarantee cover for credit facilities to small and medium-sized companies in three broad sectors, namely, general business, agriculture and manufacturing. The CGC's capital is held primarily by the Central Bank (Bank Negara Malaysia) and shareholders include all the commercial banks in Malaysia.

Loan Scheme (1981 - 1989), Principal Guarantee Scheme (1989 - 1994), Hawkers and Petty Traders Scheme (1986 -1990), Hawkers and Petty Traders Trade Associations- two type of schemes i.e. LPHT and ASLS (1990 onwards) and the New Principal Guarantee Scheme-NPGS³ (1994 onwards). The success and effectiveness of the above schemes (with the exception of NPGS) have been marginal. According to Kanbur, Boocock and Hwa (1996), the success of government-backed loan schemes is dependent on the following factors:

- i) banks are allowed to earn a satisfactory return on their lending;
- ii) the level of bad debt incurred is kept to the minimum; and
- iii) the efficiency of CGC's operating procedure regarding the settlement of claims.

Therefore, it has been suggested that prudence on both sides - the banks and the guarantor - is vital for the efficient implementation of the scheme, otherwise valuable resources will be unnecessarily wasted.

Relating from the experience of some countries, (see for example, Chee, 1992; Nikoi, 1995; Levitsky and Prasad, 1993, 1987) the provision of guarantee seems to be incapable of increasing the market power of SMIs to a considerable extent. In fact, there are suggestions that banks, when deciding on a loan application under a guarantee scheme, do not scrutinise the loan applications thoroughly due to the thought that there is a third party where they can make their claims in case the borrower defaults on its loan. This has resulted in an increase in the number of non-performing CGC loans. Owing to this problem, the guarantee schemes have been said to have indirectly contributed to the adverse selection effect in the credit market.

³Please refer to Appendix 5.1 for the main features of the New Principal Guarantee Scheme.

Apart from increasing the small firm's endowments through the provision of guarantees, it has been suggested that alternative source of financing should be made available to the SMIs. The existence of alternative sources of funding will substantially reduce the monopoly power of banks as the main provider of loans. One of such effort is to encourage the emergence of informal sources of funding such as the informal venture capitalists popularly known as 'business angels'⁴. Although this form of financing is very difficult to be assessed, since they operate within a very close and tight network lead by the syndicate's instigator or 'archangel', their existence would be very beneficial in terms of providing alternative source of finance to the small companies (Mason and Harrison, 1994, 1996).

Apart from the informal funding from business angels, the use of venture capital companies (a formal source of funding institution) should also be promoted (Kitchen, 1989). However, venture capital companies are normally interested only in companies with the prospect of high growth potential, thus limiting eligibility to a small number of companies (Ray, 1993; Murray, 1994; Boocock, 1995). In addition, venture capital companies have recently shifted their investment focus away from funding start-ups and early business stages to financing established businesses and management buyouts/buyins (Bygrave and Timmons, 1992; Murray, 1994). The above phenomenon has circumscribed the importance of the informal venture capital as a source of fund for the small and medium-sized industries.

⁴Business angels are generally experienced investors with excellent knowledge about the stock market, have experience in running a business organisation or consultation, have a fair degree of financial acumen and are confident in their own ability to evaluate the merits and risks of prospective investments (Mason and Harrison, 1996, p. 36).

In some countries, the government themselves provide direct financing to SMIs through various national and state agencies (see for example, Bolnick, 1982; Hall and Lewis, 1988). For example, in the UK, following the recommendations from various committees (see for example, Macmillan, 1931; Radcliffe, 1959; Bolton, 1971; Wilson, 1979), various national government or local authority- funded regional agencies have been established for the purpose of closing the perceived 'finance-gap' left open by the conventional capital markets. This form of financing are normally politically influenced which affects the distribution of loans. Furthermore, these agencies lack banking experience and will probably not pursue a banking initiative (Hall and Lewis, 1988, p.1675).

In Malaysia, a number of government agencies have been established to provide direct financing to targeted groups for the purpose of alleviating the enterprise culture especially among the indigenous Malays. MARA (the Council Trust for the Indigenous People) is among the pioneering agencies actively involved in the development of entrepreneurs and businesses for the indigenous people. Apart from providing financial assistance, they also provide business training as well as business premises at concessional costs (Chee, 1990).

The Ministry of Youth and Sports is also active in providing non-collateral based financial assistance to youth between the age of eighteen and thirty-five who want to start a new business. The loan is often interest-free and the payback period is relatively quite long - normally from five up to ten years including a grace period. Although the size of loan is relatively small (about RM30,000 each), the aggregate amount is quite

substantial as the scheme is offered across all districts. The cost-effectiveness of the scheme have never been scrutinised before since the availability of accounts has never been made public.

In spite of all the strategies and efforts to improve the market power of the SMIs, it is still not clear whether the market power imbalances have been rectified. It still seems that banks are having the upper-hand over lending to small businesses. This is because none of the above strategies⁵ have been able to remove the imperfections in the credit market. Credit markets behave quite differently from the other types of markets. In particular, the price of credit - *the interest rate* - is not the price paid by the borrower, but the price the borrower *promises* to pay the lender (Godley and Ross, 1996). Because of that, banks are not impressed or obliged to extend any loan, even if the borrowers are willing to offer a high interest or provide more than sufficient collateral.

In the context of small business lending, the most critical issue is not the interest rate charged on loans or the amount of collateral demanded by the financial institutions. Therefore, any attempts to control interest rates or interfering with the financial systems will only result in temporary and unsustainable results. Evidently, banks do not deliberately charge exorbitantly high rate of interest or demand excessive collateral because they know doing that will only increase the riskiness of the bank's loan portfolio either by discouraging safer borrowers (adverse selection) or by inducing borrowers to invest in riskier projects (moral hazard), thus affecting the bank's profits (Stiglitz and Weiss, 1981, p.408). All they want is freedom to perform their functions in

⁵Strategies such as the provision of guarantee on loans, promoting formal and informal venture capital markets and the establishment of government agencies offering direct financial assistance.

which they are able to decide and pursue their own institutional objectives without much interference's from the regulatory authority.

However, in most developing countries, such as Malaysia, total liberalisation of the financial system would not be a sensible idea, as it would aggravate further the market power imbalances. According to Krahnert and Schmidt (1994, p.72), there are two situations where the credit guarantee schemes can help small enterprises: the first situation is when banks reject a loan application because they overestimate the riskiness of small loans and second, is when the local banking system is extremely inefficient. The first situation seems to apply to the Malaysian context. However, the only difference is that banks in Malaysia have the tendency to direct loan applications from SMIs towards the CGC loans rather than towards their own conventional loan schemes (Kanbur, Boocock and Hwa, 1996). In most cases, CGC loans are not only for those who have been rejected under conventional loan's eligibility criterion. In other words, CGC facilities are more of replacement finance rather than additional finance - zero additionality⁶ of finance (Boocock, 1994).

Since, credit guarantee schemes do not explicitly enhance the market power of SMIs, a more plausible approach would be to change the perception (or attitudes) of the banks and other financial institutions towards SMIs by encouraging them to extend credit to the sector voluntarily rather than to 'force' them. Understandably, this is not going to be an easy task, as Kitchen (1989, p. 301) puts it "..... *attitudes are societal (in nature)*,

⁶In Boocock (1994, p.59), zero-additionality originated when alternative sources of finance were not utilised, typically where personal assets available to secure conventional bank borrowing were not disclosed.

and not ones which governments can develop by decree". Hence, the critical issue here is, government should improve the relevant system of incentives. For an example, in the context of government-backed loans, try to improve the working relationships between the guarantee provider and financial institutions as well as to allow financial institutions to earn satisfactory returns on their loans extended under the government guarantee schemes. In a more general sense, credit guarantee schemes should not try to eliminate the lemon gap, by empowering SMIs to lower its perceived risk. Rather, those schemes should encourage banks and other financial institutions to assess the true risk of lending to the SMI sector.

5.2.3 Imperfect information or information asymmetries

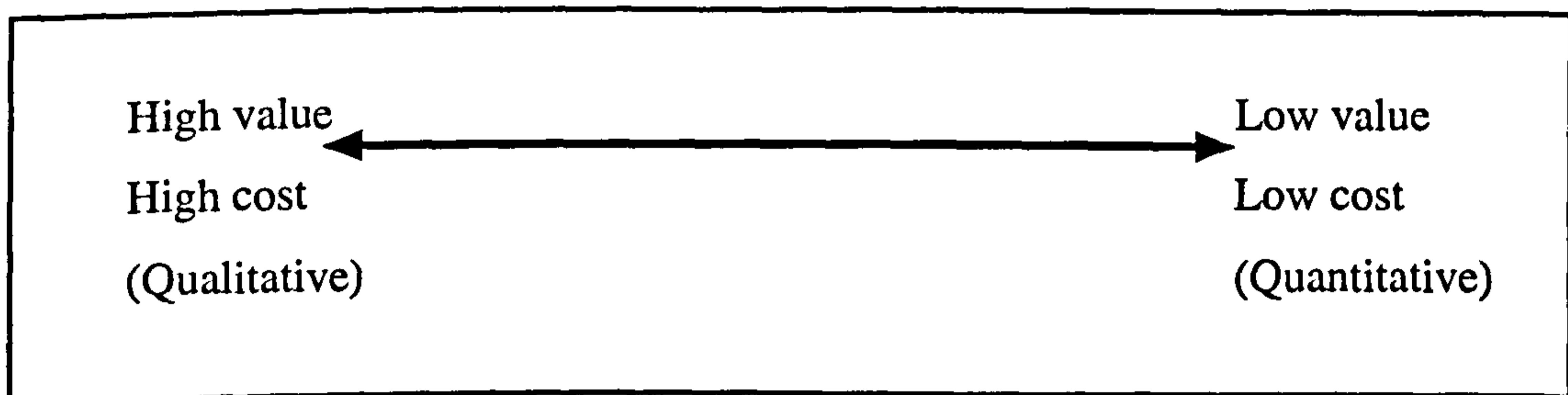
The provision of finance by a bank to a small company is always characterised by the presence of asymmetric information and incomplete contracts that increases the level of risks to the suppliers of funds (Leland and Pyle, 1977). Information asymmetry refers to a situation when certain pieces of information, having a material effect on the contract are available only to one party but not to the other (Akerlof, 1970). In the context of principal-agent framework, information asymmetry poses two problems for the provision of debt finance. First, the bank cannot observe *ex-ante* certain information which is relevant to the decision to enter into the contract, typically the actual abilities of the individuals applying for finance and the qualities of the project. Second, the risk that the small business will not perform in a manner consistent with the contract, necessitating some form of *ex-post* monitoring procedure (Binks et. al., 1992, pp. 36-37).

Basically, there are two types of information that are relevant in a lending decision; quantitative and qualitative types of information. Quantitative type of information are more readily available and can be easily processed and analysed. On the contrary, qualitative information are very subjective in nature, furthermore it is very costly to collect. Even if these were available, the bank is likely to encounter difficulties in processing that information, thus limiting its practical usefulness.

Binks, et. al. (1992, p. 36), have categorised the information along a continuum according to its value to the contract as well as the cost of acquiring such information (Figure 5.3). On one side of the continuum, there is information which has high value in terms of writing the contract but it is expensive to obtain (qualitative information); and on the other side, there is information which is lower in terms of value but are easier to obtain (quantitative information)⁷.

Figure 5.3

Value of information and its attainment cost



Since perfect information is extremely costly to acquire and process, the organisational form of the credit market intermediaries tend to be different. According to Godley and Ross (1996), the organisational forms of credit market intermediaries also fall on a

⁷Binks, et. al. (1992) have also acknowledged the possibility of high-value information which is cheap to obtain, and low-value information which is expensive, but the possibility is very low.

spectrum; and the spectrum reflects the category and amount of information available to the intermediary and upon which its allocation decision rests. At one end of the spectrum, are institutions which depend largely on formal quantitative data. These institutions would normally adopt a common, credit-scoring formula to all cases and so decisions are reduced to a simple quantitative equation. At the other end of the spectrum, are institutions (intermediaries) who are able to use other and often informal information, usually qualitative, perhaps even tacit information. They deal with information which are not normally traded. Godley and Ross (1996) further hinted that, those intermediaries who have the ability (technology) to utilise this informal information may be more efficient than banks in those niches of the credit market where such information is valuable (particularly relevant to the credit market for small companies).

It has been further suggested that under the conditions of incomplete information, organisations in the forms of networks⁸ are said to be more efficient than conventional banks in terms of allocating scarce resources to economic users (Godley and Ross, 1996). Proponents of networks believed that networks can function more efficiently than conventional banks especially in the areas of screening and sorting applicants, monitoring the loans and enforcing the loan contracts.

⁸Networks form of organisations are basically non-bank organisations which informally co-ordinate resources through co-operative strategies, with allocative decisions arrived at by consensus, rather than a single authority, and through the pooling of relevant information (See for example, Powell, W.W. (1990); Godley and Ross, 1996).

For most of the conventional intermediaries, the screening and the sorting of applicants into categories of creditworthiness are based on the formal information documented in the applicants' business plans as well as from the loan application forms. Networks, on the other hand, claimed that they can have access to more accurate and better information (additional information from the above) through their personal relationships with the applicants. Information such as the family background, close associates, personal integrity of the applicants are examples of credible information which can be secured through interaction with the local social-cultural-religious networks. However, this kind of information which is of high value to the banks could not be acquired by them without incurring a very high transactions costs⁹. In a number of studies concerning the informal venture capitalists (business angels), it was found that venture capitalists often rely upon heavily informal information (of qualitative nature) and on their own instincts and character rather than on detailed documentation and formally available information (Timmons, 1990; Baty, 1991; KPMG, 1992; Mason and Harrison, 1996). Informal venture capitalists put more emphasis on obtaining information about the 'quality' of the entrepreneur/management team so much so that it becomes the key determinant in the lending decision (McMillan, et. al., 1985).

