

**THE SMALL FIRM LOAN GUARANTEE SCHEME IN  
JORDAN: AN EMPIRICAL INVESTIGATION**

**A THESIS SUBMITTED TO THE UNIVERSITY OF NEWCASTLE-UPON-TYNE  
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN ECONOMICS**

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## TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF TABLES	vi
LIST OF FIGURES	ix
DEDICATION	x
ACKNOWLEDGMENTS	xi
ABSTRACT	xii
<b>CHAPTER 1: INTRODUCTION</b>	<b>1</b>
<b>1.1 Motivation for the Study</b>	<b>1</b>
<b>1.2 Objectives of this Study</b>	<b>3</b>
<b>1.3 Organisation of the Thesis</b>	<b>4</b>
<b>CHAPTER 2: JORDAN AND ITS ECONOMY</b>	<b>7</b>
<b>2.1 Geography</b>	<b>7</b>
<b>2.2 Economic Background</b>	<b>8</b>
<b>2.3 Socio-Economic Characteristics</b>	<b>11</b>
2.3.1 Demography	11
2.3.2 Education	12
<b>2.4 The Jordanian Economy</b>	<b>13</b>
2.4.1 Labour Force	13
2.4.2 Unemployment	14
2.4.3 Trade	15
2.4.4 Investment	16
<b>2.5 Jordanian Industry</b>	<b>17</b>
2.5.1 Agriculture	17
2.5.2 Mining	18
2.5.3 Manufacturing	19
2.5.4 Construction	20
2.5.5 Services and Retail	21
<b>2.6 Conclusions</b>	<b>22</b>
<b>CHAPTER 3: SMALL AND MEDIUM-SIZED ENTERPRISES IN JORDAN</b>	<b>29</b>
<b>3.1 Introduction</b>	<b>29</b>
<b>3.2 Definition of Small and Medium-sized Enterprises</b>	<b>30</b>

3.2.1 The Definition of SMEs in the UK	32
3.2.2 The European Union Definition	35
3.2.3 Definitions Used Elsewhere in the World	35
3.2.4 The Definition of SMEs in Jordan	36
<b>3.3 The Role of SMEs in Jordan</b>	<b>37</b>
3.3.1 The Number of SMEs	38
3.3.2 Employment	39
3.3.3 Output and Productivity	40
3.3.4 Value Added	41
<b>3.4 Problems Experienced by SMEs</b>	<b>42</b>
3.4.1 Some General Issues	42
3.4.2 Issues Specific to Jordan	45
<b>3.5 Financing Small and Medium-Sized Enterprises in Jordan</b>	<b>47</b>
3.5.1 Sources of Finance Available to SMEs in Jordan	48
3.5.2 Obstacles to Financing SMEs in Jordan	52
3.5.3 Collateral Requirements	54
3.5.4 The Finance Gap in Jordan	57
<b>3.6 Conclusions</b>	<b>58</b>
<b>CHAPTER 4: REVIEW OF LITERATURE ON LOAN GUARANTEE SCHEME</b>	<b>62</b>
<b>4.1 Introduction</b>	<b>62</b>
<b>4.2 Information and Small Firms Finance</b>	<b>63</b>
4.2.1 Asymmetric Information	63
4.2.2 Collateral	67
<b>4.3 The Rationale for a Loan Guarantee Scheme</b>	<b>69</b>
4.3.1 Objectives of a Loan Guarantee Scheme	70
4.3.2 Costs and Benefits of Loan Guarantees	71
4.3.3 Additionality	72
<b>4.4 Empirical Evidence on Loan Guarantee Scheme</b>	<b>75</b>
4.4.1 Loan Guarantee Scheme in Developed Countries	76
4.4.2 The Impacts of Loan Guarantee Schemes	87
<b>4.5 Conclusions</b>	<b>94</b>
<b>CHAPTER 5: THE LOAN GUARANTEE SCHEME IN JORDAN</b>	<b>99</b>
<b>5.1 Introduction</b>	<b>99</b>
<b>5.2 The Early Loan Guarantee Scheme</b>	<b>99</b>

5.2.1 The Operation of the LGP	100
5.2.2 Problems of the LGP	101
<b>5.3 The Loan Guarantee Scheme</b>	102
5.3.1 The JLGC	103
5.3.2 The Amman Agreement	104
5.3.3 The Operation of the LGS	107
<b>5.4 Incentives to Participating in the LGS Agreement</b>	109
<b>5.5 The Activities of the Loan Guarantee Scheme</b>	110
5.5.1 Applications Received	110
5.5.2 Distribution of the Guaranteed Loans	111
5.5.3 Portfolio of Defaulted Loans	115
<b>5.6 Conclusions</b>	116
<b>CHAPTER 6: METHODOLOGY OF THE STUDY</b>	125
<b>6.1 Introduction</b>	125
<b>6.2 Previous Approaches</b>	125
6.2.1 Previous Studies	126
6.2.2 Problems in Evaluation	130
<b>6.3 Methodology of this Study</b>	132
6.3.1 The Approach for this Study	132
6.3.2 The Advantages and Disadvantages of the Approach	134
6.3.3 The Firm Questionnaire	135
6.3.4 The Bank Questionnaire	138
<b>6.4 Structure of the Firm Sample</b>	138
6.4.1 Sample Selection	139
6.4.2 Achieved Sample	140
<b>6.5 Conclusions</b>	141
<b>CHAPTER 7: THE SURVEY RESULTS</b>	143
<b>7.1 Introduction</b>	143
<b>7.2 Demographic Data on Interviewees</b>	144
7.2.1 Job Title	144
7.2.2 Educational Attainment	144
7.2.3 Gender	145
7.2.4 Age and Experience	145

<b>7.3 Characteristics of the Sample Firms</b>	146
7.3.1 The legal Status, Organisation and Location of Firms	146
7.3.2 The Start-Up Date of Firms	146
7.3.3 The Size of the Firm	147
7.3.4 The Constraints Facing Firms	148
<b>7.4 The Start-Up of the Firms</b>	149
7.4.1 Start-Up of the Firm	149
7.4.2 The Financial Resources for Start-Up	150
<b>7.5 Loans Prior to JLGC Support</b>	151
<b>7.6 The Take-Up of JLGC Support</b>	153
7.6.1 Awareness of JLGC Loans	153
7.6.2 Purpose of JLGC Loans	154
7.6.3 Size of Loans and Projects	154
7.6.4 Arranging the Loans	156
<b>7.7 Financing of the Project</b>	158
7.7.1 Administration of the Bank Loan	158
7.7.2 The Size of the Loan Guaranteed	159
7.7.3 Other Sources of Finance	159
7.7.4 The Security for the Guaranteed Loans	160
7.7.5 'Additionality' of the Guarantee	161
7.7.6 Subsequent Finance after the Guaranteed Loan	163
<b>7.8 The Economic Effects of the Project</b>	163
7.8.1 The Project's Effect	164
7.8.2 The Effect on Total Assets	164
7.8.3 The Effect on Sales Turnover	165
7.8.4 The Effect on Employment Level	166
<b>7.9 Feedback on the Loan Guarantee Scheme</b>	167
7.9.1 Difficulties Encountered with the Scheme	167
7.9.2 Advantages and Disadvantages of the Guaranteed Loans	168
7.9.3 Feedback on the Bank	169
7.9.4 Feedback on the JLGC	169
<b>7.10 The Survey of Commercial Banks</b>	170
<b>7.11 Conclusions</b>	173
<b>CHAPTER 8: QUANTITATIVE ANALYSIS OF THE SURVEY RESULTS</b>	195
<b>8.1 Introduction</b>	195
<b>8.2 The Variables</b>	196

<b>8.3 Model Estimation</b>	201
<b>8.4 Prior to the Project</b>	203
8.4.1 The Approach to the JLGC	203
8.4.2 Previous Loans	205
8.4.3 Reasons to take the Guaranteed Loans	205
8.4.4 Documents Prepared for the Guaranteed Loan	207
<b>8.5 The Guaranteed Loan</b>	209
8.5.1 Factors Affecting the Loan Size	209
8.5.2 The Participating Banks	210
8.5.3 The Rate of Interest	210
8.5.4 The Collateral	211
<b>8.6 Finance Additionality</b>	213
<b>8.7 The Economic Effect of the Project</b>	214
8.7.1 The Effect of the Project	215
8.7.2 The Effects on Firm Activity	218
<b>8.8 Summary and Conclusions</b>	220
<b>CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS</b>	237
<b>9.1 Introduction</b>	237
<b>9.2 Main Findings</b>	238
9.2.1 Characteristics of a Successful Scheme	238
9.2.2 Survey Results	239
9.2.3 Quantitative Analysis Results	240
9.2.4 Is the Scheme a Success?	242
<b>9.3 Recommendations</b>	243
<b>9.4 Future Research</b>	246
APPENDICIES	247
BIBLIOGRAPHY	299

## LIST OF TABLES

Table 2.1:	Area of Governorates, Population and Rainfall	23
Table 2.2:	Population in Jordan	23
Table 2.3:	Number of Students and Schools, 1995-99	24
Table 2.4:	Economic Indicators	24
Table 2.5:	Unemployment Rate by Governorate and Gender	25
Table 2.6:	Trade in 1999 and Trade Balance 1995-99	25
Table 2.7:	Sectoral Shares of GDP, 1990-99	26
Table 2.8:	Agricultural and Industrial Output	26
Table 3.1:	The Bolton Committee Definition of Small Firms	59
Table 3.2:	Small Firms in Industrial Sector in Jordan, 1987-97	59
Table 3.3:	Geographical Distribution of Small Firms in Industrial Sector, 1997	59
Table 3.4:	Employees in SMEs, in Private Sector, 1992	60
Table 3.5:	Employers in SMEs, in the Industries sector, by Gender, 1996	60
Table 3.6:	SME Share in Output, 1992	60
Table 3.7:	Average of Productivity in SMEs for Some Sectors, 1991	61
Table 3.8:	Small Firms Value Added and Their Share in Industrial Sector Value Added, 1986-94	61
Table 3.9:	Credit Facilities Extended by Commercial Banks According to the Economic Activities, 1987-99	61
Table 4.1:	Summary of Loan Guarantee Schemes in Developed Countries (UK, USA, France, Germany and Canada)	95
Table 4.2:	Summary of Loan Guarantee Schemes in Developing Countries (India, Philippines, Ghana and Haiti)	96
Table 4.3:	Arrangements/ Adjustments in SFLGS	97
Table 4.4:	Guarantees Issued at 31 <sup>st</sup> March 1984 by Region	97
Table 4.5:	Guarantees Issued at 31 <sup>st</sup> March 1984 by Sector	97
Table 4.6:	Guarantees Issues during the 6 phases of Arrangements in SFLGS	98

Table 4.7:	Guarantees issued from 1/7/81 – 31/3/2000, Geographical Distribution	98
Table 4.8:	SFLGS Employment Impact in 18-month following loan	98
Table 5.1:	Loans Provided by the LGP from Oct1990 – Sept 1993	117
Table 5.2:	Distribution of the Guaranteed Loans by Economic Sectors Oct 1990 – Sept1993	117
Table 5.3:	JLGC Shareholders at the End of 2000	118
Table 5.4:	Applications Received and Total Loans Ceilings during 1994-99	118
Table 5.5:	The Distribution of Guaranteed Loans by Economic Sector, 1994-99	119
Table 5.6:	Distribution of Guaranteed Loans by Governorates during 1994-99	119
Table 5.7:	Distribution of Guaranteed loans by Banks, 1994-99	120
Table 5.8:	Total Credit Facilities and the Guaranteed Loans, 1994-99	120
Table 5.9:	Distribution of Guaranteed Loans By borrower Status during 1994-99	120
Table 5.10:	Total Number of Employees and Its Distribution between Sectors	121
Table 5.11:	Total Number of Employees and Its Distribution between Governorates	121
Table 5.12:	Distributions of Guaranteed Loans by Purpose of Loans, 1994-99	121
Table 5.13:	Portfolio of Defaulted Loans during 1994-99	121
Table 6.1:	The Sample Selection	142
Table 6.2:	Achieved Sample	142
Table 7.1:	Status of Interviewee	175
Table 7.2:	Legal Status Organisation and Location of Firms	175
Table 7.3:	Age of the Firms	176
Table 7.4:	Size of the Firm	177
Table 7.5:	Constraints Facing Firms	177
Table 7.6:	Start-Up of the Firm	178
Table 7.7:	Loans Prior to JLGC Support	179
Table 7.8:	Awareness of JLGC Loans	180
Table 7.9:	Number and Purpose of JLGC Loans Received by Firm	181
Table 7.10:	Purpose of Most Recent JLGC Loan	181
Table 7.11:	Average Size of Most Recent JLGC Loans	182
Table 7.12:	Arrangement of the Most Recent JLGC Loan	183

Table 7.13:	Administration of JLGC Loan	184
Table 7.14:	Size of the Loan and Guarantee Percentage	184
Table 7.15:	Other Sources of Finance for the Project	185
Table 7.16:	Collateral for the Guaranteed Loan	185
Table 7.17:	‘Additionality’ of Guarantee	186
Table 7.18:	Subsequent Finance after Loan	187
Table 7.19:	Most Important Effect of the Project	188
Table 7.20:	Characteristics of Firms Year before the Loan	189
Table 7.21:	Change in Firms Characteristics after Loan	189
Table 7.22:	Jobs Created and Retained in the Firm	190
Table 7.23:	Firms Experience of Loan Guarantee Process	190
Table 7.24:	Advantages of the Guaranteed Loan	191
Table 8.1:	Correlation Coefficient for the Firm Size	224
Table 8.2:	Factors Determining the Approach to the JLGC	225
Table 8.3:	Approach to JLGC: Previous Loans	226
Table 8.4:	Approach to JLGC: Collateral for Previous Loans	227
Table 8.5:	Reasons to Take a Guaranteed Loan	228
Table 8.6:	Documents Prepared for the Guaranteed Loan	229
Table 8.7:	Value of the Guaranteed Loan	230
Table 8.8:	Value of the Guaranteed Loan: Participating Banks	231
Table 8.9:	The Rate of Interest on the Guaranteed Loans	232
Table 8.10:	The Value of Collateral for the Guaranteed Loans	233
Table 8.11:	Finance Additionality	234
Table 8.12:	The Economic Effects of the Project	235
Table 8.13:	Effects on Firm Activity Due to Project	236

## LIST OF FIGURES

Figure 2.1:	Political Map of Jordan	27
Figure 2.2:	Map of Jordanian Governorates	28
Figure 5.1:	Inquiry of Applications Received during 1994 – 99	122
Figure 5.2:	Total amount of Provided Loans and Guaranteed Amount during 1994-99	122
Figure 5.3:	Ceiling of the Commercial Banks	123
Figure 5.4:	Distribution of Guaranteed Loans by Economic Sectors 1994-99	123
Figure 5.5:	Distribution of Guaranteed Loans by Governorates 1994-99	124
Figure 5.6:	Distribution of the Guaranteed loans by Borrower Status 1994-99	124
Figure 7.1:	Age of Interviewee	192
Figure 7.2:	Firms' Sales in Different Markets	193

*TO MY PARENTS, BROTHERS  
AND SISTERS*

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# **THE SMALL FIRM LOAN GUARANTEE SCHEME IN JORDAN: AN EMPIRICAL INVESTIGATION**

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## **ABSTRACT**

In Jordan around 98 percent of manufacturing and service sector firms are small and medium-sized enterprises (SMEs), while around 80 percent of the Jordanian labour force is employed by SMEs. However, SMEs face considerable difficulties in obtaining sufficient funds, especially from external sources such as commercial banks. This has been recognized in Jordan by the establishment of a loan guarantee scheme in 1994. However, neither this nor any other similar scheme introduced by a developing country has been fully evaluated to establish its impact and success. The purpose is to evaluate the effects of the Jordanian loan guarantee scheme to establish its role in improving the supply of funds to SMEs, and to suggest policies and procedures for the improvement of the scheme.

The methodology for the study is based upon an interview questionnaire survey of 142 Jordanian firms receiving loans from the commercial banks backed by a guarantee. It covers firms in different types of business (manufacture, services, retail and agriculture) and in different locations (Amman, Zarqa, Irbid, Balqa and Aqaba). The study also utilizes interviews with the credit managers of commercial banks participating in the loan guarantee scheme. The thesis is organized around nine chapters including on the Jordanian economy, SMEs in Jordan, a literature review of loan guarantee schemes and the qualitative and quantitative results of the surveys.

The main findings are that younger borrowers and newer SME firms are more able to receive commercial bank funding under the scheme than they would otherwise obtain. The scheme also helps firms with uncertain profitability and projects that are traditionally viewed as 'low quality' (e.g. low level of education or female entrepreneurs) to obtain extra finance. These projects have low default rates and do not have high failure rates suggesting a substantial market failure. However, the study finds that the commercial banks tend to use the scheme as an additional source of security in their lending, and do not necessarily lend to riskier projects, as they require similar levels of collateral. Further, the study draws attention to the management of the scheme, so that it needs to be better marketed to the target group and there needs to be better monitoring and follow-up of projects. Lessons could also be learnt from other guarantee schemes, such as in the UK, including the introduction of a premium charge for firms.

# CHAPTER 1

## INTRODUCTION

### 1.1 Motivation for the Study

Virtually all countries, at whatever stage of economic development, recognise the importance of small and medium-sized enterprises (SMEs), and the need to support their development. The importance of small and medium-sized enterprises can be observed in their share of employment and output, as well as the number of firms. Small and medium-sized firms are a very important component of national economies all over the world.

In Jordan around 98 percent of manufacturing and service sector firms are small and medium-sized enterprises (SMEs), and nearly all of the retail and agriculture sectors are small and medium-sized enterprises. Further, around 80 percent of the total Jordanian labour force is employed by SMEs and around one third of the total output is produced by these firms. However, the development of SMEs in Jordan, as elsewhere, is hampered by a variety of problems. The problems may differ from one region to another and from sector to sector, but there are certain problems that are common to all SMEs. One of the most important of these is finance. This can be observed in the firms' need for funds to start-up and to grow, while the commercial banks, as a main source of finance, are reluctant to provide loans to small firms. This is because these firms are often unable to pledge enough collateral, and sometimes their newness translates into 'bank speak' as an insufficient track record.

Thus, small and medium-sized enterprises, especially in developing countries, find it difficult to start-up and grow because of insufficient bank credit. The small and medium-sized enterprises are seen as more risky than larger firms, because of the high level of uncertainty surrounding them, and because of their much higher rates of failure. Banks prefer to deal with larger firms, due to the existing links with them, and because large firms often

have a good track record and adequate documentation, in contrast to SMEs. However, small business owners are likely to know significantly more about their firms than any outsider, including the commercial banks, but this lack of information makes the small firm's mission to borrow from the banks difficult, even though they may have sound and commercially-viable projects. This asymmetric information in the credit market makes the commercial banks' mission to distinguish between good and bad borrowers difficult, and it is a cause of both adverse selection (hidden-borrower type) and moral hazard (hidden-borrower effort) problems, and ultimately market failure. Collateral is considered to be the main way to solve this problem, because the borrower bears a penalty from loan default in addition to losing the project. However, as we have argued, SMEs do not have enough collateral to pledge in order to acquire the funds that they need from the commercial banks.

As an attempt to overcome this problem in the credit market, governments have established commercial loan guarantee scheme for SMEs. To this end, the Jordan Loan Guarantee Corporation (JLGC) was established in 1994 to offer loan guarantees to SMEs. The objective of the Jordanian Loan Guarantee Scheme (LGS) is to overcome the "difficulties encountered by owners of productive projects, including their inability to provide adequate conventional collateral to acquire the required financing from commercial banks to start or expand their feasible projects" (JLGC, 1994). The Corporation offers guarantees to commercial banks participating in the Loan Guarantee Scheme to encourage them to extend the required credit to the owners of target SME projects, as long as the individual loan guaranteed by the Corporation does not exceed 100,000 Jordanian Dinar (J.D) or about £ 100,000, and the number of workers in the project does not exceed 50 employees.

The purpose of the guarantees provided by the JLGC is to help entrepreneurs of target SMEs (ie. new firms, firms in rural areas, younger borrowers, female borrowers and so on) acquire sufficient finance from commercial banks for setting up or expanding their income-generating small and medium-scale enterprises. This is provided to feasible projects, which do not have sufficient traditional collateral to acquire such finance. The importance of SMEs to Jordan follows from their role in national economic and social objectives, such as promoting real and productive investment, which boosts production capabilities. The Jordan Loan Guarantee Corporation is the first venture of its kind in Jordan to guarantee bank loans

for entrepreneurs based on economic feasibility and cash-flow assessment rather than the traditional collateral. Further, it is the only private initiative for supporting SMEs in Jordan. Since its inception, the JLGC gives most importance to the coverage of risks associated with loans extended by commercial banks to small and medium scale projects in Jordan, whether these projects are in manufacturing, retail, agriculture or services or in projects related to handicrafts or the professionals. In total, about J.D 70 million in loans to SMEs have so far been guaranteed under the scheme, but surprisingly there has been no independent evaluation of this scheme.

## 1.2 Objectives of this Study

The primary objective of this study is to investigate the effects of the Jordanian Loan Guarantee Scheme to establish its role in improving the supply of funds to small and medium-sized enterprises in Jordan. The thesis aims to measure the scheme's 'additionality' and its economic impacts, and to recommend policies and procedures for improvements. The study has a number of other objectives. These are to investigate the impact of the loan guarantee scheme on the commercial banks willingness to provide loans to small and medium enterprises, and on encouraging entrepreneurs to take-up loans from the banks. It also seeks to examine the impact of the scheme on encouraging the commercial banks to base their credit decisions on a project's feasibility and cash flow rather than conventional collateral. As such, an important issue is whether it encourages entrepreneurs to use business plans and other documents to prove their project's potential to grow, survive and to repay the bank's money on time.

The Jordan Loan Guarantee Scheme was established in 1994, and our period of study is 1994-99. One of aims of this study is to measure the scheme's 'additionality' and the economic effects of projects that were funded by the guaranteed loans. As mentioned in the literature, both additionality and the economic effects generated by a project need at least eighteen months to become measurable (NERA, 1990). This study focused on guarantees made in the main five governorates of Jordan: Amman, Irbid, Zarqa, Balqa and Aqaba. The choice of these governorates was based on to them having the majority of economic activity and around 80 percent of the population. The governorates also have more than 90 percent of

the total firms that received guaranteed loans during the study period 1994-99. The methodology for the study is an interviewee questionnaire survey of firms receiving loans guaranteed under the scheme. The study also utilizes interviews with a small number of commercial banks participating in the loan guarantee scheme. The data collected from the firm survey are analysed in two main ways. The first is a qualitative analysis, and the other concentrates on a quantitative analysis using regression techniques.

In the field of loan guarantee scheme evaluation in Jordan, this study must be considered as a pioneering research. It might also be considered to be pioneering in most other low income countries, as Vogel and Adams (1997) report that they are “unable to find any evaluation of loan guarantee programs in low-income countries” (p, 26). Also Cressy (2000) reports that “despite widespread use of LGS [loan guarantee schemes], only a few attempts have been made to evaluate the contribution of these schemes, especially in Europe” (p, 251). As such, this is the first evaluation of loan guarantees in developing countries, and an important contribution to the literature. The main finding of the study is that the loan guarantee scheme has had a relatively poor effect, and that the banks lending practices have been little changed. However, the scheme is more successful in encouraging the banks to adopt the appropriate credit policy in the case of some target groups of firm and borrower. The study offers a number of recommendations for improving the operation of the scheme.

### **1.3 Organisation of the Thesis**

The main body of the thesis is organised into seven chapters, plus a concluding chapter. In the next chapter, a general overview of the geography of Jordan, its economic background and socio-economic characteristics is provided. The chapter looks at the labour market and trade and investment in the Jordanian economy. It gives a brief explanation of the sectoral composition of the economy, focusing on the period 1994-1999. Chapter Three is sub-divided into four main parts. The first part discusses the definition of small and medium-sized enterprises in Jordan, but looks at this definition in the UK, the European Union and elsewhere in the world. In the second part, the role of SMEs in Jordan is reviewed, including the number of SMEs, their employment level, their output and productivity and their value added. The third part looks at the problems facing SMEs, as outlined in the literature, and

particularly the problems specific to Jordan. Finally, the chapter presents the main features of SME finance in Jordan, such as different sources of finance, obstacles to financing SMEs, collateral requirements from commercial banks and the 'finance gap' in Jordan.

In Chapter Four a survey of the loan guarantee scheme literature is undertaken. This is organised in to three main parts. The first part examines asymmetric information as a reason for credit market failure, which could be potentially be corrected by firms pledging conventional collateral to the commercial banks. However, it is argued that this is a problem for small firms. In the second part the rationale for the loan guarantee scheme as an alternative or substitute for collateral is examined. Finally, the last part of this chapter considers the empirical evidence on loan guarantee schemes, including the evaluation experiences of the UK and the USA. Chapter Five explores the Jordanian experience of the loan guarantee field. Attention focuses on the early loan guarantee programme that existed in Jordan for two years in the early 1990s. The rest of the chapter concentrates on the Jordanian Loan Guarantee Scheme (LGS) run by the Jordan Loan Guarantee Corporation (JLGC) since 1994. It describes the nature of the loan guarantee scheme and its scale.

The methodology for this study is set out in Chapter Six. In order to support the chosen methodology, a review of previous approaches that have been taken by similar evaluative studies is provided. The methodology involves a large-scale interviewee survey of loan guarantee recipients, and a small number of interviews with participating banks, and these are described in some detail. In the subsequent two chapters, the analysis is undertaken of the data gathered from the survey of loan recipients. This commences in Chapter Seven with a qualitative analysis of the data, which presents data on the demographic nature of the interviewees and the characteristics of the sample firms. It also considers the start-up of the firm, the firms' history with the commercial banks, the take-up of JLGC support and the financial and economic effects of projects that were supported by a guaranteed loan. This chapter reviews the qualitative feedback from firms on the loan guarantee scheme. The last part of this chapter discussed the commercial banks' view on the scheme. Chapter Eight presents the quantitative analysis of the firm survey results. It discusses the variables that are used and the nature of the model estimations. The rest of this chapter examines the firms'

situation prior to the project, the nature and size of the guaranteed loan, the finance additionality of the guarantee and the economic effects of the project.

Finally, Chapter Nine concludes the study. It contains a discussion of the main results to emerge from the research, and puts these in the context of the loan guarantee scheme evaluations in developing countries. The chapter also presents recommendations and suggestions to improve the procedures and activities of the Jordanian Loan Guarantee Scheme. Since each of the chapters is reasonably self-contained, tables and figures are collected at the end of each chapter to make the reading of the text easier. The appendices for all chapters and the bibliography are collected at the end of the thesis.

## CHAPTER 2

### JORDAN AND ITS ECONOMY

This chapter is concerned with describing the main features, changes and problems facing the country of Jordan. It examines the geography, population, economic background, socio-economic characteristics of Jordan. It also examines the Jordanian economy and industry. The purpose is to give an overview of Jordan and its economy.

#### 2.1 Geography

The Hashemite Kingdom of Jordan is a small developing country, located in the Middle East between latitudes 29 and 33 north and longitudes 34 and 39 east. It is situated between Israel and the Palestinian National Authority regions in the west; Iraq and Saudi Arabia in the east; Syria in the north and Saudi Arabia and the Red Sea in the south. This is shown in Figure 2.1. The total land area of Jordan is 89,300 km<sup>2</sup>, of which only 7.8 percent is agricultural land. The remaining area is uncultivated, and comprised of either desert or barren hills. The country can be divided into three main geographical regions; namely, the Highlands, the Jordan Valley and the Desert region.

The Highlands which are towards the west of Jordan extend from the Syrian border in the north to the Aqaba Gulf on the Red Sea in the south. The Highlands are host to the main cities of Jordan (see Figure 2.2). These are the Capital City of Amman, as well as Zarqa, Balqa, Irbid, Ajloub, Jerash, Madaba, Karak, Tafilah and Aqaba. The Jordan Valley lies along the western border of Jordan, and along the western edge of the Highlands; through it runs the Jordan River. Most of the Valley is below sea level. The Dead Sea lies in the centre of the Valley with a total length of 90 km and a maximum width of 16 km. The Jordan River runs from Lake Tiberias in the north and empties into the Dead Sea as shown in Figure 2.1. The Desert region, to the east and southeast of Jordan, occupies nearly 70 percent of the total land area. For a long time, only a small number of nomadic Bedouins have lived here.

Jordan consists of twelve administrative areas, which are known as Governorates (see Figure 2.2). Ten Governorates, located in the Highlands and Jordan Valley, account for 33 percent of total land area. The other two Ma'an and Mafraq account for the remainder of Jordan, and are in the Desert region. Table 2.1 shows the total land area of each Governorate.

The country generally has a Mediterranean climate, though the temperature varies from one region to another. The temperature in the Highlands may reach an average 30°C in summer, but rarely falls below zero in winter. The rainy season in this region usually starts in early November until the end of March, with an average annual rainfall of around 125mm. In the Desert the temperature is very high and reaches an average of 45°C in summer and around 15°C in winter, without rain. The Valley has a dry summer with an average temperature of 40°C and warm short winter with an average temperature of 20°C. The average quantities of rainfall in the Jordanian Governorates during 1997/98 are shown in Table 2.1. It shows clearly the lower rainfall in the Desert region, and the much higher levels of precipitation in the Highlands, especially in the areas such as Irbid and Ajloun, while the south receives only 37 mm.

## **2.2 Economic Background**

From the sixteenth century to the end of the First World War, Jordan was a part of the Muslim Ottoman Empire. The Allies defeated the Ottomans in the First World War, and signed the Saykes-Picot Treaty of 1916, whereby Great Britain was to govern Iraq, Palestine and Transjordan (now Jordan, which was an appendage to the British mandate in Palestine), and France assumed responsibility over Syria and Lebanon. The state of Transjordan, which was under close British supervision, was formally created in April 1921, and recognised Amir Abdullah as its ruler.

Jordan became independent at the end of the Second World War on 25 May 1946, but remained under British tutelage. However, it experienced periods of instability, firstly due to the death of its ruler Abdullah in 1947, and secondly due to King Talal's illness between 1948-52. In several respects then, Jordan only really became independent after the accession of King Hussein in 1952. Since this time the country has faced several obstacles to its development. These are a general lack of natural resources and two periods of Israeli occupation of Palestine in 1948 and of the West Bank in 1967, which was the formerly a part

of Jordan. It created political instability, and made thousands of Palestinians homeless or refugees. In 1994 Jordan signed a Peace Treaty with Israel, ending almost 50 years of conflict.

During the period 1952-66, the emphasis of government policy was on building the country's infrastructure. Numerous projects were undertaken in industry and agriculture, including irrigation, and national output increased substantially from J.D (Jordanian Dinar) 60.5 million in 1952 to J.D 239.2 million in 1966 (market prices). Funding for this investment depended heavily on foreign loans, and on grant assistance from other Arab and European countries. Real per capita income increased by 4.4 percent per annum during the period 1955-66, with agricultural income growing by 3.6 percent annually and industrial income by 14.4 percent. Income from the service sector increased by 9.1 percent annually.

In 1967, Jordan lost the West Bank to Israel, a significant part of its territory. Over the next five years the Israeli occupation drove tens of thousands of refugees into Jordan, with significant demographic and labour market implications. Matters came to a head in September 1970, with serious civil unrest between government forces and some of the Palestinian refugees. The refugees wanted to use the Jordanian western border to fight against Israel, but without Jordanian Government acceptance. Emergency economic measures were taken to maintain order and to revive the economy. Despite this, national output grew from J.D 229.9 million in 1967 to J.D 285.7 million in 1972.

The Jordanian economy continued to grow after 1972, and this has been aided by a series of Government Plans. The primary objective of the 1972 three-year Plan was to "realise the highest possible level of economic activity and employment, and to develop manpower skills, qualifications, and capabilities in the service of development". The second objective was to "realise the highest possible rate of growth of GNP", and the third objective was "the distribution of public services and the benefits of development among all regions of the Kingdom and all groups and start a society" (see Ifram, 1997) (p, 73). This Plan aimed to solve the problems resulting from the Israeli occupation of the West Bank and the civil unrest in 1970.

A new five-year Plan followed in 1976, and this was supported by assistance from the Arab oil-producing countries, which benefited from rising oil prices. The country

implemented most of the economic and social projects envisaged by this plan, and output grew further, from JD 285 million in 1972 to JD 1,214 million in 1980. However, oil prices fell over 1981-85, and the Jordanian economy encountered new problems, with the Arabian settlements to Jordan falling from JD 415 million in 1981 to just JD 229 million in 1985. This was compounded by the War between Iraq and Iran, which lasted until 1988.

Further problems arose in 1988, as the Jordanian economy suffered as a result of a general economic depression throughout the region. Foreign debt increased and the government started to make use of its foreign reserves, resulting in a loss of confidence in the Jordanian dinar. The value of the dinar fell from JD 1= US \$ 3 in May 1988 to 42.5 percent of this value in May 1989, stabilising at around US\$ 1.41. With the resulting balance of payment crisis, the government abandoned the 1986 five-year Plan, and introduced a structural adjustment programme supported by the International Monetary Fund and World Bank. However, with the invasion of Kuwait by Iraq in August 1990, the government also had to abandon this adjustment programme. Because of government support for Iraq, many Jordanian citizens were obliged to give up jobs in Gulf countries, leading to a substantial increase in unemployment.

Faced with the problems of rising unemployment, a serious imbalance in foreign trade and reduced assistance from other Arab states, the government took a two-pronged stance to resolve these problems. Firstly, it prepared a structural adjustment programme for the 1992-98 period, which was again supported by the IMF. The funding served to compensate for the declining assistance from the Arab countries, which had ceased due to the Jordanian stance during the second Gulf War. Secondly, to work alongside this, it introduced a new five-year Plan (1993-1997).

After the death of King Hussein in 1999, and the accession of his successor King Abdullah, there was intensive scrutiny of the economy. The government undertook new measures to develop the economic situation and to encourage investment. This was achieved through the creation of new laws such as the Privatisation Law, Investment Law and the Free Zone Law. Under the new king, the government has adopted a more international approach to the economy. So, within the last few years, the Jordanian government has joined the World Trade Organisation (WTO) and signed a free-trade agreement with the USA in October 2000. It has also signed a partnership agreement with the European Union in November 1997.

## 2.3 Socio – Economic Characteristics

### 2.3.1 Demography

The Jordanian government has cast four censuses of population and housing; the first one in 1952 and later censuses in 1961, 1979 and 1994. These form the basis for our discussion, although for some other years the Jordanian Government has produced estimates of population size.

Jordan has a population of around 4.8 million (in 1998), of which 52 percent are males. Population growth is 3.9 percent per annum, compared with around 2.5 percent in other developing countries and just 1 percent in industrialised countries. Jordan's population increased from 680,000 in 1952 to 2,133,000 in 1979 and to 4,755,000 in 1998. The average annual population growth rate during the period 1952-60 was 3.1 percent, rising to 4.8 percent during 1961-79, but at 3.9 percent during 1994-98, reflecting both a natural increase and net immigration. Table 2.2 shows the population level over the years 1952-98.

The population density of Jordan has changed significantly over its short history. In 1952 there were 8 people per km<sup>2</sup>, in 1961 there were 10 people per km<sup>2</sup>, 24 people per km<sup>2</sup> in 1979 and 44 people per km<sup>2</sup> in 1994 (Ziud, 1997). The current population density is around 54 people per km<sup>2</sup>. The largest proportion of the Jordanian population is in the centre of Jordan, in the administrative areas of Amman and Zarqa (see Table 2.1). Together these account for 54 percent of total population in 1998. Irbid, in the northwest of Jordan also has a significant proportion of the population around 18 percent of total population, and 523 people per km<sup>2</sup>. Approximately 80 percent of the Jordanian population are urban, while the rest is rural. The urban population is concentrated away from the Desert region, which means 90 percent of the Jordanian population live in just 30 percent of the whole land area (Table 2.1).

During the period from 1950 to 1998, the rate of population increase, as well as the demographic distribution of the population, has been influenced by a variety of social, political and economic factors. These may be considered as a permanent change in population growth patterns, coupled with imbalance in demographic distribution and the domestic labour market (Ziud, 1997). These factors include: migration from the West Bank to Jordan, especially after the 1948 and 1967 Wars between the Arab countries and Israel;

migration from the rural area to the cities, especially to Amman and Zarqa; immigration of Arab and foreign workers, partly to cover for Jordanian workers attracted to the Gulf States; and the returned of Jordanians from the Gulf countries due to the Gulf War in 1991.

Life expectancy at birth is 68 years for males and 70 years for females (in 1998). Generally, this high rate of life expectancy reflects a good level of health services. In Jordan there are around 7,480 physicians, of which 50 percent are in the public sector. From Table 2.2, it can be seen that more than 50 percent of the total population are less than twenty years of age, while around 85 percent are under forty years of age. This means that the majority of Jordanian society is young, which has implications for education and other service needs. The majority of the population (92 percent) is Sunni Muslim, nearly 6 percent are Christians and the rest are small communities of Circassians, Chechens or Armenians. The official language of Jordan is Arabic, but English is widely spoken. French and German are spoken by people who have commercial or cultural interests.

### ***2.3.2 Education***

Education in Jordan is free at the point of use, and compulsory in the first ten school years grades. It is free in both types of secondary education (general and vocational), at all Teacher Training Institutes and Higher Institutes of Agriculture, and for boarding students in secondary vocational and higher education institutes. The policy of free education has led to a rapid expansion of education and attainment. As a result, the illiteracy rate in Jordan has been reduced sharply, from 68 percent in 1961 to 34 percent in 1979. In 1998 the illiteracy rate stood at 12 percent for the whole population, but it is 6 percent for males and 18 percent for women (Ministry of Education, 1998).

The number of school students in Jordan rose from 290,000 in 1967 to 895,000 in 1985, giving an annual average growth rate of student numbers of 7 percent. This is significantly higher than the growth rate of the population, reflecting the soaring demand for education and the successful implementation of compulsory education. However, in the last four years the average annual growth rate has slowed to just 2.5 percent, due to the reduction in population growth. However, Table 2.3 shows that the number of school classrooms and teachers at all levels has continued to grow over recent years. Eight public universities have been established in Jordan, mostly in the last twenty years. In addition, there are thirteen

private universities. Access to university is much greater through the public universities, where the fees are substantially lower. The total number of university students educated in Jordan rose from 167 in 1963 to 115,842 in 1998. In addition, there are around 45 two-year colleges. In 1998 the number of students in these colleges was 24,657.

## **2.4 The Jordanian Economy**

The performance of the Jordanian economy during the period 1995-99 is shown in Table 2.4. It can be seen that the economy is still suffering from the effects of the above mentioned problems. Per capita income in 1995 was J.D 1 063, but in real terms this had fallen to J.D 982 by 1999; an annual rate of decline of about 2 percent. This decline in per capita income is compounded by unfavourable regional conditions, including the political turmoil in Palestine and the ongoing embargo against Iraq, a leading trade partner of Jordan. National income as a whole has been growing, but at relatively slow rates, so that it has been exceeded by population growth, which has increased at an annual rate of 3.3 percent between 1995 and 1999. The control of inflation has been one of the main successes of this period. From 6.5 percent in 1996, inflation has fallen to 0.6 percent in 1999. This decrease in inflation has not only been a result of government policy, but is also due to a fall in the world price for goods, such as wheat and sugar (Central Bank of Jordan, 1999).

### ***2.4.1 Labour Force***

The growth of manpower in Jordan has been influenced by demographic, economic and social factors. On the one hand, there has been an increase in the proportion of the population under the age of 15 years, increased enrolment in education at all levels and growing manpower emigration. On the other hand, there was a large influx of Arab and foreign labour, and an increase in participation by women in the domestic labour force, which has increased from 3.1 percent in 1961 to 12.5 percent in 1985, and is reckoned to be around 20 percent in 2000 (Ministry of Planning, 1999).

The size of the labour force in Jordan was 218,000 in 1961, rising to 405,000 in 1979, to 680,000 in 1988 and around 1.25 million in 1999. According to Jardaneh (2001), the Jordanian labour force increases 5 percent yearly, which means around 40,000 people are expected to enter Jordan's job market each year. Table 2.4 shows also the labour force

distribution by major economic sectors. The service sector currently employs 54.5 percent of the total labour force in 1999, while the retail sector (the Department of Statistics separated out the retail sector from the rest of the service sector, because of the size of this sector, and because it serves primarily very local markets) employs a further 18 percent. Mining and manufacturing, construction, and agriculture employ 14.5 percent, 7.5 percent and 5.5 percent respectively in 1999. Services are the main sources of growth in the economy, while other sectors have been declining in their share of employment.

Emigration of Jordanian manpower to the Gulf countries started in the early 1950s, and increased in the 1960s and 1970s. In 1989, it stood at 380,000 people according to the Ministry of Labour estimates. As a result of this outward migration Jordan has encouraged immigration by foreign labour. Arab and other foreign labour working in Jordan registered an increase from 41,000 in 1979 to 143,000 in 1985. In 1997, the number of Arab and foreign labour was 250,000, plus an estimated 100,000 additional illegal workers (about 28 percent of all employees).

#### ***2.4.2 Unemployment***

As an outcome of the Gulf War in 1991, around 300,000 Jordanians returned from the Gulf countries, leading to a steep rise in unemployment. The unemployment rate rose to about 25 percent. This increase in unemployment has also been caused by other factors, which are identified by Ziuod (1997) as follows: the low economic growth in Jordan and the Gulf countries; the high rate of population growth; the mismatch between education and the needs of the economy; the increase in female participation in the labour force; and the poor information available to employers and employees on the supply and demand for labour, which has resulted in fictional unemployment.

Government efforts to reduce unemployment have been manifested in the adoption of several measures. Regulations governing Private Employment Bureaus were enacted. The aim of these regulations is to provide job opportunities for the Jordanian labour force inside the Kingdom and abroad. The government also continued its efforts to regulate the labour market and monitor expatriate labour by issuing instructions, setting forth the condition and procedures for both recruiting and employing immigrant labour. In addition, the government has continued to allocate funds for the implementation of the first stage of the social safety

net, and give the necessary financial support to the National Aid Fund (NAF) and Development and Employment Fund (DEF). The aim of these is to provide the necessary financing for small-scale, labour-intensive, income-generating projects throughout the Kingdom. Further, approval has been given to the Vocational Employment Management Law No.27 in 1999, which aims to enhance the role of the Vocational Training Corporation in qualifying the Jordan labour force and increasing their efficiency to meet the needs of the Jordanian labour market. The corporation will carry out this task through classification of workers, preparation of job descriptions, and granting vocational practicing licenses to workers after they have passed a prescribed test of their technical ability. As a result the government has reduced the unemployment rate, as shown in Table 2.4, from 18 percent in 1995 to around 12 percent in 1999.

Table 2.5 shows that the unemployment rate by governorates is different. In Amman, which has 38.1 percent of total population, the unemployment rate is 9.8 percent, while in some other governorates, such as Tafeleh, Karak and Irbid, the unemployment rate is around 11.5 percent. This difference in unemployment rates between governorates is due to the different levels of development between these, with projects tending to focus on the main cities and regions. The unemployment rate differs between males and females. It is 8.8 percent for males, but 18.5 percent for females, as shown in Table 2.5. This is partly due to the conservative social view of women's participation in the labour force. The government is still working to reduce the unemployment rate by creating new job opportunities for the Jordanian labour force in other countries, such as Libya, and through encouraging investment in Jordan in different sectors in order to create new jobs. The Jordan Loan Guarantee Corporation is one such initiative.

### ***2.4.3 Trade***

The traditional export markets for Jordanian products are other Arab countries, which accounted for 41 percent of the total value of exports in 1999, while only 7 percent of the total values of exports were to the European Union countries. The destination of these exports is shown in Table 2.6. Iraq is the biggest market for Jordanian exports. This represents around 8 percent of total exports, which is down to the accessibility of the Iraqi market, despite the international economic sanctions against Iraq after the invasion of Kuwait in 1990 and the current tense political situation. According to the commodity composition of

domestic exports chemical products account for the largest share of exports, at around 32 percent, followed by phosphate and potash, at 27 (see Table 2.6).

According to the geographical distribution of imports, Table 2.6 shows that imports from the European Union countries make up around 31 percent of the total value of imports, followed by 24 percent of total imports from Asian countries and 22 percent from the Arab countries. The composition of imports by commodity is also shown in Table 2.6. Machinery and transport equipment accounts for 27 percent of the total imports in 1999, whilst food and live animals made up around 18 percent. The other main imports are manufactures and raw materials, while chemical and mineral fuel accounts for around 15 and 13 percent respectively.

Jordan has suffered from a continual deficit in its trade balance, acting as a considerable constraint on its growth. This is also shown in Table 2.6. The deficit was JD 2,004 million in 1996, but narrowing to JD 1,584 million in 1999. It is evident that the trade deficit is persistent, but the government looks yearly to reduce this balance as well as it can. Decreasing imports reduced the trade deficit by J.D 80 million in 1999, or (3 percent), while an increase in exports also reduced the deficit by 1.6 percent. Accordingly, the ratio of the trade balance deficit to GDP declined by around 3 percentage points below the 1998 level to reach 25 percent in 1999 (Central Bank of Jordan, 1999).

#### ***2.4.4 Investment***

The level of investment in the Jordanian economy is volatile, being susceptible to changes in politics, the economy and other circumstances. Gross domestic investment was around 31 percent in 1995, but decreased to 23 percent in 1999 (Central Bank of Jordan, 2000). This was due to a fallback in the benefits that were expected after Jordan signed the Peace Treaty with Israel in 1994. A shortage in savings was the main reason for the low level of investment in Jordan. Saving is always lower than domestic investment, but the savings gap has increased annually, so between 1995 and 1998 it increased from JD 997 million to J.D 1,114 million. Another reason for the savings gap is that the government created a large budget deficit by overspending relative to total government domestic revenues. The only way to fill the gap between investment and saving is to depend on foreign assistance and grants. Nowadays the government is working with the IMF through the adjustment programmes to

bridge the gap between saving and domestic investment on one hand, and to improve the national economic performance on the other hand.

## **2.5 Jordanian Industry**

The Jordanian economy is market-oriented, but consisting of both private and public sectors. Both sectors have an important role in the Jordanian economy, with the Government playing a vital role in regulating the economy and attracting inward investment. The Jordanian economy consists of five sectors: agriculture, industry, construction, retail and services. The Department of Statistics separates out the retail sector from the rest of the service sector, because of the size of this sector, and because it serves primarily local markets. The relative size of each sector as a proportion of GDP is shown in Table 2.7.

Two-thirds of GDP comes from the service sector. This share has increased recently from 59.4 percent in 1995 to 64.3 percent in 1999. Services and retail combined amount to nearly 70 percent of total output. The next most important sector is the industrial sector (manufacturing and mining). Its share of GDP has been stable at around 20 percent over the period. The output share of the construction sector increased after the Gulf War; it was around 9 percent in 1994, but it decreased to 5.7 in 1999. Finally, the agriculture sector has lowest share of total output, which has decreased from 11 percent in 1992 to around 4.5 percent in 1999. The remainder of this chapter briefly discusses the nature of each of these economic sectors.

### ***2.5.1 Agriculture***

Only about 7.8 percent of the country's land area is cultivatable, with most of the agricultural activity being concentrated in the rain-fed Highlands, situated mainly in the middle and north of the country. Only 10 percent of the cultivatable area is irrigated, mostly in the Jordan Valley, where the principal services (including irrigation, housing and roads) are controlled by the Jordan Valley Authority. The agricultural sector is the main source of income for about 15 percent of the population, and in 1998 it provided employment for about 6 percent of the labour force. The available indicators on the agriculture sector show that output fluctuates, but the annual growth rate has fallen by 4.3 percent over the period 1995-

99 (Table 2.7). The value added of the agriculture sector decreased by 20 percent in 1999. This compares with a reduction of 4 percent in 1998 (Five Years Plan, 1999-2003).

The output of the main agricultural products is shown in Table 2.8. This table also presents the percentage changes output of these products over 1998-99. Field crops declined dramatically from 103.1 thousand tons in 1998 to 59.1 thousand tons in 1999, including wheat, barley, corn and clover (see below). However, vegetable crops, including tomatoes, aubergines, cucumbers and potatoes, registered a substantial growth in 1999. Agricultural stock products increased in 1999, but meat (both red meat and poultry) increased by 13.7 percent. Egg production was broadly static. The agriculture sector's significance to GDP was reduced from 9 percent in the 1970s to 7 percent in the 1980s, and to only 5.5 percent in the second half of the last decade, as shown in Table 2.7. This reflects the long-term relative decline of the agriculture sector.

This sector has been affected by many problems, the most important being the relative loss of traditional markets, especially for vegetables. This is due to the competition from other countries, which has resulted in an irregular flow to the exports market. Also, there has been a shrinking of agricultural land due to uncontrolled urban expansion, which has affected agricultural products, and in particular field crops. Furthermore, the lack of rain is still one of the main problems facing this sector (Five Year Plan, 1999-2003).

The government has tried to encourage private-sector investment in agriculture. And has geared its policy towards irrigation, with the implementation of advanced methods and technology. Private sector investment in agriculture was only around J.D 400 million in the last decade. Credit facilities extended to the agriculture sector by the Agricultural Credit Corporation (ACC) rose from J.D 92.7 million in 1998 to be around J.D 103.4 million in 1999. The growth in ACC financing was due to the government policy of helping farmers alleviate the effects of drought. Likewise, credit facilities by commercial banks increased from J.D 115.3 million in 1998 to J.D 121.8 million in 1999 (Central Bank of Jordan, 1999).

### ***2.5.2 Mining***

Jordan is relatively poor in natural resources. The minerals that are available in economically feasible quantities are phosphates, potash and cement (Central Bank of Jordan,

2000). Together, these account for about a quarter of Jordan's exports by value. So, the mining industry in Jordan is one of the main contributors to economic growth and a principal generator of national income. The mining industry earned approximately JD 182 million in 1999, representing around 3.5 percent of GDP.

Phosphate is the main mineral in Jordan, and the country is the largest producer of phosphate in the Third World after India. Table 2.8 shows that phosphate rock production has grown by an average of 4.9 percent per annum over the years 1995-99. Phosphate production is controlled by the Jordan Phosphate Mining Company, which exports a large percentage of its production. On average, the amount exported is around 12.3 percent of the total value of Jordanian GDP (see Table 2.8). The share of phosphate in total exports is likely to increase in the future, as Iran has decided to buy a large quantity of phosphate from Jordan.

Jordan's second mineral resource is potash, which also accounts for a significant proportion of total exports. Potash is mined from the Dead Sea by the Arab Potash Company, which is the second largest company in Jordan. The Potash Company now has a permit to begin work to mine other minerals from the Dead Sea. Its production of potash decreased from 1,780 thousands tons in 1995 to 1,416 thousands tons in 1997. This was due to competition from an Israeli company, which was also operating in the Dead Sea, but production has recovered by 18 percent in 1999 (see Table 2.8). It reflects the company's successful efforts in implementing new marketing strategies.

Cement production increased slightly from 3,415 thousands tons in 1995 to 3,512 thousands tons in 1996. This was due to the Peace Treaty signed between Jordan and Israel in 1994, which resulted in Jordanian cement being allowed to reach the Palestinian markets. In 1999 cement production decreased to 2,682 thousand tons (see Table 2.8), due to the closure of the Palestinian markets after the clashes between the Palestinians and Israelis. The share of cement in the total value of Jordanian exports has decreased from JD 33,449 thousand in 1997 to JD 16,546 thousand in 1999, as shown in Table 2.8.

### ***2.5.3 Manufacturing***

The discussion about the manufacturing sector is brief due to the lack of generally-available manufacturing information in official statistics. These statistics mainly relate to the industrial sector, which includes both manufacturing and mining. Industrial firms, on the

whole, are mostly privately owned and are characterised by small-scale. More than 40 percent of the industrial establishments produce food products or clothing. The three heavier industries (phosphate, potash and cement) account for 30 percent of the products in the industrial sector (Department of Statistics, 1999).

Manufacturing industry is concentrated in the northwest of Jordan in the Governorates of Amman and Zarqa, which contain 65 percent of all manufacturing. Twenty percent is located in the Irbid Governorate, and the remainder is distributed between Balqa, Ma'an, Karak and other Governorates. The relative importance of the manufacturing sector in total output has increased yearly. It was around 11 percent in 1992, but 13 percent in 1999. The growth rate of this sector was around 2 percent in 1999.

The available figures indicate an increase in the growth rate of real value added generated by the industrial sector, including both manufacturing and mining, to reach 3.5 percent in 1999 compared with 2.5 percent in 1998 (see Table 2.8). This came as a result of growth in mining industries, which had a positive growth rate of 6.5 percent in 1999, against a decline of around 6 percent in 1998. It also arises because of an increase of potash products and exports in 1999 (Central Bank of Jordan, 1999). However, the available information on the manufacturing sector shows that output was fluctuated during the period 1995-99, but showing a slight increase in 1999 (see Table 2.8).

Credit facilities extended by commercial banks to the industrial sector increased from J.D 701.8 million in 1998 to J.D 769.1 million in 1999. Also the credit facilities provided to this sector by the Industrial Development Bank (IDB) increased from J.D 92.5 million to J.D 98.2 million in 1999 (Central Bank of Jordan, 1999). The Government is still working to develop this sector through establishing Qualifying Industrial Zones (QIZs), and has signed a free-trade agreement with the USA, which provides benefits for national industries, and a partnership agreement with the European Union.

#### ***2.5.4 Construction***

The available estimates on the performance of the construction sector in 1999 indicate that this sector's share in GDP has fallen compared with the previous years. Table 2.7 shows that the construction sector share in the total output increased in the first five years of the last decade. This was due to the return of Jordanians from the Gulf States during the Second Gulf

War, who needed places to live, as well as the optimistic projections for tourist activity after the country signed the Peace Treaty with Israel in 1994. Unfortunately, the breakdown of the Peace Treaty and the unstable situation that has followed in the region has led to a reduced share of the construction sector in the national economy during the second part of the 1990s.

### ***2.5.5 Services and Retail***

Services and retail combined amount to nearly 70 percent of the total output, and the growth rate of these combined was around 3 percent in 1999. The largest sector in the Jordanian economy is the service sector (excluding the retail sector). The total share of this sector in the Jordanian economy was around 64.3 percent in 1999 (see Table 2.7). Because of the size of this sector the Department of Statistics divides it into six main sub-sectors as follows: transport and communication; finance, real-estate and business services; social service; producer of government services; non-profit institutions; and domestic household.

Transport and communications took a leading role in driving the real growth of the service sector. It registered a real growth rate of 8 percent in 1999, compared with 12 percent in 1998. Growth in these sub-sectors moved in parallel with implementation of the privatisation process in transport and communications activities, with the expansion of the Jordan Telecommunications Company and other private companies operating in this field. Finance, real estate and business services, and the social services sub-sector each registered a real growth rate of 2 percent in 1999, against 2.3 percent and 2.5 percent respectively in 1998. The government service sub-sector achieved a real growth rate of 1 percent compared with a growth of 0.5 percent in 1998. Consequently, the finance, real estate and business services; producers of government services, and transport and communications sectors retained the three main sub-sectors of the services sector (Jaradneh, 2000).

The importance of the retail sector in total output is shown in Table 2.7. In 1990s, the share of the retail sector in total output was around 4.5 percent on average. This share increased in the first five years of 1990s, from around 3.6 percent to 5.8 in 1997 (see Table 2.7). This was because of the return of Jordanians from the Gulf Countries in 1991, who started-up in retailing due to the easy entrance for the new entrepreneurs into this sector, which does not require special skills or experiences. This situation continued until 1998, and

the sector's share then declined to around 4.6 percent in 1999. It was badly affected by the renewed political instability in the region.

## **2.6 Conclusions**

Jordan became independent with the accession of King Hussein in 1952, and its land area is 89.3 thousand km<sup>2</sup>. The population is around 4.8 million, and the annual growth rate in population is 3.9 percent. The capital city is Amman, which has 38 percent of the total population. Education in Jordan is free and compulsory, and this has helped to reduce the illiteracy rate during the last few years, so that student numbers in the different levels of education are around 1.3 million, which is about one-third of the total population. Jordan's health care has also achieved a good level of service, so the number of population per physician has decreased from 893 in 1996 to 636 in 1998.

Jordan has a market-oriented economy with both government and the private sector playing an important role. However, the economy is handicapped by a shortage of natural resources, so that its main sources are phosphate and potash. The other problems facing this economy are the small size of the domestic market, and the high rate of unemployment, which stood at 12 percent in 1999. The deficit in the balance of trade and the government budget, as well as the gap between investment and savings are, also important economic problems.

Despite these problems, the Jordanian government has succeeded in putting the national economy in good order with good growth rates in output. National income has been growing in the last five years by 3 percent annually (1995-99), and the government has succeeded in controlling inflation, to keep it at less than 2 percent. The government has sought to solve the unemployment problem by creating new jobs for the Jordanian workers, both in Jordan and in some other countries. The Implementation of loan guarantee scheme is an important component of this, with the purpose of helping to create jobs in small firms and to reduce unemployment.

**Table 2.1: Area of Governorates, Population and Rainfall**

Governorate	Area (km <sup>2</sup> )	%	Population Density (person/km <sup>2</sup> )	Population (thousands)*	%	Average Rainfall (mm) 1998/99
Amman	8,231	(9.2)	220	1,809.8	(38.1)	341
Irbid	1,621	(1.8)	523	848.3	(17.8)	406
Zarqa	4,080	(4.6)	183	747.9	(15.8)	120
Balqa	1,076	(1.2)	290	312.2	(6.6)	363
Karak	3,217	(3.6)	59	191.4	(4.0)	234
Jerash	402	(0.4)	348	139.8	(2.9)	371
Madaba	2,008	(2.2)	60	121.3	(2.6)	289
Ajloun	412	(0.5)	256	105.5	(2.2)	735
Aqaba	2,114	(2.4)	14	95.4	(2.0)	37
Tafielh	6,593	(7.4)	34	72.4	(1.5)	204
Ma'raq	26,435	(29.6)	8	219.0	(4.6)	129
Ma'an	33,163	(37.1)	3	92.7	(1.9)	161
<b>Total</b>	<b>89,342</b>	<b>(100.0)</b>	<b>54</b>	<b>4755.8</b>	<b>(100.0)</b>	<b>---</b>

Source: Department of Statistics, Jordan, 1999.

\* Population by governorates in 1998

**Table 2.2: Population in Jordan**

In Thousands

**(a) Population over time**

Year	1952	1961	1979	1994	1998
Males	350	470	1,116	2,182	2,487
Females	330	431	1,017	1,920	2,269
<b>Total</b>	<b>680</b>	<b>901</b>	<b>2,133</b>	<b>4,102</b>	<b>4,756</b>

**(b) Population by age and gender in 1998**

Age	Male	Female	Total	Cumulative of total population %
0-4	376	354	730	15.3
5-9	346	324	670	29.5
10-14	308	295	603	42.1
15-19	283	263	546	53.6
20-24	281	236	517	64.5
25-29	234	195	429	73.5
30-34	159	138	297	79.7
35-39	119	107	226	84.4
40-44	85	82	167	87.9
45-49	70	68	138	90.8
50-54	70	61	131	93.6
55-59	57	50	107	95.9
60-64	40	35	75	97.5
65+	59	61	120	100.0
<b>Total</b>	<b>2,487</b>	<b>2,269</b>	<b>4,756</b>	<b>---</b>

Source: Department of Statistics, Jordan, 1999.

**Table 2.3: Number of Students and Schools, 1995-99**

In thousands	1995	1996	1997	1998
Student numbers	1,249	1,281	1,305	1,346
Number of Schools	4.0	4.2	4.4	4.5
Number of Classrooms	42.2	43.7	45.0	45.6
Teacher Numbers	59.3	63.1	63.5	61.7

Source: Department of Statistics, Jordan, 1999; Ministry of Education, Jordan, 1997

**Table 2.4: Economic Indicators**

	1995	1996	1997	1998	1999
<b>(a) Output</b>					
Per Capita GDP (J.D, 1995 prices)	1,063	1,036	1,013	997	982
GDP (J.D million, 1995 prices)	4,560	4,605	4,662	4,741	4,815
Growth rate of GDP (%)	---	1.0	1.2	1.7	1.6
GNP (J.D million, 1995 prices)	4,444	4,546	4,617	4,735	4,807
Growth rate of GNP (%)	---	2.3	1.6	2.6	1.5
<b>(b) Inflation</b>					
Change in cost of living index (%)	2.4	6.5	3.0	3.1	0.6
<b>(c) Other Macroeconomic Indicators</b>					
Ratio of total consumption to GDP	87.8	94.6	96.4	97.6	97.3
Ratio of gross fixed investment to GDP	30.9	30.7	26.8	22.8	21.8
<b>(d) Labour Force by Economic Sectors (%)</b>					
Agriculture	6.8	9.3	7.7	6.1	5.5
Mining & manufacturing	14.7	12.8	14.2	13.1	14.5
Construction	10.3	9.7	9.5	7.1	7.5
Retail	16.5	17.1	18.2	19.0	18.0
Other Service	51.7	51.1	50.4	54.7	54.5
<b>(e) Unemployment Rate (%)</b>					
	18	16	14	14	12

Source: Thirty Six Annual Report, Department of Research and Studies, Central Bank of Jordan, Amman, Jordan, 36, 1999.  
Department of Statistics, Jordan, 1999.

**Table 2.5: Unemployment Rate by Governorate and Gender**

In percent

Governorate	Total	Gender	
		(Male)	(Female)
<b>Highlands &amp; Jordan Valley</b>			
Amman	9.8	(8.3)	(17.7)
Irbid	11.8	(10.1)	(21.0)
Zarqa	10.2	(8.8)	(21.4)
Balqa	9.2	(8.0)	(15.0)
Karak	11.4	(9.5)	(21.6)
Jerash	7.9	(7.7)	(9.5)
Madaba	11.6	(11.2)	(13.7)
Ajloun	10.2	(8.7)	(18.6)
Aqaba	6.2	(4.8)	(15.6)
Tafielh	11.1	(10.5)	(14.7)
<b>Desert</b>			
Ma'raq	10.2	(8.7)	(21.9)
Ma'an	10.0	(9.8)	(11.1)
<b>Total</b>	<b>11.3</b>	<b>(8.8)</b>	<b>(18.5)</b>

Source: Unemployment Survey, Department of Statistics, First round, Jordan, 1999

**Table 2.6: Trade in 1999 and Trade Balance, 1995-99**

Jordanian Dinars, millions

	Exports	Imports	Trade Balance
<b>(a) Trade Partners</b>			
Arab countries	427	574	-147
European Union countries	61	830	-769
Other European countries	8	172	-164
NAFTA countries.	10	271	-261
South America countries	0.5	69	-68.5
Asian (non Arab) countries.	315	637	-322
Other countries	230	82	148
<b>Total</b>	<b>1,051</b>	<b>2,635</b>	<b>-1584</b>
<b>(b) Trade by Commodity</b>			
Food & Live animals	127	483	-356
Beverages and Tobacco	3	27	-24
Phosphate and Potash*	282	84	198
Mineral Fuels	0.1	323	-322.9
Animal and vegetable oil and fats	45	45	0
Chemicals	341	336	5
Manufactured good classified by Material	107	391	-284
Machinery Transport Equipment	69	721	-652
Misc. Manufactured articles	77	180	-103
Others	0.1	45	-44.9
<b>Total</b>	<b>1,051</b>	<b>2,635</b>	<b>-1584</b>
<b>(c) Trade Balance</b>			
1995	1,005	2,590	-1585
1996	1,040	3,044	-2004
1997	1,067	2,908	-1841
1998	1,046	2,714	-1668
1999	1,051	2,635	-1584

Source: Monthly Statistical Bulletin, Department of Research and Studies, Central Bank of Jordan, Amman, Jordan, Vol 36.6, June 2000.

\* Jordan exports phosphate and potash and imports crude materials except fuels.

**Table 2.7: Sectoral Shares of GDP, 1990-99**

In percent						
Sector	1991	1993	1995	1997	1999	Annual Growth Rate 95-99*
Agriculture	10.5	7.7	6.0	5.3	4.5	-4.3
Industrial	19.4	18.7	21.4	20.7	20.9	5.7
Construction	5.2	8.7	8.5	6.9	5.7	-6.4
<b>Total Commodity</b>	<b>35.1</b>	<b>35.1</b>	<b>35.9</b>	<b>32.9</b>	<b>31.1</b>	<b>-0.80</b>
Retail	3.4	4.1	4.7	5.8	4.6	-2.8
Services	61.5	60.8	59.4	61.3	64.3	4.4
<b>Total Services</b>	<b>64.9</b>	<b>64.9</b>	<b>64.1</b>	<b>67.1</b>	<b>68.9</b>	<b>3.8</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>---</b>

Source: Monthly Statistical Bulletin, Department of Research and Studies, Central Bank of Jordan, Amman, Jordan, Vol 34.10 and 36.6, Dec.1998, June 2000.

Note: Industrial production includes mining and manufacturing.

\* Average annual growth rates 95-99.

**Table 2.8: Agricultural and Industrial Output**

Products	1995	1996	1997	1998	1999	1998-99 % change
<b>(a) Agriculture Products</b>						
Field Crops (tons, thousands)	133.4	129.8	109.5	103.1	59.1	-42.7
Vegetables (tons, thousands)	886.6	680.5	714.4	740.9	762.3	2.9
Fruit Trees (tons, thousands)	273	305.6	293.5	379.7	209.7	-44.8
Meat (tons, thousands)	122.0	116.0	113.5	115.2	131.0	13.7
Milk (tons, thousands)	147.0	165.1	170.0	170.8	170.8	---
Eggs (million)	715.0	726.0	954.0	948.1	937.0	-1.2
<b>(b) Some Industrial Products</b>						
Phosphate (tons, thousands)	4,984	5,355	5,896	5,925	6,014	1.5
Potash (tons, thousands)	1,780	1,765	1,416	1,527	1,800	17.9
Cement (tons, thousands)	3,415	3,512	3,251	2,650	2,682	1.2
<b>(c) Exports of Industrial Products</b>						
Phosphate (JD thousands)	105,493	126,922	134,533	139,717	132,508	-5.2
Potash (JD thousands)	121,616	125,628	98,599	111,633	125,956	12.8
Cement (JD thousands)	29,576	41,453	33,449	16,189	16,564	2.3
<b>(d) Indicators of Industrial Sector*</b>						
Value Added (J.D millions, current price)	737	695	761	780	807	3.5
Growth Rate (%)	11.0	-5.7	9.5	2.5	3.5	40.0
Share of GDP (%)	21.4	19.9	20.7	20.5	20.9	2.0
<b>(e) Manufacturing Products (tons, thousands)</b>						
	8,382.8	8,070.2	11,642.6	10,890.7	10,900.7	0.1

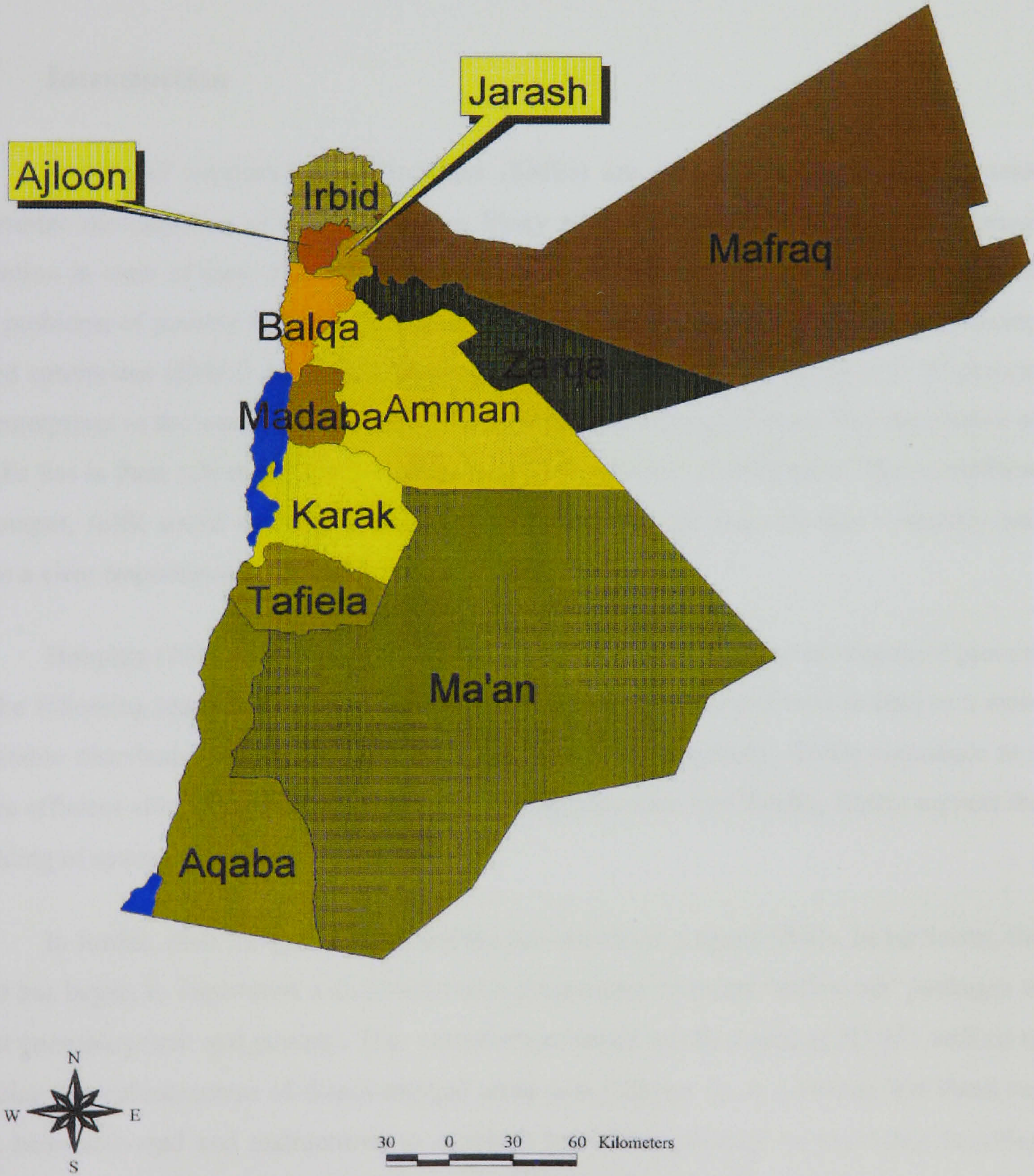
Source: Monthly Statistical Bulletin, Department of Research and Studies, Central Bank of Jordan, Amman, Jordan, Vol 36.6, June 2000.