The existence of imperfect/asymmetric information have forced banks, as the main supplier of funds to the business community to ration its credit allocation (Jaffee and Russell, 1976). The rationing is done by imposing high interest rates so that those applicants who are not serious would withdraw from the credit market. However, using

⁹Transactions costs here specifically refer to the costs to obtain relevant information for the banks to evaluate the creditworthiness of the applicant.

interest rates as a screening and sorting device has led to an *adverse selection*¹⁰ effect as well as an *adverse incentive*¹¹ effect (Stiglitz and Weiss, 1981). As the bank raises the interest rates, creditworthy applicants withdraw from the market either to look for other financing alternative (e.g. informal venture capital) or by postponing their investment decisions. Eventually, the credit market is left with “risk lovers”, “optimists/opportunist” and “crooks” (Stiglitz and Weiss, 1990, p. 96; Godley and Ross, 1996, p. 2)¹². The adversity of using interest rate as a screening and sorting device have been acknowledged by Stiglitz and Weiss (1981) as they argue, “.....*It is difficult to identify ‘good borrowers’ and to do so requires bank to use a variety of screening devices. The interest rate which an individual is willing to pay may act as one such screening device: those who are willing to pay high interest rates may, on average, be worse risks; they are willing to borrow at high interest rates because they perceive probability of repaying the loan to be low. As the interest rate rises, the average ‘riskiness’ of those who borrow increases, possibly lowering the bank’s profits.*” (Stiglitz and Weiss, 1981, p. 393).

In terms of monitoring, banks have limited capacity since monitoring can be very costly to the banks especially when there are too many borrowers with very small average loan size. Furthermore, the asymmetric information in the lending process has made it even more difficult and expensive for the banks to perform the monitoring function

¹⁰Adverse selection effect refers to the adverse changes in the mix of loan applicants, so much so that the expected return from those receiving loans may actually decrease as the interest rate charged increases (Stiglitz and Weiss, 1990).

¹¹Adverse incentive effect refers to borrowers who will undertake riskier investments, which increases the probability of default. Also popularly known as moral hazard.

¹²*Risk lovers* are borrowers who are willing to undertake very risky projects, with a small probability of success, but high returns; *optimists* are those who overestimate the probability of projects succeeding and the return if successful; and *crooks* are those who, because they do not plan to pay back the money anyway, are virtually indifferent to the interest rate which they ‘promise’ (Stiglitz and Weiss, 1990, p. 97).

effectively. The best a bank can do is to rely on relevant 'signals' or information that can be possibly derived through monitoring the borrowers' accounts or by requesting the borrowers to submit a periodic report on the progress of the borrowers' investments. But, it is often argued, neither the accounts nor the reports can accurately provide the lenders with exact information since those information can be easily 'tampered with' and therefore can be misleading. This argument is based on the assumption that borrowers tend to keep most of the information about the project to themselves. They prefer not to leak any vital information about their project; not even to their lenders simply because they fear that their competitors will be equally interested in them, if their investment proved to be successful. Borrowers also tend to hold back information, if they suspect that their project is heading for trouble, simply because they do not want their lenders to be alarmed. Furthermore, companies would want to protect their credibility to maintain the confidence of their customers and suppliers. Without sufficient and accurate information, as illustrated above, banks as intermediaries would not be able to perform the function of monitoring effectively.

Informal sector organisations, on the other hand, rely on first hand information. Unlike banks, they are able to monitor borrowers 'on-site' rather than 'on-paper' through the normal trading activities. Since monitoring by these organisations can never be closer, borrowers cannot hoard information about the status of their investment, thus, forcing them to share virtually all relevant information with their lenders. Networks are said to be efficient in their monitoring process because they 'live' in the same environment as the borrowers and therefore share a common interest. Banks, on the other hand, normally operate at arm's length from their borrowers, thus, have little or no involvement with their clients' business activities (Petersen and Rajan, 1994). This

evidence is further supported by the study conducted by Chaston (1996) where he had identified that significant gaps exist in terms of the provision of quality financial services to the SMI sector.

Finally, in terms of enforcing the contract, informal organisations are said to have better 'enforcement tools' than the conventional tools used by the formal intermediaries. Apart from the conventional tools often used by the formal intermediaries which include litigation and forfeiting collateral, informal networks are able to inflict shame, exclusion/isolation from the rest of the society (social sanctions), and to some extent, threat to inflict severe bodily injuries. The threat of losing one ear or eye, are severe enough to make the borrower committed to the loan contract! Although, these 'additional tools' of enforcement are mostly illegal, they seem to be the most effective deterrent for non-compliance. This sort of enforcement mechanism is found to be used quite extensively in the less developed countries (see for example, Roth, 1979; Basu, 1984; Chandavarkar, 1985; Llewellyn, 1991; Bolnick, 1992; Schrader, 1992). Quite surprisingly, the usage of the equivalent sort of enforcement tools have also been found in some developing and developed countries (Harrison and Mason, 1992; Mason and Harrison, 1994)

The effectiveness of informal organisations in adapting the crucial functions of the conventional intermediaries, needs to be analysed carefully before one could say that network forms of organisation are better than banks at assimilating, interpreting and acting upon the relevant information over the lifetime of a loan. Nonetheless, the recent recognition of the potential advantages the informal sector such as the networks in fulfilling the role of the conventional intermediaries in certain economic sectors has

rekindled a renewed interest on the subject (see for example, Meyer and Nagarajan, 1988; Bouman, 1989; McLeod, 1991; Evers and Mehmet, 1994). However, according to a recent study, although it seemed that the informal intermediaries tend to have certain advantages over conventional intermediaries, there are certain limits whereby these intermediaries could be a perfect substitute, unless certain conditions are satisfied (Christensen, 1993). Accordingly, there are suggestions that there should be a link between these informal intermediaries and the formal intermediaries so that scarce resources can be efficiently allocated to economic users (Mrak, 1989; Germidis, 1990).

Since lending to the small business sector under asymmetric information is perceived to be more risky, majority of the banks require some kind of collateral from the borrowers in order to compensate for the risks. From the lenders' point of view, the collateral requirement is justifiable as it can provide hedging against default risks. Moreover, it also encourages the borrower to be seriously committed to the loans repayment (Bester, 1987; Cowling and Westhead, 1996). But, from the borrowers' point of view, the collateral requirement imposed on them is unjustified because they were made to compensate for banks inefficiency to distinguish between good and bad borrowers.

As discussed earlier, raising interest rate may only lead to situations where low quality projects being funded (oversupply of credit) and in others, high quality projects being denied funding (credit rationing). Similarly, increasing the collateral requirement will also have the same adverse selection effects. This is because even if small companies have the capacity to offer the required collateral, they may not do so since the excessive collateral requirement would make default costlier to them. Therefore, they would rather postpone their investments or alternatively, seek for other source of financing.

Lack of collateral are often cited as one of the main reasons for the small and medium-sized companies in Malaysia being denied financial assistance from the formal institutions (see for example, Haron, 1990, 1994; Chee, 1986; Lin, 1996). Formal financial institutions normally demand physical and tangible collateral which are more or less consistent in value such as real estate properties. In some cases, where the value of the collateral is not sufficient, borrowers often have to supplement with assets or have a third person to stand as guarantor. Formal financial institutions would not accept collateral which are based on future outputs or accept collateral other than the one specified above¹³. This strict requirement and specification of collateral have further impaired the ability of SMIs to gain external finance. In order to assist potential SMIs who lack collateral to get access to formal institutional finance, the government has introduced the credit guarantee schemes. But, as discussed earlier, these schemes have yet to make an impact on the small company credit market (Boocock, 1995).

Since obtaining complete information about the borrower is extremely difficult, banks have to rely on whatever information that they could possibly get before the decision to give the loan is made. Many institutions have to rely mainly on the explicit information given by the applicants on the standard loan application form. These information are by no means sufficient to enable the banks to assess risks adequately. However, these information can be readily available if the SMIs adopt project appraisal practice.

¹³Formal financial institutions are not able to accept future collateral of collateral in kind because they do not have the technology in evaluating the value of these collaterals (Ghosh, 1986).

It is believed that apart from the explicit information that can be obtained from the standard loan application form, project appraisal documents can be another important source of information for the Malaysian banks. Most information about the person (the entrepreneur/management team) and the proposed project are normally described in these documents. These documents also contain very detailed information on the opportunity, the technical aspects, the product and market, the financial structure and also the projections of cashflows anticipated from the proposed projects. Information regarding the managerial strengths of the business and its track record may be of particular importance to the banks since they may help reduce the extent of adverse selection and moral hazard problems (Binks, et. al., 1992, p.37). These kinds of information is of high value to the banks because by evaluating the project appraisal documents coupled with their own past experiences, banks can adequately assess the viability (hence also the risk) of the proposed project. A high quality project appraisal document can only be prepared if the small and medium-industries have the expertise and adopt a formal project appraisal practice.

Unfortunately, small and medium industries, more often than not, write business plan only when they are forced to do so; often, just before the time when they need to apply for a loan from the bank. Even then, the quality of information are normally not up to the banks' expectations. Small and medium-sized industries who do not adopt a formal project appraisal practice find it very difficult to compose the information required by the banks because they simply do not have or keep those information. This is one of the prime reason why, majority of loan applications by the small and medium-sized industries are often rejected. According to Haron (1994, p. 93), the five most common problems faced by credit officers when dealing with small business loan applications

include (i) the applicant's lack of knowledge in accounting, (ii) incomplete information in the loan proposal to the bank, (iii) limited sources of income for the loan's repayment, (iv) insufficient equity, and (v) lack of strength in the leadership. He has also cited that insufficient information in the loan application forms and no proper business plan are among the most common factors which influence banks decision to disapprove loan applications from the small and medium-sized industries. Similar factors (also known as 'deal rejection factors/deal killers') have also been found to affect the investment decision made by the informal venture capitalists (Mason and Harrison, 1996, p.44).

In this thesis, particular attention is devoted to examine whether or not small and medium-sized manufacturing companies (SMMC) in Malaysia have adopted a formal project appraisal practice and to examine whether the adoption of a formal project appraisal practice has had any effects/influence on the accessibility of formal institutional finance to these SMMCs. Adoption of a formal project appraisal practice simply refers to the performance of the appraisal exercise starting from the idea generation/identification stage, through the selection stage until the post-monitoring/evaluation stage (Gurnani, 1984; Murkhejee (1987), Mukherjee and Henderson, 1987; Mills, 1988b). The project appraisal practice is also to include the methods used in evaluating the proposed project as well as detailed documentation about the proposed project. The information contained in the project appraisal documents will certainly counteract the effect of asymmetric information as more information is made available through the appraisal documents. SMMCs who have adopted a formal project appraisal practice are expected to have better access to external finance as compared to those who have not adopted a similar practice.

Another important source of information is the company-bank relationship. 'Relationship banking', as this concept has come to be known, differs from the traditional 'account banking' because the focus is much more on the company as the profit centre rather than the account (Storey and Cressy, 1996, p. 10). In recent years, a number of empirical studies have been devoted to investigating the benefits of company-creditor relationships (see for example, Petersen and Rajan, 1994; Hoshi, Kashyap and Scharfstein, 1990a, 1990b, 1991; Shockey and Thakur, 1992, Capie and Collins, 1992; Cowling and Westhead, 1996). For example, companies in Japan who have close ties with their bankers are less likely to be financially constrained at time of depression or financial distress than companies that do not have such ties, thus suggesting that a favourable company-bank relationship help to overcome friction impeding the flow of credit (Hoshi, Kashyap and Scharfstein, 1990a, 1990b, 1991). In the United States, Shockey and Thakur (1992) have found that a healthy company-bank relationship does significantly affect the provision of loans from their banks. In another study, Petersen and Rajan (1994) have identified the primary benefit of building close ties with an institutional creditor is that availability of financing increases. However, they found negligible effects on the price of credit. The similar benefits have also been derived by companies in Germany where they claimed that not only their banks provide them with long-term capital, they also advise and generally nurse the companies they finance (Capie and Collins, 1992, Kitchen, 1989). However, in the UK, relationship banking is a rarity although there is now some evidence that the attitudes of British banks are changing. UK banks such as the NatWest, for example, have already established substantial numbers of Business Managers, who operate closely with a

smaller portfolio than the traditional bank manager, and who offer a one-stop-shop for their full range of banking requirements (Storey and Cressy, 1996).

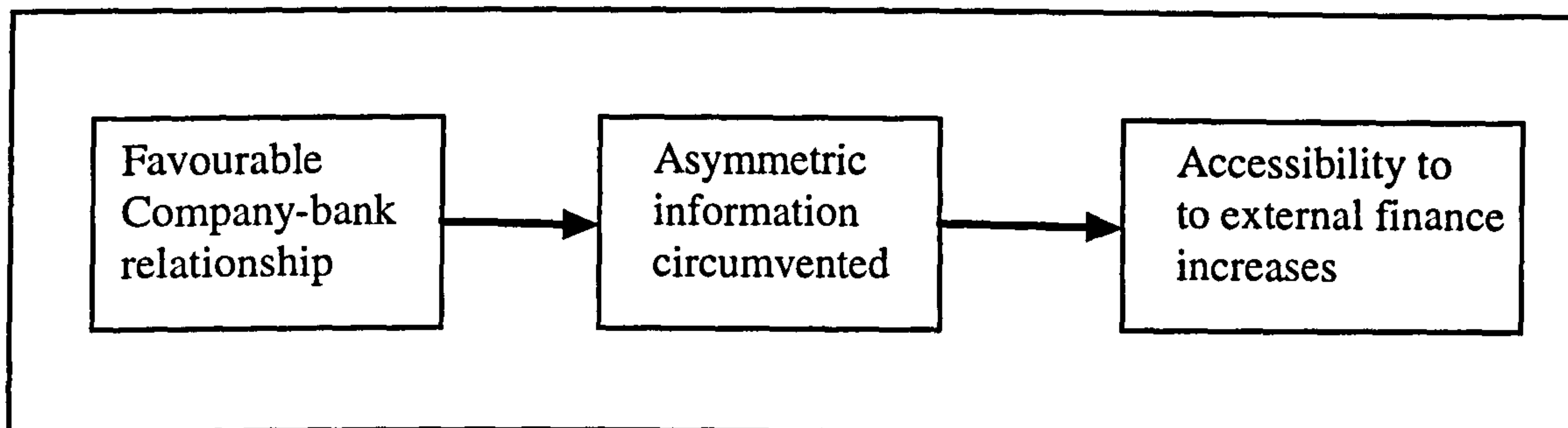
Undoubtedly, one of the most eminent advantages of a favourable company-bank relationship is that it facilitates the exchange of information from the company to the bank and from the bank back to the company. The free flow of information certainly reduces the credit market frictions due to information asymmetries. Moreover, obtaining information through this relationship is a lot cheaper and more reliable thus reducing the banks transactions costs. Building a relationship with small portfolios of business customers allows the banks to understand their customers needs as well as responding to those needs. Though this approach may lead to a bilateral monopoly situation¹⁴, the problems associated with asymmetric information can be significantly reduced, thus increasing the chance of SMMCs' access to institutional finance.