\* Industrial production includes mining and manufacturing, and its expressed as GDP at factor prices

Figure 2.1: Political Map of Jordan



Figure 2.2: Map of Jordanian Governorates



## **CHAPTER 3**

### **SMALL AND MEDIUM-SIZED ENTERPRISES IN JORDAN**

#### **3.1 Introduction**

Small and medium-sized enterprises (SMEs) are a vital component of the socio-economic development of emerging states. Many such countries have given SMEs special attention in view of their role in promoting productive capacity, and in helping to deal with the problems of poverty and unemployment. Hobohm (2001) shows that small and medium-sized enterprises (SMEs) are the backbone of the private sector, making-up over 90 percent of enterprises in the world and between 50 and 60 percent of employment. The importance of SMEs lies in their role in growth at various stages of economic development. They contribute to output, fulfil social objectives, attract considerable foreign reserves into a country and have a clear importance in providing employment.

Hobohm (2001) attributes the vital contribution of SMEs in the development process to the following reasons: firstly, SMEs are more labour-intensive and tend to lead to a more equitable distribution of income than do larger enterprises; secondly, SMEs contribute to a more efficient allocation of resources in developing countries; and thirdly, SMEs support the building of systemic productive capacities.

In Jordan, both the government and the private sector support SMEs. In particular, the state has begun to implement a comprehensive programme of social 'safety-net' packages to fight unemployment and poverty. This comprises schemes worth a total of JD 431 million to develop the infrastructure of disadvantaged areas (see Chapter 2). A National Aid Fund has also been activated and restructured to enable it to combat poverty by providing recurring cash assistance and emergency aid to needy individuals incapable of working, as well as affording vocational rehabilitation opportunities and setting up income-generating self-employment projects for needy individuals capable of work. Another scheme is being set up

to finance training for the poor as a practical response to their needs, so that they may enter the labour market through self-employment.

The aim of this chapter is to consider small and medium-sized enterprises in Jordan. The definition of an SME is important, but it varies across the countries, so that the chapter begins by considering this issue. It also considers the role of SMEs in the Jordanian economy, the problems experienced by SMEs, both in general and specific to Jordan, and finally, the chapter examines the financing of SMEs in Jordan.

### **3.2 Definition of Small and Medium-Sized Enterprises**

There is no consensus on the definition of a small and medium-sized enterprise (SME). The terms 'small' and 'medium' are relative terms, and vary from one country to another, and from sector to sector within the same country. One study by the Georgia Institute of Technology, for instance, identifies over 55 different definitions of SMEs in 75 countries (Abdullah, 1999).

Despite the different definitions, Bridge *et al.* (1998) argue that any definition of a small business should possess at least two of the following four characteristics:

- (i) The management of the business is independent. Usually, the managers in small firms are also the owners.
- (ii) An individual or small group provides capital and ownership.
- (iii) The areas of operation are mainly local, with the workers and owners living in one home community. However, the markets need not be local.
- (iv) The relative size of the business within its industry must be small when compared with the biggest units in the field. This measure can be in terms of sales volume, number of employees or some other significant comparison.

The definitions of SMEs can depend on many criteria, such as the number of employees or the value of paid-up capital, or a combination of both of these. Other definitions use total turnover, either annually or as an average over a few years; total fixed assets; the market share of the firm; or the level of technology used by the firm (Al-Shama'a, 1998). Other studies such as SESRTCIC (1987) explain that the definition depends on the subject under consideration, and various qualitative and quantitative criteria may be taken

into account. The quantitative criteria focus on the size of the firm's labour force, the size of capital outlay, the level of utilisation of inorganic energy and the like. The qualitative criteria result in dichotomies, such as between organised /unorganised, modern / traditional, capitalist / pre-capitalist, formal / informal and factory / non-factory, but these can be regarded as making the definition unoperational and perhaps controversial.

The World Bank seeks to define SMEs according to the number of employees, which it considers to be the primary criterion. It regards a firm as 'small' if it has 50 or fewer persons working in it. Several countries also use staff number as a criterion, though the actual number varies between countries. In the USA, Italy, and France a firm is small or medium if it has up to 500 employees, in Sweden up to 200, in Canada and Australia up to 99 and in Denmark up to 50 (Amman Chamber of Industry, 1991).

The employee number benchmark has a number of advantages: it makes it a simple matter to compare firms in different sectors and countries, and it is also a stable yardstick, since it has no direct automatic relation to variations in prices, such as movements in exchange rates or inflation. It is also relatively easy to gather data for it. For example, Pratten (1991) in his study uses the number of employees rather than sales turnover or value added because "information about the employment is readily available and because it may be considered by managers to be less confidential" (p, 3).

Other countries use the capital paid to define small and medium enterprises. In Malaysia, for example, small enterprises are considered as having paid-up capital not exceeding (Malaysian Ringgit) RM 500,000 (£1 = 5.5 RM) and medium-sized enterprises as having paid-up capital not exceeding RM 2.5 million (Abdullah, 1999). In Egypt, a small project is one with capital not exceeding (Egyptian Pound) E£ 550,000 (£1 = 7 E£). Here, the value of the currency causes problems, as it is difficult to make comparisons between 'small' firms in two countries because of the need to convert currencies and because of currency value fluctuations. Other countries seek to utilise several criteria, such as paid-up capital and the number of employees, so as to obviate the disadvantages of using just one or other of these. Whatever benchmark is selected, however, reaching a satisfactory definition of a small or medium-sized business has proved to be headache for researchers and policymakers throughout the world.

### ***3.2.1 The Definition of SMEs in the UK***

In the United Kingdom, the Bolton Committee (1971) found that a small firm could not be adequately defined in terms of employment, assets, turnover, output or any other arbitrary single quantity. The Committee sought to differentiate between an “economic” definition and a “statistical” definition. The economic definition regarded firms as being small if they satisfied three criteria, as follows:

- The firm has to have a relatively small share of the market;
- The firm is owned or part owner-managed in a personalised way, but not through the medium of a formalised management structure; and
- The firm is independent, in the sense of not forming part of a larger enterprise.

Under the statistical definition, the Bolton Committee adopted some limits, which applied to different sectors of the economy, using three criteria: the number of employees, turnover, and the number of vehicles used in the firm. These are set out in Table 3.1. Manufacturing enterprises, construction and mining were defined by the employment criterion; retailing, wholesaling, the motor trades and miscellaneous enterprises were defined by a turnover criterion; and enterprises in the road-transport field were defined according to the number of vehicles owned. The employment criterion uses two upper limits: it is 200 employees for manufacturing, but for construction and mining it is 25 employees. The turnover criterion uses three upper limits: for retailing and miscellaneous firms it is £ 50,000 or less; for motor trades it is £100,000 or less; and for wholesales criterion it is £200,000 or less. The number of vehicles criterion uses 5 vehicles as an upper limit for road transport (Bolton, 1971).

The Bolton definitions (economic and statistical) have a number of criticisms. In the case of the economic definition, these are considered by Storey (1994a) as follows:

- The economic and statistical definitions are incompatible. Bolton requires that the owners or part-owners manage the small business in a personalised way and not through the medium of a formal management structure. This, however, is almost incompatible with the statistical definition of small manufacturing firms which could have up to 200 employees. It is not easy to manage this number of employees in a personalised way.

- The second criticism of the Bolton economic definition is the emphasis upon the inability of the small firms to affect their environment-most notably their inability to influence, by changing the quantity which it produces the price at which a product or service is sold in the market place. In this respect, Bolton is clearly influenced by the economist's concept of perfect competition.

According to Storey (1994a) there are five basic criticisms of the Bolton Committee "statistical" definition of a small firm. Firstly, there is no single definition, nor even any single criterion of 'smallness'. Instead, four different criteria are used in the definition - employees, turnover, ownership and assets. Secondly, three different upper limits of turnover are identified for the different sectors, and two different upper limits of employees are used. These make the definition too complex to enable comparisons to be made, either over time or between countries. Thirdly, the monetary unit used in the turnover definition makes comparisons over time very difficult, since appropriate index numbers have to be constructed to take account of price inflation. They also make international comparisons difficult, because of currency value fluctuations and differences in purchasing power parity.

Fourthly, there are problems with employee-based criteria in comparing small and large firms over time. As Dunne and Hughes (1989) point out, output per head at constant prices varies according to firm size. Using an index of net output per head, where 1979 equals 100, output per head in enterprises with less than 100 workers was 125.1 in 1986, whereas for enterprises with more than 1,000 workers it was 132.8. Hence, taking account of these increases in productivity over the last twenty years, the manufacturing upper limit for a small firm, which was 200 in 1971, would be much closer to 100 in 1993. Fifthly, the Bolton Committee definition treats the small firm sector as homogeneous. Even though the Committee, in their text, explicitly recognises that this was not the case; the single statistical definition for small firms implies the existence of homogeneity.

The Bolton Committee faces other objections. Curran (1986) in his review and analysis of small business research in Britain over 1971-86 argues that "the government could influence a consensus on definition usage but has shown little willingness to do so. This definition has more serious drawbacks when it comes to the construction of adequate statistics on the extent and importance of the small enterprise" (p.16). Also, there is another

objection according to Curran (1986): “The definition [of a small firm by Bolton Committee] is rather narrower than some others and deliberately excludes what has been called the ‘informal economy’, where goods and services are produced but no money payment are involved and the ‘fiddle’ or theft of goods or services or money from employers or customers, which are consumed by the employee. Some of the figures discussed in relation to estimates of the extent of black economy may cover a wider range of activities than those in the definition adopted here but those offering the estimates are not always clear on these matters”(p, 16).

In practice, a wide variety of definitions of SMEs are used in the UK, such as by the Companies Acts, the Small Firms Loan Guarantee Scheme (SFLGS), and by different agencies, such as the Department of Trade and Industry (DTI), the Inland Revenue and the Bank of England. These are summarised by Bridge *et al.* (1998) as follows. They show the considerable diversity in the definition of small and medium-sized enterprises.

*DTI:* The DTI uses the following definitions:

- Micro firm: 0-9 employees
- Small firm: 0-49 employees (includes micro)
- Medium firm: 50-249 employees
- Large firm: 250 or more employees.

*Inland Revenue:* The small companies’ rate of Corporation Tax applies to businesses with taxable profits of up to £ 300,000 and a marginal rate is applied to profits between £300,000 and £1,500,000. The full rate applies above this.

*Bank of England:* For the purposes of considering finance issues for small businesses the Bank of England focuses mainly on business with a turnover of up to and including £ 1 million per year.

*Companies Act, 1985:* Company is “small” if it satisfies at least two of the following:

- A turnover of not more than £ 2.8 million.
- A balance sheet total of not more than £ 1.4 million.
- Not more than 50 employees.

A medium-sized company satisfies at least two of the following:

- A turnover of not more than £ 11.2 million.
- A balance sheet total of not more than £ 5.6 million.
- Not more than 250 employees.

*SFLGS:* The scheme applies to businesses with fewer than 200 employees and with a turnover of not more than £ 3 million in manufacturing or £1.5 million for other eligible businesses.

### ***3.2.2 The European Union Definition***

The European Union has a different definition of SMEs to that of the UK. To avoid inconsistencies and the sort of criticisms discussed above, the European Commission has adopted the following definition:

- Micro-enterprises: those with between 0-9 employees.
- Small enterprises: those with 10-99 employees.
- Medium enterprises: those with 100-499 employees.

In this case small enterprises do not include micro firms. Storey (1994a) argues that the definition adopted by the European Union is more appropriate than that of the Bolton Committee for the following reasons. First, it is based exclusively upon employment, rather a multiplicity of criteria. Second, the use of 100 employees as a small firm limit is more appropriate, given the rises in productivity that have taken place in the last two decades. Third, it recognises that the SME group is not homogeneous, in the sense that distinctions are made between micro, small and medium-sized enterprises.

### ***3.2.3 Definitions Used Elsewhere in the World***

Elsewhere in the world there are other definitions of small firms. In this section we look at the definition used in some countries, which are comparable to Jordan. In particular, we look at Malaysia and Turkey, on which there have been a number of studies. In Malaysia, the definition of a small and medium-sized enterprise depends on the view of various government agencies. The Ministry of International Trade and Industry definition of SMEs has changed over time. In 1975 companies with less than 25 workers and paid-up capital of

more than (Malaysian Ringgit) RM 250,000 were small and medium-sized enterprises. In 1985 the definition changed to cover companies with paid up capital up to RM 1 million and not more than 50 full-time employees, and a year later the paid-up capital was increased to RM 2.5 million and to 75 full-time workers (Abdoulah, 1999). Meanwhile, under the Credit Guarantee Corporation of Malaysia, the definition of a small and medium-sized enterprise depends on the paid-up capital only; it should not exceed RM 200,000 for 'Bumiputera' (ethnic Malays) enterprises and RM100,000 for 'non-Bumiputera' enterprises.

However, researchers on the Malaysian economy have used several other measures to define the small and medium enterprises, such as Chee in his study of 1985. He defines small firms in the manufacturing sector as employing less than 50 full-time workers, while the medium-sized firms employ between 51-200 full-time workers. Lim and Aziz adopt another definition, that the small and medium-sized enterprises in Malaysia are those that have a workforce of between 10 and 100 full-time employees (see Abdoulah, 1999 for a translation). Abdoulah defines a small and medium enterprise as having no fewer than 200 full-time employees and fixed assets of less than RM 2.5 million.

Turkey also uses different criteria for defining SMEs. The Small Industry Development Organisation defines small-scale industry as firms employing up to 50 workers (SESRTCIC, 1987). However, Halk Bank (a government bank to support SMEs in industrial sector) has a definition of enterprises based on the number of employees and total assets. Small enterprises employ up to 100 workers and have up to US \$ 25,000 of total assets, and 250 workers and US \$ 125,000 are the upper limits for medium enterprises. This latest version of the Halk Bank definition was made necessary by high inflation (Sogut, 1999).

#### ***3.2.4 The definition of SMEs in Jordan***

The definition of small and medium enterprises in Jordan is no easier than elsewhere, as there is a multiplicity of definitions. This has led the various government agencies and institutions to adopt their own definitions.

The central government Department of Statistics (DOS), for example, defines SMEs for all sectors according to their employment size. It distinguishes between firms as follows: a firm employing 1-4 workers is a small firm; 5-19 workers is a medium firm; and a large

firms employ 20 workers or more. The Encourage Investment Law number 11 (1987), which is designed to encourage investment, especially in small firms in less-developed regions (see Chapter 2), defines a small firm in Jordan as an investment in fixed assets that is not more than some unspecified limit. However, it does not explain why and how this definition was adopted, but it reflects the Government point of view (Amari *et al*, 1994). The Amman Chamber of Industry defines a small firm as employing 9 employees or less, and medium firms as employing 10-50 employees, while the Industrial Development Bank has defined a small firm as those employing not more than 5 employees, whose capital is not more than JD 25 thousand and where the manager is the owner.

In this study we will adopt the definition of a small and medium-sized firm used by the Jordan Loan Guarantee Corporation (JLGC), which operates and executes the loan guarantee scheme in Jordan. However, much of the aggregate statistics for this sector arise from Department of Statistics, and it is these that appear below when reporting aggregate published data on SMEs in Jordan. In adopting this approach, we are not alone, as there are a number of other studies that adopt their own definitions for particular applications (e.g. Abdullah 1999, SESRTCIC 1987, and Cressy and Olofsson 1997). It means that the practical definition of a small and medium-sized enterprise used in this study depends on the number of employees criterion. The JLGC has a condition that the employees in the firm, which is looking for a JLGC-support loan, should not be more than 50 employees. So the small and medium-sized enterprises according to the JLGC definition is the firms that employee not more than 50 employees. Overall, it is difficult to compare the Jordanian definitions and figures with British figures. This may be attributed to the differences between the two country's economies; the British economy being much more developed, while the Jordanian economy is still in its infancy.

### **3.3 The Role of SMEs in Jordan**

The Bolton Committee chose three ways to measure the role and importance of the SME sector to the economy: their share of employment; their share of output; and their share in the total number of the firms. However, in this section will give an indication of the importance of SMEs in the Jordanian economy, by considering the number of SMEs, the employment in SMEs, output and productivity, and value added. The definition of SMEs

used in this section is the same as the definition used by the Department of Statistics. This is because DOS is the only source of aggregate information on SMEs. However, before the importance of SMEs can be considered we must remind ourselves of the common functions of the small firms sector. These are summarised by Storey (1986) as follows:

- (i) Small firms provide a source of competition (potential and actual) to larger firms in their industry, limiting the latter's ability to raise prices and/or be technically inefficient in the use of factors of production.
- (ii) Small firms are increasingly claimed to be major creators of new jobs in developed countries, since standardised products, which have traditionally been produced in large enterprises, are now increasingly produced in developing countries.
- (iii) Small firms provide the "seed corn" from which the giant corporations of future years will grow.
- (iv) Small firms can provide a harmonious working environment where owner and employee work "shoulder to shoulder" for their mutual benefit. This is likely to be reflected in fewer industrial disputes and lower absenteeism.
- (v) The inner city areas of industrialised nations contain concentrations of high unemployment, low incomes and poor housing. It is argued that small firms can make an important contribution to the regeneration of these areas.
- (vi) Small firms are likely to be innovative and found in industries where technical development is essential for survival. The low capital requirement in modern microelectronics makes this industry particularly suited to new small firms.

### ***3.3.1 The Number of SMEs***

Since most firms in Jordan are single-plant enterprises, we have chosen to use the terms firm, plant and establishment interchangeably. Table 3.2 shows the small firms share in the total number of plants in the industrial sector (manufacturing and mining) over 1987-97. There is an increase from 7,933 establishments in 1987 to 19,580 establishments in 1997. The table also shows that the growth in small firms has been more or less continuous over of the period.

Table 3.2 also shows that the firms employing four workers or less accounted for 82 percent of the total number of industrial enterprises in 1997 (ie. 19,580 of 23,878 firms). If we include medium-sized firms (those employing 5-19 employees), the number of small and medium-scale firms in Jordan is 23,400. This means around 98 percent of the total firms in the industrial sector in Jordan are small and medium-sized enterprises. Thus, SMEs are important not only in the industrial sector (manufacturing and mining), but also to the national economy. Moyers (1998) reports that at least 80 percent of existing private businesses have fewer than ten employees, and most have less than five workers.

For the service sector it is difficult to obtain data on the number of firms. However, in 1992, Amari *et al.* (1995) calculate that SMEs (ie. firms with less than 20 employees) represented 98.7 percent of all firms in this sector (ie. 14,490 out of 14,677 firms). Moyers (1998) notes that there are particular concentrations of SMEs in activities such as retail, hairdressing, restaurants, wholesaling and general services. However, the concentration of SMEs is smaller in other activities, such as construction, banking and insurance. Hence, overall, small and medium-sized firms account for the vast majority of enterprises in Jordan.

If we examine the geographical distribution of small and medium-sized enterprises in the industrial sector, then we see that these enterprises are heavily concentrated in particular areas. Table 3.3 shows that Amman accounts for nearly half (44.5 percent) of all small and medium-sized firms in Jordan. Further, two other areas (Irbid and Zarqa) account for one third (33.5 percent). These three governorates contain the major cities of Jordan, where industry is at its greatest.

### **3.3.2 Employment**

In the United Kingdom the role of small and medium-sized enterprises in creating jobs has been a main plank in the government's policies to reduce unemployment. However, almost two out of three people working for themselves don't employ anyone else (Curran, 1986). Storey (1994a) says that small firms in the UK create jobs at a faster rate than larger firms. The labour force is the most important factor in the development process in Jordan, due to the lack of natural resources. This is the reason that the government supports small and medium-sized enterprises by encouraging people to create their own businesses.

In 1996, small and medium-sized firms in the industrial sector provided around 16 percent of the total labour force in Jordan. However, the total share of small and medium-sized enterprises in all employment was around 83 percent of the total labour force in Jordan. This is plausible for a small economy like Jordan, especially if one considers that 53 percent of the American labour forces are working in small firms, employing less than 500 persons (Rayan and Ludtke, 1995). Table 3.4 shows the number of employees in the SMEs in Jordan in all sectors at 1992 (the available data is for the private sector). According to this table, 83 percent of total employees in the private sector are working in firms with less than 20 employees, but this is as high as 100 percent for agriculture. The figure for the other sectors is industrial (49 percent), construction (20 percent), services (64 percent) and retail (96 percent).

The most important sector from the Jordanian Government's point of view is the industrial sector (ie. mining and manufacturing), due to its ability to maintain sustainable development in the economy. The ability of small and medium-sized firms to provide jobs in this sector is shown in Table 3.5. In 1996 the total number of employees in the industrial sector was 139,000 of which around 46,000 employees were working in nearly 19,000 small firms. Every one of these 19,000 small firms employed less than five persons. In addition, around 27,000 employees were working in 4,000 medium-sized firms, employing between 5-19 persons. Hence, the total number of employees in small and medium firms in the industrial sector was around 73,000, which is about 52 percent of the total labour force of the industrial sector. The other 48 percent of jobs were provided by only 2 percent of the total firms in the sector. This is due to some very large firms in the Jordanian economy, such as the Arab Potash Company, which employs around 4,500 persons. Table 3.5 shows the distribution of employees by gender for SMEs in the industrial sector. Only 6 percent of the workforce of SMES in the industrial sector is female, but then only 3 percent of the total labour force in small and medium-sized industries is female.

### ***3.3.3 Output and Productivity***

The share of small and medium-sized enterprises in output (Gross Domestic Product) is shown in Table 3.6. The SME share of output was around 27 percent of the total output in 1992. By industrial sector, the retail sector has the largest SME share, at around 8 percent, followed by agriculture with around 7 percent. This is because these sectors are virtually all

comprised of small and medium-sized firms, whereas the table shows, other sectors, such as manufacturing; have a much greater proportion of large firms.

The productivity of the labour force in SMEs is estimated by dividing the value added (at 1991 prices) by the number of employees (Amari *et al*, 1995). The productivity in SMEs and large firms is shown in Table 3.7. The average productivity in SMEs is higher in the service sector J.D 20,000, and lowest in the industrial sector at J.D 2,300. Generally, productivity in large firms is more than that in the small and medium-sized firms, but except in agriculture and retail (see Table 3.7). This is due to the high technology used in large firms on one hand, and the lower capital-labour ratio in SMEs on the other hand. The most important thing to note from Table 3.7 is that productivity in the agriculture sector is higher than in the industrial sector. This is surprising, but it is due to the way in which the number of employees in the agriculture sector has been calculated. The number that is used here does not include seasonal employees.

#### **3.3.4 Value Added**

All firms in the agriculture sector are small and medium-sized firms (employing less than 20 employees), so that all of the value added in this sector is from SMEs. Value added was around J.D 114 million in 1999, and accounted for 4.5 percent of GDP in 1999. In the trade and construction sectors, small and medium-sized firms consisted of approximately all the value added in this sector. The value added from the service sector was around 36 percent in 1994, while the total value added from the small firms was around 24 percent in 1996 (DOS, 1996).

The small firm (ie. with less than 5 employees) share in value added in the industrial sector during the period 1986-94 is shown in Table 3.8. It shows that the value added from small firms increased sharply from J.D 27 million in 1986 to J.D 55 million in 1989. This was due to the general improvements during the 1980s. Unfortunately, the amount of value added from small firms decreased sharply in 1990 to around J.D 49 million; which was caused by the lack of confidence in the Jordanian dinar in late 1989 and the Gulf problems when Iraq invaded Kuwait. However, it increased sharply again to around J.D 56 and 80 million in 1991 and 1992 respectively, and then decreased again in 1993 and 1994 due to an uncertain political climate. The small firm average share in total value added in the industrial

sector was around 9 percent over 1987-93 (between 7.2 percent to 11.6 percent), but in 1994 this was only around 5 percent. This can be linked to government policy after the peace process, which aimed to prepare the Jordanian manufacturing sector for new competition (ie. from Israel) by concentrating on medium and large firms at the expense of small firms.

### **3.4 Problems Experienced by SMEs**

The development of SMEs everywhere is hampered by a variety of problems. These may differ from one region to another and from sector to sector, but there are certain problems that are common to all SMEs all over the world (Benacek and Zemplerova, 1995). In this section we will discuss the general problems facing small and medium-sized enterprises and some issues that specific to Jordan.

#### ***3.4.1 Some General Issues***

The economic difficulties that small firms encounter are not identical to those faced by large firms (Johns, 1983). The problems are not only varied and complex, but they also interact with each other. In general, the types of problem facing SMEs may be divided into those problems of an internal nature and those of an external nature. The problems can be considered internal if they are found within the organisation of a small firm or caused by the entrepreneurs themselves, and they can be considered external if they arise from the external environment outside the direct control of the firm (Schmitz, 1993). Some authors, such as Bruch and Hiemenz (1984) and Harper and Ramachandran (1984) refer to these problems as “supply-side and demand-side constraints”.

By reviewing the literature on the issues facing SMEs in different countries, it is possible to summarise the main problems facing SMEs. The following review is based on evidence gathered from countries and areas such as the United Kingdom, the United States, Japan, Sweden, Germany, South East Asia and Africa. It shows that there are problems common to all small and medium-sized firms, as follows:

- (i) Availability and cost of capital: As Thompson and Leyden (1983) note, the availability and cost of capital affects the profitability of small enterprises in two main ways. One is that small business must pay significantly higher interest rates than

their larger competitors on loans of the same type and maturity. While a large firm of good credit standing is likely to pay the prime rate on its short-term bank loans, small firms typically must pay from 2-4 percent above the prime rate on such loans, and 3-6 percent above prime on loans from finance companies. A second reason why high interest rates have such a great impact on small businesses is that small firms depend much more heavily upon debt financing and bank loans as a source of funds, and they have little or no other access to the capital market.

- (ii) Inflation: Increasingly high prices of raw materials and labour will increase the operating costs of firms. The problem is that it is difficult for SMEs to pass on increased costs by raising prices because they usually face strong competition in their product markets. As John M. Blair, former chief economist of the Senate Antitrust Committee explains: “smaller firms pay more for money even in the best of times, but inflation has aggravated the difference. The bias against SMEs applies not only to corporate bonds and bank lending, but also to the equities market. The securities of the large companies enjoy higher price/earnings ratio because they are better known, more actively traded, and therefore more liquid” (p. 28) (Thompson and Leyden, 1983). Inflation imposes the heaviest burden on SMEs and impairs their development and survival. It is difficult for SMEs to restore their capital, and they have limited resources available to resist inflation, by enlarging the stocks and fixed assets. In addition to the economic effects of inflation, there are socio-psychological effects on SMEs, as they may be unfairly blamed for inflation by consumers (Sougt, 1999).
- (iii) Finance: For small and medium-sized firms there are difficulties in finance related to their size (lack of collateral) and their ‘newness’ (lack of track record) (Cross, 1983). Financial institutions therefore face higher risks if they seek to provide loans to small and medium-sized firms. According to Suzuki (1996), the amount of finance obtained by SMEs depends on the ‘five-stage growth model’ of the corporate life cycle. The five stages are: the start-up stage; the early stage; the early-growth stage; the late-growth stage; and the consolidation stage. In the start-up stage, high risk is inherent and the source of funding is informal due to the banks refusal to extend loans to SMEs. In the early stage, the commercial banks are still reluctant to provide finance to SMEs due to the low-credit profile of these firms. In the third and fourth stages,

commercial banks provide short-term loans for SMEs. Long-term loans are provided in the last stage. So banks are not the right source or institution for financing SMEs for the following reasons, as Harper (1998) reports, “bankers are trained to be conservative, because they are taking care of [savers] money. Banks work on low margins they cannot afford the time to assess new business propositions, and banks need to get their money back, and also know when they will get it back. SMEs often fail and the timing of their success are unpredictable” (p. 7).

- (iv) Government Regulations: This problem is more common in the developing countries, where there is a lack of regulations that relate to the organisation of small and medium-sized enterprises. Such problems can be seen particularly in the management process. This creates more obstacles for SMEs, especially in the early stages of start-up and growth.
- (v) Taxes: The tax system is one of the main problems facing SMEs all over the world. In the United States small businesses criticise the tax system because of its discrimination between small and large firms. The US tax system is also very complex and does not allow for the special need of SMEs (Thompson and Leyden, 1983). In the United Kingdom, Bannock (1976) argues that the direct taxation of profits has more severe effects on the small firms than large firms for three reasons. Firstly, because small firms, and particularly new ones without a profit record, have only limited access to the capital market and therefore find it more difficult to raise new equity or long-term finance to substitute for retained earnings as a source of development capital. Secondly, the owners of small firms are jealous of their independence and feel reluctant to borrow, because borrowing threatens their independence. This reluctance does not affect the managers of large firms, due to the independence of their firms from the actual owners. The third effect of the tax system is to diminish the availability of capital.
- (vi) Competition: Problems related to competition and marketing are manifold. Competition seems to be especially strong in markets for simple, standardised items where technological and capital requirements are low. Competition for SMEs comes from the large firms and imports.

- (vii) Lack of Raw Materials: For many small producers in developing countries obtaining material input poses a major problem. Many SMEs have to reduce their volume of production because of the lack of supply of inputs or raw materials or due to the currency exchange rate (Tambunan, 2000). But Bruch and Hiemenz (1984) argue that the “supply of raw materials and intermediate inputs of the required specifications is often unstable in quality, quantity and price because of deficiencies in the trade sector and due to lack of infrastructure in transportation and communication. Large industries, on the other hand, can rely on long-term contracts and favourable prices for bulk purchases”. However, there are more problems facing SMEs, namely: the lack of technology, the lack of skilled workers, inadequate infrastructure, and the problems in the export market relating to the lack of information about international trading practices. Every one of these problems has a relation with the previous problems in one way or another.

The problems mentioned above are common problems facing SMEs. Stanworth and Gary (1991) explain that the key problems and issues discussed in the Bolton Report (finance, governmental regulations and marketing) are still under discussion today. However, it should be remembered that every country and sector has its different idiosyncrasies.

### ***3.4.2 Issues Specific to Jordan***

Many difficulties facing small and medium-sized enterprises in Jordan are similar to those faced by their counterparts elsewhere. However, there are special problems facing SMEs in Jordan due to the structure of the economy, the nature of SMEs and to the government's economic policies. These problems are now discussed in the remainder of this section.

#### The Economy

About 80 percent of enterprises in the Jordanian economy are small and medium-sized firms (see Section 3.3). The economy also suffers from problems, such as a lack of natural resources, a deficit in the trade balance and the government budget, and a low level of savings (see Chapter 2). All of these issues influence firms in the country, especially SMEs. For example, small and medium-sized enterprises in the manufacturing and construction sectors import their raw materials from foreign markets, because it is impossible to find the

materials that they need in the local market. This is reflected in the input prices of SMEs, which fluctuate according to international markets.

If we compare the Jordanian economy with those of neighbouring countries, it seems that starting a business is easier in Jordan than elsewhere because it is a free market-orientated economy. However, the nature of the economy also means more competition for Jordanian SMEs, not only from the large firms in the country, but also from small and large firms in other countries. All of these problems are due to the structure of the Jordanian economy, and therefore SMEs seek extra finance to combat them. However, a lack of finance is one of the biggest problems facing small and medium-sized businesses in Jordan. The conservative policy of the commercial banks regarding extending credit facilities to small investors makes it impossible for small and medium-sized investors to get loans from these banks. Governmental organisations also cannot provide the needed funds to these firms because of the deficit in the government budget and the low level of savings generally. As Hamilton (1990) indicates, many businesses fail each year due to a lack of funding.

### The Nature of SMEs

Other kinds of problems that face SMEs in Jordan are related to the nature of the firms themselves, which often depend on only one person; the owner, who is also the manager. However, many of the problems that face small and medium-sized enterprises in Jordan are similar to those of other developing countries, due to the similar economic and social conditions of these countries. The main problems for SMEs are as follows:

- (i) There is more than one definition of a SME in Jordan. (see Section 3.2). This lack of consistency means that a firm may satisfy the definition of an SME for one agency, but not another, causing confusion.
- (ii) Lack of information and knowledge for and about small firms. This is partly due to the policymaker's ignorance about SMEs and their perceived lack of importance to the national economy. This situation also existed in UK when the Bolton Committee began its work. It found that one of the main obstacles facing SMEs was the lack of information for small enterprises (Curran, 1986).
- (iii) The low level of productivity of small and medium-sized firms, often due to the low-quality of workers employed by these firms

- (iv) Small firms face a high rate of employee turnover, due to the low wages compared to the wage levels offered by large firms. Workers obviously look for the best job, and are attracted to work in large firms by the higher wages, greater job security and a better working environment.
- (v) In order to reduce their costs, Many SMEs pay no attention to health matters, environmental conservation and the need for general safety.

### Government Economic Policy

The 1995 Encouragement of Investment Law No 16, which aims to encourage the private sector to invest in rural areas, defines areas for tax exemptions according to the level of development. An “A” area covers parts of the main three cities, Amman, Zarqa and Irbid, offering 10 years tax exemption for firms and a 25 percent discount from income tax for entrepreneurs. A “B”, area is defined around the less developed cities, such as Ajloun, Jaresh, Mafraq, Madaba, Aqaba and Karak. Firms in these areas have 10 year’s tax exemption and 50 percent exemption from income tax. The “C” areas cover the least developed parts of Jordan, such as the south-east areas, Ma’an, Mafraq and Tafeleh. Firms here have 10 years tax exemption and 75 percent exemption from income tax.

Around 80 percent of SMEs are located in the ‘A’ areas, because SMEs usually prefer to be near the main cities so as to reduce the cost of transportation, marketing and so on (Amari *et al*, 1995). This means that small and medium-sized firms do not take advantage of the greater tax exemptions provided by B and C areas. This Investment Law mostly benefits large firms, which have the ability to choose the regions that have more exemptions, because they can afford to transport and market their products more widely.

### **3.5 Financing Small and Medium-Sized Enterprises in Jordan**

All firms, and especially small and medium-sized firms, need funds to achieve their goals and objectives. Firms require and seek finance at the different stages of their life cycle: at the beginning of their life; during the development period; and at the time when they are preparing their products for export to foreign markets. The vast majority of small and medium-sized enterprises mobilise the small amounts that they need to start their businesses from their own savings or from their friends and family. There are various reasons why SMEs

have little or no access to institutional finance. Banks consider lending to small businesses risky and the administrative cost of such lending is high (Levitsky, 1999).

The financial sector in Jordan consists of the following:

- (i) The Central Bank of Jordan. This is the monetary authority that controls the financial system.
- (ii) The Commercial Banks. In 2000, there were 21 banks with 547 branches throughout the country. The majority are concentrated in urban centres. The commercial banks are the largest source of loan finance for small business. All 21 banks are privately owned; 16 are owned by Jordanians and 5 by foreigners. They provide short and long terms loans for all sectors of the economy.
- (iii) Specialised Credit Institutions. These include the following:
  - The Agriculture Credit Corporation
  - The Cities and Villages Development Bank
  - The Jordan Cooperative Organisation
  - The Industrial Development Bank
  - The Housing and Urban Development Corporation

### ***3.5.1 Sources of Finance Available to SMEs in Jordan***

Sources of finance in Jordan, as Baydas (1998) has described, include both formal and informal channels. He found that entrepreneurs used one or more of the following four sources. First, some borrowers use trade loans from their suppliers and a few use advances from their customers. Suppliers' credit is the principal type of trade credit. Second, some entrepreneurs have acquired formal finance. Third, informal sources of finance from family and friends. Fourth, some entrepreneurs report never requesting formal loans, primarily because of the availability of finance from other sources, fear of the inability to repay or religious beliefs that prohibit the payment of interest under Islamic Sharia'a. A study by Bird (2000) has defined the sources of finance for SMEs in Jordan as follows:

- Informal Lending – family, friends' suppliers and customers.
- Formal Lending – commercial banks; 21 licensed banks;
- Government of Jordan supported lending programmes - sector lending and guarantee programmes: including specialised credit institutions (see above); and

governments institutions such as the National Aid Fund and the Development Employment Fund.

- Non-governmental organization, such as: Nour Al-Hussein Foundation, Jordan River Foundation, United Nation Development Programme (UNDP), United States Aid for International Development (USAID) and Access to Microfinance and Improved Implementation of Policy Reform (AMIR).

The commercial banks, specialised credit institutions and non-governmental organisations are all formal sources of financing small and medium-sized enterprises. However, there are no specific data available for informal lending (Bird, 2000). In the remainder of this section we discuss the main formal sources of finance for SMEs.

### Commercial Banks

Ifram (1997) notes that the banking system structure in Jordan was influenced by the British model. The new indigenous banks simply adopted the practices and policies of British banking, the most important of which had to do with the nature of banking. Indigenous banks, like their British model, have always been “commercial”, as opposed to “credit” or “saving” banks, which evolved in many parts of continental Europe. Consequently, indigenous banks have always felt that their proper sphere of business lies in meeting the legitimate “need of trade”. In practical terms, this attitude has meant that the banks’ main business is to finance international, and to a lesser extent internal trade, typically by short-term loans.

Table 3.9 shows the increase in total credit facilities extended by commercial banks to the firms in all economic activities increased from JD 1,309 million in 1987 to JD 4,466 million in 1999. In relation to short and medium-term loans, the commercial banks in Jordan usually extend these to the firms in all sectors, especially to small firms in the industrial (mining and manufacturing) and retail sector. Table 3.9 shows also the credit facilities extended to different sectors by commercial banks during the period 1987-99. The total credit facilities increased yearly, especially to the industrial sector with an average growth rate of around 11 percent per annum. The relative importance of the industrial sector in relation to finance from the commercial banks is about 17 percent (CBJ, 1999). This facility has increased from JD 220 million in 1987 to JD 765 million in 1999. The Central Bank of Jordan (2000) reports that around 80 percent of these facilities provided to the industrial sector were

for manufacturing firms. In the service sector, the total value of credit facilities provided by the commercial banks increased from JD 685 million in 1987 to JD 2,456 million in 1999. The retail and agriculture sectors have around 25 and 3 percent respectively of the total credit facilities provided.

Unfortunately, we were unable to obtain specific data on the credit facilities provided to the SMEs, because it is not published, neither by the commercial banks nor the Central Bank of Jordan.

In relation to long-term finance, the banks do not extend these facilities to SMEs, due to the high risk in offering such facilities to SMEs, who are unable to provide enough real-estate collateral to satisfy the commercial banks requirements. So, the banks extend their long-term loans to large firms, due to the low level of risk and mutual benefits; and relations between the large firms and the banks, such as partnership and co-ownership in different projects. However, Aqel (1998) believes that a role of the banking system is to supply finance to SMEs, due to the following advantages of the banks:

- (i) Proficiency and ability in both management and financial expertise.
- (ii) A wide distribution of bank branches in all regions in the country; there are currently 21 banks with 547 branches in all parts of Jordan.
- (iii) The proficiency of auditing and adopting the international standards of accounting.
- (iv) Stability of banks' financial resources and their ability to offer banking services.

#### Specialised Credit Institutions

To confront the banks refusal to extend long-term loans and facilities to small and medium-sized enterprises, the government has established specialised institutions that aim to extend long-term facilities to SMEs.

The first such organisation is the Agriculture Credit Corporation (ACC). This is 100 percent owned by the government and was established in 1959. Its main purpose is to provide loans to borrowers in agriculture sector under special conditions and at subsidised rate of interest of around 7 percent. This institution provides three types of loan: short-term loans up to 2 years; medium-term loans for 2-10 years; and long term-loans for 10-15 years. It

provided around JD 16.8 million in 1997 as finance for the firms working in the agriculture sector, all of which were small and medium-sized firms.

The second specialised institution is the Industrial Development Bank (IDB), which was established in 1965. This Bank aims to provide finance for firms in the industrial sector at a subsidised rate of interest of between 7–10 percent and loans of up to 7 years. The bank offers a number of other banking services and special programmes such as: risk capital loans; venture capital; commercial bill discounting; and financial broking in the Amman stock market. The bank does not accept deposits, but it relies on the government and donor laws. However, the small firms in the industrial sector could not meet the IDB conditions, so the bank established a special unit for financing small businesses and handcrafts in 1975. The aim of this unit was to finance small businesses with 5 employees or less and the maximum value of the loan was up to JD 10,000 for up to 5 years with six months grace period. In 1997 this unit provided funds for 3,726 small firms, totalling JD 15.2 million.

The other institutions are: the Housing and Urban Development Corporation (HUDC), which extends loans to borrowers in the housing sector; the Cities and Villages Development Bank (CVDB), which participate in the development process in the less-developed regions, especially in the south of Jordan; and the Jordan Co-operative Corporation (JCC), which provides finance to the agriculture sector, through cooperation associations. Other governmental institutions have been established, due to the government's conviction about the importance of SMEs and their role in the Jordanian economy. These include the National Aid Fund (NAF), which has lent about JD 12.1 million in 1997, and the Development and Employment Fund (DEF), which in 1999 offered around JD 23 million for 5,600 small firms and handcraft businesses (CBJ, 1999). The objective of these institutions is to provide the necessary financing for small-scale firms and self employed individuals, to contribute to the struggle against poverty and unemployment.

#### Non-Governmental Organisation

Some non-governmental organisations (NGOs) have also been established to support specific groups of borrowers or firms. Some of these organisations are local, such as the Nour Al-Hussein Foundation, Jordan River Foundation and the Hashemite Jordanian Fund for Human Development. Others are international organisations, such as: the United Nations

Development Programme (UNDP); the Co-operative for Development (CD); CARE International; the Near East Foundation (NEF); the Co-operative Housing Foundation (CHF); Access to Microfinance and Improved Implementation of Policy Reform (AMIR); and the United States Aid for International Development (USAID). All of these donors support SMEs to deal with economic and social problems. All of the NGOs work through specialised credit institutions. The facilities from all of the non-governmental organisations are only available for the small and medium-sized firms under fixed conditions. All of these organisations work within the government's plan against poverty and unemployment.

### ***3.5.2 Obstacles to Financing SMEs in Jordan***

Despite of the multiplicity of financial sources in Jordan, small and medium-sized firms still suffer from lack of finance from the different sources. Commercial banks are also reluctant to provide finance for SMEs unless they can protect their interest. There is also limited competition in the banking sector and banks have not been under pressure to develop their lending to small firms (Hallberg, 2000). The lending of the specialised credit institutions and non-governmental organisation is also very restrictive. In this section, we will discuss the obstacles facing the commercial banks and the specialised credit institutions preventing them from providing loans to SMEs.

#### **The Commercial Banks**

Up to 42 percent of small and medium-sized firms in Jordan have received loans from formal sources of lending (Baydas, 1998). However, despite this there is still a lot to be done to help small and medium-sized enterprises. Many of problems and obstacles that prevent the banks from financing SMEs are outside their direct control, such as: the interest rate, which is controlled by the Central Bank of Jordan (between 11-17 percent); the firm's track record; the direct control of credit by the Central Bank; the high rate of required capital reserve; and rules and policies in the credit market that have created barriers between the banks and SMEs (Aqel, 1998). In addition, reasons for the failure of the commercial banks to provide loans to small and medium-sized enterprises are as follows:

- (i) The cost of managing and executing a loan are the same whether it is a small loan or a large one. This means that management cost for small loans is comparatively high.
- (ii) The high risk facing SMEs and the greater external uncertainty of the environment in which SMEs operate makes the banks reluctant to offer loans to small firms.
- (iii) The lack of collateral available to the SMEs to help obtain loans. The commercial banks usually request collateral, especially real-estate, to protect their interests.
- (iv) The difficulties that banks face in the case of loan defaults by SMEs, such as the valuation of collateral during the loan period.
- (v) Entrepreneurs avoid dealing with banks due to their own lack of understanding of banking, fear of their inability to pay back a loan, religious beliefs that prohibit charging a rate of interest, and they are jealous of their independence.

Bird (2000) in his study of the banking sector in Jordan states, "Jordan has a fairly sophisticated banking sector although their credit policies and lending practices are rather restrictive" (p.7). Bird comments that the banking sector does not participate in financing SMEs because; they banks perceive SMEs as 'self help' organisations, not real, available businesses; banks perceive that firms lack qualified management, sound business practice, record keeping, marketing, etc; banks do not see market opportunities in what is perceived as a high-risk sector; and banks lack an understanding of cooperatives as business enterprises and do not have qualified staffs that understand financing for cooperatives and SMEs.

Haque (1999) identifies managerial problems as a reason why banks are reluctant to lend to SMEs. These include: a lack of innovation fostered by job permanency; an office-oriented work approach; rigid rules and regulation; a long decision-making process; an ability to work in a 'situational context'; training that emphasises a formal setting; and a rigid rate of interest. Baydas and Graham (1997) also identify six key issues that banks need to resolve; these are: commitment to repayment by borrowers; organisational structure; financial methodology; human resources; cost-effectiveness; and regulation and supervision.

### Specialised Credit Institutions

The establishment of specialised credit institutions was intended to bridge the finance gap between demand and supply, to address both poverty and unemployment problems and to create financial resources for SMEs. However, these institutions cannot obviate the risk of extending loans to SMEs because they do not use the collateral to protect their interests. The social objective of these institutions and the fact that they are governmentally financed creates the impression that the government supports the loans extended to small and medium-sized firms through these institutions. This impression encourages the borrowers to use the loans in different ways from that described in their original application form (Bassal, 1995). Further, the borrowers do not always feel that they have to repay the amount of loan to these institutions. This has affected the repayment rate, which is 78.5 percent for the Industrial Development Bank and around 74 percent for the Agricultural Credit Corporation in 1999. This compares with a default rate for the commercial banks of around 6 percent on average.

#### ***3.5.3 Collateral Requirements***

As with most decisions, the more quality information the banks have, the better their decision will be. The 'seven C's' are considered by White (1990) to be the main information that banks require in their lending, as follows

- (i) **Character:** This is the borrower's ability and commitment to repay the loan. The bank can discover this characteristic from the track record of the borrower. The character is directly related to the question: will the borrower repay?
- (ii) **Capacity:** This is the borrower's experience and his capacity to manage his work smoothly. The relevant questions are: does the borrower have the wherewithal to repay the loan, and what is his main source of repayment? A clear answer to this question can be found in the cash flow analysis.
- (iii) **Capital:** This is the amount of money paid by borrower as his own shareholding in the total capital of the project, which offers a secure margin to protect the bank's rights.
- (iv) **Conditions:** Economic, industry, or firm conditions play a strong role in the firm's ability to repay the loan. So the banks have to check if the cash flow from the operation is sensitive to changing conditions. Their next step will be to look at other sources of repayment.

- (v) Customer relationships: These are the borrower's history with the bank and other credit institutions. This additional information can be used in the bank's decision.
- (vi) Competition: Competition plays a role in the credit decisions of the banking sector. The desire to attract good borrowers from other competitors or to keep the bank's good borrowers from going to other banks causes bankers to be more careful when making a credit decision.
- (vii) Collateral: The banks prefer to lend only to projects with a record of success, rather than new projects, due to their ability to provide the required collateral. The banks also look for the collateral to be the main protector of their interest in the event of default.

### The Importance of Collateral

Collateral is an asset pledged by the borrower to the lender, which the lender has the right to seize and sell should the borrower default on the loan repayments. Collateral is used to protect the lender against the credit risk. Collateral is an important feature of the banks' lending decision, and the banks usually extend loans to the borrowers who have the capacity, ability and commitment to repay the loan. Collateral is very important for both parties in the credit operation (Abu-Jobara, 1997). In this section we will discuss the importance of collateral from both the lender's and the borrower's points of view.

The lender looks to the collateral as a very important protector of their rights, because it can protect them if the borrower's project fails or if the borrower refuses repayment. The importance of collateral can be summarised as follows. First, collateral must minimise the lender's losses by giving the lender total or partial protection of his resources against any risk involved. In case of default the lender has the right to seize the collateral and sell it. Second, collateral is a screening device. Pledging collateral means that the borrower could lose part of his property if he does not repay the money on time, so the borrower has an interest in repaying. The reluctance of a borrower to provide collateral could signal to the bank that the borrower is fully aware of the implications of making this pledge, and if he does provide collateral, then he is likely to do everything to avoid the loss of the pledged assets. Third, collateral indicates that the borrower intends to use the loan for the purpose stated in the loan application. Collateral can then increase the security margin for the banks.

Collateral is also important for the other side of the credit operation. The collateral shows that the borrower has the ability to repay money on time and encourages the banks to lend. Further, if the borrower has enough collateral he will be able to save capital by borrowing for his business. In addition, putting forward collateral can create more facilities for the borrower, such as a lower interest rate, and an increase in the grace period or the repayment schedule (Abu-Jobara, 1997).

### Kinds of Collateral in Jordan

Hammoud (1993) and Najjar (1997) set out the main kinds of collateral used in Jordan, and the characteristics of this collateral:

- (i) **Securities:** This kind of collateral should be completely owned by the borrower and be in the form of high-quality securities, due to their price stability. Banks usually lend less than 50 percent of the capital consideration against this kind of collateral, and seek to diversify these securities due to market risk.
- (ii) **Goods:** This kind of collateral is popular. The goods should be protected from damage by storage and not closely related to changes in demand and supply.
- (iii) **Bills of exchange:** These should be a first class bills and maturing in not more than six months. They should come from legal commercial operations and have a suitable profit margin.
- (iv) **Real estate:** This is the main and the best kind of collateral from the banks point of view. Usually, the borrower pledges his real estate to the bank for a loan. This kind of collateral raises some obstacles, such as declining mortgage value during the loan period, difficulties for the banks in trying to sell the real estate in event of default (especially if the mortgage is a co-ownership) and differing valuations of the estate.
- (v) **Personal guarantee:** This is divided into two parts. First, the person can have a loan and can guarantee it with his own salary or ordinary income. Second, if the person has a good reputation and good record in his commercial activities, he can take a loan on the basis of his reputation alone.
- (vi) **Equipment:** This collateral is for loans extended to factories that use capital equipment. The equipment should be in an activity with a high productivity. The problem facing banks with this type of collateral is depreciation.

#### ***3.5.4 The Finance Gap in Jordan***

Despite the multiplicity of sources of finance available, and the different kinds of collateral that might be used in Jordan, the small and medium-sized enterprises are often not able to obtain the requisite finance. This is because SMEs are unable to provide the required collateral by the commercial banks to protect the banks' interest. This means there is gap between the loans or funds that are demanded by SMEs and the funds that are supplied by the commercial banks. This known as the 'finance gap' in SMEs financial relation with the commercial banks. The finance gap can be defined simply as the deficit between the amount of financial resources demanded by SMEs and what is provided or supplied.

Baydas (1998) finds that small firms demanded around JD 168 million in finance for 176 thousand borrowers in 1995, whereas on the supply side the financial institutions supplied only JD 118 million for SMEs. This means there is a finance gap of around JD 50 million. This study by Baydas (1998) derives these findings through interview survey methods of a randomly selected sample of 350 small and medium-sized enterprises across various sectors in the three most populated areas of Jordan. However, Aqal (1998) argues that if the commercial banks extended only one percent of their credit facilities to small and medium-sized enterprises then this gap would be bridged or closed.

This gap is caused by two factors. Firstly, from the supply side, the commercial banks usually refuse to lend to SMEs for a long period in the form of long term loans, and always prefer land and buildings as collateral (i.e. real estate). The lack of feasibility studies also affects the financing decisions of the banks, and limitation of the financial resources for the specialised credit institutions. Secondly, from the demand side, the main factor is the low level of income in small and medium-sized firms, which reduces the ability of these firms to finance themselves. The government has tried to address the finance gap by encouraging the commercial banks to provide loans to small and medium-sized firms through the Jordan Loan Guarantee Corporation (JLGC). This was established in 1994 to execute a loan guarantee scheme for small and medium-sized firms in all sectors of activity. These guarantees are provided to firms that have a good cash flow analysis and a feasible project, but which might have not enough of the kind of collateral that is attractive to the commercial banks.

### **3.6 Conclusions**

The definition of a small and medium-sized enterprise in Jordan is no easier than it is elsewhere, and there are multiplicities of different definitions. This has led the various government agencies and institutions to adopt their own definitions. The Department of Statistics in Jordan (DOS) definition, used in this chapter considers a firm to be small if it employs less than 5 workers, medium if it employs 5-19 workers and large if there are more than 20 workers. However, for the rest of this study we use the JLGC definition, which considers a firm to be small or medium-sized if it employs 50 or fewer workers.

The role of SMEs in Jordan can be seen from the number of SMEs in each sector. More than three quarters of private firms in Jordan are small and medium-sized firms, and around 98 percent of firms in manufacturing sector are SMEs, while all of the firms in retail and agriculture sectors are SMEs. The importance of SMEs is also found in these firms share of employment, with 80 percent of the total labour force in SMEs. Despite this SMEs face the same problems as elsewhere. These include the availability and cost of capital, inflation, finance, government regulations and so on. While some of the problems faced by SMEs in Jordan are due to the structure of the economy, others are due to the nature of SMEs in Jordan, and to the government policy.

The main sources of finance for SMEs in Jordan are: the commercial banks, specialised credit institutions and non-governmental organisations. Because the specialised credit institutions and non-governmental organisation are working to promote government policy and targeting special groups, then the commercial banks are considered to be the main source of finance for SMEs. However, the banks are usually reluctant to lend SMEs, and this creates a finance gap in financing small and medium-sized firms. In recognition of the importance of SMEs to the national economy, the Jordanian government established the Jordan Loan Guarantee Corporation in 1994 to encourage the commercial banks to lend to SMEs. The remainder of this thesis is a study of how well these guarantees are able to bridge the finance gap.

**Table 3.1: The Bolton Committee Definition of Small Firms**

Sector	Definition
Manufacturing	200 employee or less
Construction, Mining and Quarrying	25 employee or less
Retailing, Miscellaneous	Turnover of £ 50,000 or less
Services, Motor Trade	Turnover of £ 100,000 or less
Wholesale Trades	Turnover of £ 200,000 or less
Road Transport	Five vehicles or less
Catering	All, excluding multiplies and brewery, Managed houses

Source: Storey. D, 1994.

**Table 3.2: Small Firms in Industrial Sector in Jordan, 1987-97**

Year	Small Firms			The Total Firms	
	Number	Annual Growth rate	Share of Total Firms %	Number	Growth rate
1987	7,933	-	81.2	9,766	-
1988	10,428	31.5	86.7	12,033	23.2
1989	10,909	4.6	80.9	13,485	12.1
1990	13,109	20.2	89.1	14,713	9.1
1991	13,141	0.2	85.6	15,348	4.3
1992	14,899	13.4	81.6	18,260	19.0
1993	16,540	11.0	87.1	18,980	3.9
1994	16,526	-0.1	80.5	20,535	8.2
1995	18,724	13.3	81.8	22,880	11.4
1996	19,117	2.1	81.8	23,358	2.1
1997	19,580	2.4	82.0	23,878	2.2

Source: Department of Statistics, Industrial survey, 1993-1997

**Table 3.3: Geographical Distribution of Small Firms in Industrial Sector, 1997**

Governorate	Number of Industries	%
<b>Highlands &amp; Jordan Valley</b>		
Amman	8,713	44.5
Irbid	3,524	18.0
Zarqa	3,035	15.5
Balqa	1,057	5.4
Karak	548	2.8
Jerash	392	2.0
Madaba	450	2.3
Ajloun	294	1.5
Aqaba	352	1.8
Tafielh	196	1.0
<b>Desert</b>		
Mafraq	764	3.9
Ma'an	255	1.3
<b>Total</b>	<b>19,580</b>	<b>100.0</b>

Source: Department of Statistics, Jordan, 1999.

**Table 3.4: Employees in SMEs, in Private Sector, 1992**

Sector	Total employees	Employees in SMEs	%
Agriculture	49,602	49,602	100.0
Industrial	114,526	56,459	49.3
Construction	14,960	2,962	19.8
Services	55,553	35,748	64.3
Retail	75,375	72,355	96.0
<b>Total</b>	<b>260,409</b>	<b>217,126</b>	<b>83.4</b>

Source: Amari, *et al* 1995.**Table 3.5: Employers in SME in the Industrial Sector, by Gender, 1996**

Labour Class	1 - 4	5 - 19	Up to 20	Total
Firms Number	19,117	3,683	558	23,358
%	81.8	15.8	2.4	100.0
Total Number of Employee.	45,959	26,850	66,142	138,951
%	33.1	19.3	47.6	100.0
Male	45,367	25,059	59,661	130,087
%	34.9	19.3	45.8	100.0
Female	592	1,791	6,481	8,864
%	6.7	20.2	73.1	100.0

Source: Department of Statistics, 1998.

**Table 3.6: SME Share in Output, 1992**

Sector	GDP (J.D. million)	%
(a) SMEs	939.7	27.0
of which: Retail	279.0	8.0
Agriculture	217.9	6.0
Transportation and Communication	143.6	4.0
Others	299.2	9.0
(b) Large Firms	1,115.6	32.0
of which: Manufacturing	380.9	11.0
Transportation and Communication	273.2	8.0
Mining	144.1	4.0
Others	317.4	9.0
(c) GDP	3,494.0	

Source: Amari, *et al* 1995.

**Table 3.7: Average of Productivity in SMEs for Some Sectors, 1991**

Jordanian Dinar, Thousands

Sector	SMEs	Large Firms	Total Sector
Agriculture	4.4	-	4.4
Industrial	2.3	12	6.6
Retail	3.3	-	3.3
Services	20.3	7.9	6.5
Transportation and Communication	4.4	11.3	7.3
Construction	2.8	2.5	2.6
Water and Electricity	-	9.8	9.8

Source: Amari, *et al* 1995**Table 3.8: Small Firms Value Added and Their Share in Industrial Sector Value Added, 1986-94**

Million, Jordanian Dinar

Year	SMALL FIRMS			Industrial Sector	
	Value (J.D.million)	Growth Rate %	Sharing %	Value(J.D.million)	Growth Rate %
1986	26.8	-	9.0	297.3	-
1987	29.0	8.2	7.2	400.4	34.7
1988	34.6	19.3	7.9	436.6	9.0
1989	54.5	57.5	9.5	575.4	31.8
1990	49.4	-9.4	8.3	595.4	3.5
1991	55.6	12.6	9.4	590.9	-0.8
1992	79.7	43.3	11.6	684.7	15.9
1993	76.7	-3.8	10.0	766.8	12.0
1994	47.7	-35.2	5.6	886.6	15.6

Source: Department of Statistics, Industrial survey, various issues.

**Table 3.9: Credit Facilities Extended by Commercial Banks According to the Economic Activities, 1987-99**

Jordanian Dinar, Million.

Year	Sector				
	Agriculture	Industrial	Retail	Services	Total
1987	40.0	220.7	363.7	684.8	1,309.2
1988	47.2	221.4	402.5	742.2	1,418.3
1989	47.4	239.0	391.5	833.6	1,511.5
1990	53.7	236.9	407.8	946.3	1,644.6
1991	49.8	250.5	465.9	998.1	1,764.3
1992	54.4	285.8	525.1	1,139.4	2,004.7
1993	65.4	285.8	631.8	1,658.3	2,741.3
1994	75.5	471.6	798.6	1,902.7	3,248.4
1995	75.7	548.3	970.4	2,111.3	3,705.7
1996	79.5	610.6	1,035.7	2,194.5	3,920.3
1997	93.3	590.5	1,064.5	2,231.4	3,979.7
1998	115.3	701.8	1,104.7	2,363.5	4,285.3
1999	117.3	765.3	1,127.0	2,456.4	4,466.0

Source: Central Bank of Jordan, Monthly Statistical Bulletin, various volumes.

## CHAPTER 4

### REVIEW OF LITERATURE ON LOAN GUARANTEE SCHEME

#### 4.1 Introduction

Across the world, the primary source of external funds for small businesses is loans. Most of these loans are provided by commercial banks, so the commercial banks have a very important role in financing small firms. For the last few decades the credit market and, more generally, financial markets, have attracted considerable attention from economists due to their role in the economy. The main reasons for this attention are described by Clemenz (1986) as follows. Firstly, credit markets have the ability to execute an important role in any developed economy through the sharing of risk and the allocation of financial resources. Secondly, some influential economists have noted that credit markets operate in a very distinct way compared to most other markets, and in many they cases exhibit inefficiency.

Banks aim to maximize their profits, so they must simultaneously seek the highest return possible on loans and securities, reduce risk and make adequate provision for liquidity by holding liquid assets. Banks try to accomplish these goals in the following ways: they try to find borrowers who can pay a high rate of interest and are unlikely to default; they look for high-quality investments with a high rate of return; and they manage the liquidity of their assets so that they can satisfy the reserve assets requirement without bearing huge costs (Clemenz, 1986). However, these factors make the small firms' quest to borrow funds from banks difficult. This is not only because of a lack of information about the returns that can be made from small firms, but also due to the inability of these firms to pay high interest rates or to pledge sufficient collateral that may be requested by banks. It is because of these problems that governments may offer loan guarantee to the commercial banks in order to encourage them to lend to small and medium-sized enterprises. These loan guarantee schemes are the focus of this chapter.

This chapter discusses the theoretical background to the loan guarantee schemes that have arisen as a response to asymmetric information in the credit market. It will go on to discuss how collateral can solve the problem of asymmetric information, but also how loan guarantee schemes can act as an alternative to collateral. This chapter also presents and evaluates the empirical evidence on loan guarantee schemes. It provides a general survey of the main literature about loan guarantee schemes, their role and importance, and it considers the experience of the main developed countries in the field of loan guarantee schemes.

## 4.2 Information and Small Firms Finance

Despite the importance of the credit market and its ability to be the main source of finance for SMEs, it is not possible to ignore the main problem facing commercial banks when offering loans to SMEs. This is the problem of asymmetric information in the credit market. This section will discuss the importance and the role of asymmetric information in the credit market, and the role of collateral as a solution to the asymmetric information problem. As Riding (1997) notes, “it is worth reviewing the literature on credit rationing because it is often invoked as justification for loan guarantee programmes” (p. 643).

### 4.2.1 Asymmetric Information

The small-business owner is likely to be significantly better informed about their business than any outsider, such as the bank. Indeed, the analysis of small business finance depends on the assumption that the owner of a small firm has more information about his firm and its performance than a bank. The situation may not be the case for large firms, especially for those with publicly-traded shares. This is because, as Storey (1994a) states, information about larger firms is collected by independent analysts and widely disseminated to a large group of potential and actual investors in the business. Such information is not so readily available about smaller firms. Thus, the problem for the banks is how to distinguish between good and bad small firms in the absence of any reliable information, so that the banks are wary about lending to small firms.

Cowling and Sugden (1995), Binks *et al.* (1990), and Binks and Ennew (1996) illustrate how asymmetric information may lead to adverse selection (hidden borrower type) or moral hazard (hidden borrower effort). They define adverse selection as when a bank

cannot distinguish between two types of borrowers: the good risk and the bad risk. So in this case the bad borrower has an incentive to pretend to be a good borrower in order to benefit from more favourable lending conditions. However, this will not be optimal for the bank. To prevent this problem, banks may look for indicators or signals to reduce the uncertainty. Cowling and Sugden (1995) define moral hazard as situations in which “a borrower’s success probability can be influenced by effort. In cases where effort cannot be monitored sufficiently, the borrowers may not put in the required effort” (p. 90). The upshot is that borrowers may default on loans. In response to this, the banks may design a loan contract that induces more effort from the borrower. Higher collateral requirements are consistent with this. However, with perfect information this would not be necessary.

From the above discussion, we can see that asymmetric information in the credit market causes adverse selection and moral hazard problems. This can cause the financial market to fail. This is defined by NERA (1990) as the “failure of the financial markets to provide finance to apparently viable small firms” (p.15). NERA also mention other sources of financial market failure, which may occur due to the imperfections in banks’ internal decision-making processes. For example, irrational bias and principal-agent problems. These means that some potentially profitable business opportunities do not take place.

Binks *et al.* (1990) note that in the provision of bank finance to a small project, both parties typically sign a contract. If the bank wants to enter into this contract it will need certain information, and the bank must be sure of the following details. First, that the project is an appropriate one; second, that the firm is capable of undertaking it; and third, that once the contract has been written, the firm will do what it has agreed to do to the best of its abilities. So, we can see that the bank is always looking to avoid the problems posed by asymmetric information by designing the loan contract in an appropriate way.

The idea that asymmetric information causes market failure was first proposed in Akerlof’s (1970) paper on the ‘lemons’ principle. The paper illustrates the problem of adverse selection, which derives from asymmetric information between sellers and buyers, who are unable to distinguish between good from bad goods (i.e. “peaches” from “lemons”). This will cause market failure. The reasoning is as follows. The market depends on the buyer’s perceptions of the average quality of the goods. Because the buyer cannot distinguish between good and bad products, they will offer an average price, which will be more than the

bad product value and less than the good product value. As a result the sellers of bad products will receive a premium at the expense of those selling good products (see Kreps, 1990). Further, this situation will affect all of the market activities, as the good-product sellers will stay out of the market, because the price is too low. It is inefficient, since if the good products could be identified, markets would exist in which both the good and bad goods would be sold, but at different prices.

This idea can be applied to the credit market. Imagine the bank as the buyers of risk and the borrowers as the sellers. The sellers know the riskiness of their projects, but the bank have less or no information about the likely project performance. Credit rationing will be the natural outcome of this asymmetry of information, since the banks will know that their classifications of borrowers according to risk is imperfect and fear that setting a market clearing rate of interest may lead to a worsening, in terms of risk characteristics of the overall quality of borrowers. In such circumstances, as Akerlof (1970) notes “the difficulty of distinguishing good quality from bad is inherent in the business world; this may indeed explain many economic institutions and may in fact to be one of the more important aspects of uncertainty” (p. 500).

The earliest example in the literature of a study on imperfect information and financial markets is Jaffee and Russell (1976). In their paper they tried to develop a more specific model of how imperfect information and uncertainty can lead to rationing in loan markets. In their paper they define borrowers as “honest” and “dishonest” borrowers. Honest borrowers only accept the contracts that they expect to repay and they do in fact repay. Dishonest individuals, by contrast, default on loans whenever the costs to the borrower of default are sufficiently low. The paper constructs a setting where borrower default probabilities increase with loan size. Furthermore, for any given loan size, default probabilities differ across borrowers due to the factors lenders cannot observe, so the market interest rate incorporates a ‘lemon premium’. Credit rationing in the form of restrictions on loan size can emerge for the following reason. Honest borrowers may prefer the restrictions because the smaller loan size may lower the market average default probability, reducing the lemons premium, dishonest borrowers have to follow a long type contract in order to reveal themselves.