This research also intends to examine the benefits derived from a close company-bank relationship especially in terms of improving the access of the small and medium-sized industries to institutional finance. The provision of finance to SMMCs is expected to improve following the problem of imperfect/asymmetric information having been significantly alleviated through a favourable company-bank relationship (Figure 5.4).

¹⁴Sharpe (1990) indicated that a bilateral monopoly situation will exist when the firm's bank knows more about the company than other banks. This will create a disadvantage to low risk companies because they tend to be locked permanently into the relationship. However, in another study, majority of SMMCs are found to be more comfortable and loyal to a single bank, therefore, they are less concerned of being tied to a single bank (Cowling and Westhead, 1996)

Figure 5.4

Company-bank relationship and accessibility to institutional finance



5.3 The Present Research Framework

The present research is built upon the above theoretical framework, particularly, the one related to the incomplete/asymmetric information which characterise the credit market for small and medium-sized industries (i.e. the provision of finance to small and medium-sized under incomplete/asymmetric information) particularly, in developing countries. The research intends to unveil that by adopting a formal project appraisal practice as well as maintaining a healthy relationship with the providers of finance, small and medium-sized manufacturing companies can significantly improve their access to external finance. This is based on the assumption that performance and documentation of project appraisal practice will benefit both; the SMMCs, as borrowers, and the banks, as lenders. Both parties can objectively assess the potential/viability of the proposed project, thus reducing substantial amount of risks and uncertainties normally faced by them. The banks and other providers of finance can now have better access to information (information about the borrower and the proposed project) which will enable them to objectively evaluate loan application from the small and medium-sized companies.

In addition to the adoption of a formal project appraisal practice, it is also expected that a close company-bank relationship could significantly enhance the access of the small and medium-sized companies to external finance. This is due to the fact that, through this relationship, both the small and medium-sized companies and banks are able to share every information available which can have significant effect on their lending decisions. Furthermore, by having a favourable and honest relationship, any disputes relating to their contract can be peacefully resolved between them. The mutual trust can be developed (over time) when the lender makes frequent visits to the borrower's business premise and try to closely understand the borrower's business activities. On part of the borrower, they should be committed to fulfill the loan contract by servicing the loan on time and inform the lender well in advance if they have any problem in honouring their commitments. The importance of mutual trust and understanding between the borrowers and lenders are significantly vital to the successful formation, monitoring and enforcing of the lending contract, which will eventually improve the provision of finance to this important sector of the developing economy. As Hagaman (1995, p.14) has argued, *"The key to success to credit is an ongoing working relationship - not the lowest possible rate for a single (act of) financing"*. It is hoped that the findings from this research will shed some new insights in improving the allocative efficiency of the conventional financial intermediaries, especially in terms of the provision of short and long-term finance to the small and medium-sized companies.

The adoption of a formal project appraisal practice as well as the fostering of a healthy company-bank relationship are very much dependent on two basic group of factors. First are factors relating to the firms' profile and secondly, factors which are related to the owner(s) of the companies i.e. the entrepreneur(s). Logically, it is anticipated that

the profile of the companies and entrepreneurs will have a significant impact on the adoption of project appraisal practice as well as the company-bank relationship. Therefore, it is only appropriate to include both factors in the present research scheme.

5.3.1 The research scheme

A three level analysis will be performed in order to explicate the theoretical relationships between the four core groups of factors (namely, company's profile, entrepreneur's profile, project appraisal practice and company-bank relationship) that are expected to exert significant influence on the access of the small and medium-sized industries to institutional finance (Figure 5.5). The four main components included in the present research scheme are as follows:

- Component I:** **Profile of the company**
Size of company, proxied by the size of employment¹⁵
Ownership structure
Age of the company
Business location
Market classification
Industry classification
Sales turnover
Type of entity registration
- Component II:** **Profile of the entrepreneur**
Demographic factors¹⁶
Academic and professional qualifications

¹⁵Companies employing less than 50 employees are considered small companies while companies employing more than 50 employees but less than 100 employees are considered medium-sized companies. This classification is consistent with the official definition of SMI adopted by the government.

¹⁶Demographic factors include age, gender, race.

Business management skills¹⁷

Past working experience

Part-time business experience

Length of current business experience

Component III: Project appraisal practices

Adoption of project appraisal practice

Types of appraisal

Sophistication in methods used

Usage of computer software packages

Project documentation

Types of information

Component IV: Company-bank relationship

Deposit/account relationship

Single/multiple accounts

Single or multiple banks

Credit relationship

Length of deposit/credit relationship

Utilisation of auxiliary services

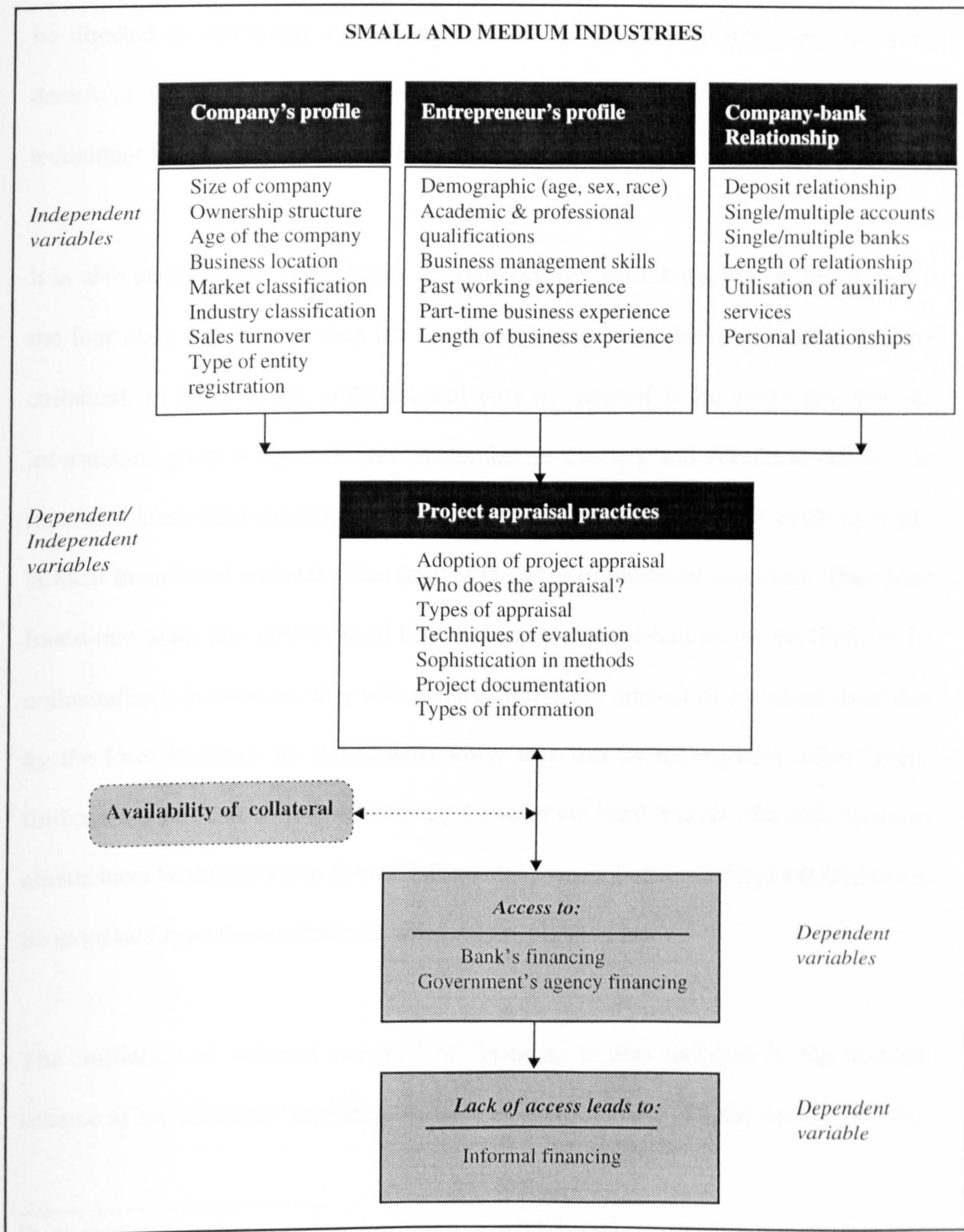
Personal/individual relationship

The first level analysis will concentrate on each individual component, focusing on the relationships between variables within the same core-group. In the second level analysis, the focus will be on determining whether the company's profile, company-bank relationship and the entrepreneur's profile have exerted any significant influence on the adoption of project appraisal practice by SMMCs in the sample. Also in the same level of analysis, further examination will be carried out to determine whether or not project

¹⁷Business management skills include attendance of business management training course and training on project appraisals.

Figure 5.5

Theoretical relationships between independent and dependent variables



appraisal practice has significantly affected the access of the companies to institutional finance. If the relationship between adoption of project appraisal practice and SMMCs' access to external finance is found to be significant, then, the third level of analysis will be directed to identifying explanatory factors that significantly influence the firms' decisions whether or not to adopt project appraisal practice. Various statistical techniques will be employed to perform all of the above analyses.

It is also expected that if the banks are satisfied with the information provided within the four main components, they are less likely to require the borrower to put up some collateral. In other words, collateral will only be required if the banks feel that the information given is not sufficient. According to Cowling and Westhead (1996), the most dominant distinguishing factor which influence the loan decision made by banks at local branch and regional office level is the level of collateral requested. They have found that loans provided by local branches are four-and-a-half times less likely to be collateralised. In addition, they also confirmed that the amount of collateral requested by the local branches are significantly lower than that by the regional office. These findings suggest that a close relationship between the local branch with their business clients have facilitated a free flow of information, hence, less or no collateral is likely to be requested from these companies when they apply for a loan.

The utilisation of informal sources¹⁸ of financing is also included in the research scheme as the secondary dependent variable in order to verify allegations that SMMCs

¹⁸Informal sources of finance include sources other than the institutional finance such as moneylenders, borrowing from relatives and friends, personal savings, trade/suppliers credit or borrowing from company officers. Some of these sources are 'interest-free', but a majority of them have implicit as well as explicit interest costs.

have to rely heavily on these sources - often at usuriously high interest rate - as the result of being unable to obtain credit from the formal institutional financiers. Apart from the inaccessibility of formal financing, the growing dependence on this type of financing is due to certain factors such as easy access and general availability, less or no paperwork needed, less emphasis on collateral and flexible repayment scheme. The usage of informal sources of finance also have some disadvantages. Easy access and general availability is only possible when the borrower has close contact with the sources or their agents. Apart from that, the cost of fund from these sources are often usurious. Although the repayment scheme is thought to be flexible, this is not always the case. More often than not, the borrowers end up paying just the cost of interest for a very long period of time before they could finally start paying back the principal sum that they have borrowed. Although there are no paperworks or documented contracts, failure to repay the debt may lead to a very serious accusations, shameful acts, social sanctions and even worse still, the infliction of bodily injury (Roth, 1979).

Within the context of the informal sources of financing, this research is interested to seek proof that SMMCs' heavy reliance on these sources is due to their inaccessibility to formal institutional finance. In other words, the utilisation of informal sources of finance is more of supplementary rather than complementary to the use of the formal sources of finance.

5.4 Derivation of Operational Research Objectives and Hypotheses

Drawing primarily on the literature review presented in Chapters 3 and 4 as well as from the theoretical framework presented in this chapter, several testable hypotheses

have been developed which will be tested for statistical significance in order to satisfy the following operational research objectives¹⁹.

5.4.1 Operational research objectives

In this section, the operational research objectives are developed with the aspiration to provide some insights on the main research issues under study. Objectives 1.1 to 1.4 are specifically formulated to seek whether there are significant differences between the company's size²⁰ and ownership structure²¹ in terms of awareness and adoption of formal project appraisal practices, access to external finance and the utilisation of informal sources of finance.

Objectives 1.5 through 1.8 intend to capture the significance of each and every variable related to the four core-groups identified in the research scheme (*please refer to Section 5.3.1 for details*) in relation to the firm's access to external finance.

Objective 1.9 will specifically examines the motive behind the utilisation of informal sources of finance by the small and medium-sized industries. It will also try to establish the supplementary nature of informal sources of finance to the formal sources provided by the institutional financiers.

Objective 1.10 seeks to find an evidence as from which side does the demand for project appraisal actually came; was it from the demand side i.e. from the small and medium-sized companies as potential borrowers or was it from the supply side i.e. the

¹⁹The operational research objectives are based on the main research objectives presented in *Chapter 1* of the thesis.

institutional financiers. This is very important in order to determine the extent of which both parties utilise the information contained in the appraisal documents in their decision-making process.

Finally objective 1.11 intends to identify the factors which determine whether or not SMMCs in the sample adopt formal project appraisal practices. The individual statements of the operational research objectives are given below.

Objective 1.1 (Hypotheses 1)

To determine whether there are any significant differences between companies of different sizes (i.e. small and medium size) in terms of their level of awareness, their adoption of project appraisal practices, the types of appraisal used, and the level of sophistication of methods used in the appraisal.

Objective 1.2 (Hypotheses 2)

To determine whether there are any significant differences between companies which are owned by *bumiputeras* and those which are owned by *non-bumiputeras*, in terms of their level of awareness, their adoption of project appraisal practices, the types of appraisal used, and the level of sophistication of methods used in the appraisal.

Objective 1.3 (Hypotheses 1 & 2)

To determine whether there are any significant differences in terms of SMMCs' access to external formal sources of finance²² between the small and medium-sized companies

²⁰Size of company is classified on the basis of employee size and categorised into small-sized and medium-sized companies.

²¹Ownership structure is categorised as bumi-controlled companies and nonbumi-controlled companies.

²²In this research, external formal sources of finance refer to the two main suppliers of credit to the small and medium-sized industries namely, (i) the commercial banks and other financial institutions (e.g. finance companies, formal venture capital companies, developmental banks) and (ii) government's

as well as between the bumi-controlled companies and the nonbumi-controlled companies.