The most influential paper in this area is the work by Stiglitz and Weiss (1981). The exploitation of informational asymmetries leads to a form of credit rationing where the market denies funds to borrowers with characteristics identical to those receiving loans. In the equilibrium, some firms receive loans but the others are denied by the market. Both the borrowers and lenders “seek to maximize profits; the former through their choice of a project, the latter through the interest rate that is charged to borrowers and the collateral that is required of borrowers” (Stiglitz and Weiss, 1981, p.393).

The borrowers are two types, good-quality borrowers and bad-quality borrowers (those with riskier projects), so that projects have different probability distributions of return. In this case the interest rate may act as a screening device; since borrowers who are looking to pay a high interest rate may have the worse risk, ie. they do not worry about the interest payments if they default. A rise in the interest rate lowers the average borrower quality, and this will decrease the lender’s expected return, so that the loan supply curve bend backwards. Stiglitz and Weiss (1981) reach a very useful conclusion: “increasing the interest rate or increasing collateral requirements could increase the riskiness of the bank’s loan portfolio, either by discouraging safer investors, or by inducing borrowers to invest in riskier projects, and therefore could decrease the banks profits, either by discouraging safe investors, or by inducing borrowers to invest in riskier projects, and therefore could decrease the banks profits. Hence, neither instrument will necessarily be used to equate the supply of loan able funds” (p. 408).

De Meza and Webb (1987) examine the effects of asymmetric information on aggregate investment and on the financial structure of firms, by using a simple competitive model, under certain reasonable assumptions about the distribution of the project returns. The inability of banks to discover the characteristics of projects leads to more investment than is socially efficient. They assume that projects all have the same expected returns but differ in risks. The paper shows that in the presence of asymmetric information, the financial structures of firms and the efficiency properties of the level of investment depend upon the distribution of project returns. If all projects offer the same expected returns but differ in their risk, then equity is the favoured means of finance, and social efficiency obtains. This conclusion of de Meza and Webb (1987) conflicts with the Stiglitz-Weiss (1981) model. The difference between the two papers as described in Kon and Storey (2000) is thus; “whereas

Stiglitz and Weiss assumptions lead to credit rationing, those of de Meza and Webb lead to oversupply”(p.1).

The de Meza and Webb (1990) paper is driven by the assumption that entrepreneurs differ in their ability, which results in relationships of first order stochastic dominance between their project returns. They find that capital market failure cannot be attributed to moral hazard for it is an inescapable consequence of severing the link between performance and reward and there is no reason for thinking that in its presence competitive markets yield an inefficient risk-return mix. Adverse selection does provide a reason why a market equilibrium involves too little risk sharing. Nevertheless, in the seemingly plausible class of models considered here, if a pooling equilibrium exists, there is always too much investment (de Meza and Webb, 1990).

Many papers enlarge upon the basic ideas presented by Jaffe and Russell (1976), Stiglitz and Weiss (1981) and de Meza and Webb (1987). These include Greenwald *et al.* (1984), Bester (1985), Kanemoto (1987), Besanko and Thakor (1987), Black and de Meza (1994), Boot and Thakor (1994), Drake and Holmes (1995), and Hellmann and Stiglitz (2000). All of them consider that asymmetric information causes market failure in the credit market. After this simplified explanation of the background and review of asymmetric information and credit rationing, which still make the banks job to lend SMEs so difficult, because as Stiglitz and Weiss (1981) state, banks like to determine the borrowers who are likely to repay, but it is difficult to identify a good borrower due to asymmetric information, so the bank will use the interest rate and collateral as screening devices. The role of collateral in screening projects is now considered.

#### ***4.2.2 Collateral***

Asymmetric information and the bank's inability to identify good borrowers' causes credit market failure. As mentioned above, one of the main ways to solve this failure is through collateral. Collateral is an asset pledge by the borrower to the lender, until the borrower pays back the loan. In case of loan default the lender has the right to seize the collateral and sell it. Collateral serves to protect the lender against the risk of default that may face the project. Collateral is defined by Mishkin (1997) as “property promised to the lender if the borrower defaults. It lessens the consequences of adverse selection because it reduces

the lenders losses in the event of a default on a loan, the lender can sell the collateral and use the proceeds to make up for losses on the loan” (p. 247).

However, collateral has another role, since it is a signal that the borrower is high-quality, who is committed to his project and so merits having a loan from the bank. The entrepreneur has more information about the performance of his project than the bank, and so an entrepreneur who is willing to provide collateral is likely to be doing so because he knows that his project will succeed. Thus, collateral can also be considered as a signal (Storey, 1994a). As Bester (1987) says, “Borrowers with high probability of default prefer contracts with higher interest payments and lower collateral than borrowers with a low default risk. The reason is that high risk borrowers are more likely to lose their collateral” (p. 893). Also, Besanko and Thakor (1987) support the idea that low risk borrowers choose contracts with low interest rate and high collateral.

According to Storey (1994a) the importance of collateral is as follows. Firstly, it limits the downside loss by providing an asset for the bank in the event of a project failure. Secondly, it keeps a strong level of commitment between the borrower and his project. Thirdly, it provides a signal to the banks that the entrepreneur believes the project is likely to succeed, otherwise he would not commit his personal resources to it. One of the other useful roles that collateral plays, as Besanko and Thakor (1987) report, is that collateral has a role in designing credit contracts, as it enables the banks to sort borrowers into risk classes. Low-risk borrowers, will choose a contract with a low interest rate and high collateral requirement, whereas high-risk borrowers choose the contract that has a high interest rate and low collateral requirement. Collateral offers facilitate cooperation between lenders and borrowers. Lenders are more willing to make loans secured by collateral, and good borrowers are willing to supply collateral as it may help them to get loans more easily and with a lower rate of interest.

The remainder of this section briefly reviews the literature on collateral. Besanko and Thakor (1987) illustrate the role of market structure in credit allocation when there is information asymmetry. They find that the high-quality borrowers are willing to pledge more collateral when they try to get a loan, because collateral-associated costs produce different marginal rates of substitution. But this is contrary to the conventional view, which states that only low quality (more risky) borrowers should pledge more collateral. The same surprising

result has been found by Chan and Thakor (1987). Bester (1987), analysed the structure of the credit market equilibrium under imperfect information. He found that an increase in collateral has a positive effect on the probability of repayment, whereas an increase in the interest rate has a negative effect. The same result has been founded by Chan and Thakor (1987) and Besanko and Thakor (1987). Bester (1987) also goes against the conventional wisdom, in saying that more risky borrowers should pledge more collateral. Berger and Udell (1990) analysed the relationship between collateral and credit risk. The risks they studied included the risk to the borrower, and the bank. They found that there is a positive relationship between collateral and risk for both agents, so that contract type depends on the information and risk observed by bank.

Collateral is used to reduce the risks associated with adverse selection and moral hazard problems. Binks *et al.* (1990) indicate in their study that the availability of sufficient collateral can counteract these problems. Kon and Storey (2000) say that the prime role of collateral is to compensate for the information imperfections of the bank. However, sometimes new and good entrepreneurs are looking for finance from commercial banks to start-up or to develop their projects, but they have not enough or any collateral. Despite this, the project may have a good cash flow analysis which shows the borrowers ability to repay back the loan on time, but due to the absence or lack of collateral, which signals that the projects ability is not clear, then the bank will refuse to provide loans to this project.

### **4.3 The Rationale for a Loan Guarantee Scheme**

It is difficult for small and medium-sized enterprises especially in the developing countries to begin or to grow without access to credit, particularly from the commercial banks. The main factors that limit the access of SMEs are now considered. Castellanos (1997) illustrates three basic reasons to explain why banks may be biased against lending to small and medium-sized enterprises. Firstly, SMEs have a higher rate of failure than the large firms, so they are seen as riskier. Secondly, the administrative costs of providing loans to SMEs are high, which reduces their profitability. Moreover, SMEs are often unable or unwilling to provide any kind of documentation to banks or to provide collateral. Thirdly, “with few exceptions, financial institutions have not developed alternative techniques for lending against the prospective cash flows of SMEs. There is some evidence that banks can use the techniques of informal finance to profitably serve even the smallest borrowers.

Nonetheless the supply of loans to SMEs is not sufficient, and there are important gaps in the coverage of these borrowers” (p. 35).

Levitisky and Parasad (1989) consider similar reasons why banks are reluctant to lend to small and medium-sized enterprises. Balkenhol (1990) takes a different view. He says, “to gain better understanding of the banks reluctance to lend to small and medium-sized enterprises we need to take closer look of how bankers calculate profitability” (p. 246). He discusses four factors playing the main role in calculating profitability: the cost of resources, administrative costs, provisions against default and the lending rate. These factors are different if the bank provides a loan to a large firm since the administrative costs will be lower, and the provisions against default will also be lower, due to the higher default rate of SMEs.

Governments have tried to overcome these problems by providing credit (loan) guarantees to banks. Seibel (1995) defines a loan guarantee scheme as a complement to direct credit and as an incentive in commercial lending to enterprises without sufficient collateral or track record. So, loan guarantee schemes are a substitute for collateral to overcome the lack of information, which makes financing SMEs through the commercial banks so difficult. Vogel and Adams (1997) argue that “collateral is seen as a substitute for informational imperfections” (p. 22). Also Seibel (1995) argues, “Credit guarantee may either be a substitute for collateral, or in some cases a security of last resort, in addition to collateral” (p. 172). See also Kanbur *et al* (1994) on this. It is because SMEs suffer from the lack of collateral, and due to the risk of financing small and medium-sized enterprises, so that it leads to a search for alternatives to protect the lender’s rights.

The objectives, the costs and benefits and the important issue of the additionality of the loan guarantee scheme are now considered. Despite the lack of information and studies in this area (see Vogel and Adams, 1997).

#### ***4.3.1 Objectives of a Loan Guarantee Scheme***

Loan Guarantee Schemes (LGS) are set up to improve the corporate relationship between banks and the small and medium-sized enterprises, and to help the SMEs to receive the funding that they need. Riding (1997) reports that the main objective of a loan guarantee scheme is to assist small firms and not to subsidise risky firms. While KPMG (1999) argue

that “the primary objective of all loan guarantee programmes is to redress a perceived flaw in the credit market. The desired outcome is to facilitate access to debt capital for firms” (p. 3). Levitsky and Parasad (1989) consider the following objectives of a loan guarantee scheme. Firstly, the main purpose of the scheme is to cover some portion of losses incurred when borrowers default on loans. This will encourage the financial institutions, especially the commercial banks, to lend to small and medium-sized enterprises. Secondly, a LGS provides guarantees against loans and promotes investment in fixed assets or working capital. Thirdly, the risk of loss is shared in specific proportion between the lender and scheme provider. Fourthly, the financial institutions and commercial banks seek to protect their rights by demanding securities or collateral, but the LGS reduces these requirements, making lending to SMEs much easier.

These are general objectives for loan guarantee schemes, but each specific loan guarantee scheme may have its own objectives. For example, in the United Kingdom, when considering the reasons for establishing the Small Firm Loan Guarantee Scheme (SFLGS), Harrison and Mason (1986), Storey (1994), Cowling (1995), Cowling and Clay (1995) and Cowling (1998) all make reference to the recommendations of the Wilson Committee of 1979. Cowling and Clay (1995) state that the main objectives are: “Firstly, to facilitate an increase in the numbers of both business start-ups and expansions. Secondly, to encourage banks to shift away from asset-based lending towards a more involved customer-client relationship based on mutually beneficial information exchanges. Finally, a key policy goal was to generate jobs in a cost-effective manner. This was seen to be particularly important given that some 50% of employment in the UK is in small firms” (p. 142).

#### ***4.3.2 Costs and Benefits of Loan Guarantees***

The costs and benefits of a loan guarantee scheme are considered by Vogel and Adams (1997) and Camion and Cardone (1999). The cost of a loan guarantee scheme depends on three things. First, the cost of setting-up a new organization, including costs such as offices, equipment, employee salaries, and benefits and advertising the programme. The second is the cost of funding the subsidies; most of loans guarantee schemes involve hefty subsidies to sustain their operations. These subsidies may come through grants or concessionary-priced funds to establish the initial guarantee fund or to later replenish it. Finally, the lenders usually incur additional transaction costs to participate in the scheme,

such as having to prepare special reports on the portions of their loan portfolios covered by the loan guarantees. They also incur additional transaction costs when they make claims on defaulted loans covered by the scheme. In some cases the guaranteeing agency may unilaterally decide not to honour its guarantee unless the lender has pursued all legal remedies against the defaulting borrower.

The benefit that the loan guarantee schemes offers is increased economic activity. The purpose of a loan guarantee scheme is to encourage lenders to change their policies and provide more loans to SMEs, thus causing 'additional' lending and activity. Vogel and Adams (1997) argue that this 'additionality' might be expressed "either in the terms of number of clients, number of loans, or volume of funds lent for targeted purposes" (p. 26). They report that the 'additionality' is poorly measured since attributing it to a loan guarantee scheme is difficult, due to counterfactual and substitution problems.

#### ***4.3.3 Additionality***

Loan guarantee schemes aim mainly to encourage the commercial banks to provide loans to small and medium-sized enterprises. The success of these schemes, therefore, hinges on the extent to which guarantees cause additional lending to targeted groups, or more lending than would have occurred in the absence of the scheme. So, the extent of 'additionality' is thus extremely important in judging the effectiveness of the loan guarantee scheme subsidies. Roheds (1984) defines the 'additionality' as follows "It is used to convey a measure of something worthwhile happening which would not otherwise take place-caused, in this case, by the provision of a government guarantee. By providing that guarantee to a bank the government enables that bank to provide incremental lending to potentially viable businesses for which there would otherwise have been no way of providing the necessary finance" (p.1).

The simple example that used by Vogel and Adams (1997), may clarify the notion of additionality. Assume the purpose of a loan guarantee scheme is to stimulate lending to small and medium-sized enterprises. Further, assume that before the availability of the guarantee, lender X was making loans to ten SMEs for a total £1,000. If, after participating in the loan guarantee scheme, lender X lent to twenty SMEs for a total of £2,000, one could conclude that the loan guarantee scheme was associated with additionality in both number of loans and

value of loans made to the target group. Additionality might likewise occur when another lender Y, who initially made no loans to SMEs, later lent a total of £1,000 to ten SMEs under a loan guarantee scheme.

In different evaluations of loan guarantee schemes two types of additionality are found. The first type is ‘finance additionality’. This is whether the finance provided to the firm by the bank, and guaranteed under the scheme, would have been available from other commercial sources, or from the same sources in the absence of the loan guarantee scheme. Such finance, which would not be available through other sources, is defined as ‘additional finance’ (KPMG, 1999). It has two components:

- Full finance additionality: when a firm would not have been able to obtain any finance through alternative sources; and
- Partial finance additionality: when firm would have been able to obtain some of the finance provided borrowed other sources, but not the full amount borrowed through the LGS.

The second type of additionality is ‘economic additionality’. This is defined by NERA (1990) “the economic activities that generates by the scheme, which would not otherwise have taken place” (p, 60). Economic additionality depends on finance additionality, first of all, and depends on the characteristics of the business to which the loans were made. Always the economic additionality result appears in the level of employment, turnover and value added.

One way to assess the finance additionality of a guarantee is to pose the following questions to the recipients of the guaranteed loans. Does the LGS represent a source of finance, which would not otherwise have been available to the firm or which would have been available only at a later date? Would the finance have been available but only on different terms? Have existing sources of finance been displaced by the LGS? The next step is to assess what would actually have been raised in the absence of the scheme. To measure the finance additionality (ADD) at the level of the firm, NERA (1990) define it in the following way:

$$ADD = \{(A + C - B) \div A\} \times 100$$

where: *A*: Amount of loan guaranteed by LGS.  
*B*: Alternative finance, which would have been raised in the absence of guarantee.  
*C*: Other non-LGS finance raised of the same time as the LGS loan.

Suppose it is found that LGS finance additionality is 80 percent additional at the level of the firm, then does this imply that the finance additionality at the level of the small firms sector or at the whole economy is 80 percent too? NERA (1990) discuss this point as follows; “assessing the impact of the LGS requires assumptions about both the supply of and demand for funds overall and their interaction. Let us assume that the volume of funds advanced by the banking system is limited only by lack of viable projects (where viable projects in banking terms exclude those projects which are sound but which lack the necessary security). In these circumstances lending under the LGS which is additional at the level of the firm will also be additional at the level of the small firms sector and economy, since it will be not have displaced other lending. If, however, bank lending was subject to some form of lending ceiling, then the allocation of funds to LGS projects might simply displace other forms of lending. Under these circumstances LGS lending which is additional at the level of the firm would not be additional at the economy level” (p. 46).

Economic additionality depends in the first instance on finance additionality. So, if there is no finance additionality, there is no economic additionality, at the level of the firm that assimilates in the firm’s turnover, profitability, value added and employment. Regarding the assessment of economic additionality at the level of the firm, NERA (1990) focused attention on LGS-induced changes in value added, turnover and employment, and they found, typically, that if there is some LGS finance additionality, then there will be also some additional turnover and employment at the level of the firm.

With reference to economic additionality at the level of the small firm sector and the economy, it was found that the level of economic additionality at the level of the firm is greater than on the level of the sector and economy as whole. This is due to the increase in turnover, value-added and the fact that, employment in the LGS supported firm may be at the expense of other firms elsewhere in the economy. Generally, additionality at the small firms’ sector level reflects the extent to which the LGS supported firms are in competition with other small firms. Additionality at the level of the economy as a whole will be higher the more the activity of the firm is judged to lead to increased net exports or to improve the

supply side performance of the economy through innovation or enhancement of labor supply. The absence of such effects does not, of course, imply that wider economic additionality is zero. Displacement presumably occurs because the LGS supported firm is able to offer a cheaper or better service or product to some purchasers (NERA, 1990, p. 47).

Measurement of additionality and attributing it to a loan guarantee scheme is difficult, because of counterfactual and substitution problems. The term counterfactual refers to what the lender would have done in the absence of loan guarantee scheme. It is impossible to know with certainty what might have occurred, but Vogel and Adams outline two subjective ways to deal with this issue. The first is to ask lenders, *ex ante*, what they would likely do regarding targeted lending with and without a loan guarantee. The other alternative is to ask the same question of participating lenders *ex post*. Both alternatives are vulnerable to the Hawthorne effect: lenders' responses may be influenced by what they think the interviewer wants to hear. Regarding the substitution problem, Vogel and Adams (1997) differentiate between two types of substitution. The first occurs within the lending institution. It is defined by Vogel and Adams as follows "a loan guarantee scheme may, for example, cause a bank to transfer part or all of the qualifying portion of its existing loan portfolio to the guarantee programs and then expand its lending in no targeted area" (p. 27). The second type of substitution that occurs is among lenders: interlender substitution. In conclusion, Vogel and Adams (1997) argues that "the problems of substitution and the counterfactual could lead casual observers to conclude that a credit guarantee programme had a major impact on lender behavior when, in fact, the guarantee caused much less additionality in lending for targeted purposes" (p. 27). And they were unable -according to their opinion- to find any evaluation of loan guarantee scheme that correctly documents additionality.

#### **4.4 Empirical Evidence on Loan Guarantee Scheme**

Since there is very little, if any, evidence on loan guarantee schemes in developing countries, then the discussion focuses on the experienced of developed countries. This section will discuss the empirical evidence on loan guarantee schemes. This includes an outline studies examining these schemes from different aspects and from different countries.

#### ***4.4.1 Loan Guarantee Schemes in Developed Countries***

Before going on to consider the evaluation of loan guarantee schemes, it should be clear that the structure and operation of these guarantees, such as design of the scheme, risk sharing, guarantee fees, handling of claims and financing, are different from one country to another. These differences partly depend on the circumstances that the scheme was established for. As Riding (1997) argues, the objective of loan guarantee schemes is much the same everywhere; it is to facilitate the provision of capital to small viable firms. However, the schemes may differ in their design.

Table 4.1 illustrates the main features of the loan guarantee schemes in some developed countries (UK, France, Germany, USA and Canada). The table also shows that all of these schemes are aimed to encourage the commercial banks and financial institutions to provide loans to small and medium-sized enterprises, so they are consistent in their objective. But, the schemes are different in practical sides such as the guaranteed amount that is between 70 – 85 percent in the UK scheme, while it's between 50 – 65 percent in the France scheme and its 80 percent in the Germany scheme. And they are different, for example, in the cost of the loan length of loan (for more details see Table 4.1). The asymmetries of the loan guarantee schemes practice is also in the developing countries as shown in Table 4.2. This table explains the main features of the guarantee schemes in four developing countries (India, Philippines, Ghana and Haiti) to show how these schemes are different in their design, but almost they are consistent in their source of fund, which depend in the government mainly (for more details see Table 4.2).

This section will discuss the English and American experience of loan guarantee schemes. This is due to their long experience and well developed schemes in this field. There are several evaluations completed for these two schemes, which is different from the case for developing countries, as these suffer from the lack of evaluation studies. Vogel and Adams (1997) say, “Unfortunately, we were unable to find any evaluation of loan guarantee programs in low-income countries” (p. 26). Camion and Cardone (1999) argue that there is no comprehensive evaluation of loan guarantee as far as they know anywhere. Cressy (2000) reported that despite the “widespread use [of guarantees], only a few attempts have been made to evaluate the contribution of these schemes, especially in Europe. However, a number

of studies from the UK indicate that the loan guarantee schemes are of limited usefulness and the achievements of their stated objectives are generally questionable” (p. 251).

### The UK Experience

In the United Kingdom, the Department of Trade and Industry (DTI) introduced the Small Firms Loan Guarantee Scheme (SFLGS) in 1981. The scheme was established to bridge the gap in the market for small firm access to finance, and provides guarantee to encourage the commercial banks and financial institutions to provide loans to the SMEs. This is where the firms are unable to raise conventional finance for viable projects, due to the lack of collateral or insufficient track record.

The establishment of a loan guarantee scheme followed the recommendations of the Wilson Committee (1979). The Committee found that the obtaining finance remained a problem for both the small and medium-sized enterprises, even they need these funds for start-up and for the expansion of their business. The Committee recommended the introduction of some form of government-based guarantee scheme. The justification, given in Cowling (1995) and (1998), was as follows. The first was because there were reasons to believe that competition between the banks in this area was insufficiently effective to ensure that viable small businesses always had the necessary access to sufficient funds on reasonable terms. The second was because that the public return from the activities of small firms was greater than the private benefit, due to their importance to job creation. It follows that some public subsidy was justified.

Under the loan guarantee scheme the government guaranteed a high proportion of a loan obtained by an SME from a participating bank (see Table 4.1). In return, the small firm had to pay an interest rate to the government additional to the bank’s own ‘base-plus’ small firm rate (Cowling and Clay, 1995).

### *The Objective*

The objective of the Small Firms Loan Guarantee Scheme (SFLGS) arises from the importance of the small business in areas such as employment and income in the UK. Another reason is the banks bias against lending to small firms, particularly when they don’t have enough collateral or insufficient track records. In 1988, the National Audit Office

identified three objectives for the small firms' loan guarantee scheme in the United Kingdom as follows. Firstly, to facilitate an increase in the number of both business start-ups and expansions by bridging the 'equity' gap between the banks and firms. Secondly, to encourage banks to change their lending process. Finally, the scheme was introduced to provide a cost-effective job/wealth generation package (Cowling and Clay, 1995). Also, see Cowling (1995) and (1998) for more details. Levitsky and Prasad (1989) state that "one of the objectives of the UK scheme, and an objective not found in other countries, was to end the usual requirement of personal guarantees from small businesses seeking bank finance" (p. 36).

### *The Operation*

A small firm that failed to obtain a conventional loan, either due to a lack of collateral or insufficient track record, or both, may be able to obtain finance under the Small Firms Loan Guarantee Scheme. It enables high-street banks and other financial bodies to lend between £5,000 and £250,000 to new and existing businesses. The procedures of the SFLGS can be summarised as follows: when the lender receives a borrower's application for a loan, and it is found to be unsuitable for a conventional loan due to insufficient security, the lender will apply to the Department of Trade and Industry, so as to guarantee the loan. If the value of the loan is less than £30,000 certain banks and other lenders can grant the application by themselves without first referring it to the SFLGS.

The DTI provides the lender with a guarantee for 70 or 85 percent of the total loan. In return for government backing, the borrower must pay the DTI an annual premium. In addition, Riding (1997) explains that the lender may require a pledge of real assets as security, and usually a lack of a fixed or floating charge on such assets. The security applies to the whole loan, and the borrower remains liable for the full debt. Lenders seek recovery, possibly through liquidation in the event of default (p. 661). The SFLGS loan cannot exceed 7 years.

The loan guarantees are provided to firms with less than 200 employees, in different activities covering many types of businesses. These include all manufacturing and construction firms and many services industries. Also, the finance is eligible for various purposes, such as developing a project, starting-up trading, expanding an existing business or improving efficiency. Ineligible purposes include buying a company's shares, buying-out a

member of a partnership, replacing existing loan and overdraft facilities or financing interest payment (DTI, 2000).

### *Development of SFLGS*

After the first three years working with small firms in the United Kingdom the scheme was adjusted to better meet the requirements of small firms. So from July 1984 the guarantee covered 70 percent of the loan value, instead of 80 percent during the first three years, and the premium rate, which was paid to the scheme increased to 5 percent on the outstanding balance of loans.

There have been other adjustments to the small firms loan guarantee scheme from its inception until now. These are shown in Table 4.3. In May 1986 the premium rate was decreased from 5 percent to 2.5 percent on the outstanding balance of loans. So as to encourage people to establish and expand businesses in the inner city areas, in January 1988 the scheme introduced loans up to £15,000, which could be approved by the major participating lenders without referring them to the Department. In June of the same year, the maximum guarantee was increased to 85 percent for businesses based in, or wishing to be based in the inner city task force areas. To further encourage both the banks and a small firm, in April 1989 the value of the loan under the scheme was increased from £75,000 to £100,000. One year later, in April 1990, the premium rate decreased to 2 percent, and in 1993 it was decreased again to 1 percent and decreased on the third time to be 0.5 percent for the loans under the scheme in the inner city. These were designed to encourage take-up of the scheme, which was flagging.

The 85 percent guarantee is available for loans up to £ 250,000 to established business in inner city and for 2 years or more, but for other business still as before. In 1994 the amount of loans, which did not need to be referred to the Department for a decision was increased to £ 30,000. Finally, the premium rate was decreased to 1.5 percent for loans with variable interest rates, and 0.5 percent for loans with a fixed interest rate.

### *Activities and Achievements*

The initial allocation of the scheme was £150 million; of which the government guaranteed 80 percent i.e. £120 million. As a result of its successful operation the allocation

was increased to £300 million in 1983. The scheme operates through the participating banks and other financial institutions, which numbered thirty in early 1983. These banks make a decision on the viability of projects, and final approval may then be given. Table 4.4 shows the volume of demand for the SFLGS guarantees in the first three years of its life (i.e. 1981-84). There was a strong demand during this period, but varying across regions (see Table 4.4). As at 31<sup>st</sup> March 1984, 14,286 guaranteed loans had been issued in respect of £469 million in bank lending. As shown in Table 4.4, the South East region has the greatest share of the loan guarantees, at around 38 percent, which is 5,365 guaranteed loans issued in respect of £139 million of bank lending to this region.

The distribution of loans by economic sector during the same period is shown in Table 4.5. This indicates that the manufacturing sector received the largest share, at around £6,250 million or 44 percent of total guarantees. The service sector was in the second place, with 39 percent, followed by the retail and construction sectors, at 15 and 2 percent respectively. Table 4.6 reports the activities of the small firms' loan guarantee scheme in six different phases from the initial start-up of the scheme until the year 2000. The average size of the SFLGS guaranteed loan has increased significantly in the last phase comparing to the previous two phases. This may be due to a decrease in the premium rate, which is 1.5 or 0.5, enabling the firms to implement larger projects. The average size of the loan that is guaranteed by the scheme is around £35,400.

Finally, from its inception in June 1981 until the end of March 2000, the small firms' loan guarantee scheme has guaranteed accumulative total of 71,407 thousand loans with a value over £2.5 billion. Table 4.7 illustrates their geographical distribution. It shows that London and the South East region took the largest share of total scheme activities, at around 32 percent of the total loans. Northern Ireland has the lowest share of loans, receiving only around 1 percent. KPMG (1999) report that start-up firms have around 20 percent of the total guaranteed lending during the VI phase. Newly-established firms (0-2 years of age) have 9 percent, and established firms (over 2 years) have 71 percent of the total guaranteed lending.

### *Evaluation of SFLG*

The evaluation of a loan guarantee scheme involves checking that the scheme has achieved its objectives and deciding whether it is successful or not. This can lead to

adjustments in order to improve and develop the scheme, or it may be decided that it would be better to scrap it. This section will discuss the evaluation of the small firms' loan guarantee scheme in the United Kingdom. It will discuss three reports about the SFLGS, and will then discuss the main three evaluations of the scheme.

In 1983, Rhodes reported on some early loan defaults and claims under the loan guarantee scheme. In his report, they studied the circumstances that gave rise to 48 of the first 50 claims made under the scheme. They began their study by reviewing bank files and distinguish a questionnaire to each loan default. The main conclusion of their report can be summarised by saying that the small businesses still suffered from limited understanding, and mistrust by their bankers. The level of failure rates in the early period of the scheme was one in every five loans. Regarding the effects of the scheme on the credit market, it was the first and only such source of finance, which meant that some borrowers and bankers were quick to accept it (Rhodes, 1983).

Rhodes (1984a) was hired by the government to study 150 businesses financed by the small business loan guarantee scheme. In all he visited 86 of 94 surviving businesses and 20 of the 56 failed businesses, so this study considered both surviving and failed businesses. In the case of surviving businesses, it was followed by a visit to the businesses so as to discuss his conclusions. The main objective of this study were to: derive fresh and firmer evidence from a much wider, and therefore more valid sample, in order to achieve a more 'definitive' study in respect of 'additionality', banking practice, attitudes and trends; and to suggest ways in which the scheme might be improved and developed.

The conclusions of this study were as follows. Firstly, they re-affirm the conclusions of his first report, which mentioned above. Secondly, he finds that the banks have a great deal to do in order to assist small businesses under the scheme umbrella and to give these firms more attention. Thirdly, the study explains that setting-up a business is somewhat nonconformist and small firms are not conformists generally. They need active assistance and they need discipline in their work, they need also to be assisted in understanding what help they require and what is available to these firms. Fourthly, he finds that the demand in the market for funds is unbalanced, and the supply inadequate. Finally, the survey shows that less than half of the scheme loans are truly 'additional', in the sense that the borrowers believe that they could not have raised the finance in any other way (Rhodes, 1984a).

In a separate study, Rhodes (1984b) carries out a telephone survey of borrowers financed under the small businesses loan guarantee scheme. This was based on 100 borrowers who obtained scheme loans during the first six months of 1983, and it was complementary to the previous survey for 1981 and 1982. The questionnaires were dispatched to the borrowers by the loan guarantee unit in the Department of Trade and Industry. The main finding of this study shows that around 46 percent of the total sample believe that the guaranteed loans they received was additional. And the scheme's biggest advantage from the borrowers' point of view is that personal guarantees are not required (for more details see Rhodes, 1984).

In 1990 the National Economic Research Associates (NERA) prepared an evaluation of the loan guarantee scheme. This evaluation aimed to assess the extent to which LGS generated additional finance and economic activity for the small firms using the scheme. It also examined the economic principles, which supported the loan guarantee scheme, and its possible effect on the conduct of lenders. The study consisted of a sample of 125 firms who received loans under the SFLGS mainly between August and October 1986. This sample was divided into 100 surviving firms and 25 defaulting firms. It was selected at random from 260 firms throughout the United Kingdom, which had loans under the guarantee scheme during this period. The survey approach for this study depended on separate interviews held with the proprietors of the firms and with the bank manager who advanced the LGS loan. The study also included a description of the main characteristics of the sample, compared with the underlying population in respect of the loan size, the location of the borrowers, the sector and the age of the firm.

The study concentrated on examining the effect of the loan guarantee scheme on both finance and economic addionality. The conclusions of the evaluation were as follows:

- (i) The LGS generated both additional finance and economic activity within the firms in the sample. Around 60 percent of firms could not have raised some or all of the finance they needed without the LGS. About half of finance raised (48 percent) was judged to be additional.
- (ii) To reduce the costs, it is necessary to concentrate on reducing the administrative burden on firms, and attention should also be directed at reducing defaults.

- (iii) To encourage people to use the scheme, an increase in the upper limit of the loan should be considered.

In 1992 Planning, Economic and Development Consultants (pieda) prepared an evaluation of the loan guarantee scheme. This evaluation aimed to assess the extent to which loan guarantee scheme has generated additional economic activity and the extent to which it remedies market failure. The aim of this study is almost the same as the aim of NERA (1990) aim. The study methods consisted of a sample of 188 face-to-face survey of firms receiving guaranteed loans under Phase V of the scheme, a face-to-face or postal survey with the individual bank managers approving and administering the above loans, and a postal survey of companies receiving guaranteed loans under Phase IV (see Table 4.3). The main conclusion of the study is that the scheme exerts a positive effect on the level of lending to small firms. The study also leads to the conclusion that loan guarantee scheme is contributing to the alleviation of market failure in small business finance (Pieda, 1992).

In 1999 KPMG carried out an evaluation of the small firms' loan guarantee scheme. The objectives of this evaluation were as follows: "to examine the degree to which the SFLGS has supported small firms with viable propositions in accessing finance, which under normal market criteria they would not have received. The objective of the evaluation is to test not only the validity of the rationale but also to measure the benefits that the programme has delivered, and establish whether the scheme respects value-for-money in public expenditure. The evaluation also considers whether the scheme addresses the problems of financing small firms, or if some other measures are needed" (KPMG, 1999, p. 9).

The evaluation concentrated on the guaranteed loans provided under Phase VI, which started in July 1993 until the present (see Table 4.3). This evaluation used a number of methods, which can be summarised as follows. A review of the small firm financing literature and interviews with experts in the field; econometric analysis of the SFLGS database held by the DTI and providing data on over 60,000 loans; large scale telephone surveys of 449 borrowers and 148 lenders' branches; and finally interviews with 50 borrowers, 17 lenders' SFLGS units and 15 lender's bank branches.