Objective 1.4 (Hypotheses 1 & 2)

To determine whether there are any significant differences between the small and medium-sized companies as well as between the bumi-controlled companies and the nonbumi-controlled companies in terms of SMMCs' utilisation of informal sources of finance.

Objective 1.5 (Hypotheses 3A & 4A)

To determine whether size of company, ownership structure, age of the company, business location, type of entity registration, market classification, industry classification, and average annual sales turnover have significant effects on the SMMC's access to external formal sources of finance.

Objective 1.6 (Hypotheses 3B & 4B)

To examine whether the adoption of a formal project appraisal methods and procedures have significant effect in determining the access of Malaysian SMMCs to external formal sources of finance.

Objective 1.7 (Hypotheses 3C & 4C)

To determine whether the existence of deposit relationship, multiple account relationship, multiple bank relationship, the length of deposit relationship, the

agency finance (e.g. in Malaysia, namely MARA, Ministry of International Trade and Industries and Ministry of Youth and Sports).

utilisation of auxiliary bank services and the personal relationship between company officials and bank officials have significant effect on the access of SMMCs to external formal sources of finance.

Objective 1.8 (Hypotheses 3D & 4D)

To determine whether entrepreneur's profile in terms of demographic, business management skills and working experience have significant effect on the access of SMMCs to external formal sources of finance.

Objective 1.9 (Hypotheses 3E & 4E)

To determine whether SMMCs utilisation of informal sources of finance is due to lack of access to external formal sources of finance.

Objective 1.10 (Hypotheses 5 & 6)

To determine whether the requirement for project appraisal came from the demand side (SMMCs as borrowers) or from the supply side (commercial banks & governmental agencies as lenders).

Objectives 1.11

To identify the aggregate factors which are important in determining SMMCs' adoption of formal project appraisal practices.

5.4.2 Main research hypotheses

In this section, several testable hypotheses are developed in order to satisfy the above operational objectives. These hypotheses are mainly derived from the literature review

as well as from the theoretical framework discussed earlier. For each hypotheses, the relationship between the dependent variable and the independent variables are given in its null form. A detailed explanation for the hypotheses is also provided to ensure that it fits the current theoretical framework. A full list of the expected dependent and independent variables can be found in Appendix 5.2.

Based on the above operational research objectives, the following null hypotheses have been developed and to be tested for its statistical significance:

Hypotheses 1 (Objectives 1.1 to 1.4)

There are no significant differences between the small and the medium-sized SMMCs [F_SIZE] in terms of the following variables:

- 1.1 level of awareness about project appraisal practices [AWAREPA]
- 1.2 adoption of project appraisal practices [ADOPTPA]
- 1.3 types of project appraisal used [TYPEPA]
- 1.4 level of sophistication of project appraisal methods used [METHOD]
- 1.5 access to bank and other financial institution finance [ACCESS_B]
- 1.6 access to government agencies' finance [ACCESS_G]
- 1.7 utilisation of informal sources of finance [INFORM_S]

Hypotheses 2 (Objectives 1.1 to 1.4)

There are no significant differences between the *bumi-controlled* SMMCs and the *nonbumi-controlled* SMMCs [OWNSTRUC] in terms of the following variables:

- 2.1 level of awareness about project appraisal practices [AWAREPA]
- 2.2 adoption of project appraisal practices [ADOPTPA]
- 2.3 types of project appraisal used [TYPEPA]
- 2.4 level of sophistication of project appraisal methods used [METHOD]
- 2.5 access to bank and other financial institution finance [ACCESS_B]

2.6 access to government agencies' finance [ACCESS_G]

2.7 utilisation of informal sources of finance [INFORM_S]

Hypotheses 1 is developed to verify whether there are any significant differences between the small-sized SMMCs as compared to the medium-sized SMMCs in terms of the awareness and adoption of formal project appraisal practice, the state of the company-bank relationship and their utilisation of informal sources of finance. Hypotheses 2, on the other hand, attempts to verify the difference between the companies in terms of their ownership structure.

In terms of awareness and adoption of project appraisal practice, larger-sized companies are expected to be more aware of the practices and should have adopted a more formal project appraisal practice as compared to the smaller-sized companies. This is because larger-sized companies are supposed to have bigger resources and wider investment alternatives than smaller-sized companies. Similarly, the *nonbumi-controlled* SMMCs are expected to be more aware of the project appraisal practice and are more inclined to adopt the practices formally in their respective companies. This is basically due to the fact that the *non-bumiputeras* have been in the commercial trade much earlier than the *bumiputeras*. As such, the *bumi-controlled* SMMCs are expected to have a lower awareness on the practice of project appraisal. By the same token, it is expected that their adoption of such practice are less than their *nonbumi* counterparts.

In terms of access to external finance (i.e. access to bank finance and government agency finance), larger-sized companies are more likely to have better access than their smaller-sized counterparts. This is due to the fact that larger-sized companies

are capable of providing better justification (for example, providing bank with high quality project appraisal documents, adequate collateral etc.) to the banks as compared to the smaller-sized companies. Due to inability of access to banks and other financial institutions, smaller-sized companies are expected to rely more on the government sources than their medium-sized counterparts. Furthermore, the smaller-sized companies are expected to rely more heavily on the informal sources as compared to their larger-sized counterparts.

With respect to ownership structure, the *nonbumi-controlled* SMMCs are expected to have easier access to banks and other financial institutions since they have a more established relationship with the bankers. *Bumi-controlled* companies are expected to be less dependent on the services provided by the banks and other financial institutions. As such, they are suspected to be more dependent on the services provided by governmental agencies.

Moreover, *nonbumi-controlled* SMMCs are thought to be more established and mature as compared to the *bumi-controlled* SMMCs. Based on the presumptions that their access to banks and other institutional finance are better, it is maintained that their reliance on governmental agency financing is relatively minimal. On the other hand, the *bumi-controlled* SMMCs are expected to find it more difficult to access banks and other financial institution finance. They are thought to be young and inexperienced, and are, therefore considered to be more risky. It is presumed that the *bumi-controlled* SMMCs have turned to government agencies for financing which reflect the fact that their access to banks and other financial institutions finance are severely limited. Consequently, they are expected to rely more heavily on government sources as well as on the

informal sources for financing. The preceding two hypotheses (Hypotheses 1 and 2), are expected to cover objectives 1.1 through objective 1.4.

Hypotheses 3 (Objectives 1.5 to 1.9)

There are no significant relationships between access to bank and other financial institutions finance [ACCESS_B] and the following set of factors:

3A. Variables related to profile of companies

- 3A.1 size of company [F_SIZE]
- 3A.2 ownership structure [OWNSTRUC]
- 3A.3 age of company [AGEFIRM]
- 3A.4 business location [BUSLOCA]
- 3A.5 type of entity registration [REGTYPE]
- 3A.6 market classification [MKTCLASS]
- 3A.7 industry classification [INDCLASS]
- 3A.8 annual sales turnover [ANNSALES]

3B. Variables related to project appraisal practices

- 3B.1 adoption of project appraisal practices [ADOPTPA]
- 3B.2 type of appraisal used [TYPEPA]
- 3B.3 level of sophistication of methods used [METHOD]
- 3B.4 documentation of project appraisal [DOCPA]
- 3B.5 types of information contained in the PA document [INFOTYPE]

3C. Variables related to company-bank relationship

- 3C.1 existence of a deposit relationship [ACCSHIP]
- 3C.2 single or multiple account relationship [S_MACC]
- 3C.3 single or multiple bank relationship [S_MBANK]
- 3C.4 length of deposit relationship [AGEACC2]
- 3C.5 utilisation of auxiliary bank services [OTHER_B]
- 3C.6 personal relationship between company officials and bank officials [KNOW_B]

3D. Variables related to profile of entrepreneurs

- 3D.1 age of entrepreneur [AGE_R]
- 3D.2 gender of entrepreneur [GENDER]
- 3D.3 ethnic groups [ETHNIC]
- 3D.4 educational level [EDUCATE]
- 3D.5 professional qualifications [PROF_Q]
- 3D.6 business management training attended [TRAINED]
- 3D.7 project appraisal training attended [TRAINPA]
- 3D.8 part-time business experience [PARTIME]
- 3D.9 past working experience [WORKEXP]
- 3D.10 experience in current business [BUSEXP]

3E. Other variables

- 3E.1 utilisation of informal sources of finance [INFORM_S]

Hypotheses 4 (Objective 1.5 to 1.9)

There are no significant relationships between access to government agencies' finance [ACCESS_G] and the following set of factors:

4A. Variables related to profile of companies

- 4A.1 size of company [F_SIZE]
- 4A.2 ownership structure [OWNSTRUC]
- 4A.3 age of company [AGEFIRM]
- 4A.4 business location [BUSLOCA]
- 4A.5 type of entity registration [REGTYPE]
- 4A.6 market classification [MKTCLASS]
- 4A.7 industry classification [INDCLASS]
- 4A.8 annual sales turnover [ANNSALES]

4B. Variables related to project appraisal practices

- 4B.1 adoption of project appraisal practices [ADOPTPA]
- 4B.2 type of appraisal used [TYPEPA]

- 4B.3 level of sophistication of methods used [METHOD]
- 4B.4 documentation of project appraisal [DOCPA]
- 4B.5 types of information contained in the PA document [INFOTYPE]

4C. Variables related to company-bank relationship

- 4C.1 existence of a deposit relationship [ACCSHIP]
- 4C.2 single or multiple account relationship [S_MACC]
- 4C.3 single or multiple bank relationship [S_MBANK]
- 4C.4 length of deposit relationship [AGEACC2]
- 4C.5 utilisation of auxiliary bank services [OTHER_B]
- 4C.6 personal relationship between company officials and bank officials [KNOW_B]

4D. Variables related to profile of entrepreneurs

- 4D.1 age of entrepreneur [AGE_R]
- 4D.2 gender of entrepreneur [GENDER]
- 4D.3 ethnic groups [ETHNIC]
- 4D.4 educational level [EDUCATE]
- 4D.5 professional qualifications [PROF_Q]
- 4D.6 business management training attended [TRAINED]
- 4D.7 project appraisal training attended [TRAINPA]
- 4D.8 part-time business experience [PARTIME]
- 4D.9 past working experience [WORKEXP]
- 4D.10 experience in current business [BUSEXP]

4E. Other variables

- 4E.1 utilisation of informal sources of finance [INFORM_S]

Hypotheses 3 will explore the relationship between the explanatory variables that are expected to have significant effects on SMMCs access to banks and other financial institutions while Hypotheses 4 will examine the relationship between similar variables with regard to access of SMMCs to government's agency financing. These explanatory

variables are grouped according to the four main components as described in *Section 5.3.1*. However, sub-hypotheses 3E and 4E are intended to test the relationships between the utilisation of informal sources of finance and the access of SMMCs to the external sources of finance.

Small and medium-sized companies with 'stronger' profiles are expected to have greater accessibility to external sources of finance than compared to companies with 'weaker' profiles. Stronger profile of companies are gauged by variables such as the size of company, number of years in operation, type of market and industry classification, type of business location, type of entity registration and most importantly the average annual sales turnover.

In relation to the adoption of project appraisal practices, SMMCs that have formally adopted the practices are expected to gain better access to the formal institutional finance. Furthermore, it is expected that companies that use a more sophisticated method of appraisal stand a better chance in terms of securing external debts. The information contained in the project appraisal documents are expected to provide valuable information to the potential supplier of finance, thus increasing the likelihood of the proposed project to get financed. On the contrary, SMMCs who have not adopted similar practices are expected to have less access to external finance.

Turning to the company-bank relationship, additional benefits can be derived by companies who work very closely with their bankers. These additional benefits include the possibility of obtaining preferential treatment in terms of credit application as well as other financial services desired by the companies. Opening an account with a

commercial bank is normally the first step towards establishing a more durable and meaningful company-bank relationship. As the maturity of the relationship increases, it is expected that financial services offered by the banks to their clients will also broaden. This assumption is akin to the concept of 'financial evolution' suggested by McLeod (1991) when she revealed that as companies grow and become more mature and stable, the opportunity for them to secure financial services from the banks also increases.

Another aspect that is important in the company-bank relationship is the SMMCs' utilisation of auxiliary services provided by the banks. This is because the intensity of using these services reflects the activeness of the companies. In other words, companies that are active tend to utilise various kind of auxiliary services provided by their bankers. By monitoring the use of these services, banks can obtain valuable information about the companies' activities, and this information is useful at times when the banks need to evaluate the firms' credit application. Individual relationship between the entrepreneurs and the banks' officers also help to enhance the firms' access to external financing. The relationship is supposed to be more informal and thus facilitates a smooth exchange of information flow between the two parties. As discussed earlier in *Section 5.3*, relationship banking has recently become an important aspect in retail banking whereby business managers spend more time with their clients rather than examining their accounts (Storey and Cressy, 1996). It is therefore predicted that SMMCs whose owners are in good term with the bank officers have more access to credit than companies with owners that do not have good relationship with the bank officers.

Profile of the individual entrepreneur is also seen as a key factor in determining SMMCs' access to external finance. SMMCs whose owners have a stronger profile are expected to stand a better chance of securing debt financing from the institutional finance than those companies whose owners have a somewhat weaker profile. The strength of the entrepreneur's profile are normally gauged by variables such as the academic and professional qualifications, age, sex, ethnic background, business management skills, business and past working experience²³. Apart from assessing the proposed project, banks would also normally assess the character of the entrepreneur who is applying for the loan. Although much of the assessment is being subjective, credit officers in Malaysia still regard it as one of the most important criteria in the credit evaluation process (Haron, 1990, 1994).

Finally, in terms of utilisation of informal sources, it is expected that SMMCs who have faced difficulties in accessing the formal institutions will certainly rely heavily on the informal sources. It is also postulated that even companies with no problems in accessing the formal credit market are using the informal sources as supplementary source of financing. In this case, the use of informal sources of finance is not an alternative to the formal sources as envisaged earlier. The establishment of this hypotheses will elucidate the importance of the informal sources especially in providing emergency credits to the SMMCs that cannot afford the time in making a crucial business decision.

²³There are several studies which relate the profile of the entrepreneur to the success of small business. See for example, Steiner and Solem (1988), Duchesneau and Gartner (1990) and Luk (1996). Although the factors concern primarily on the small business success, these same attributes can also be used to gauge accessibility factors which are relevant for this research.