The conclusions of the study show that a round 70 percent by number of firms, or around 60 percent of total value of loans, were additional finance. The economic impact was

as follows: 53 percent of firms used the guarantee to help finance new product services, 64 percent to open new markets, 25 percent to develop a new process and 32 percent to introduce a sector leading-edge technology. All of the above activities indicate that firms could provide wider economic benefits. In the labour market, the impact of SFLGS is through the additional employment (created and safeguarded), which may be directly attributed to the scheme. On average, 2.4 jobs were created or safeguarded per firm in the 18 months following the loan (KPMG, 1999). The net impact of the loan guarantee scheme on employment is summarised as in Table 4.8.

KPMG (1999) summarized the main conclusions in the evaluation as follows: “The evaluation has provided evidence that the SFLGS has provided much needed financial support to a large number of small firms. The majority of this support has been found to be additional to that which would have been available from other sources, supporting the continuing rationale for the scheme. The economic benefits show that there is a strong case for SFLGS to continue to play a role, alongside other types of support, in meeting the particular need of SMEs which lack security but nevertheless have sound business propositions” (p. 145). However, as recommendations, it suggests improvements; including equalizing the guarantee level, trying to develop new lenders to operate the scheme, and developing new material to increase awareness of the SFLGS to the target group (KPMG, 1999).

### The US Experience

In the Small Business Act of July 30, 1953, Congress created the Small Business Administration (SBA), whose function was to aid, counsel, assist and protect, in so far as possible, the interests of small business concerns. The SBA also came to make direct loans and loans in partnership with banks, and to provide loan guarantees to small firms.

In 1968, section 7 (a) of the Small Business Act empowered the SBA to guarantee loans made by participating lending institutions to eligible small business. The main objective of this scheme was to help small businesses in the United States, so as to increase the financing level facing small businesses, provided by banks and financial institutions. However, this was made possible by reducing the risk of banks and financial institutions which made loans to small businesses easier (Levitsky and Prasad, 1989). Also according to

Ryan and Ludtke (1995), “The SBA programs are mainly guarantee programmes. This means that the SBA enhances loans made by financial institutions by providing a guarantee that it will repurchase a previously agreed upon percent of the unpaid principal if the borrower defaults on the loan” (p. 1).

According to the eligibility criteria a guarantee from the SBA is based on three measures: the size of the business, the nature of the business and the use of the fund. For the size of the business, the standard size is based on either the number of employees or the company’s annual revenue. If the size standard is based on revenues, the average of the previous three years is used. In general, the size standards are:

- Manufacturing – 500 or fewer employees
- Retail – less than \$5.0 million in annual sales.
- Services – less than \$ 5.0 million in annual sales.
- Wholesaling – 100 or fewer employees.
- Special trade – less than \$ 7.0 million in annual sales.
- Building contractors – less than \$ 17 million in annual sales.
- Farming – less than \$ 500,000 in annual sales.

Once the size determination is made, the lender has to check if the business is eligible for SBA funding. Ineligible businesses tend to fall within one of the following areas: Non-profit organisations, including consumer cooperatives; gambling and illegal activities; speculative businesses that include dealing in commodity futures and real estate held for investment purposes; lending or investment concerns such as life insurance companies, investment companies, banks, finance companies and other businesses whose stock in trade is money; pyramid sales plans; applicants currently incarcerated and construction of any combined residential. The final of the three criteria is the use of fund. The SBA guarantees a loan if it used for one of the following purchases: raw materials or inventory; furniture or fixtures; machinery or equipment; land for construction; building construction; leasehold improvements; real-estate property; working capital needs and refinance of certain debt.

The programme guarantees up to 90 percent of the loan amount, if the loan amount is over \$ 155,000 with terms greater than 10 years then the risk sharing will be 75 percent. But if the loan amount is over \$ 155,000 with terms less than 10 years so it will be 85 percent,

and it will be 90 percent if the loan amount is \$155,000 or less and for refinanced loans the risk sharing is 80 percent.

The SBA offers guarantee fees depending on the size of the loan; Ryan and Ludtke (1995) say that “fees generally are one-quarter of 1 percent on short-term loans (12 months or less) and 2 percent on long-term loans (more than 12 months). On loans of \$ 50,000 or less, the lender may retain one half of the guarantee fee or return it to the borrower. At the point of first disbursement of proceeds, the loan officer collects from the borrower the appropriate one-time guarantee fee of 2 percent of the amount of the guaranteed portion of the loan. The officer may not collect this guarantee fee from the borrower until the first disbursement is in the hands of the borrowers or until the disbursement has been sent to the designated recipient” (p. 42). These fees considered as the most straight forward way of protecting the SBA from the banks guaranteeing loans that would have received credit without SBA help.

Regarding the evaluation of the SBA, there are two main articles which investigated this area; Rappaport and Wyatt (1993) and Haynes (1996). Rappaport and Wyatt (1993), aimed to provide an overview of the pool assembly process and the resultant securitisation of small business administration (SBA) loans. In summary its main conclusion was that the growth in the securitisation of SBA loans since 1985 indicates that access to this market serves both investors and lenders needs. This is due to the assumption that the customer has a high-income level. They also determined three advantages for the securitisation of SBA loans. Haynes (1996) reported that his article considered the financial capital market failure created by lenders’ monopoly power in the financial capital market. The model in this study was derived to evaluate the lenders and borrowers attitudes in the financial capital market, and to compare the financial characteristics of small business borrowers with and without SBA loan guarantees. The main conclusions of this study were the “high-risk borrowers in high concentration financial markets have a higher probability of receiving a SBA loan guarantee than low-risk borrowers in low concentration financial markets. So the SBA borrowers are higher risk borrowers than non-SBA borrowers, also he said that the SBA loan guarantee does mitigate the effect of financial market failure” (p. 460)

According to the SBA evaluations, Pineda (1992) illustrate that in 1983 the US General Accounting office undertook a study to determine the effects of the SBA loan

guarantee programme on the lending practices and financial institutions, and they found that the SBA guarantee increased the banks willingness to lend to new firms and firms with a lack of collateral or insufficient track record; and the SBA scheme is satisfying a significant portion of small firms long-term capital needs. Around 42 percent of forms' loans over five years in maturity are SBA loans. A little formal evaluations of the credit guarantee programme have been done by the SBA itself.

Only one major independent study by Rhyne in 1988, evaluates the SBA as a whole. According to SBA credit guarantee Rhyne analysis showed that default affects almost 1 in 4 borrowers, almost ten times as often as comparable bank customers. The average long-run default is 23 percent. Rhyne also conducted a financial appraisal of the SBA loan programme and found that on average the estimated present value to the banks of the SBA portfolio was just below break-even level. She also found that the government subsidies to the programme amounting to 9 percent of the loan principale or 11 percent of SBA administrative expenses are included. Piedad (1992) reported that in two other studies the results showed there was significant growth performance on the firms' activities that received guaranteed loans by the SBA.

#### ***4.4.2 The Impacts of Loan Guarantee Schemes***

It is not easy to evaluate the impact of a loan guarantee scheme. As Levitsky (1999) puts it: "The evaluation of the impact of [these] programmes is difficult and costly so that most conclusions are based on fragmented and anecdotal impressions. Some evidence is conflicting. There are evaluations that say that credit has little or no impact and fails to raise people out of the poverty in which they are trapped. Others have moved in the opposite direction - namely expanding from credit into non-credit supplementary activities justifying this by claiming that credit alone was insufficient to make significant impact on the incomes of the poorer beneficiaries" (p. 90). Green (2000) also reported that, despite the wide use of loan guarantee schemes (85 countries have a loan guarantee scheme), very little attempt has been made to evaluate the contribution of these.

The importance of loan guarantee schemes was recognised in a speech by B.H. Brown, vice-president of Allied Lending Corporation. He stated that the loan guarantee scheme is an important source of long term capital for small and medium-sized enterprises,

and that these programmes reflect an excellent partnership between the public and private sectors (Riding, 1997).

However, the main effects of the loan guarantee scheme, which are related, can be summarised as follows. These schemes have been helpful in providing loans to SMEs; creating additional lending to small and medium-sized enterprises; and creating confidence in small and medium-sized borrowers with high risk. These are because lenders can be sure that a large percentage of their money will be returned if some borrowers default, and these schemes also reduce the loss rate. This is defined as total claims for default paid out as a percentage of loans guaranteed (Levitsky and Parasad, 1989). The remainder of this section will give a brief account of the main empirical studies on loan guarantee schemes.

#### The Cowling and Clay Study

Cowling and Clay (1995) note that the UK Loan Guarantee Scheme (LGS) has undergone a series of adjustments in its operation and eligibility criteria since its inception in 1981. The nature of this scheme and the changes made to it are described in section 4.4.2. The main objective of their paper is to identify the factors responsible for the changes in LGS take-up rates using time-series analysis. The model used in this study has its roots in basic utility theory, in as much as individual or groups of entrepreneurs take decisions based on a desire to maximize their utility. They assume that the entrepreneur will choose to start-up or continue in business if the utility derived from so doing exceeds the utility derived from other alternatives, which are waged employment or unemployment. The entrepreneurs are motivated by the financial returns from being in business. As such, entrepreneurs are assumed to earn a net income of  $Y$  per time period:

$$Y = \{b Q (K^*, \theta, \delta) + (1 - b) Q (K, \theta, \delta)\}$$

Where  $b = 1$  if firm/ entrepreneur is unconstrained in the capital market and  $b = 0$  if constrained. While  $K^*$  is optimal capital and  $K$  sub-optimal. Here  $Q$  is real business revenue which is positively related to  $K$ , the amount of capital invested in the business and  $\theta$ , which is the entrepreneur's ability to effectively manage the firm's resources, both financial and human capital.  $\delta$  is a demand parameter, and as such is also positively related to  $Q$ .

Estimating this relation using quarterly data over 1980s, they find that the most important factors in determining take-up rates are the scheme parameters itself. These are the premium act which is significantly deterrent on take-up rates by raising the cost of borrowing to the firm, and increase in the proportion of the loan guaranteed by the government increase the take-up rates by effectively reducing the collateral constraint on small business. The evidence suggests that the government can directly influence take-up rates through its ability to adjust these two parameters.

### The Cowling Study

Cowling (1996) presents some preliminary tests of the sensitivity of take-up rates to changes in the two main scheme parameters, namely the guaranteed percentage and the premium paid to the government. This study outlines the rationale for the UK loan guarantee scheme, and presents some general statistics relating to the nature of the loans and the borrower type. He also presents evidence on failure of LGS borrowers. The modeling procedure adopted was to specify two Error Correction Models and estimate this using two-step OLS estimation. He focuses on the determinant of the equilibrium or long-run behaviour of LGS take-up and failure. The take-up equation is as follows:

$$\ln LGS = B_0 + B_1 \ln GUAR + B_2 \ln PREM + B_3 \ln RBASE + B_4 \ln WAGE + B_5 \ln RGDP$$

where:  $LGS$  = number of entrants on the scheme;  $GUAR$  = proportion of the total loan amount guaranteed by the government to the lending bank;  $PREM$  = interest rate premium levied by the government on LGS firms on standard loans;  $RBASE$  = real interest rates deflated by real price index;  $WAGE$  = wages; and  $RGDP$  = Gross Domestic Product deflated by the real price index. The  $B_0$ ,  $B_1$ ,  $B_2$ ,  $B_3$ ,  $B_4$  and  $B_5$  are the parameters to be estimated.

The dynamic error-correction model is:

$$\Delta \ln LGS = B_0 + B_1 ECM_{t-1} + B_2 \Delta \ln PREM + B_3 \Delta \ln GUR$$

The ECM term gives the long-run relationship, while the  $\Delta$  terms estimate the short-run coefficients. The model was estimated use aggregate quarterly data from 1982 – 92, so that there are only 40 observations. He also presented equivalent models for failure rates of LGS borrowers:

$$\ln TYFR = B_0 + B_1 \ln LGS + B_2 \ln RBASE + B_3 \ln INF + B_4 \ln WAGE + B_5 \ln RGDP + B_6 \ln LOANSIZE$$

$$\Delta \ln TYFR = b_0 + b_1 ECM + b_2 \Delta \ln TYFR + b_3 \Delta \ln RGDP$$

where: *TYFR* = 2- year failure rate of LGS entrants, measured from each quarter; *INF* = retail price index; and *LOAN SIZE*: The average size of loans issued measured quarterly in £'000's.

The long-run relationships were tested using Augmented Dicky-Fuller tests to establish the order of integration. The conclusion from this was that all the variables can be considered. The main result of this study was that the take-up rates are particularly sensitive to changes in the guarantee percentage, the premium rate and to macroeconomic conditions, as measured by GDP changes. The results also suggest that failure can be significantly reduced by either reducing the guarantee or by imposing a very much higher premium. Furthermore, there is a strong and negative effect upon failure in times of macroeconomic expansion (Cowling, 1996).

### The Riding Study

Riding (1997) reports an analysis of three issues pertaining to the provision of loan guarantees to small firms, as follows: An economic theory to examine the case for loan guarantee programme; a review of the Canadian Small Business Loan Act (SBLA) and design issues using agency theory; and the experience and lessons from loan guarantee schemes in other countries.

The main point he discusses is the size of loan provided by banks in both the presence and absence of a loan guarantee. In this analysis, he adapts the approaches of de Meza and Webb (1987, 1992) and Besanko and Thakor (1987), who investigated the response of lenders to risk. His work is based on the following assumptions: A scale dimension is explicitly introduced by incorporating variables that reflect the size of loan, and fixed and variable dimensions of the lenders costs due to diligence and monitoring; a constraint that represents lenders upper limit on bad debt losses; and risk that is expressed as a probability of default, but does not differ across firms.

Riding (1997) finds, “The effect of the loan guarantee is two-fold. First, the guarantee reduces the lender’s demand for collateral, making debt more generally accessible to firms, particularly small firms that lack the resources to pledge for security. Moreover, the lender assesses a lower rate of interest, recognizing that the business owner’s return on investment is reduced by the amount of the fees. As a result, higher fees not only discourage owners from investing, they reduce the profits to the lenders, discouraging their involvement” (p. 648).

#### The Camion and Cardone Study

In their study about the valuation and cost of programmes, Camion and Cardone (1999) discuss the literature on imperfect information and the extent to which a loan guarantee can be a solution to the problem of asymmetric information. They focus on the main characteristics of loan guarantee programmes in European countries, especially in Spain. Their study assesses the effectiveness of the loan guarantee scheme in Spain, on which they argue there is no comprehensive evaluation of loan guarantee. They state three important questions that should be asked about loan guarantee schemes in assessing their effectiveness and efficiency in assisting SMEs. These questions are as follows:

- Do the programmes significantly alter the firms’ behaviour in the desired directions?
- Are the benefits of these programmes greater than their costs?
- Could the resources committed to loan guarantee schemes be used more effectively?

According to the impact of credit guarantees they find that it is unclear and there is plenty of controversy by both theorists and practitioners. Since most programmes are subsidised, it is logical to expect that a comprehensive credit guarantee programme will be affected by severe adverse selection and moral hazard problems. Many skeptics conclude that guarantees represent subsidised credit loans dressed in new clothes. The main contributions of Camion and Cardone (1999) are as follows. First, it contributes to the study of the cost-benefit side of government - sponsored loan programmes, which most of the existing literature has defined in terms of implicit subsidies rather than direct benefits. Second, it introduces a method for recognising the cost and calculating the values resulting from the

operating expenses of loan guarantees and the contribution of these for the success of the bank's loans. This methodological contribution provides opportunities for enriching the cost benefit-oriented studies on loan guarantee programmes. Finally, they suggest that other researchers should study other important parts of LGS, such as 'additionality' of the guarantees.

### The Kanbur et al. Study

Kanbur *et al.* (1994) focus on the utilisation of government-backed loan schemes for small and medium-sized enterprises in Malaysia. They argue that "the attempts to measure the effectiveness of these schemes have addressed such issues as whether or not they provide additional finance and their cost to the public purse" (p. 161). They base their study on the reports for the United Kingdom by Robson Rhodes (1984), NERA (1990) and Pineda (1992). The objectives of their study are as follows:

- (i) Provide a brief overview of the Credit Guarantee Corporation (CGC) of Malaysia.
- (ii) Identify a range of demand and supply factors affecting the utilisation of CGC's facilities.
- (iii) Develop a model by solving a reduce-form equation that indicates an equilibrium level of utilization of loan guarantees, which creates a balance between demand and supply factors.

To realize their objectives, they isolated the factors determine the demand and supply of loan guarantees. Their hypothesis is that utilisation of the CGC's scheme has been determined by a number of factors. These factors, which are given below, include both demand ( $X_1$  and  $X_2$ ) and supply ( $X_1$ ,  $X_3$ , and  $X_4$ ).

$X_1$  = cost of CGC compared to conventional bank loans.

$X_2$  = availability of conventional bank credit.

$X_3$  = default rate on CGC loans.

$X_4$  = claims paid.

Letting:  $Y_1$  = total utilisation of the CGC facilities (Demand side).

$Y_2$  = total utilisation of the CGC facilities (Supply side).

Then: 
$$Y_1 = f_1(X_1, X_2) \quad (1)$$

$$Y_2 = f_2(X_1, X_3, X_4) \quad (2)$$

This means that the reduced-form estimating equation can be written in linear form as follows:

$$Y_t = b_0 + b_1 X_{1t} + b_2 X_{2t} + b_3 X_{3t} + b_4 X_{4t} + U_t \quad (3)$$

Where  $b_0$ ,  $b_1$ ,  $b_2$ ,  $b_3$  and  $b_4$  are parameters to be estimated,  $U_t$  is the error term which satisfies the standard assumption of the linear regression model, and  $t$  is time period. The equation was estimated using data for just 10 years (1984 to 1993), but on both statistical and economic criteria the results were poor. An alternative equation using the same explanatory variables was specified in first difference form.  $Y_t$  ( $CHY_t$ ) was related to  $X_1$ , change in  $X_2$  ( $CHX_2$ ), change in  $X_3$  ( $CHX_3$ ), and  $X_4$ . Because  $X_1$  and  $X_4$  did not change during the study period. Algebraically, the linear model is expressed as follows:

$$CHY_t = a + b_1 X_1 + b_2 CHX_2 + b_3 CHX_3 + b_4 X_4 + U_t \quad (4)$$

Estimating model using ordinary least squares (OLS) with the same data gives:

$$CHY_t = 1.92 - 0.93 X_1 - 2.66 CHX_2 - 0.95 CHX_3 - 4.28 X_4 \quad (5)$$

$$(3.16) \quad (3.58) \quad (2.17) \quad (2.91) \quad (2.33)$$

$$R^2 = 0.85, D.W = 2.34, n = 10 \text{ observation, } t \text{ ratios in brackets.}$$

The paper highlights the importance of allowing the banks to earn a reasonable return on CGC loans, to encourage utilisation of the CGC's facilities. There has also a generally negative relationship between the availability of conventional bank credit and CGC loans, the latter should ideally be restricted to firms that cannot obtain private - sector funding. The importance of prompt and efficient settlement of default claims is also highlighted in the model. However, the results of the paper are tentative due to the limited available data. In the next section the loan guarantee schemes in developed countries are considered.

## **4.5 Conclusions**

In this chapter we found that the idea behind the loan guarantee schemes, is representative in asymmetric information in the credit market, which leads to credit rationing from commercial banks, because they cannot distinguish between good and bad borrowers (small and medium-sized enterprises especially). In this case banks use the rate of interest or collateral to protect their rights in case of borrowers default. But in other cases if the borrower has a good project and not enough or any collateral, then loan guarantee schemes appear to help SMEs to get the funds that they need and to help commercial banks to provide loans to these firms.

The main objectives of the loan guarantee scheme all over the world is to help the small and medium-sized firms to apply for the fund they need from financial institutions. Whilst the cost of these schemes represent in the cost of setting-up the organizations, cost of funding the subsidies and the additional transactions costs. But the benefits of the loan guarantee schemes can be found encouraging the lenders to change their policies and provide loans to the targeted groups.

Due to the lack of evaluation studies for the loan guarantee scheme over the world, we examined the UK and the USA experiences in this field to know the main effects of the loan guarantee scheme in these countries. We found that the SFLGS in UK was generated both additional finance and economic activities within the firms in the sample, the scheme has provided much needed financial support to a large number of small firms. According the SBA loan guarantee, it increased the banks willingness to lend to new firms and there was a significant growth in performance for firms receiving the guaranteed loans by SBA.

**Table 4.1: Summary of Loan Guarantee Schemes in Developed Countries (UK, USA, France, Germany and Canada)**

	UK (SFLGS)	France (SOFARIS)	Germany (Burgschaftsbanken)	USA (SBA 7(a) Loans)	Canada (SBLA Loans)
<b>Guaranteed Amount</b>	Start-ups: 70%, to loans of up to £100,000. Over 2 years trading: 85 % to loans of up to £250,000.	50% of default risk (65 % in start -up) to limit of £523,000	Usual maximum is 80%. Max loan value £528,000	Up to 80% on loans up to £ 60,000 or 75% to a max guarantee of £ 480,000 (can be reduced mid-year due to demand)	Up to 85 %, max loan value £120,000.
<b>Cost of Loan</b>	Arrangement: max 1% of loan. Premium: 1.5 % on the outstanding whole credit, or 0.5% on fixed rate loans.	Arrangement: no fee Premium: 0.6 % pa of outstanding guaranteed credit.	Arrangement: 0.75% commission on the amount guaranteed min £ 175. Premium: 0.8-1% pa of outstanding credit.	Arrangement: 2-3.875% of guaranteed amount depend on loan size. Premium: 0.5%pa of outstanding balance charged as service fee	Arrangement: 2% commission on loan amount. Premium: 1.25% of outstanding credit incorporated in interest rate.
<b>Interest rate</b>	Fixed by lender	Fixed by lender	Fixed by lender	Fixed rate: prime rate + capped margin of between 2.25 & 4.75%, depend on loan size	Must not exceed prime +3% (variable rate), residential mortgage +3% (fixed rate) Up to ten years
<b>Length of loan</b>	2 to 10 years.	2 to 15 years	15 years (23 years for building projects)	Up to 7 years for working capital. Up to 25 years for property and equipment.	Up to ten years
<b>Target of firm</b>	Small firms (< or =£ 1.5m turnover, or £ 3m for manufacturers from a range of eligible sectors.	All sectors, excluding professional services; agriculture where turnover <£523,000; teaching association	All sectors, including overseas firms wanting to locate in the new states	Open to most types of business, specific allocations for minority groups, women, economically distressed areas.	Open to most types of small business (turnover < £ 2.2m), excluding agricultural, religious, charitable firms.
<b>Other conditions</b>	-----	Start-up: equality to debt ratio >=50% (33 % where personal equity used). Working capital to budget turnover >= 15%. Companies less than 3 years old have other conditions.	-----	Size of firm limits, dependent on sector.	Not available for working capital, only 90% of project can be financed by SBLA loan.
<b>Take-up</b>	1996/97: 6,942 firm (£255.8m of loans guaranteed)	1996: 5,000 start-ups (£316m of finance guaranteed) 25,000 firms over all (£3.187m of finance guaranteed)	1996: 6,850 (£1,100 m of loans guaranteed)	1997: 45,300 (£5,750m of loans guaranteed)	1997: 30,765 (£881m of loans guaranteed)
<b>Guarantee payments (note 1)</b>	Number: Value: £52.5m	Number: not reported Value: £ 48m 1996, percent of current year loans: 1.5 % Percent of t-2: 3.2 % £ 36m (1996, all activities)	Number: 938 (1996) Value: £ 99.5 m Percent of current year loans: 9.0 %	Number: not reported Value: see funding requirement.	Number: 3,822 (1997) Value: £67m. Percent of current year loans: 7.5 %. Percent of t-2: 3.4% £42.5m (1997)
<b>Net cost of scheme</b>	£ 46m (1997/98)				
<b>Evaluation by guarantee organisation</b>	Formal, at end of phase of scheme	Evaluation carried out 3 years after changes to scheme; last one is 1996 (confidential)	No formal evaluation by federal ministry of economy.	Review for congress in progress by administrator of SBA (preliminary report published July 1997)	SBLA produces annual report enumerating loans, defaults, costs; industry Canada commissions several studies on SBLA loans for evaluation of scheme.

**Notes:** 1. due to fluctuations in take-up, where data allows, guarantee payments are also compared with value of loans from two years previously (typical peak in business default). 2. Currencies converted at annual average exchange rates for the year of the data. **Source:** KPMG,(1999), An evaluation of the small firms loan guarantee scheme, London, DTI

**Table 4.2: Summary of Loan guarantee Schemes in Developing Countries  
(India, Philippines, Ghana and Haiti)**

	<b>India</b>	<b>Philippines</b>	<b>Ghana</b>	<b>Haiti</b>
<b>Eligibility</b>	Credit for both investment and working capital (goods, services) for small industries.	SMEs in manufacturing and services sectors with assets between P 250,000 but not exceed P 2.5m for small firms. P 2.5-10 m for medium firms.	All small enterprises in different sectors and capital not exceeding cedi (¢) 100,000	SMEs, which are 51 % owned and control by Haitian citizens.
<b>Risk sharing</b>	60% of the amount in default for extended, up to Rs 0.2 m.	60% for small loans. 40% for medium loans.	66 % of the total amount up to ¢ 50,000.	75% for firms up to G500, 000. 60 % for firms from G500,000-1.25m
<b>Guarantee fees</b>	0.5% per annum on aggregate credit up to Rs 250,000. 0.75% per annum for credit above Rs 250,000 (times yearly)	2% of guaranteed percentage of the loan outstanding.	1% per annum calculated on maximum of the guaranteed.	2% per annum on the guaranteed portion of outstanding loan.
<b>Claims procedure</b>	-----	3-4 months to settle claims.	Bank submits the claim without any legal proceeding.	Within 30 days of receiving the claim.
<b>Funding of scheme</b>	The paid up capital is Rs 500m (US\$ 41.7 m)	-----	¢ 500,000 by that bank of Ghana.	Funding from the government resources, national and international agencies.

Source: Levitsky. J and Prasad. R, (1989), Credit Guarantee Scheme for Small and Medium Enterprises, World Bank, Washington.

**Table 4.3: Arrangements/ Adjustments in SFLGS**

Phase	Duration	Guarantee percent	Premium Rate	Loan up to £
I	6/81 to 5/84	80	3	75,000
II	6/84 to 12/84	70	5	75,000
III	1/85 to 3/86	70	5	75,000
IV	4/86 to 3/89	70 or 85	2.5	75,000 or 15,000
V	4/89 to 6/93	70 or 85	2.5 or 1	100,000
VI	7/93 to present	70 or 85	1.5 or 0.5	100,000 or 250,000 & 30,000

**Notes:**

1. The 85 percent guarantee in phase IV is available for loans on, or wishing to be based in inner city.
2. The value of loan up to £ 15,000 in phase IV is the loans which the participating lenders to approve loan applicants without referring to the department.
3. The 1 percent premium rate in phase V available for loans on, or wishing to be based in inner city.
4. The 0.5 percent premium rate in phase VI available for loans on, or wishing to be based in inner city, and for loans have fixed interest rate, which 1.5 percent is premium for loans have available interest rate.
5. The value of loan up to £ 30,000 in phase VI looks like £ 15,000 in phase IV, and £ 250,000 for loans to inner city.

Source: KPMG, An Evaluation of the Small Firms Loan Guarantee Scheme, London, 1999.

**Table 4.4: Guarantees Issued at 31<sup>st</sup> March 1984 by Region**

The value in million £

Area	1/7/81-31/3/82		1/4/82-31/3/83		1/4/83-31/3/84		Total	
	Number	Value	Number	Value	Number	Value	Number	Value
Scotland	211	6.0	327	9.1	438	13.7	976	28.8
Wales	185	5.6	325	9.5	162	5.3	672	20.4
North Eastern	106	3.2	269	8.6	244	6.9	619	18.7
Yorkshire & Humberside	255	8.0	451	12.4	431	12.0	1,137	32.4
East midlands	231	7.9	385	13.2	299	9.3	915	30.4
South Eastern	1,268	46.1	2,245	81.6	1,852	65.5	5,365	139.2
South West	306	10.5	589	18.4	399	11.8	1,294	40.7
West Midlands	348	11.6	513	16.9	381	11.0	1,242	39.5
North West	431	14.4	887	27.0	596	17.6	1,914	59.0
Northern Ireland	10	.4	54	2.2	88	3.4	152	6.0
<b>Total</b>	<b>3,351</b>	<b>113.7</b>	<b>6,045</b>	<b>198.9</b>	<b>4,890</b>	<b>156.5</b>	<b>14,286</b>	<b>469.1</b>

Source: Industrial Development Act, Annual report, various issues, London.

**Table 4.5: Guarantees Issued at 31<sup>st</sup> March 1984 by Sector**

The value in million £

Sector	1/7/81-31/3/82		1/4/82-31/3/83		1/4/83-31/3/84		Total	
	Number	Value	Number	Value	Number	Value	Number	Value
Manufacturing	1,572	59.6	2,610	97.3	2,068	73.3	6,250	230.2
Construction	58	2.0	119	3.6	126	4.2	303	9.8
Retail	471	12.2	647	23.9	716	17.8	2,134	53.9
Other Services	1,250	39.9	2,369	74.1	1,980	61.2	5,599	175.2
<b>Total</b>	<b>3,351</b>	<b>113.7</b>	<b>6,045</b>	<b>198.9</b>	<b>4,890</b>	<b>156.5</b>	<b>14,286</b>	<b>469.1</b>

Source: Industrial Development Act, Annual report, various issues, London

**Table 4.6: Guarantees Issues during the 6 phases of Arrangements in SFLGS**

Phase	No. of Loans	Value of loans (million pounds)	Average size of loans, 000 pounds
I	14,286	469.1	32.8
II	1,117	37.0	33.1
III	542	17.8	32.7
IV	4,567	150.96	33.0
V	11,866	305.88	25.8
VI	39,029	1,544.542	39.6
<b>Total</b>	<b>71,407</b>	<b>2,525.288</b>	<b>35.4</b>

Source: Industrial Development Act, Annual report, various issues, London.

Note: The Phases are shown in Table 4.3.

**Table 4.7: Guarantees issued from 1/7/81 – 31/3/2000, Geographical Distribution**

Region	Number	Value (£m)
Scotland	4,912	222,657
Wales	3,589	113,686
North East	3,093	95,990
Yorkshire & Humberside	5,430	179,201
East Midland & East	8,630	303,259
London & South East	22,696	843,753
South West	9,130	294,930
West Midlands	6,218	203,805
North West	7,054	234,292
Northern Ireland	675	33,715
<b>Total</b>	<b>71,407</b>	<b>2525,288</b>

Source: Industrial Development Act, Annual report, 1999/2000, London

**Table 4.8: SFLGS Employment Impact in 18-month following loan**

Impact Stage	Employment
Total employment in all SFLGS assisted firms	144,400
Total employment all Surviving SFLGS assisted firms (created and safeguarded)	132,300
Total employment in all surviving finance additional SFLGS firms (created and safeguarded)	39,700
Total employment in all surviving finance additional SFLGS assisted firms less allowance for national displacement	5,400 to 9,500
Net cost-per-job of all surviving finance additional SFLGS assisted firms after allowance for national displacement	£9,500 to £ 16,600

Source: KPMG, An Evaluation of the Small Firms Loan Guarantee Scheme, London, 1999.

## **CHAPTER 5**

### **THE LOAN GUARANTEE SCHEME IN JORDAN**

#### **5.1 Introduction**

We have seen in Chapter 3 that the commercial banks are extremely reluctant to provide loans to small and medium-sized enterprises, due to the high levels of uncertainty and high rates of mortality of these firms. Further, there has been an absence of public and private institutions to offer insurance against these risks, so that the financial institutions have been extremely conservative and risk averse in their lending to small and medium-sized businesses. These firms are very important to the Jordanian economy, and the establishment of the Loan Guarantee Scheme is an attempt to overcome these problems. The purpose of the scheme is to reduce the risk of lending to small and medium-sized enterprises, thereby encouraging the commercial banks to lend to these firms.

The purpose on this chapter is to examine the operation on the Loan Guarantee Scheme in Jordan. This includes both the early Loan Guarantee Scheme, which started in 1988 (and is now defunct), and the more recent Loan Guarantee Scheme that was established in 1994, and which forms the basis for study in this thesis. Both schemes sought to encourage lending to small firms. The chapter describes the establishment of these schemes, their objectives and their operation. It also describes the problems that have arisen in attempting to guarantee the risk of banks against loan defaults by firms.

#### **5.2 The Early Loan Guarantee Scheme**

Preparation for a loan guarantee scheme started in the mid 1980s. This was the Loan Guarantee for Enterprise Development Project (LGP). It was established in August 1988 through the signing of an Agreement between the Hashemite Kingdom of Jordan, acting through the Ministry of Planning, and United States of America, acting through the United States Agency for International Development (USAID). According to the Agreement, USAID would provide a grant, starting at US\$ 2.5 million and reaching a total of US\$ 10

million over a period of four years. The Industrial Development Bank (IDB), which was set up in 1965 by the government to provide finance for firms in the mining and manufacturing sector, was designated as the executing agency for the loan guarantee project (JLGC, 1994).

The goals behind the establishment of the Loan Guarantee Project, as stated in USAID (1988), were as follows. Firstly, to increase the levels of employment and income of small enterprises in Jordan. Secondly, to increase the ability of the local entrepreneurs to establish and expand enterprises. Thirdly, to improve the efficiency of enterprises. Fourthly, encourage firms to produce and sell goods and services in foreign markets, thereby earning foreign exchange to help ease foreign exchange constraints. Finally, the purpose was to increase the capacity and the confidence of commercial banks and other financial institutions to make loans to small businesses in a self-sustaining and profitable manner. This could be through intensive training for loan officers at the participating institutions, in cash-flow analysis and other small business lending techniques.

In practice, the LGP looked to develop small enterprises in general, and in particular to develop small enterprises owned by females and those operating outside the Amman Greater Municipality. This would be accomplished through several methods, including the encouragement of licensed banks to finance such projects by providing loan guarantees, and training bank loan officers in credit management and small project evaluation. While USAID initially agreed US\$ 10 million over 4 years, in 1989 this was changed to US\$ 7 million. Of this, US\$ 1.5 million was for technical assistance, training and research, and the remaining US\$ 5.5 million for loan guarantees to be managed by the Industrial Development Bank. Unfortunately, only a small percentage of the US\$ 1.5 million grant was taken up for training and research, so much of it was returned to USAID.