Hypotheses 5 (Objective 1.10)

The demand for project appraisal by banks and other financial institutions is not significantly dependent on the following variables:

- 5.1 size of company [F_SIZE]
- 5.2 ownership structure [OWNSTRUC]
- 5.3 age of company [AGEFIRM]
- 5.4 types of credit applied [CRTYPE]
 - 5.4.1 long-term loan [CRTYPE3]
- 5.5 length of deposit relationship [AGEACC2]
- 5.6 length of credit relationship [AGECR2_B]
- 5.7 annual sales turnover [ANNSALES]
- 5.8 the adoption of project appraisal practices [ADOPTPA]

Hypothesis 6 (Objective 1.10)

The demand for project appraisal by government's agency is not significantly dependent on the following:

- 6.1 size of company [F_SIZE]
- 6.2 ownership structure [OWNSTRUC]
- 6.3 age of company [AGEFIRM]
- 6.4 length of deposit relationship [AGEACC2]
- 6.5 length of credit relationship [AGECR2_B]
- 6.6 annual sales turnover [ANNSALES]
- 6.7 the adoption of project appraisal practices [ADOPTPA]

Hypotheses 5 and 6 are set to examine the factors which affect the demand for project appraisal from financial institutions and government's agency respectively. Both hypotheses are important in the sense that they provide some justification that banks and other financial institutions as well as government agencies will not always require the credit applicant to perform and submit a project appraisal when dealing with the loan application from the SMMCs. It is expected that for short-term financing, banks

will not require project appraisal but for longer-term finance, banks and other financial institution would normally insist on the project appraisal to be carried out. Government agencies, on the other hand, are expected not to be particularly concerned whether or not project appraisal is performed when dealing with applications from SMMCs. This is because government agencies are expected to be less stringent than banks and other financial institutions in their evaluation process. It is also suspected that government agencies lack expertise in evaluating the appraisal documents thus attach very little significance to it.

If the demand for project appraisal appears to be stronger on the side of the external suppliers of fund, borrowers will perform the appraisal just to meet the lenders' requirement, not as a useful basis for investment decisions. By doing so, the risks associated with the proposed investments are not fully verified, thus increasing the probability of failure. But if the companies themselves recognise the importance of doing the appraisal as a useful basis for investment decisions, the risks of failure can be significantly reduced. In addition, it will certainly help to boost the lenders' confidence when evaluating a loan proposal.

There is also a reason to presume that banks and other financial institutions sometimes do not demand project appraisal to be performed, especially, when the applicant applies for a loan which can be guaranteed by the government through its credit guarantee agency. If this particular presumption is true, it will reflect banks' and other financial institutions' imprudence which may lead to a very serious setback for SMMCs credit market. There are already frictions between the banks, as suppliers of fund, and the credit guarantee agencies in many countries; each party accusing the other for not being

prudent enough in performing their respective functions (Levistky and Prasad, 1987).

As a result, the provision of finance to SMMCs are severely constrained as banks and financial institutions tighten their lending policies in order to minimise losses.

With regard to Hypotheses 5, it is expected that the demand for project appraisal by banks and other financial institutions are not significantly dependent on the size of company, ownership structure, age of the company, the types of credit applied, duration of account and credit relationship and also whether or not the company adopts a formal project appraisal practice. These variables are expected not to affect the decision made by banks and other financial institutions in terms of requiring the prospective borrower to perform project appraisal on the proposed project. However, with regard to Hypotheses 6, it is anticipated that similar variables will have significant influence in determining whether or not project appraisal document is required.

5.5 Summary

This chapter has set the theoretical backdrop for the subsequent chapters of our study. Evidence in the literature suggests that imperfections in the credit market have contributed significantly to the 'finance gaps' found in the provision of finance to the small business sector by the formal sector financial institutions. These imperfections are thought to be the result of several phenomenon existing in the financial market which include among others, government's interventionist policies, market power imbalances and asymmetric information. Many studies in the past have tried to discover several measures in order to reduce the imperfections. For example, some suggest that government should not interfere with the country's financial system and should leave the allocative function to the financial intermediaries. Government intervention will

only make the financial system less efficient, thus artificially set the market forces in equilibrium, where in fact the effective demand and supply are not. Consequently, it has been suggested that any intervention undermining of the role and function of financial intermediaries should be avoided. But even in some countries where the financial system is said to be fully liberalised, there are still some allegations by the small and medium-sized companies that they are being unfairly 'discriminated' against their larger counterparts by the banks.

With regard to the market power imbalances, it has been suggested that by providing guarantee to small companies would enhance their access to external financing. But experience in some countries have shown some dismay in outcomes whereby the credit guarantee agencies have to bear the cost of a significant amount of non-performing loans. It has also created a friction between the banks and the credit guarantee agencies as they start blaming each other when the default rate is climbing. This does not mean that the introduction of credit guarantee scheme is a total failure, as substantial numbers of SMIs have benefited via such schemes.

The existence of asymmetric information in the lending contract makes the provision of finance to the small company sector even worse. In order to reduce asymmetric information, it has been suggested that banks should seek more information other than that could be derived by conventional sources. Network, social clubs and societies, as informal organisations, seemed to be very useful sources of information. In addition, banks can obtain information by focusing its attention to the owner and the companies themselves rather than by focusing on their accounts. This has given rise to the concept of relationship banking.

Building on the theoretical framework related to the asymmetric information, the present research sets to explore two important issues. The first issue is whether the adoption of a formal project appraisal practice by the small and medium-sized companies has any significant influence in the provision of finance by the formal financial institutions. From a theoretical standpoint, SMIs which have adopted a formal project appraisal practice, are expected to have more access to external finance since a lot of information about the project and the company can be obtained from the appraisal documents. Of course, the quality of information would depend largely on the quality of the appraisal itself. Nevertheless, the information in the appraisal document is useful to the banks when making an informed lending decision.

The present study is particularly concerned with SMMCs adopting project appraisal practice as an investment strategy as well as a means to secure external financing. In other words, project appraisal is done objectively and diligently to assess the potential and risks associated with a particular investment project rather than merely to satisfy the potential lender's requirement. SMMCs should be encouraged to adopt these practices, since in the long run, banks would be more confident in extending loans to this sector.

The second important issue is related to the company-bank relationship. Favourable relationship between the companies and their bankers are expected to widen the opportunity to other financial services that can be acquired from the banks. Moreover, a closer company-bank relationship would facilitate the flow of information more freely

between both parties. This would certainly reduce the problem associated with asymmetric information as more information could be derived from the relationship.

In the next chapter, the discussion will focus on the research methodology that has been adopted in conducting the present research.

Chapter 6
RESEARCH METHODOLOGY

6.1 Introduction

This chapter starts by reviewing various research methodologies that have been adopted by previous studies that are directly related to the issue of project appraisal practices and SMI financing. It should be emphasised here, that thus far, the present researcher (to the best of his knowledge) has not found specific study which empirically evaluates the relationship between project appraisal practice and SMIs' access to formal finance in both developed and developing countries. Shortly after the review, discussion will then focus on the research methodology that has been adopted by the present researcher. Postal questionnaires were used to collect the primary data, while secondary data were obtained from various sources¹. Aspects of the current research methodology discussed in this chapter include the selection of research instrument, survey design, questionnaire design, pre-testing of questionnaires, selection of sample, the actual fieldwork and techniques used for data analysis. Towards the end of the chapter, a brief profile of the sampled firms is presented and a discussion on the limitations and constraints faced by the present research is given.

6.2 Review of Previous Research Methodologies

A brief review of the methodologies adopted by previous researchers in the specific areas of project appraisal practices and SMI financing is given in Appendix 6.1 and Appendix 6.2 respectively. Only those studies that have included small and medium-sized firms as their sample population are presented in those appendices.

¹Secondary sources include academic journals, books and informal interview with relevant organisations including those from the public and private sector.

6.2.1 Research methodologies on SMI's project appraisal practice

Most of the previous research on project appraisals by small and medium-sized companies have used postal questionnaires as the tool for collecting primary data. For example, Peel and Wilson (1996) used postal survey to collect primary data on the working capital and financial management practices in the small manufacturing and service sector firms located in North and West of Yorkshire. The questionnaires were posted to the managing director of the 250 firms in their sampling frame. Out of 250 companies, only 84 responses were usable for analysis; a response rate of 34 per cent, which, according to them, compares favourably with other studies of the small firm sector. In terms of data analysis, Peel and Wilson (1996) have used only descriptive statistics with parametric and non-parametric tests of mean differences.

In another study, Pope (1987) also used postal questionnaire to collect information on the capital budgeting practices of small and large firms in the USA. Using the Standard and Poor's March 1984 listing, questionnaires were sent to all companies listed therein. However, only 420 companies responded, representing a response rate of 43.3 per cent. According to him, the response rate appears to be typical for this type of survey research (Pope, 1987, p. 24). In terms of data analysis, only basic descriptive statistics were used to explain the findings.

In a study of capital budgeting practices by medium-sized firms in the UK, McIntyre and Coulthurst (1986) selected 750 companies from a commercial directory. The companies that were selected apparently conformed to the criteria of 'medium-sized' as defined by the Companies Act 1985 Section 248. They also used postal questionnaires as the primary tool of collecting data. Out of 750 questionnaires that were mailed, only

155 questionnaires were returned; of which only 141 questionnaires were usable for analysis. The usable returns represent a response rate of only 19 per cent. In term of analysis, they only used descriptive statistics to explain their findings.

In another study, Velez and Nieto (1986) used postal survey to gather information on the investment decision-making practices, which include the capital budgeting practices. From a sample frame of 173 firms in Bogota, Colombia, they managed to secure 70 usable response for analysis, representing a response rate of 40 per cent. Standard descriptive analysis were used to discuss the findings.

Beng, Choudhury and Tee (1986) also used postal survey in order to elicit information on the management accounting practices of small private firms in Singapore engaged in manufacture, service, and trade with fixed operating assets ranging from one to five million Singapore dollars. Their sampling frame was derived from those firms who have enrolled their employees for the Mandarin Diploma Course in Business Studies organised by the Singapore Institute of Management during 1984 and 1986. Out of a total mailing of 260 questionnaires, only 68 were usable, representing a response rate of 26 per cent. They also believed that the response rate was reasonable despite the fact that their sample was strictly not random (Beng, Choudhury and Tee, 1986, p.39). In this study, the analysis of data was done by using only descriptive statistics.

Personal interviews as a method to collect primary information on investment appraisal/capital budgeting practices, was used by Sheehan (1993a and 1993b) and Mao (1970). Sheehan (1993a and 1993b) used a list provided by the Northern Ireland Economic Research Centre (NIERC) as her sampling frame. Using clustered-sampling,

she managed to contact 65 companies. However, only 45 companies were actually interviewed; the rest either declined to be interviewed or were not interviewed due to scheduling difficulties. In both of her studies, the analysis of the data was based on descriptive statistics.

Mao (1970) used personal interviews to gather information on the capital budgeting practices of 8 medium-sized companies and 8 large companies. No information on the definition of size as well the sampling frame were given. However, in this particular study, the case-study approach was adopted in order to provide explanation on the findings. All interviews were recorded and transcribed before detailed descriptive analysis was carried out.

6.2.2 Research methodologies on SMI financing

The use of postal questionnaires on studies involving small firms and their banks have been utilised in a number of studies. For example, in one of the most recent studies by Cowling and Westhead (1996) on the relationship between small firms and their banks, the authors have used postal questionnaires as the main data gathering instrument. Using stratified random sampling technique, they selected a sample of 1,500 companies which are members of the Chamber of Commerce in Scotland and the South and West Midlands of England. Out of 1,500 companies surveyed, only 272 responses were used in the analysis. In terms of analysis, univariate and multivariate analyses were carried out to test the research hypotheses.

In another study, Sjorgen and Jungerhem (1996) have also used postal questionnaires to elicit information from sample firms. Their initial target population was to include

every manufacturing firms with between five and fifty employees in the region of Uppland. However, due to a low response rate, the sample target had to be revised to include firms with between ten and fifty employees. Out of 73 companies to which questionnaires were sent, only 63 companies responded to the survey. In terms of data analysis, they have used only descriptive statistics to discuss their findings.

Haron (1990 and 1994) used postal questionnaires in both of his studies on SMI financing in Malaysia. In the first study (1990), he sent questionnaires to 200 bank managers, of which 41 questionnaires were returned, representing a response rate of 20.5 per cent. For the later study (1994), he targeted credit officers as his sampled population rather than bank managers. Out of 150 questionnaires posted to the loan officers, 49 questionnaires were returned giving a response rate of 33 per cent. In both studies, he discussed the results of his study using only basic descriptive statistics.

A number of studies on the subject have used other methods of gathering data such as the use of personal interviews (e.g. Boocock and Shariff, 1995; Onn, 1995; Berry et. al., 1993), telephone interviews (e.g. Onn, 1995), and the use of secondary or published data set (e.g. Binks and Ennew, 1996; Petersen and Rajan, 1994; Binks, Ennew and Reed, 1992; Haines, Riding and Thomas, 1991). It has been found that, if the sample size were small and the main focus of study were on behavioural aspects, then, the use of personal interview would be more desirable than postal questionnaires. On the other hand, if relevant and reliable database already existed and was readily available, then the use of such database would be encouraged. However, for the present study, such a database is not readily available and easily accessible from the relevant authorities

(special permission and proper authorisation is always needed). Hence, the postal method has been chosen as the primary tool for collecting data.

6.3 Definition of the SMI Sector in Malaysia

Due to inconsistencies in defining and classifying SMIs in Malaysia in the past, a committee known as the National Development Council was set-up at the Economic Planning Unit, Prime Minister's Office in 1992 to come up with a standard classification to be used for the purpose of planning, providing incentive, financial assistance and other related services. After an extensive deliberation and consultation, the committee suggested that the government adopt the classification of Malaysian SMIs according to the criteria displayed in Table 6.1. The classification by number of employee has been adopted to define SMIs for the present study.

6.4 Statistics of SMIs in Malaysia

There are two main sources of official statistics on the small and medium-sized industries (SMIs) in Malaysia; namely the Department of Statistics and Registrar of Companies. The Department of Statistics publishes data from the industry surveys commissioned by the Ministry of International Trade and Industry. Until 1996, there are at least three major industry surveys which focused specifically on the small and medium-sized industries. The three industry surveys are the Industry Survey (1989), Survey of Manufacturing Industries (1992) and Survey of Small and Medium Scale Industries (1994). Apart from the Department of Statistics, the Registrar of Companies also have some statistics on the small and medium-sized industries that register with them but these statistics are usually out of date and very difficult to obtain.

Table 6.1
Classification of SMIs according to sector

Sector	Classification	No. of Employee	Output	Fixed Assets	Shareholders' Fund
MANUFACTURING (include resource and non-resource based)	Small	1-49	<RM3 mil	<RM1 mil	<RM500K
	Medium	50-99	RM3 mil - RM10 mil	RM1 mil - RM2.5 mil	RM500k - RM2.5 mil
	Large	100 & >	>RM10 mil	>RM2.5mil	>RM2.5 mil
BUILDING & CONSTRUCTION (include building and supplying as well as maintenance)	Small	1-49	<RM1 mil	<RM200K	<RM500K
	Medium	50-99	RM1 mil - RM2.5 mil	RM200K - RM500K	RM500K - RM2.5 mil
	Large	100 & >	>RM2.5mil	>RM500K	>RM2.5 mil
SERVICES Group 1: include professional services, tourist bureau, trading wholesale and retail, transportation	Small	1-9	<RM100K	<RM100K	<RM500K
	Medium	10-49	RM100K- RM1 mil	RM100K - RM1 mil	RM500K - RM2.5 mil
	Large	50 & >	>RM1 mil	>RM1 mil	>RM2.5 mil
Group 2: include shipping services, hotel, private schools and hospitals	Small	1-19	<RM1 mil	<RM500K	<RM500K
	Medium	20-49	RM1 mil - RM5 mil	RM500K - RM2.5 mil	RM500K - RM2.5 mil
	Large	50 & >	>RM5 mil	>RM2.5 mil	>RM2.5 mil
AGRICULTURE (include fishery, farming, horticulture and floriculture)	Small	1-9	<RM200K	<RM200K	<RM500K
	Medium	10 -49	RM200K - RM1 mil	RM200K - RM1 mil	RM500K - RM2.5 mil
	Large	50 & >	>RM1 mil	>RM1 mil	>RM2.5 mil

Note: 1. RM=Ringgit Malaysia (1 pound sterling=RM5.00)
2. Output is based on sales
3. K = thousands

Source: Economic Planning Unit, Prime Minister's Department

6.4.1 Industry Survey (1989)

According to the Industry Survey (1989), the number of SMI establishments in the *manufacturing sector* is about 6,092 companies which represent 93 per cent of the total manufacturing establishments in the country in 1988. The SMIs in this sector alone account for about 40 per cent of the labour force employed in the manufacturing sector. The number of SMI establishments in the *building and construction sector* is about 4,482 companies which represent 82 per cent of the total building and construction establishments and has 42 per cent share of employment in this particular sector.

In the *service sector*, SMI establishments represent 92 per cent of the total establishments (12,614 companies) but employing only 39 per cent of the workforce. While in the professional service sector, the number of SMI establishments is about 5,945 companies which represents 96 per cent of the total establishments in this sector and account for 73 per cent of the workforce. Unfortunately, a reliable figure for the SMIs involving in the *agriculture sector* at the time is not available.

6.4.2 Annual Survey of Manufacturing Industries (1992)

Based on the 1992 Annual Survey of Manufacturing Industries, SMIs accounted for about 84 per cent of total manufacturing establishments. Although the representation of SMIs is very high, their contribution to total value-added and employment was about 28 per cent and 33 per cent respectively, indicating that they were relatively less effective than their larger counterparts in terms of their contribution to the overall growth of the manufacturing sector.

6.4.3 Survey of Small and Medium Scale Industries in Malaysia (1994)

This survey provides the most recent statistics on SMIs in Malaysia. It was commissioned in 1994 to provide a census on the SMIs but the preliminary results were only available in December 1995. Based on this survey, there are 12,108 SMIs with paid-up capital of less than RM2.5 million and employing between 5 to 99 full-time workers. SMIs consisted of 10,400 small-scale and 1,708 medium-scale industries. Concentration of SMIs are in the production of machinery and equipment; rubber and plastic products; wood and wood products; food, beverages and tobacco; textile and wearing apparel as well as leather industries. An in-depth survey based on a sample of

1,900 SMIs selected from the above census was carried out shortly after the preliminary reports were published in order to provide more detail information (Appendix 6.3 provides some details on the industry classification based on a sampled survey of 1,900 SMIs).

6.4.4 Registrar of business/companies

According to the record at the registrar's office in 1990, there are about 64,758 companies that can be categorised as SMIs. Out of these, only 16% (10,643) of these establishments belong to the Bumiputera². In terms of equity, the Bumiputera SMIs only owned 11% out of the total equity of all SMIs. The non-bumiputera SMI companies (mainly owned by the Chinese) accounted for up to 60% (38,640) and their equity stake is about 50% out of the total paid-up equity. (Please refer to Appendix 6.4 for details).

6.5 Present Research Methodology

6.5.1 Data gathering technique

Since the majority of the previous research have favoured postal questionnaires as a reliable tool to gather primary data on the subject, the present research has attempted to adopt a similar technique after taking into consideration some of the drawbacks of postal questionnaire design as pointed out by Rappaport (1979) and Aggarwal (1980). For example, Rappaport (1979) have cautioned that the use of questionnaires to gather large amount of information without giving sufficient thought on the research design will only lead to misinterpretation and make inferences statistically invalid. Although

²Bumiputera refers to the indigenous population i.e. the Malays.

Rappaport is more concerned on the compatibility of samples, his reminder on the importance of the research design is well taken.

Aggarwal (1980) contends that the reliability of responses to academic questionnaires mailed out to selected firms may be deficient for two main reasons. First, one cannot make certain that the person who receives the questionnaire has the authority or ability to respond fully to the questionnaire. In many instances, the task of filling up the questionnaires are likely to be relegated to someone else. Secondly, according to him, previous studies seemed to have ignored the simple process of reducing the effect of non-response bias, *i.e. a telephone or personal poll of a representative random sample of the non-respondents to see if their responses are different from the other responses received* (Aggarwal, 1980, p. 33).

The reliability and validity of using postal surveys as research instrument, especially on the subject of capital budgeting, was supported by the findings of Klammer and Walker (1987) and Mills (1988b). Using multiple time-series surveys, Klammer and Walker (1987) have identified relatively few significant differences between the response rates by firms under different years of study, indicating that responses to the questionnaires by respondents are fairly accurate and reliable. In another study, Mills (1988b) based his questionnaire design and interpretation closely on the study of capital budgeting practices in the UK by Pike (1982) and Scapens, Sale and Tikkas (1982). The test for non-response bias conducted by Mills (1988b) indicates that later responses do not differ very much from earlier responses, indicating the validity of sample selection. In both of these studies, the use of postal questionnaires to gather information is perfectly

accepted as long as proper attention is given to the design and interpretation of such questionnaires.

According to Dillman (1978), the method of using postal questionnaires is desirable in many ways. It is an effective method of reaching the targeted sample provided that an accurate listing is available. In addition, the likelihood of interviewers' distortion and subversion can be effectively avoided. In terms of administrative requirements, the postal survey method is known for keeping costs low as well as being able to cover wider geographical dispersion. It is also useful, in situations where the targeted respondents are expected to be hostile or reluctant to personal interviews.

6.5.2 Research design

Following the suggestion put forward by Oppenheim (1992), this survey has adopted a multi-variate design since it is one of the most appropriate type of survey designs for well-researched domain of studies and where the researcher has no control over events (Figure 6.1). The current research falls within this particular domain, therefore multi-variate design seemed to be most appropriate.

6.5.3 Questionnaire design

The postal questionnaire method is generally known for its low response rate. However, due to its ability to cover a wider area as well as its cost-effectiveness, this particular method has been widely used to gather primary information. In order to encourage the response rate, the questionnaire is designed to be as attractive as possible, following the

Figure 6.1

Survey Design for Analytic Studies

	Little is known	Well-researched domain
No control over events	<ul style="list-style-type: none"> • Cross-sectional designs • Natural experiments • Retrospective follow-up • Panel studies 	<ul style="list-style-type: none"> • Factorial designs • Multivariate analyses including multiple regression
Power to control events	<ul style="list-style-type: none"> • Planned prospective follow-up with control sample 	<ul style="list-style-type: none"> • Before and after designs (matched groups) • Effects and intervention studies

Source: Oppenheim (1992), p. 35

recommendation of Dillman (1978) and Jain, Pinson and Ratchford (1982). Their recommendations include the length, size of the page, method of production, format, layout, and colour of questionnaires; respondents anonymity; the use of premiums or rewards, return envelopes and stamps and deadline dates. In terms of its physical appearance, the questionnaire is made into a booklet form, with clear step-by-step instructions.

The research questionnaire is divided into six short sections, eliciting information on the following areas:

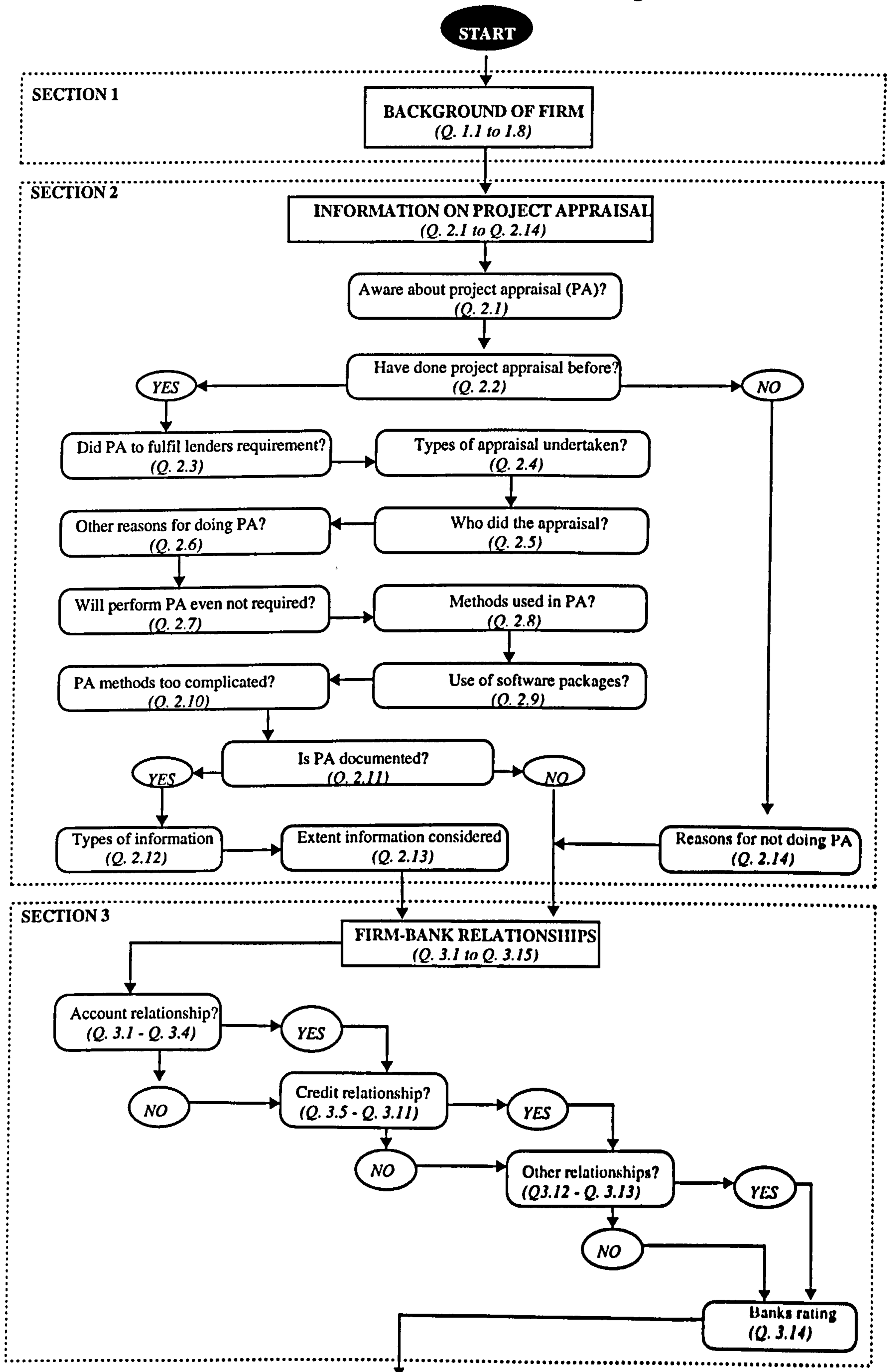
- Section 1: Background of the firm
- Section 2: Adoption of Project Appraisal Practices
- Section 3: Firm-Bank Relationships
- Section 4: Utilisation of Government Finance
- Section 5: Utilisation of Informal Finance
- Section 6: Background of the Entrepreneur