### ***5.2.1 The Operation of the LGP***

The Agreement between the Hashemite Kingdom of Jordan and USAID stipulated that the loans provided by the banks and guaranteed by the LGP should be used by small enterprises in the private sector. In addition, it was agreed that the amount of loan for any one firm should not more than JD 20,000 and on short-term conditions. Each bank that was interested in participating in the LGP had to sign a separate agreement concerning the way in which it operated. The terms included the guarantee ceiling, the guarantee ratio and the guarantee fees that would be charged to the bank (these concepts are considered more fully

below). The agreement required the participating banks to pay 0.5 percent as commission on any loan guarantee that was utilised as part of the ceiling, and to pay 1 percent for any unutilised loans up to the total of the ceiling. The guaranteed ratio was 75 percent of the loan value if the loan was less than JD 10,000, or if the borrower was female. In other cases the guaranteed ratio was a less generous 50 percent.

The LGP started in October 1990, and during the period up to September 1993 the number of guaranteed loans (as in Jordan Loan Guarantee Corporation files) reached 326, to a total value of around JD 3.4 million. The scheme included 10 participating banks, and the distribution of the guaranteed loans between the participating banks is shown in Table 5.1. We can see from the table that the Housing Bank (which is the most popular bank in Jordan with 110 branches) provided 36 percent of total loans that were guaranteed by the LGP. The Industrial Development Bank (IDB), that was designated as the executing agency of the LGP provided 20 percent of the total loans, and the rest were distributed between the other eight banks (see Table 5.1).

Distribution of the guaranteed loans by gender shows that 91 percent of borrowers were males and only 9 percent were females. The geographical distribution of the loans shows that the Greater Amman Municipality got 48 percent of the loans, while the rest of the country got the other 52 percent. These are despite the purpose of the LGP to concentrate on small enterprises either owned by females or operating outside of Amman. Table 5.2 shows the distribution of guaranteed loans by economic sector. It indicates that around 45 percent of the total guaranteed loans were granted to the manufacturing sector, 31 percent to the service sector, followed by 23 and 1 percent respectively to the agriculture and retail sectors. This distribution reflects the nature of the IDB, which had traditionally concentrated on providing loans to the manufacturing sector.

### ***5.2.2 Problems of the LGP***

Unfortunately, the performance of the LGP was below expectation in terms of the number and the value of guaranteed loans. Out of 1,650 loans expected under the Agreement between Jordan and USAID, only 326 loans were guaranteed by the end of the fourth year. This is only around 20 percent of the target. It was the first time that loan guarantees had been used in Jordan, and the scheme also had a number of problems and difficulties. These are given in Salah (1998) as follows:

- (i) The LGP did not reach its goals in terms of the number and value of guaranteed loans. This was related to management problems at the IDB, which did not give priority to the LGP scheme.
- (ii) The banks were not able to tap the entire guarantee ceiling that was dedicated for them, related to the weakness of the marketing strategy for the guarantees.
- (iii) The LGP lending did not fulfil the Agreement signed between Jordan and USAID. This is clear from the geographical and gender analysis for the guaranteed loans mentioned above.
- (iv) The commercial banks insisted on real-estate collateral in addition to the LGP guarantee, so that in effect there was no difference between the loans guaranteed by the LGP and other loans.
- (v) The economic conditions during the life of the LGP were poor, including the Second Gulf War and the financial crisis in Jordan in 1988/89.

### **5.3 The Loan Guarantee Scheme**

In order to eliminate the difficulties that faced the LGP and to expand the reach of the guarantees to all SMEs (instead of just small firms), the Council of Ministers of the Jordanian Government decided the following at its meeting of 14<sup>th</sup> August 1993:

- (i) To establish a public shareholding company with capital of JD 7 million to guarantee loans to small and medium-size enterprises. The share capital would be provided by the Central Bank of Jordan, the financial institutions, insurance companies, the Amman Chamber of Industry and the Amman Chamber of Commerce, as well as some other institutions.
- (ii) The contribution of JD 3 million from the Central Bank of Jordan would be paid for from a grant originally provided to the government by USAID.
- (iii) Transfer all of the LGP accounts and assets to the Central Bank of Jordan in preparation for the establishment of the new company to guarantee the loans. This would be known as the Jordan Loan Guarantee Corporation.

The main purpose of the new Loan Guarantee Scheme (LGS) was to encourage the commercial banks to provide loans to both small and medium-sized enterprises, especially

those firms suffering from a lack of collateral. The Loan Guarantee Scheme had both economic and social aims, as set out in JLGC (1994) and Salah (1998) as follows:

- (i) To encourage the entrepreneur to invest in projects with sound cash flows and economic viability.
- (ii) Increase total factor productivity, by establishing new small and medium-sized enterprises.
- (iii) Reduce imports and help the country to save its foreign reserves.
- (iv) Encourage firms to increase their production and open-up new markets.
- (v) Reduce unemployment, especially as SMEs tend to be more labour intensive.
- (vi) Encourage the commercial banks to extend loans to projects in the less developed regions of Jordan.
- (vii) Encourage the banks to extend loans to the firms that are owned or managed by females, so as to increase the female participation rate.

### 5.3.1 The JLGC

The Jordan Loan Guarantee Corporation (JLGC) was established in April 1994 to administer the new Loan Guarantee Scheme (LGS). It is a limited public shareholding company with capital of JD 7 million, increased to JD 10 million in 1995 (approximately US\$ 14 million). There are 23 founders of the JLGC, which include the Central Bank of Jordan, representing the Jordanian Government (with share of JD 4.8 million granted by USAID), three other government institutions, 15 commercial banks, two insurance companies, the Chamber of Commerce and the Jordan Mortgage Refinance Company. Table 5.3 lists all JLGC shareholders and their respective holdings as at the end of 2000.

The Jordan Loan Guarantee Corporation was the first venture of its kind in Jordan to guarantee bank loans to firms based on a cash-flow assessment rather than the traditional collateral. Since its inception, JLGC seeks to cover the risk associated with lending by the commercial banks to small and medium-sized firms in Jordan, whether these are in manufacturing, agriculture, retail, services or related to handcrafts or professional activities. The objectives of the Jordan Loan Guarantee Corporation are as follows (JLGC, 1994):

- (i) Provision of guarantees under the LGS necessary to fully or partially cover loans of different types and terms granted by banks and financial institutions

for small and medium-sized enterprises. Loans can be for the purpose of start-up, expansion and for raising the productive and marketing capacity of firms, with the aim of creating job opportunities and saving on foreign reserves.

- (ii) Provision of export credit guarantees for pre-shipment and post-shipment, and the provision of guarantees to cover the export risks of any economic sector.
- (iii) Undertaking re-guarantees (or reinsurance) to cover all or any of the risks associated with the guaranteed loans provided by the Corporation.
- (iv) Conducting economic feasibility studies and project evaluations, as well as reviews of its operations and policy amendment in the light line of issues affecting the economic developments of Jordan.
- (v) Development, and implementation of innovative and/or traditional methods of production, as well as offering training on their utilisation in all related aspects.

The most important objective of the JLGC is to overcome difficulties encountered by owners of potentially productive projects that are unable to provide adequate conventional collateral to get the required financing from commercial banks. The Corporation offers guarantees to financial institutions participating in the Loan Guarantee Scheme to encourage them to extend the required credit to projects, as long as the individual loan guaranteed by the Corporation does not exceed JD 100,000 and the number of workers in the firm does not exceed 50 employees. The aim is to encourage new projects, which will create new job opportunities, reinforce the productive base of the national economy, and provide potential for earning and saving on foreign currency.

### ***5.3.2 The Amman Agreement***

The procedure by which the Loan Guarantee Scheme (LGS) operates was set out in the Amman Agreement, which was signed between the JLGC and the participating banks. This Agreement sets out the duties of the parties (ie. the JLGC and banks), as well as determining the guarantee fees, the guarantee ceilings and the procedure for handling claims under the guarantee scheme. This section describes each of these features of the Amman Agreement, as follows (JLGC, 1994).

JLGC Duties: The main duties of the JLGC are to determine a specific ceiling for each bank in respect of the loans that are covered by the guarantee scheme. The ceiling includes the total guaranteed amount of loans granted to SMEs by the commercial banks. In respect of loan defaults the JLGC must pay the amount of the guarantee to the bank within a maximum of three months from the date that a bank requests payment. The JLGC must ensure that the banks provide the necessary documents to the JLGC and that the remedial procedures are in line with what is stated in the Agreement. The JLGC must also offer the necessary training free-of-charge for the credit officers involved in the scheme and working in the commercial banks.

Duties of the Banks: The main duties of the banks are as follows:

- (i) Receive loan applications, evaluate them and adhere to the generally-accepted banking rules when advancing loans. This includes those set out in the Amman Agreement. It is necessary for the banks to take into consideration the reputation and character of the borrower, and any other factors that may affect decision making with regard to approving the credit.
- (ii) The banks must offer help to prospective borrowers through evaluating their projects, and help prepare the necessary data for their applications, such as projections of project cash flows.
- (iii) Take all necessary measures that guarantee loan repayment, such as life insurance on the borrower or insurance on the project, except if the two parties agree on alternative arrangements.
- (iv) Gather information from the JLGC on the borrower before moving ahead with the implementation procedures, by filling-out an inquiry application form (Form 101, see Appendix 5.1).
- (v) Provide the JLGC with notification of the approval of a loan through filling-out a summary of the loan granted by the bank notification of approval form (Form 102, see Appendix 5.2). This gives a summary of the loan offered by the bank, and has to be completed within seven days from the date the bank approves the loan.
- (vi) Maintain a separate file for each borrower, and undertake follow-up procedures, whether office or field-related, through site visits to firms to ascertain that the funds have been used for the purpose for which they were advanced.

- (vii) Provision of periodic quarterly reports on the guaranteed loans (Form 103, see Appendix 5.3), giving all quarterly lending activities by the bank. In addition, a monthly report must be lodged (Form 104, see Appendix 5.4), which sets out all due instalments that are unpaid.
- (viii) The bank is committed to provide any other reports that are requested by the JLGC on the loans covered by the scheme. It also needs to choose qualified employees, who are responsible for the management of the guaranteed loans.

The Guarantee Fees: The Amman Agreement determines that each commercial bank shall pay to the JLGC an annual fee of 1.5 percent of total guarantee ceiling allocated to that bank. Each bank must settle the guarantee fee payment quarterly. If the bank fails to make payment covering the guarantee fees for a period of one month from their due date, the Corporation shall have the right to suspend the validity of the agreement for a period of two months. If the commercial banks do not pay the fees, the JLGC has the right to cancel the agreement with the bank. When the bank wishes to conclude a new guarantee agreement with the JLGC, or if it wants to reactivate the previous agreement that has been cancelled, it must repay the guarantee fees due thereon. In addition, it must pay a penalty equal to 1 percent of the total due fees, plus interest. The rate of interest is determined in accordance with the prevailing interest rate on credit facilities.

The Guarantee Ceiling: According to the Amman Agreement, the JLGC has the right to cancel the unutilised portion of the guarantee ceiling at any time without giving the reasons for such cancellation. In this case the utilised portion of the ceiling shall remain covered by the terms of the Amman Agreement. Also, the bank has the right to request the reduction of the ceiling which it has been allocated. Any amendment is enforced as at the beginning of the next calendar quarter. The bank can also increase the ceiling of the guarantees at any time through consultation between the two parties, and such an increase shall be enforced directly. The JLGC shall have the right to refrain from guaranteeing any new loans should the economic or financial situation of the JLGC require such a measure.

Claims under the Guarantee and Collection: The Agreement designates that any loan is considered 'non-performing' or 'a default' if the borrower fails to pay the full due amount of a loan instalment for a period of 180 consecutive days. In such an event, a claim may be submitted by the bank to the JLGC, with accompanying documents. These include

photocopies of the loan contract between the bank and the borrower, and all statements and documents that reflect the efforts exerted for the collection of the defaulted loan instalment. Forms must also be completed (Forms 105 and 105/A, see Appendix 5.5 and 5.6). On satisfactory completion of these, the JLGC reimburses the bank for the guaranteed amount, which the bank then credits to a separate account “Security against credit facilities”. This amount cannot be used to offset any portion of the corresponding non-performing loans, except after exhaustion of all collection efforts. At the same time, banks must undertake all legal and judicial measures. After a non-performing period of one year, the JLGC has the right severally or jointly with the bank to carry out the necessary measures to collect the non-performing debts. In this case, the bank shall deliver all subsequent documents relating to the said debts to the JLGC.

*Other Matters:* The Amman Agreement includes some general issues, such as the JLGC’s right to evaluate and follow-up on the loans provided by the bank and make necessary recommendations and remarks in that regard. The JLGC also has the right to reject any potential guarantee in the line with its policy, and it has the right to request additional information or documents about the borrower from the commercial bank.

### ***5.3.3 The Operation of the JLGC***

The purpose of this section is to explain how the LGS operates in practice. The standards which the commercial banks should apply are set out in Amman Agreement, and from time to time we refer to these. The Agreement determines the standards and measures necessary to organise the lending and guarantee operation. These standards are definitional and quite technical in nature, but they can be considered as follows:

*Qualifying Borrower:* Any natural or corporate individual operating in Jordan and in private enterprise.

*Qualifying Loans for Guarantee:* The Loan Guarantee Scheme will guarantee the risk of loans advanced to small and medium-sized firms in manufacturing, agriculture, services and retail, including professional activities such as doctors, lawyers, engineers and consultants. The number of employees must not exceed 50, and the maximum limit for the loan granted by banks is JD 100,000.

*Non-Qualifying Loans:* Loans granted to importers, profit-sharing trade operations or consumer purchase and sale transactions (known as Murabaha). Guarantees also do

not cover loans granted to existing credit portfolios of the financial institutions or for the renewal or extension. The JLGC does not cover loans whose terms are not in conformity with the generally accepted rules for lending.

*Guarantee Ratio:* The scheme guarantees the risks of loans in accordance with the following coverage ratios:

- 75 percent of the outstanding balance of the loan plus the accrued interest that up to a maximum amount of JD 40,000.
- 50 percent of the outstanding balance of the loan plus the accrued interest for loans in the range JD 40,000 to JD 100,000.

*Financial Analysis:* The bank must conduct a financial analysis, including the project cash flow and must keep this in the borrower's file. This file, as far as possible, should include the budget and the profit and loss statement for the applicant. The bank must also analyse these statements with the aim of exploring the sources for loan repayment. In 1997, a Counselling Services Unit was set up as a part of JLGC to help small and medium-sized firms define project feasibility and cash-flow adequacy. The work of the Unit has resulted in enhanced co-operation with the banks.

*Loan Term, Usage, Method of Repayment, Interest Rate and Rescheduling:* Loans may be of a short or medium term, provided the repayment period of the loan does not exceed six years, inclusive of a maximum grace period of one year. The grace period (ie. the period in which no repayment is necessary) is determined in accordance with the following: if the term of the loan is one year or less the grace period is three months; if the term of the loan is one to three years the grace period is six months; and if the term of the loan exceeds three years the grace period is one year. The loan can be used for financing start-up projects, working capital or for the purchase of fixed assets. Overdrafts are not considered suitable for guarantee. Guaranteed loans must be repaid by monthly or quarterly instalments that may be determined in accordance with the cash flow analysis and future projections. The interest rate is equal the rate set by the commercial banks. The banks are prohibited from collecting loan interest upfront. For rescheduling, a bank must obtain the approval of the JLGC prior to the rescheduling and/or extending the maturity date of any guaranteed loan.

*Claims Due for Repayment and Repayment Procedures:* The outstanding balance of the loan shall be considered as due for repayment under the guarantee terms after a lapse of 180 days from the date of the last instalment that the borrower has paid. Steps to be

implemented for the collection and repayment of the due and unpaid amounts of any loan include the following: visits paid to the work site of the borrower; study of his financial position; production of evidence of measures required for the collection of funds have already been taken (whether through sending of letters of claims and notices to guarantors); and any other legal steps that may be necessitated by common judgement to collect the due and unpaid loans. The documents that are to be submitted with any claim, as mentioned in the previous section.

#### **5.4 Incentives to Participate in the LGS Agreement**

The reluctance of the commercial banks to provide loans to small and medium-sized enterprises was the main reason for the establishing of the Loan Guarantee Scheme in Jordan. Hence, the Jordan Loan Guarantee Corporation and Central Bank of Jordan have to give some incentives to the commercial banks to encourage them to provide more loans to small and medium-sized firms. This is in addition to the guarantee itself, for which the banks must pay a fee. The incentives provided by the JLGC and the Central Bank of Jordan can be considered here in tern. Those provided by the JLGC are as follows:

- (i) Provision of liquidity to banks. In case of loan default the Corporation settles the guarantee amount within three months of the claim. This enables banks to reinvest these amounts in their credit activities.
- (ii) Encourage the banks to move away from the overdraft loans in their credit practice, which is a move consistent with the direction of monetary policy.
- (iii) Induce banks to adopt new credit programmes that were not previously used, such as housing loans and loans for taxi cars, which are covered by the Corporation's guarantees.
- (iv) Motivate banks to provide medium-term loans where the Corporation guarantees loans for six years, including a one-year grace period.
- (v) Provision of necessary training to the banks' credit officers on procedures and the management of loan.
- (vi) Expansion of the client base with whom the commercial banks conventionally deal, and in particular small and medium-sized enterprises who do not have adequate collateral.

The Central Bank of Jordan (CBJ) is the representative of the Jordanian Government on the JLGC. It also gives some incentives to the commercial banks, so as to encourage these banks to extend more credit to SMEs. These incentives are as follows (JLGC, 1997):

- Since November 1995, the commercial banks do not have to place reserves at the Central Bank in relation to expected defaults.
- Since December 1996, the commercial banks are able to reduce their reserves held at the Central Bank in relation to the guaranteed loans, which also improves their liquidity.

Such measures encourage banks to expand credit to SMEs and seek guarantees from the JLGC. In fact, these steps have led to an expansion of the scheme activities and to a widening of its client base, as well as allowing greater bank participation in the programme as the risks have lessened.

## **5.5 The Activities of the Loan Guarantee Scheme**

The primary objective of the JLGC is to encourage the commercial banks to provide loans to the small and medium-sized enterprises. Loans can be partially, or in some cases, fully guaranteed. There were 19 participating banks in the loan guarantee agreement by the end of 1999, and the total guarantee ceiling of these banks was around JD 26 million. Loan guarantees are provided directly to the banks, and are available for start-ups and other projects. The purpose of this section is to consider the operation of the scheme over the period 1994-99.

### ***5.5.1 Applications Received***

The number of applications received from the participating banks since the scheme inception on 28<sup>th</sup> August 1994 until the end of 1999 stood at 2,606, amounting JD 50 million. The guarantee amount was JD 27 million. During the period the JLGC received 41, 166, 264, 567, 731 and 837 applications for the years 1994 through to 1999 respectively. This is shown in Figure 5.1 and Table 5.4. This increase in the applications received by the scheme was a normal result of the JLGC efforts to market the LGS services, both to encourage the commercial banks to lend to SMEs and to encourage firms to apply for funds from the banks.

The applications increased sharply in each year, but in 1999 the growth rate in applications on the previous year was only 15 percent (see Figure 5.1).

Table 5.4 also shows the number of applications according to the status of the loan, over the period 1994-99. This table shows that around 86 percent of the total loan applications received are executed, to a total value of J.D. 42.5 million. Of this, the scheme guaranteed J.D. 22.5 million (see Figure 5.2). The table also shows a high ratio of loans cancelled by banks, at around 11 percent of the total applications received (ie. 283 out of 2,606). These cancellations were due to the borrowers' inability to meet the loan requirements. Only around 3 percent of applications are rejected by the LGS. The reasons for this are related to insufficient initial information, the intended use of the loans, the client's financial position, or simply because the Corporation was not convinced that the project was viable. The JLGC also rejected applications because the applicant was heavily indebted, engaged in litigation, or had defaulted in the repayment of the previous LGP scheme.

The total loan ceiling and total utilisation by the commercial banks are also shown in Table 5.4. In 1994 the total ceiling for all of the participating commercial banks was J.D 3.6 million, but only 5 percent (J.D 0.2 million) of this ceiling was utilised by the banks. This reflects the operation of the scheme for only three months in 1994. However, in 1995 the total ceiling was increased to J.D 3.9 million, but only 13 percent of the ceiling was utilised by the commercial banks. The table shows a steady increase in the total ceiling over the period 1994-99. In 1999 it was J.D 25.6 million, but by which time only one-quarter of the total ceiling was utilised by the banks participating in the scheme. This growth in the total ceiling and utilisation reflects the JLGC efforts in marketing its services to the banks (see Figure 5.3). However, what stands out is the general under-utilisation of the loan guarantees by the banks. This seems to be a serious problem with the scheme, and it is taken up further below.

### ***5.5.2 Distribution of the Guaranteed Loans***

This section considers the distribution of the guaranteed loans that were executed over the period 1994-99, according to the following characteristics: economic sector, geographical location, banks identity, status of borrower, number of employees and the purpose of the loan. In total 2,244 loans amounting to J.D 42.5 million are considered (see Table 5.4). These loans have an average value of around J.D 19,000. Further, the LGS

guaranteed J.D 22.5 million of the loans, which means that around 53 percent of the total loan value was guaranteed by the JLGC.

### Economic Sector

The distribution of guaranteed loans by sector is shown in Table 5.5 and illustrated in Figure 5.4. It shows the service sector received the lion's share of the guaranteed loans, ie. 1,503 loans or around 67 percent of total guaranteed loans. The average value of these loans was around J.D 18,700. The next greatest share is in manufacturing, which received 563 loans or around 24 percent. The average loan value in manufacturing is J.D 19,300. The retail sector had 160 loans (7 percent) the average value of which was J.D 19,600, and the agriculture sector received 45 loans (2 percent), with an average value of J.D 20,800.

The distribution of guaranteed loans by economic sector according to year is also shown in Table 5.5. It shows an important switch occurring over time, away from manufacturing and towards services (see Figure 5.4 also). In 1994 the LGS guaranteed only 28 loans, but the majority of these (57 percent) were in manufacturing. In the next year the share of this sector was 53 percent, but in 1996 it had only 34 percent, and by 1999 its share was only 12 percent (see Table 5.5). The large share of the manufacturing sector in the LGS activities early on reflects the history of the loan guarantees in Jordan. The Loan Guarantee Project that was managed by the IDB led firms to believe that the LGS was aimed at the manufacturing sector. Firms began to recognise that this was not the case, but the switch to the service sector also arose because of the difficulties of entry into the manufacturing sector. It also reflected the greater opportunities for service activities after the Peace Treaty between Jordan and Israel in 1994. At this time, entrepreneurs expected to find new markets in the Palestinian areas for manufacturing, but their hopes proved false.

The service sector share in the total loans increased yearly (see Table 5.5). In 1994 its share was only 29 percent of the total loans, but in 1995 it increased sharply to 40 percent and the average value increased as well from J.D 15,000 to J.D 17,000. By 1999 the service sector share had around 81 percent of the total loans provided by the banks and guaranteed by LGS. The average value of a loan was around J.D 19,000 (see Table 5.5). This shows that the scheme is now predominantly aimed at the service sector. Generally, this distribution of the guaranteed loans by economic sector reflects the nature of the Jordanian economy, which

is a service economy. Also, service activities are much easier to enter through relatively small-scale start-up projects.

The loans granted to the agriculture sector are also shown in Table 5.5. In 1994 and 1995 this sector share was 14 and 7 percent respectively. After this time, it was no more than 5 percent of the total loans guaranteed, and in 1999 it was only 1 percent. The average value of a loan to agriculture is between J.D 15,500 and J.D 24,300, so that these loans are much larger. The low proportion granted to the agriculture sector reflects the lack of cultivatable land, which is only 7.8 percent of the total land area. This has been compounded by a lack of rainfall in the last decade, and by the reluctance of entrepreneurs to invest in this sector. Finally, the retail sector started to take up guaranteed loans from 1996. Its share since then has been in the range 6 – 11 percent. The average value of the loan was similar to the manufacturing and service sectors.

#### Geographical Location

As in all developing countries, most of the economic activities are centralised in the capital and one or two main cities. Table 5.6 shows the geographical distribution of the loans between the twelve governorates of Jordan. These are loans provided to SMEs, guaranteed by the LGS and granted over the period 1994-99. In this table it can be seen that more than half (58 percent) the loans were to firms located in Amman (1,302 loans out of 2,244 loans). The total value of these loans is around J.D 26 million, and the average value is around J.D 20,000. The other 42 percent of the loans are located in the other eleven governorates (see Figure 5.5). Most of these loans are to firms located in Irbid (16 percent of total number of loans), Aqaba (7 percent), Zarqa (6 percent), and Balqa (4 percent). The other 9 percent of loans went to the other seven governorates (Figure 5.5). This distribution of loans is compatible with the population distribution and density (see Chapter 2), and with the distribution of SMEs between governorates (see Chapter 3). Table 5.6 also shows the average loan value in each governorate. It was J.D 20,000 in Amman, but the highest average was around J.D 27,700 in Karak and the lowest was J.D 7,900 in Tafelah.

#### The Banks

The distribution of the guaranteed loans by the participating commercial banks is shown in Table 5.7. Again, this covers the period 1994-99. It shows that 20 banks

participated in the LGS (but only 19 banks after 1998 due to the bankruptcy of the Amman Bank). The Housing Bank for Trade and Finance granted 510 loans, which is 22 percent of total loans by number and 19 percent by value. The total value of the loans granted by the Housing Bank was around J.D 8.2 million, which means that the average value of the guaranteed loan provided by this bank was J.D 16,000. The Cairo Amman Bank and Industrial Development Bank each provided around 11 percent of the loans (see Table 5.7).

Table 5.7 shows that more than half (58 percent) of the total value of guaranteed loans were granted by five banks only. These banks perhaps represent the most popular banks in Jordan. (ie. they have 235 branches out of 547 total bank branches spread in Jordan). Also, this table shows that three foreign banks (A. N. Z Grindlays, Citibank and HSBC) have the lowest participation rates with the LGS; they granted only 0.5 percent of the total value of loans guaranteed by the scheme over the period 1994-99.

Table 5.8 shows that the total value of the credit facilities extended by the commercial banks in Jordan in each year over the period 1994-99. It also shows the total value of the guaranteed loans extended to SMEs by the JLGC. The guaranteed loans consisted of only 0.02 percent of the total credit facilities extended by the banks in 1994. It increased to reach 0.3 percent by 1999, so that overall the total guaranteed loans during the period 1994-99 is around 0.18 percent of the total credit facilities provided by the commercial banks. This is consistent with the SFLGS in UK, where lending under the scheme represented only a small percentage of overall bank lending (KPMG, 1999). Over its life, the SFLGS has fluctuated between 0.5 percent and 1.5 percent of total bank lending.

#### Status of Borrower

During the period 1994-99, a total of 1,609 guaranteed loans or 72 percent were granted to male borrowers, while females received 196 loans or around 9 percent of the total guaranteed loans. Despite the similar number of males and females in total population, this situation reflects the oriental characteristics and conservative nature of Jordanian society. It means that males have the main role in life and they are more prevalent than females in economic activities. Legal entities (Companies with three or more partners) received 342 loans, constituting around 15 percent of the total loans and individuals received 97 loans or 4 percent of the total guaranteed loans (see Table 5.9 and Figure 5.6).

### Number of Employees

The total number of employees in the firms that received guaranteed loans during the period 1994-99 is around 10,176. This means that the average number of employees for each loan is 5 workers (there are 2,244). The distribution of the total employees between economic sectors is shown in Table 5.10. The manufacturing sector employs 5,898 workers, which is around 58 percent of the total employees in firms receiving guaranteed loans. The average number of workers in each manufacturing project is 11. The service sector has around 33 percent of the total employees, with the average of only 2 workers for each loan project. This low average of workers is due to the nature of the firms in this sector. Retail sector employs 5 percent of the employees, and the agriculture employs 4 percent. Table 5.11 shows the distribution of the employees in firms receiving guaranteed loans between the governorates. It can be seen that around 66 percent of the total employees are in firms working in Amman, which is because most of the economic activity is concentrated in this city. The average number of employees in the firms located in Amman is 5 employees. Irbid has 9 percent of these employees, 8 percent in Zarqa and 5 percent in each of Balqa and Aqaba. The other 7 percent of the total workers are located in the other seven governorates.

### Purpose of Loan

The Loan Guarantee Scheme (LGS) categorises the purpose of guaranteed loans into main three categories: start-up projects, working capital aims and capital purchases. Table 5.12 shows the distribution of the guarantees by the purpose of the loan over the period 1994-99. There are 1,260 loans provided start-up projects, which is around 56 percent of the total loans. Loans provided to these increased yearly until 1998, but it was decreased from 412 to 383 loans in 1999. Working capital accounts for 19 percent of guarantees and capital purchases for 25 percent.

#### ***5.5.3 Portfolio of Defaulted Loans***

By the end of 1999 there were 119 claims for non-performing or default loans that were guaranteed by the Loan Guarantee Scheme. This is only around 5 percent of the total loans guaranteed by the scheme. The Corporation compensated the banks for 78 of the loans (66 percent), of which 19 were over 1994-97, 20 in 1998 and 39 in 1999. However, it rejected the bank's claim in 16 cases, while 25 defaults are still under consideration or

rescheduling. Table 5.13 shows the total amount of compensation paid by the JLGC to cover the default loans was JD 985,347. The amount recovered from the firms is JD 281,437, to set aside this compensation. The ratio of defaulted loans guaranteed by LGS is calculated by dividing the net amount paid for the default loans, which is JD 703,910, to the guaranteed amount of the executed loans, which is JD 17,900,000. So, in 1999 the default ratio for the JLGC loans was only around 4 percent, compared to 3.2 percent in 1998. These seem to be very acceptable loan default ratio, and compare extremely well with the commercial banks.

## **5.6 Conclusions**

The initial Jordanian experience of the loan guarantees was in 1988 with the Loan Guarantee Projects. However, this failed for a number reasons. This attention that has been given to the loan guarantee scheme since late 1980s reflects the Jordanian government care and support for the small and medium-sized enterprises. The recent loan guarantee scheme started at 1994, and it is executed and managed by the private sector to overcome the problems that faced the early scheme in Jordan.

The main objectives of the loan guarantee scheme was to encourage the commercial banks to provide loans to small and medium-sized enterprises. It also aims to encourage the entrepreneur to invest in projects that depends on cash flow analysis and has economic feasibility, and the scheme aims to encourage the banks to provide loans to the firms that owned by female, so as to increase the women share in the economic activities. The JLGC was prepared an agreement to arrange its relationship with the commercial banks so as to guarantee and insure the risk that faced the commercial banks to provide loans to SMEs.

The scheme guaranteed around 86 percent of the total applications that the scheme received from the commercial banks over the period 1994-99. Services sector has the lion's share of the LGS activities. The distribution of the guaranteed loans between the economic sectors exactly represents and reflecting the economic sectors situation in the Jordanian economy, which is a service economy. Also the distribution of the guaranteed loans according to the geographical locations confirmed the advantages that the projects in Amman have, around 60 percent of the projects received guaranteed loans are located in Amman. But the LGS share in the total credit facilities still negligible as all of the loans guarantee schemes all over the world.

**Table 5.1: Loans Provided by the LGP from Oct 1990 – Sept 1993**

Bank	Guarantee Ceilings JD '000's	Guaranteed Loans		
		No. of Loans	Loans provided JD ('000s)	Loans Guaranteed JD ('000s)
Housing Bank	1,000	119	1,267	688
Union Bank for Investment & Saving	50	5	78	39
Amman Bank for Investment	100	8	126	76
Industrial Development Bank	300	64	534	300
Cairo Amman Bank	50	7	63	35
ABC Bank	200	30	411	164
Bank of Jordan	150	14	161	82
Jordan Gulf Bank	200	32	314	147
Jordan-Kuwait Bank	250	37	365	218
Philadelphia Bank for Investment	50	10	81	29
<b>Total</b>	<b>2,350</b>	<b>326</b>	<b>3,400</b>	<b>1,778</b>

Source: Jordan Loan Guarantee Corporation Files, Amman, 1994.

**Table 5.2: Distribution of the Guaranteed Loans by Economic Sectors Oct 1990 – Sept 1993**

Sector	No. of Loans	%	Value of Loans Provided JD '000's
Manufacturing	155	45	1707
Services	107	31	962
Retail	2	1	33
Agriculture	77	23	882
<b>Total</b>	<b>341*</b>	<b>100.0</b>	<b>3,584</b>

Source: Jordan Loan Guarantee Corporation Files, Amman, 1994.

Note: The number of loans includes 15 loans that were cancelled by the project

Table 5.3: JLGC Shareholders at the End of 2000

Name of Shareholder	No of Shares	% of Shares to Total Authorised Capital
Central Bank of Jordan	4,775,000	47.75
Housing Bank for Trade & Finance	525,000	5.25
Cities and villages Development Bank	525,000	5.25
Social Security Corporation	525,000	5.25
Industrial Development Bank	450,000	4.50
Egyptian Arab land Bank/Jordan	375,000	3.75
Arab Bank PLC	350,000	3.50
Jordan Kuwait Bank	300,000	3.00
Jordan National Bank	250,000	2.50
Bank of Jordan	225,000	2.25
Amman Chamber of Commerce	200,000	2.00
Jordan Investment and Finance Bank	150,000	1.50
Arab Banking Corporation (Jordan)	150,000	1.50
Philadelphia Investment Bank	150,000	1.50
Arab Insurance Company	150,000	1.50
Jordan Gulf Bank	150,000	1.50
Middle East Investment Bank	125,000	1.25
Jordan Mortgage Refinance Company	125,000	1.25
Cairo Amman Bank	100,000	1.00
Arab Jordan investment Bank	100,000	1.00
Union Bank for Saving & Investment	100,000	1.00
The National Ahliya Insurance Co.	100,000	1.00
Export and Finance Bank	100,000	1.00
<b>Total</b>	<b>10,000,000</b>	<b>100.00</b>

Source: JLGC, Annual Report, Amman, 2000.