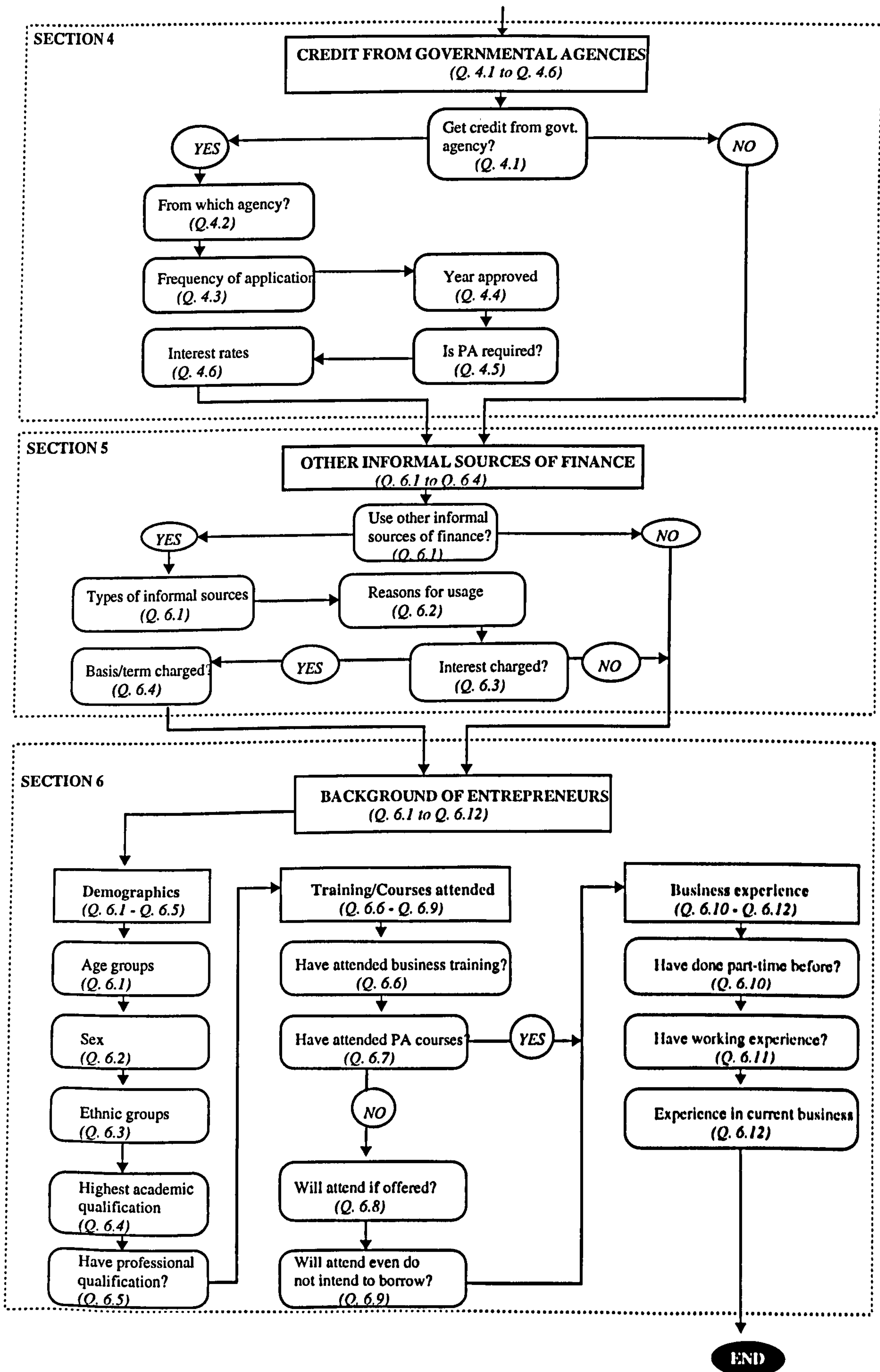
The wording of each question is designed to be simple and straight-forward and as far as possible, redundant, ambiguous and misleading questions are avoided. The questions are asked in the two main languages used in the Malaysian business and industrial communities which are the 'Bahasa Melayu' (the Malay language) and 'Bahasa Inggeris' (the English language). Though it was considered that 'Bahasa Mandarin' (the formal Chinese language) should be used but due to space limitation, the final questionnaire was finally written in the Malay and English language. In any case, as all SMI owners of Chinese and Indian origin carry out their business in English, absence of question in 'Bahasa Mandarin' and 'Bahasa Tamil' is not expected to make any difference. The final version of the questionnaire design flowchart is illustrated in Figure 6.2, while a copy of the actual questionnaire is given in Appendix 6.5.

6.5.4 Pilot survey

The first draft of the questionnaire was pre-tested on an actual sample of fifty small and medium-sized manufacturing companies. Another twenty, first draft questionnaires were sent to academic researchers in the area of SMIs, including colleagues for their comments and suggestions. Out of fifty questionnaires that were sent, only 11 questionnaires were returned - a response rate of 22 per cent.

Figure 6.2
Flow Chart to Illustrate Questionnaire Design





Based on the returned questionnaires as well as the comments and suggestions from experts and colleagues, the questionnaire design was amended accordingly. Initial coding and data entry also had to be amended following the changes in the questionnaire.

6.5.5 Selection of samples

Definition of sample

The sample used in this research is of firms defined as the small and medium-sized manufacturing companies (SMMCs) in Malaysia. The description of the SMMCs is based originally on the SMI Master Plan, 1989, (refer to Table 6.1) but with special emphasis on the ‘manufacturing activity’ as defined by the Industrial Coordination Act, 1975 of MIDA³. The Act defines ‘*manufacturing activity*’ as *the making, altering, blending, ornamenting, finishing or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal and includes the assembly of parts and ship repairing but shall not include any activity normally associated with retail or wholesale trade* (MIDA, 1996). From this definition, it is clear that other sectors of the industry such as the agricultural sector and the service sector are not included in the survey. The decision to concentrate only on the manufacturing sector is based on the assumption that project appraisal practices are more common in the manufacturing sector as compared to other sectors (*please refer to Section 1.4.1, p. 23 of Chapter 1*). Furthermore, by focusing on a single sector, the findings will be expected to be more focused and reliable for the sector studied. Nevertheless, the same study can also be replicated to other sectors if needed in the future.

³MIDA - Malaysian Industrial Development Authority.

Sampling frame and sample size

The sampling frame for the study is derived from the two main directories, namely, the Federation of Malaysian Manufacturer's (FMM) Directory, published in 1995 and The Small and Medium-Sized Industry (SMI) Directory of 1995/96 published by a private publishing firm. In terms of representativeness, the FMM directory provides an excellent coverage of cross-section of firms in terms of their location, product and industry classification. However, this particular directory makes no distinction in terms of the firms' size. Therefore, all companies which conformed to the definition of a SMI used by the study are selected. The directory has been able to provide a list of 674 small and medium-sized manufacturing companies. The SMI Directory 1995/96, on the other hand, classified the companies only by trade index, therefore, it is extremely difficult to count the total number of companies listed in this particular directory. It was therefore decided that the SMI Directory 1995/96 be used only to supplement the listing obtained from the FMM Directory⁴. Another 326 companies are selected at random from the SMI Directory 1995/96 and added to the original list to make a total of 1000 companies as the initial sampling frame.

The next step is to determine the size of sample. Many authors agree that the determination of sample size usually depends on the objective of the study itself, the variables of interest and the extent of the accuracy of information that can be obtained from the selected sample to draw inference for the general population (Bailey, 1978, Moser and Kalton, 1979, Fowler, 1984). As a general rule, the larger the population, the

⁴It is theoretically permissible to use a supplementary frame, if one exists, to make up the population in the initial sampling frame (Moser and Kalton, 1979).

larger is the sample required (Bailey, 1978). However, a large sample size by itself is not sufficient to guarantee the accuracy of results (Moser and Kalton, 1979). Since there is hardly any definitive answer as to how large a sample should be for any given study, the present study assumes that a sample of 500 companies is considered adequate. This number is determined following Fowler's (1984) suggestion, after considering a ninety-five per cent level of confidence with standard error of no more than 2 per cent⁵. The present study is more concerned on the representation of SMIs, in a manner where each state should be represented. The best way to achieve this is through stratified sampling technique. Thus, the sampling frame is stratified into states. The original distribution of samples in the sampling frame is given in Column 1 of Table 6.2. The number of samples from each strata (states) is determined according to the proportion it represents in the population in the sampling frame. After the number of required samples from each state is determined, simple random technique is used to select the firms.

For example, for the state of Selangor; the original number of firms in the sampling frame is 208 (Column 1) representing 20.8 per cent (Column 2) of the population in the sampling frame. Since the required sample is only 500, the number of firms to be selected from the state of Selangor is 20.8 per cent of 500, which is 104 firms. These 104 firms are then selected at random from the strata of 208 firms, giving almost a fifty-fifty chance for each firm to get selected. The same procedure is applied for the other strata. The final number of firms to be selected from each state is given in column 3 of Table 6.2.

⁵The usual recommended sample size is 500 (See Table 2.1 in Fowler, 1984, p. 42).

Table 6.2

Sampling Frame and Sample Size

States	No. of firms in sampling frame (Column 1)	Proportion of total (Column 2)	No. of selected samples (Column 3)
<i>West coast states</i>	912	0.912	456
(1) Selangor	208	0.208	104
(2) Wilayah Persekutuan (FT)	196	0.196	98
(3) Pulau Pinang (Penang)	112	0.112	56
(4) Johor	103	0.103	51
(5) Melaka	95	0.095	48
(6) Negeri Sembilan	89	0.089	44
(7) Perak	46	0.046	23
(8) Kedah	39	0.039	20
(9) Perlis	24	0.024	12
<i>East coast states</i>	57	0.057	29
(10) Kelantan	22	0.022	11
(11) Pahang	19	0.019	10
(12) Terengganu	16	0.016	8
<i>East Malaysian states</i>	31	0.031	15
(13) Sabah	15	0.015	7
(14) Sarawak	16	0.016	8
Total	1000	1.0	500

It seemed that a greater proportion of firms are selected from the West coast states followed by the East coast states and the East Malaysian states. This representation reflects the fact that many of the industries are located in the western states, while in the eastern states as well as in the eastern Malaysia, the industrialisation process is relatively young.

Once the sample firms were determined, a complete mailing list was then prepared and all the necessary administrative work⁶ was undertaken. A sample of the personalised official letter sent with the questionnaire to the selected respondent is given in Appendix 6.6.

6.5.6 The actual survey

The actual fieldwork was undertaken in Malaysia for a period of two months starting from the 15th of March until the 15th of May, 1996. The questionnaires were sent in two batches; the first batch was sent on the 18th March, 1996 and the second batch on the 25th March 1996. The closing date for the first and second batch was on the 15th and 22nd of April 1996 respectively. The first reminder (without questionnaire) was sent immediately after the closing dates while a second reminder (with questionnaire) was sent a week later. By May 10th, 1996, the number of questionnaires that have been returned was 216 but only 135 of them were fully completed and usable for analysis. This indicates a response rate of 27.0 per cent (Table 6.3).

Table 6.3

Actual Survey Statistics

<i>Particulars</i>	<i>Frequency</i>	<i>Percent</i>
Total number of questionnaire posted (sample size)	500	100.0
Total number of questionnaire returned	216	43.2
No. of questionnaires not returned at all (non-response)	284	56.8
No. of questionnaires returned uncompleted*	79	16.8
No. of questionnaires spoiled	2	0.4
No. of questionnaires completed/usable (response rate)	135	27.0

*Due to change of address or have ceased operation or have grown into large company.

⁶Include printing of questionnaires, self-addressed envelopes and formal letters.

Among the major problems encountered during the fieldwork was the reliability of addresses in the two directories. Many of the questionnaires returned uncompleted (79 questionnaires) were stamped '*Sudah pindah*' (have moved) by the postal authority which clearly indicates that the directories were not updated before its publication. SMIs moving without notice is a very common phenomena in both developed and developing countries (Hamilton, 1982). For some of the questionnaires that were not completed fully, the researcher made an effort to contact the companies over the telephone in order to have a completed response from the respondents. There were also a few cases where the questionnaire did not reach the company, but they received the reminder letters. This might be due to postal mistakes. In that case, fresh questionnaires were sent with a letter of apology. Samples of the reminder letters are given in Appendix 6.7 and Appendix 6.8.

One particular problem with any survey instrument is the problem of non-response. Non-response is a universal problem that no human investigator can avoid since his survey instruments is not, nor ever can be, entirely under the investigator's control (Moser and Kalton, 1979, p.166). There are generally two types of non-response. The first relates to incompleteness of the returned questionnaires. In other words, there are questions that are supposed to be responded to but are left unanswered by the respondent, may be due to lack of clarity of the questions themselves or the respondent simply refuses to give his or her response. This type of non-response will lead to 'missing values' during coding of data and if there are missing values, it will lead to difficulties in performing the data analysis. In order to avoid the problem, missing

responses are normally coded⁷, so that the decision to include them in the analysis or otherwise can be taken by the researcher at the analysis stage. In relation to the present study, the researcher had made the effort to ensure that this type of non-response is totally eliminated by contacting the particular respondents who have missed certain questions. The researcher has been able to identify the respondents since a complete mailing list was available to him and each and every respondent were identified with a serial number.

The second type of non-response is related to the inability of the researcher to get any response from the sampled population i.e. the questionnaires (and the follow-up questionnaires) sent are never returned or the questionnaires were returned incomplete due to various reasons, such as respondents had moved, or the respondents were no longer suitable to provide the answers as they have ceased operation. This type of non-response usually create biased estimates in study of any type as the characteristics of the non-response stratum could be different from those who have responded to the survey. Of course, the best way to reduce the non-response bias is to increase the response rate, however, certain constraints might limit the researcher's ability to do so. Particularly, with postal-surveys, despite the best effort on part of the researcher in designing the questionnaire, a high rate of response can never be guaranteed.

Since the problem of non-response is inevitable, efforts have to be focused on whether this problem creates significant bias to render the sample estimate inadequate. One method of dealing with non-response is to try to get some information about the

⁷When using statistical package such as the SPSS, the missing values can be defined by the user. Otherwise, any missing response will be automatically coded as missing values by the program.

characteristics of the non-response stratum. This can be done by random selection of the non-respondents and make some effort to find out some basic characteristics of the non-respondents by contacting them through telephones or by sending them a postcard asking a few simple questions that will enable the researcher to judge what kind of 'people' his sample has missed. This method has been suggested by leading authors on survey research methods such as Moser and Kalton (1979), Fowler, (1984), Hoinville and Jowell (1978) and Jain, Pinson and Ratchford (1982). Another method is to compare the results from a given survey with known values for the population such as the official statistics. If the values extracted from survey do not differ significantly from the 'known' values, then, the effect of non-response bias on the survey estimates can be considered minimal (Armstrong and Overton, 1977 in Jain, Pinson and Ratchford, 1982).

The present study has adopted the first of the above two methods. A sample of fifty non-respondents (identified by serial number) were randomly selected from the database originally created by the researcher himself and their telephone numbers were noted. Next, a simplified version of the questionnaire containing ten questions that were essential to determine the profile of the non-respondents was constructed. The ten questions in the simplified version of the questionnaire are as follows:

1. Date of establishment
2. No. of employees
3. Ownership structure
4. Sales category
5. Have adopted project appraisal?

6. What is the purpose of the appraisal? (Ask only if response to question 5 is yes)
7. Have been trained on project appraisal?
8. Have deposit relationship with a bank?
9. Have credit relationship with a bank?
10. Have used informal source of funds?

The non-respondents were contacted and interviewed over the telephone. Out of the fifty non-respondents, only 18 (36 % response rate) responded to the telephone survey⁸. Their responses were then analysed and compared to the original response from the respondent firms. From the observation, the researcher found that the characteristics of the non-respondents as compared to the respondents firms do not differ significantly except in their sales category⁹. Although this comparison can never guarantee the absence of 'bias', nevertheless, it has certainly boosted the confidence of the researcher and reassured him that his final sample is valid for further statistical analysis. The simplified version of the question is given in Appendix 6.9 and the profile of the non-respondent based on the ten questions is given in Table 6.4.

6.5.7 Data analysis

The data gathered from the questionnaires is coded and followed by data entry. The statistical package that is used for data analysis is the SPSS® for Windows™ Version 6.1. This package is chosen based on its capability to perform the required analysis. It is also a powerful package to perform many of the advance statistical analyses including

⁸The slightly higher response rate could be due to shorter questionnaire as well as 'direct' contact by phone.

⁹The majority of the non-respondent firms are in the lower sales category.

the *logistic regression* model. The data analysis is done in three stages. The first stage is to examine the relationship of the variables within its component using univariate

Table 6.4

Main characteristics of the non-respondents and respondent firms

Main characteristics	Non-respondents (n=18)		Respondents (n=135)	
	Frequency	Percent	Frequency	Percent
1. Age of firm				
1 to 5 years	2	11.1	28	20.7
6 to 10 years	7	38.8	37	27.4
11 to 15 years	5	27.8	29	21.5
16 to 20 years	3	16.7	24	17.8
21 years and above	1	5.6	17	12.6
2. Size of employment				
1 to 25 employees	2	27.7	41	30.4
26 to 50 employees	4	38.9	37	27.4
51 to 75 employees	8	11.1	27	20.0
76 to 100 employees	4	22.3	30	22.2
3. Ownership structure				
Bumi-controlled companies	7	38.9	54	40.0
Nonbumi-controlled companies	11	61.1	81	60.0
4. Average annual sales turnover				
RM 1 million or less	7	38.9	18	13.3
>RM 1 million to RM 1.5 million	5	27.7	18	13.3
>RM 1.5 million to RM 2 million	2	11.1	12	8.9
>RM 2 million to RM 2.5 million	1	5.6	12	8.9
>RM 2.5 million to RM 3 million	2	11.1	12	8.9
>RM 3 million and over	1	5.6	63	46.7
5. Have adopted project appraisal practice				
Yes	10	55.5	88	65.2
No	8	45.5	47	34.8
6. Reasons for appraisal(answer yes only)	(n=10)		(n=88)	
Project appraisal as loan requirement	5	50.0	45	51.1
To ascertain project risks	8	80.0	47	53.4
To ascertain project's viability	9	90.0	75	85.2
To rank and select projects	2	20.0	16	18.2
To help make decision	6	60.0	59	67.0
As a guide to implementation	3	30.0	29	33.0
7. Have been trained on project appraisal?				
Yes	4	22.2	29	21.5
No	14	77.8	106	78.5
8. Have deposit relationship with banks?				
Yes	18	100.0	134	99.3
No	0	0.0	1	0.7
9. Have credit relationship with banks?				
Yes	16	88.8	112	83.0
No	2	12.2	23	17.0
10. Have used informal source of funds?				
Yes	14	77.8	112	83.0
No	4	22.2	23	17.0

methods. Then, the second stage involves testing of the hypotheses where the relationships between the dependent and independent variables across components are examined, also using univariate methods. The third stage includes the multi-variate analyses which identify the variables that are important in determining whether or not the respondent companies adopt project appraisal practice.

6.6 The Main Profiles of Respondent Companies

As can be seen in Table 6.5, the firms were fairly represented in terms of size and ownership structure. In terms of size, out of 135 firms who responded to the survey, 78 firms (57.8 per cent) are small-sized manufacturing companies while 57 firms (42.2 per cent) fall within the category of medium-sized manufacturing companies.

In term of ownership structure, 60 per cent of the firms are controlled by *non-bumiputeras* while 40 per cent of the firms are controlled by *bumiputeras*. The higher proportion of *nonbumi-controlled* SMIs is self explanatory, since the *non-bumiputeras* have involved themselves in commercial activities from a much earlier period than the *bumiputeras*.

In terms of size of employment and age of the firm, the representation in each of the respective cohorts is considered to be uniformly distributed. The mean age of firms for the total sample is 11.99 years. However, for *bumi-controlled* companies, the mean age of firms is 9.54 years while the mean age of firms for *nonbumi-controlled* companies is 13.63 years. This observation reflects the fact that *non-bumiputeras'* involvement in commercial and industrial activities in Malaysia is earlier than the *bumiputeras*.

Table 6.5

Main profile of respondent firms (n=135)

<i>Main profiles</i>	<i>n (%)</i>	<i>mean/(s.d.)</i>
1. Size of firm¹		
Small-sized (1 to 50 employees)	78 (57.8)	1.422
Medium-sized (51 to 100 employees)	57 (42.2)	(1.134)
2. Ownership structure²		
Bumi-controlled companies	54 (40.0)	1.600
Nonbumi-controlled companies	81 (60.0)	(0.492)
3. Size of employment		
1 to 25 employees	41 (30.4)	
26 to 50 employees	37 (27.4)	2.341
51 to 75 employees	27 (20.0)	(1.134)
76 to 100 employees	30 (22.2)	
4. Age of firm		
1 to 5 years	28 (20.7)	
6 to 10 years	37 (27.4)	11.993 years
11 to 15 years	29 (21.5)	(7.672)
16 to 20 years	24 (17.8)	
21 years and above	17 (12.6)	
6. Type of entity registration		
Sole proprietorships	8 (6.9)	
Partnership	7 (6.2)	3.385
Private limited company (subsidiary)	45 (33.3)	(0.837)
Private limited company (non-subsidiary)	75 (56.6)	
6. Market classification		
Local markets only	48 (36.6)	2.222
Export markets only	9 (6.7)	(0.944)
Both local and export markets	78 (57.8)	
7. Industry classification		
<u>SIC Code</u> <u>Industry</u>		
381-383 Electrical, electronic products & machinery	17 (12.6)	
311 Food products and manufacturing	18 (13.3)	
321-322 Textile and apparel	8 (6.9)	
331-332 Wood and wood products	7 (6.2)	
355 Rubber-based products	6 (4.4)	6.044
371-372 Iron & steel and metal products	20 (14.8)	(3.522)
369 Non-metallic mineral products	9 (6.7)	
351-356 Chemicals, petrochemicals and plastic products	26 (19.3)	
390 Other manufactured products	24 (17.8)	
8. Average annual sales turnover³		
RM 1 million or less	18 (13.3)	
>RM 1 million to RM 1.5 million	18 (13.3)	
>RM 1.5 million to RM 2 million	12 (8.9)	4.267
>RM 2 million to RM 2.5 million	12 (8.9)	(1.932)
>RM 2.5 million to RM 3 million	12 (8.9)	
>RM 3 million and over	63 (46.7)	

Note: ¹ Size of the firm is defined according to the size of employment.

² Bumi-controlled firms are firms fully owned by bumiputeras as well as firms where bumiputeras are the major shareholders. Nonbumi-controlled firms are firms fully owned by nonbumiputeras as well as firms where the nonbumiputeras are the major shareholders, inclusive of foreign-owned companies.

³ RM = Ringgit Malaysia (Exchange rate: 1 pound sterling is equivalent to RM5.00)

The majority of the small and medium-sized manufacturing companies covered in the survey are registered as a private limited company. This may be due to the fact that a private limited company offers a greater protection in terms of liabilities as the owner and the firm are considered as two separate entities. Much of the operation of a private limited company is monitored by the Registrar of Companies according to the Company Act 1965 (Amendment 1996). Out of 135 companies, 120 of them are registered as private limited companies; 75 companies (56.6%) being non-subidiaries while 45 companies (33.3%) are being subsidiaries of larger companies. Out of the remainder 15 companies, 7 companies (6.2%) are registered as partnership and 8 companies (6.9%) are registered as sole proprietorships.

In terms of market classification, the majority of the small and medium-sized manufacturing companies in the sample produce for both local and export markets. Out of 135 companies, 78 companies (57.8%) reported to produce for both local and export markets, 48 companies (36.6%) produce exclusively for local markets while 9 companies (6.7%) produce exclusively for the export markets. This observation reflects the role of small and medium-sized industries as ancillaries to the larger corporations. It also reflects the fact that small and medium-sized industries in Malaysia has began penetrating the international market.

In terms of industry classification, almost all industries classified by the SIC code are represented in the sample. The small and medium-sized manufacturing companies who responded to the survey are involved in the following industries (by order of percentage):

1. production of chemicals, petrochemicals and plastic products (19.3%)
2. iron & steel and metal products (14.8%)
3. food products and manufacturing (13.3%)
4. electrical, electronic products & machinery (12.6%)
6. non-metallic mineral products (6.7%)
6. textile and apparel (6.9%)
7. wood and wood products (6.2%)
8. rubber-based products (4.4%)
9. other manufactured products (17.8%)

Finally, in terms of average annual sales turnover, the representation of respondent companies is slightly biased towards the upper bound of the sales cohort. However, the number of companies in the lower sales cohorts are fairly represented. Out of 135 companies surveyed, 63 companies reported to have annual sales in excess of RM 3 million. This observation gives an early indication that a substantial number of small and medium-sized industries in Malaysia have bypassed the “smallness” criteria and are growing into larger companies.

6.7 Limitations of the present research.

Despite the best possible efforts made by the researcher, the present study is constrained by one or two shortcomings which include selection of sample, data collection method, representation of findings and last but not least the limited amount of time and resources available to the researcher.

In terms of sample selection, the present research relies primarily on the following business directories; (i) The Federation of Malaysian Manufacturers (FMM) Directory, which is published annually by the Federation of Malaysia Manufacturers and (ii) Small and Medium Industries Directory which is published by a private publishing company. The list of companies in the FMM directory are limited by the number of its members. Most of its members are large manufacturing companies and multi-national corporations established in the country whereas small and medium-sized companies represent a relatively small proportion of its membership. Nevertheless, the information on the small and medium-sized manufacturing companies listed in the directory is very reliable. Furthermore, the directory provides an excellent classification which make cross-referencing extremely efficient. The directory is classified under three separate headings, by name of companies (alphabetically), by products (main products only) and by states. The only problem is to select the relevant companies since the directory does not differentiate between the large corporations and the small and medium-sized companies. Therefore, the selection of sample has to be based on the criteria adopted by the government in defining the small and medium-sized companies.

The problem in using the SMI Directory 1995/96 is basically due to the classification index which is based on products manufactured or services rendered. Therefore, if a particular company has more than two products, the same information about the company will appear under two different product classifications. Moreover, much of the information is incomplete; in some cases the addresses are not reliable. However, the directory has been quite useful in giving some information about the bumiputera companies, which can be scarcely found in the FMM directory. Other sources of listing

are either out-of-date or not available for consultation due to lack of co-operation from the relevant agencies¹⁰.

With respect to the data collection technique, the present research has adopted the postal questionnaire method as opposed to personal interviews. This is basically due to the geographical disbursement of samples throughout the country which requires substantial resources in terms of time and money. Furthermore, it was anticipated that fixing a relevant date for interviewing the entrepreneurs would not be an easy task, since a majority of them are always engrossed with their business and have very little sympathy in spending time to answer questions for an academic exercise! For these reasons, the postal questionnaire survey method was thought to be more appropriate. It was designed to be attractive and informal but without losing its essence following recommendations from prominent authors on survey methods (Dillman, 1978; Creswell, 1994 and Hoinville and Jowell, 1978).

Since the present research is based on data derived via postal questionnaires for a selected small and medium-sized manufacturing companies (SMMCs), the statistical analysis has to be confined within the research issues covered by the questionnaire. The validity of the response largely depends on the sincerity, frankness and diligence of the respondents which are beyond the control of the researcher, hence these have been taken at face value. Although, some efforts have been undertaken to filter the

¹⁰Listing have been requested from the Registrar of Business (ROB) and Registrar of Company (ROC) but they are unable to co-operate due to certain constraints. A database was obtained from the Ministry of Trade and Industry, but more than fifty per cent of the companies have either changed addresses or have been out of business.

information (such as cross-checking the responses), one can only assume that the information given by the respondent is fair and reasonably accurate.

In addition, postal questionnaire have been generally known to have a very low response rate. Nonetheless, this method allows the researcher to have a wider area of coverage. Since the study involves small and medium-sized manufacturing companies all over Malaysia, it will be impossible for the researcher, given the constraint of time and money, to cover the selected respondents in every states via personal interviews. Even though a wider coverage can be achieved by postal questionnaire, one cannot ensure that every state will be represented, especially the smaller states where the number of selected sample is extremely small.

Finally, in terms of representation of its findings, our survey has to be limited to the small and medium-sized manufacturing companies in Malaysia although similar implications can be extended to SMIs in the other business sectors such as the service and agriculture sectors.

However, despite the above limitations, the findings from the present research will certainly contribute to the body of knowledge particularly in the field of small business finance and will shed some new insights as to the direction of future research in this particular area. The experience gained from the present research can also be shared with other developing countries like Malaysia, especially in formulating policies and strategies to nurture the growth and development of SMIs which forms the backbone of the nation's industrialisation process.

6.8 Summary

This chapter focuses on the research methodology adopted for this dissertation. It starts off by reviewing the previous research methodologies especially those studies which are relevant to the current research issues. Following that, the current research methodology is discussed in detail. The discussions include the data gathering methods employed, the survey design, design of the questionnaire, sampling frame and sample size, pilot survey and the actual survey. Postal questionnaire survey method was used as the primary data gathering methods because of its particular advantages. The survey design was to allow data to be analysed within the univariate and multi-variate framework. Pre-testing of questionnaires were conducted before the final version of the questionnaire is distributed.

The sampling frame was formed from the two most recent business directories, namely the FMM Directory 1995 and the SMI Directory 1995/6. A total of five hundred companies were selected at random to be included in the final sample size. Out of five hundred questionnaires posted, one hundred and thirty five questionnaires were duly returned completed. The usable response rate is twenty seven per cent which is considered sufficient for statistical analysis, and a brief profile of the respondent firms is given. Towards the end of the chapter, the discussion is focused on the limitations and constraints faced by the present research.

In the next chapter, detailed descriptive analysis on the profile of the company, the company's project appraisal practice, their banking relationships and the entrepreneur's profile respectively will be provided.