Table 5.4: Applications Received and Total Loan Ceiling, 1994-99

		JD, Millions				
Year	Guaranteed Loans	Cancelled Loans by Banks	Rejected Loans by LGS	Total	Total Ceiling	Total Utilisation
1994	No. of Loans	28	10	3	41	
	Loan Provided	0.58	0.2	0.07	0.85	3.6
	Guaranteed Amount	0.14	0.06	0.01	0.21	0.2
1995	No. of Loans	131	28	7	166	
	Loan Provided	2.77	0.6	0.2	3.57	3.9
	Guaranteed Amount	0.64	0.3	0.03	0.97	0.5
1996	No. of Loans	216	44	4	264	
	Loan Provided	4.4	0.8	0.08	5.3	5.9
	Guaranteed Amount	1.8	0.3	0.01	2.1	1.1
1997	No. of Loans	508	52	7	567	
	Loan Provided	8.8	1.2	0.1	10.1	11.2
	Guaranteed Amount	3.6	0.8	0.04	4.4	2.9
1998	No. of Loans	665	52	14	731	
	Loan Provided	12.4	1.2	0.3	13.9	24.0
	Guaranteed Amount	7.8	0.7	0.2	8.7	6.4
1999	No. of Loans	696	97	44	837	
	Loan Provided	13	2.2	1.0	16.2	25.6
	Guaranteed Amount	8.5	1.4	0.6	10.5	6.6
<b>Total</b>	No. of Loans	2244	283	79	2606	
	Loan Provided	42.5	6.0	1.5	50.0	---
	Guaranteed Amount	22.5	3.6	0.9	27.0	---

Source: JLGC, Unpublished data, Amman, for different years.

**Table 5.5: The Distribution of Guaranteed Loans by Economic Sector, 1994-99**

Year		Manufacturing	Services	Retail	Agriculture	Total
1994	No. of Loans	16	8	0	4	28
	%	57	29	0	14	100
	Value of Loans JD'000's	403.5	121.0	0	62.0	568.5
	Mean JD '000's	25.2	15.1	0	15.5	20.3
1995	No. of Loans	70	52	0	9	131
	%	53	40	0	7	100
	Value of Loans JD'000's	1,694.3	917.2	0	172.7	2,784.2
	Mean JD '000's	24.2	17.6	0	19.2	21.3
1996	No. of Loans	73	130	2	11	216
	%	34	60	1	5	100
	Value of Loans JD'000's	1,598.2	2,477.0	43.8	267.0	4,386.0
	Mean JD '000's	21.9	19.1	21.9	24.3	20.3
1997	No. of Loans	153	303	41	11	508
	%	30	60	8	2	100
	Value of Loans JD'000's	2,445.7	5,261.0	824.9	264.6	8,796.2
	Mean JD '000's	16.0	17.4	20.1	24.1	17.3
1998	No. of Loans	141	448	70	6	665
	%	21	67	11	1	100
	Value of Loans JD'000's	2,402.2	8,661.8	1,229.7	108.0	12,401.7
	Mean JD '000's	17.0	19.3	17.6	18.0	18.6
1999	No. of Loans	83	562	47	4	696
	%	12	81	6	1	100
	Value of Loans JD'000's	1,783.0	10,693.8	1,045.1	63.7	13,585.6
	Mean JD '000's	21.5	19.0	22.2	15.9	19.5
Total	No. of Loans	536	1503	160	45	2244
	%	24	67	7	2	100
	Value of Loans JD'000's	10,326.9	28,131.8	3,143.5	938.0	42,540.2
	Mean JD '000's	19.3	18.7	19.6	20.8	19.0

Source: JLGc, Unpublished data, Amman, for different years.

**Table 5.6: Distribution of Guaranteed Loans by Governorates during 1994-99**

Governorate	1994	1995	1996	1997	1998	1999	Total			
							No.	%	Value JD*	mean JD*
Amman	16	80	123	272	354	457	1302	58	26,038.7	19.9
Irbid	3	12	32	76	130	108	361	16	5,912.1	16.4
Zarqa	5	14	13	27	40	33	132	6	2,513.6	19.0
Balqa	4	13	15	28	17	21	98	4	1,849.6	18.9
Karak	0	5	1	6	7	8	27	1	748.4	27.7
Jerash	0	1	0	4	4	7	16	1	366.6	22.9
Madaba	0	1	4	17	25	10	57	2.5	743.6	13.0
Ajloun	0	1	3	10	5	8	27	1	586.5	21.7
Aqaba	0	0	16	60	70	13	159	7	2,646.6	16.6
Tafelah	0	1	0	0	1	5	7	0.5	55.8	7.9
Mafraq	0	3	7	8	7	16	41	2	836.7	20.4
Ma'an	0	0	2	0	5	10	17	1	242.1	14.2
<b>Total</b>	<b>28</b>	<b>131</b>	<b>216</b>	<b>508</b>	<b>665</b>	<b>696</b>	<b>2244</b>	<b>100</b>	<b>42,540.2</b>	<b>19.0</b>

Source: JLGc, Unpublished data, Amman, for different years

\*Value of loans and the average of loans by JD thousands

**Table 5.7: Distribution of Guaranteed loans by Banks, 1994-99**

Bank name	1994	1995	1996	1997	1998	1999	Total			
							No.	%	Value JD*	mean JD*
The Housing Bank	1	30	58	204	155	62	510	23	8,225.1	16.1
Industrial Development Bank	4	19	16	84	90	24	237	11	4,820.2	20.3
Cairo Amman Bank	0	7	6	11	103	121	248	11	4,018.9	16.2
Arab Land Bank	6	10	2	8		168	194	8.6	3,927.3	20.2
Bank of Jordan	2	6	2	13	29	137	189	8.4	3,752.3	19.9
Arab Banking Corporation ABC	5	19	40	33	40	9	146	6.5	3,533.0	24.2
Union Bank for S&I	0	0	4	41	75	45	165	7.4	3,279.6	19.9
Arab Bank PLC	0		4	5	32	30	71	3.2	3,250.4	45.8
Jordan National Bank	0	5	11	1	23	71	111	4.9	2,157.3	19.4
Jordan Kuwait Bank	5	8	35	46	6	10	110	4.9	1,685.9	15.3
Export and Finance Bank	0	0	0	9	8	3	20	30	1,043.0	52.2
Arab Jordan Investment Bank	0	3	5	14	10	7	39	1.7	849.2	21.8
Middle East Investment Bank	1	2	14	23	31	4	75	3.3	789.9	10.5
Jordan Gulf Bank	0	14	16	5	1	3	39	1.7	545.1	14.0
A.N.Z Grindlays	0	1	1	8	7	1	18	0.8	215.5	12.0
Jordan Investment & Finance Bank	3	1	0	1	0	1	6	0.3	215.0	35.8
Amman Bank**	1	6	1	0	55	0	63	2.8	165.5	2.6
Philadelphia Investment Bank	0	0	1	1	0	0	2	0.1	52.0	26.0
The British Bank of M.E.(HSBC)	0	0	0	1	0	0	1	0	15.0	15.0
Citibank	0	0	0	0		0	0	0	0	0
<b>TOTAL</b>	<b>28</b>	<b>131</b>	<b>216</b>	<b>508</b>	<b>665</b>	<b>696</b>	<b>2244</b>	<b>100</b>	<b>42,540.2</b>	<b>19.0</b>

Source: JLGC, Unpublished data, Amman, for different years

\*Value of loans and the average of loans by JD thousands

\*\* Amman Bank was bankrupted at the end of 1998.

**Table 5.8: Total Credit Facilities and the Guaranteed Loans, 1994-99**

Jordanian Dinar, Million.

Year	Total Credit Facilities Provided by Commercial Banks	Loans Provided to SMEs and Guaranteed by the LGC	%
1994	3,284	0.57	0.02
1995	3,706	2.78	0.08
1996	3,920	4.39	0.11
1997	3,979	8.80	0.22
1998	4,285	12.40	0.29
1999	4,466	13.59	0.30
Total	23,640	42.54	0.18

Source: JLGC, Unpublished data, Amman, for different years.

Central Bank of Jordan, Annual Reports, Various Issues.

**Table 5.9: Distribution of Guaranteed Loans By borrower Status during 1994-99**

Status	1994	1995	1996	1997	1998	1999	Total	
							No.	%
Male	14	80	153	366	481	515	1609	72
Female	2	8	18	32	56	80	196	9
Legal Entity	12	41	42	89	97	61	342	15
Individuals	-	2	3	21	31	40	97	4
<b>Total</b>	<b>28</b>	<b>131</b>	<b>216</b>	<b>508</b>	<b>665</b>	<b>696</b>	<b>2244</b>	<b>100</b>

Source: JLGC, Unpublished data, Amman, for different years

**Table 5.10: Total Number of Employees and Its Distribution between Sectors**

Sector	No. of Employees	%	No. of Loans	average of workers
Manufacturing	5,898	58	536	11
Agriculture	422	33	45	9
Services	3,306	5	1,503	2
Trade	550	4	160	3
<b>Total</b>	<b>10,176</b>	<b>100</b>	<b>2,244</b>	<b>5</b>

Source: JLGC, Unpublished data, Amman, for different years

**Table 5.11: Total Number of Employees and Its Distribution between Governorates**

Governorate	No. of Employees	%	No. of Loans	average of workers
Amman	6,761	66	1,302	5
Irbid	903	9	361	3
Zarqa	757	8	132	6
Balqa	537	5	98	5
Karak	126	1	27	5
Jerash	56	0.5	16	4
Madaba	214	2	57	4
Ajloun	86	1	27	3
Aqaba	524	5	159	3
Tafelah	10	0.25	7	1
Mafraq	183	2	41	4
Ma'an	19	0.25	17	1
<b>Total</b>	<b>10,176</b>	<b>100</b>	<b>2,244</b>	<b>5</b>

Source: JLGC, Unpublished data, Amman, for different years

**Table 5.12: Distributions of Guaranteed Loans by Purpose of Loans, 1994-99**

Year	Start-up	Working Capital	Capital Purchases	Total
1994	9	11	8	28
1995	43	53	35	131
1996	93	84	39	216
1997	320	91	97	508
1998	412	73	180	665
1999	383	104	209	696
<b>Total</b>	<b>1,260</b>	<b>416</b>	<b>568</b>	<b>2,244</b>

Source: JLGC, Unpublished data, Amman, for different years

**Table 5.13: Portfolio of Defaulted Loans during 1994-99**

Defaulted loans guaranteed by JLGC	1994-1997	1998	1999	Total
No.	19 out of 883	20 out of 665	39 out of 696	78 out of 2244
Value of Compensation J.D.	279,671	257,188	448,488	985,347
Amount Recovered J.D.	38,290	91,378	151,769	281,437
Net Position J.D.	-241,381	-165,810	-296,719	-703,910

Source: JLGC, Sixth Annual Report, Amman, 1999.

Figure 5.1: Inquiry of Applications Received during 1994 - 99

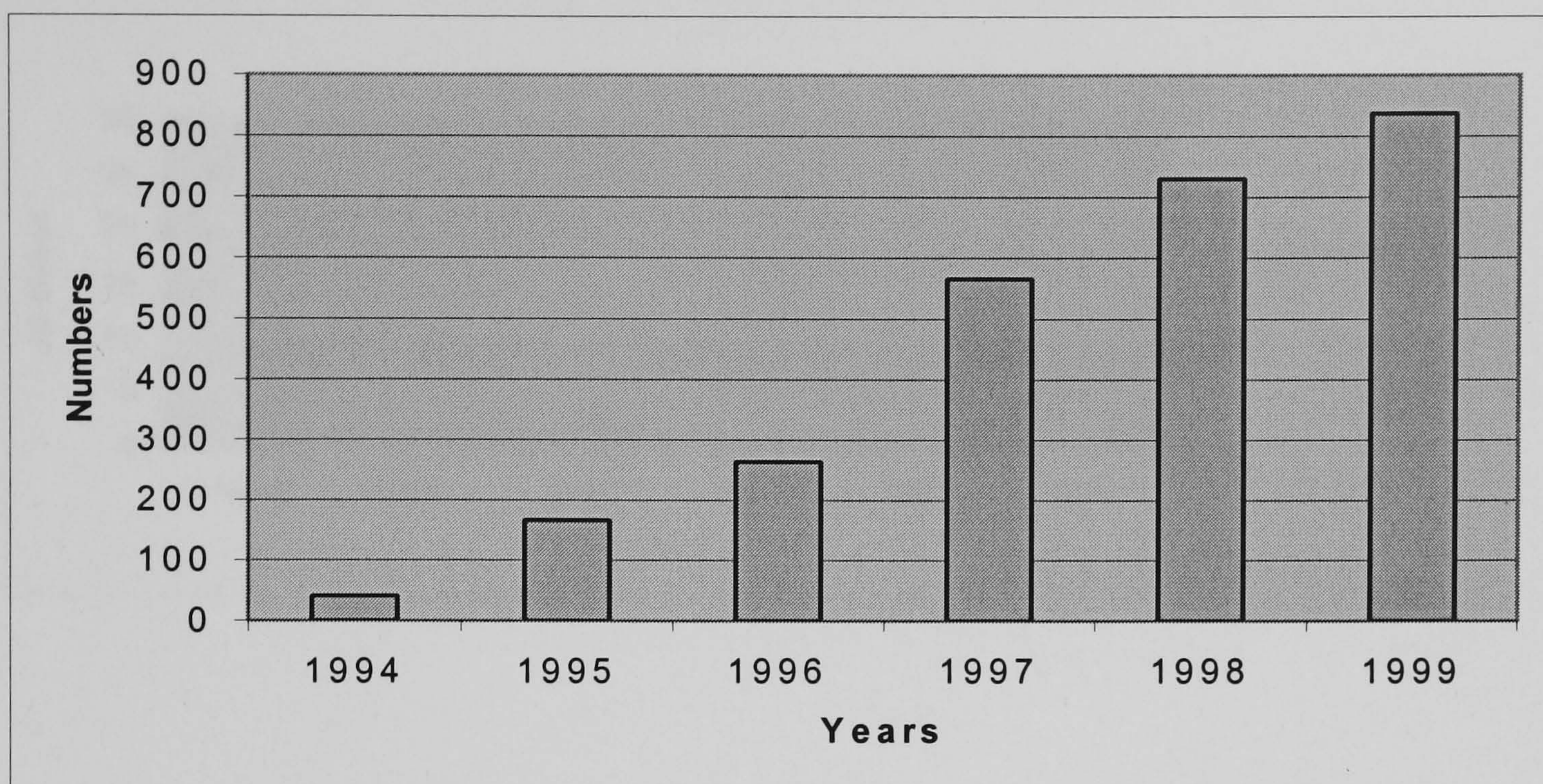


Figure 5.2: Total amount of Provided Loans and Guaranteed Amount during 1994-99

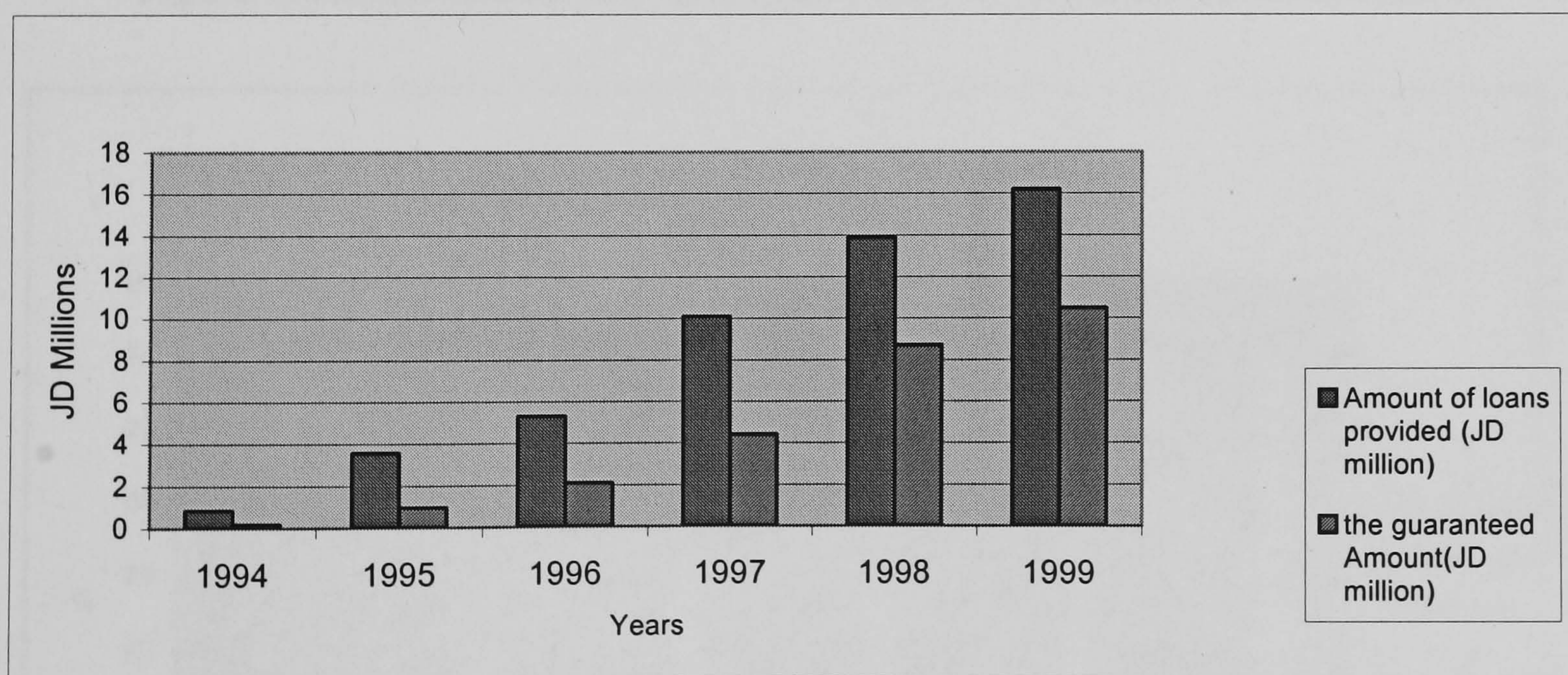


Figure 5.3: Ceiling of the Commercial Banks

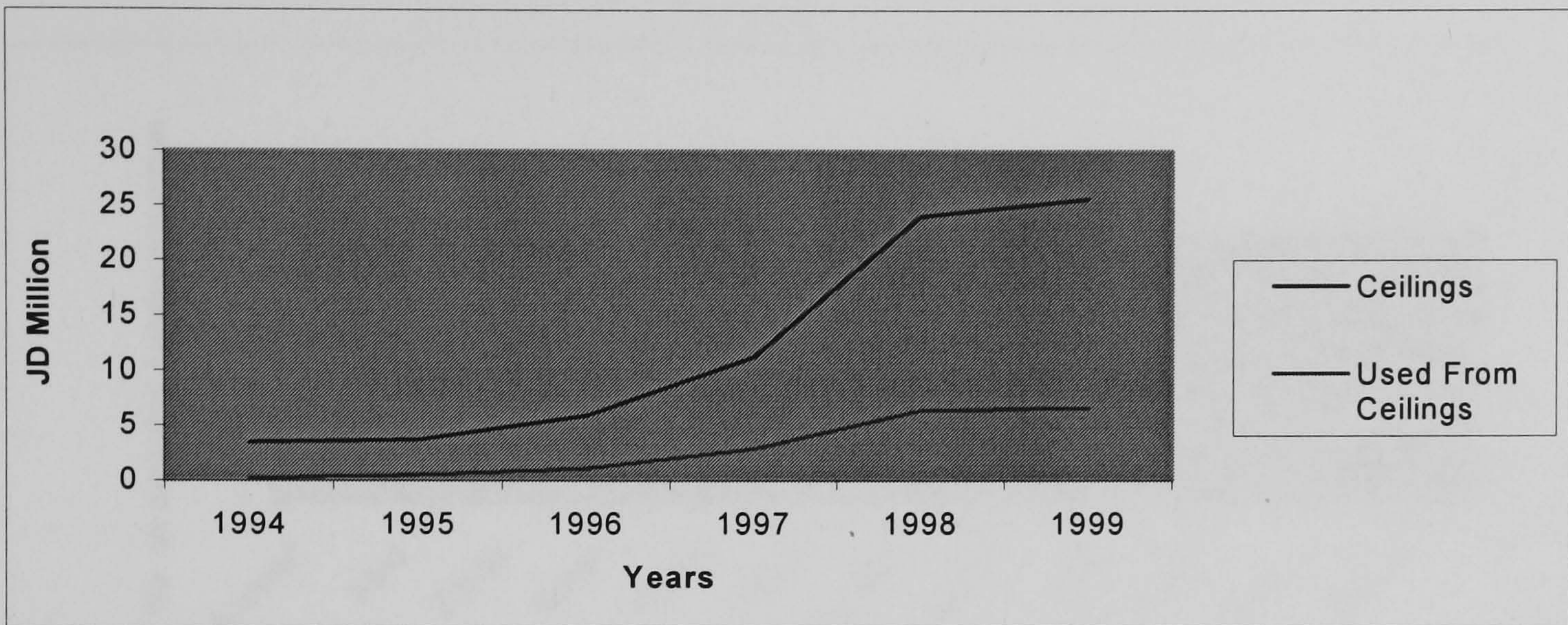


Figure 5.4: Distribution of Guaranteed Loans by Economic Sectors 1994-99

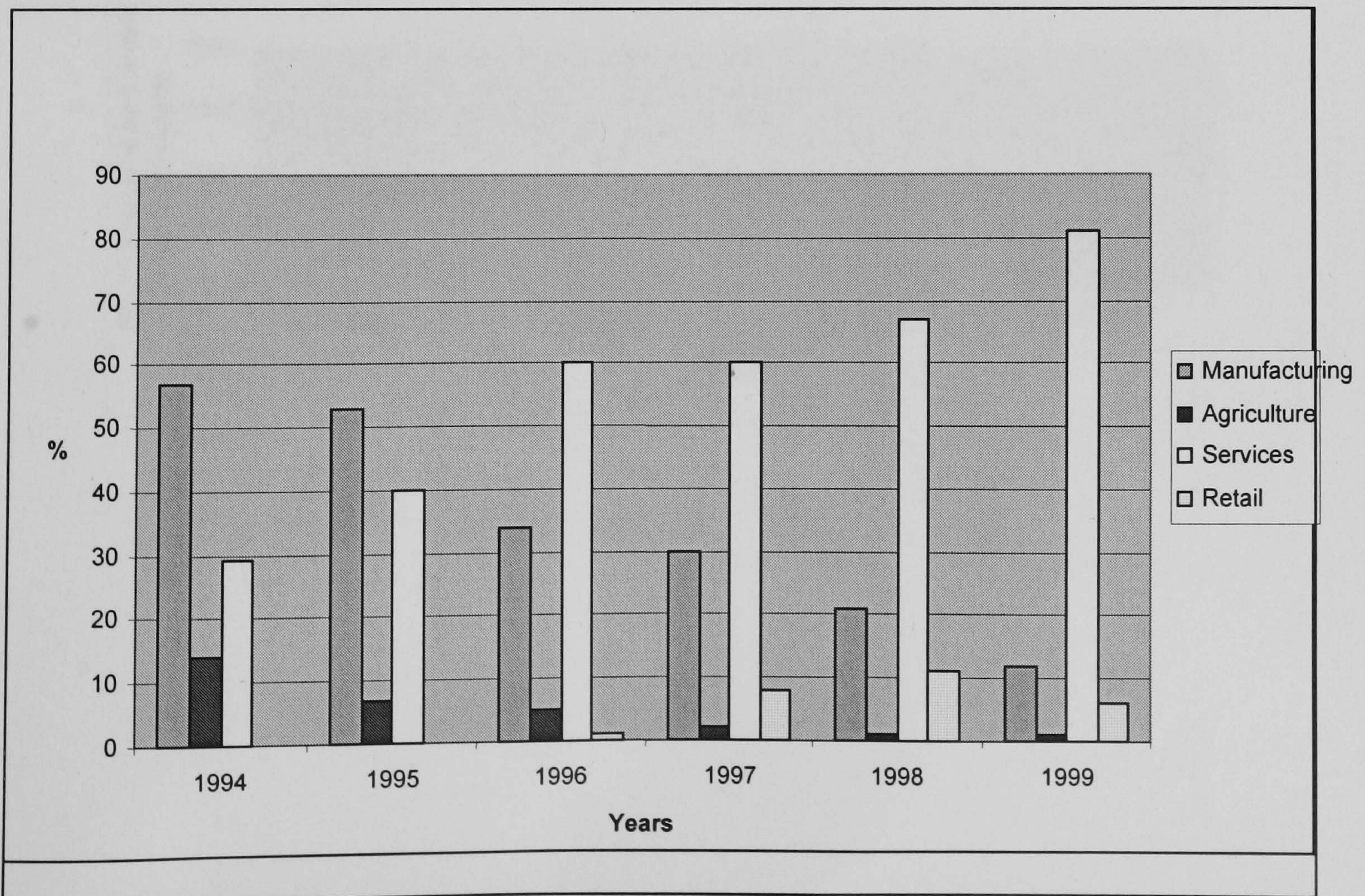


Figure 5.5: Distribution of Guaranteed Loans by Governorates 1994-99

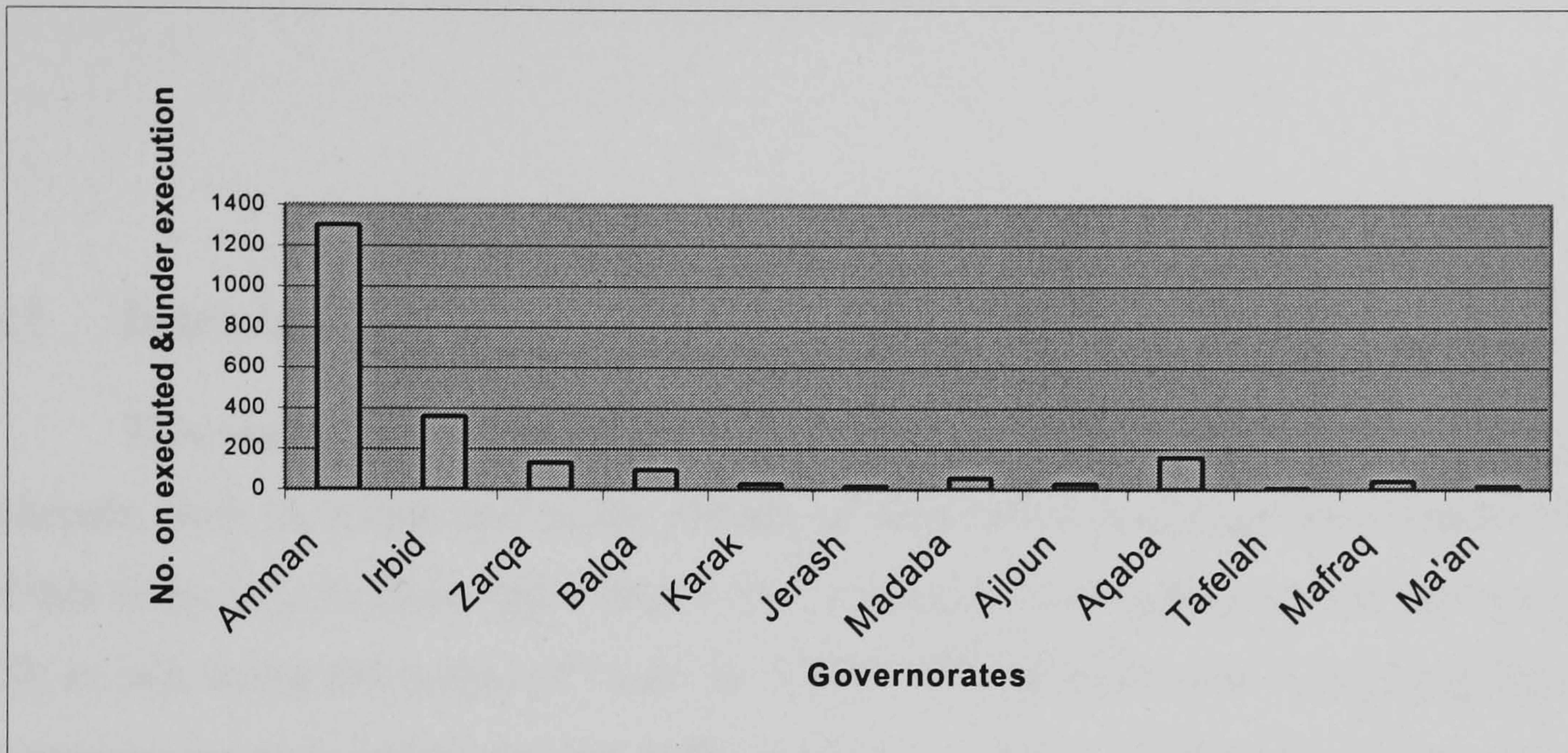
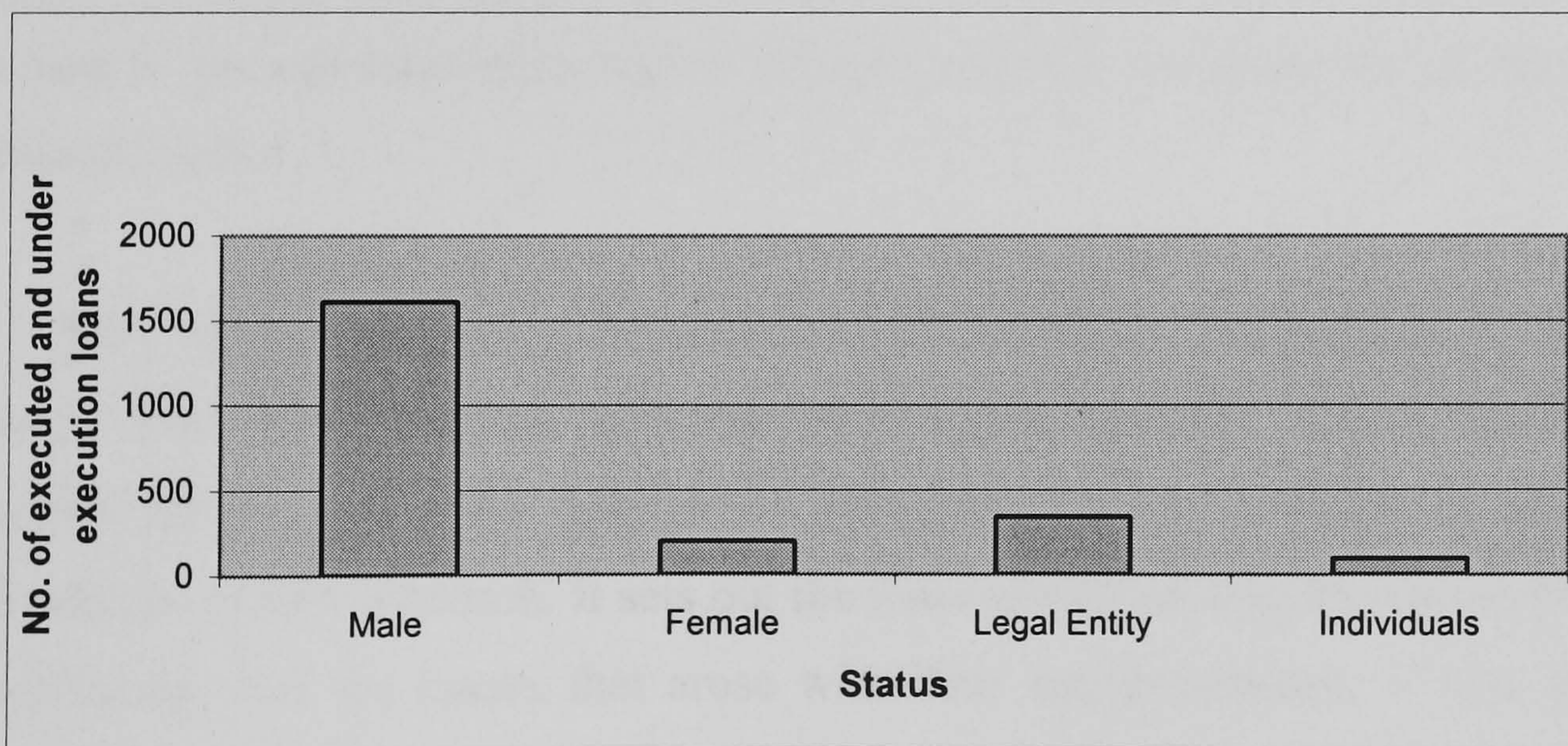


Figure 5.6: Distribution of the Guaranteed loans by Borrower Status 1994-99



## **CHAPTER 6**

### **METHODOLOGY OF THE STUDY**

#### **6.1 Introduction**

This study can be considered as pioneering research in the field of loan guarantee schemes, both in Jordan and in the context of developing countries. The principal objective of this study is to evaluate the effects of the Jordanian loan guarantee scheme to establish its role in improving the supply of funds for SMEs. The research aims to measure the scheme's economic impacts, and to suggest policies and procedures for improving the loan guarantee scheme. The principal method used is a survey of recipient firms of the guarantees. A period of about four months was spent in Jordan carrying out this fieldwork, and the objectives were three-fold: to collect all possible and available primary information on the sample projects and firms receiving loan guarantees; to gather all available related secondary information pertaining to the research work; and to conduct a survey questionnaire of the participating commercial banks.

This chapter presents and discusses the previous approaches to evaluate loan guarantee schemes, in order to learn from their experience. The chapter also describes the procedures for data collection through the questionnaire, and considers the advantages and disadvantages of this approach. It sets out the frameworks for drawing-up the firm and bank questionnaires, and the issues that arose with their implementation. It also describes the method of data analysis to be carried out in the next chapter. Generally, the chapter discusses the main issues involved in survey design, data collection and data analysis.

#### **6.2 Previous Approaches**

In all countries it is common that loan guarantee schemes support viable small and medium-sized enterprises that do not have sufficient conventional collateral when they seek loans, especially from the commercial banks. The loan guarantees typically cover part of the bank's risk on the loan provided to these firms in the event of default. In effect, the schemes

are insurance schemes for the commercial banks in case of loan default. It is one of the more important indirect subsidies that are provided to the small and medium-sized enterprises, so that it is vital important to measure the benefits and costs of these schemes to ensure that they have delivered to the target group, ie. increased lending to SMEs. This ensures the proper use of public funds. This section considers the previous methods that have been used to evaluate the impact of such schemes in order to learn from their experience. It also considers the problems that arise in evaluation.

### ***6.2.1 Previous Studies***

Despite the widespread use of loan guarantee schemes, very few attempts have been made to evaluate the contribution of these schemes. Cressy (2000) notes that most of the evaluation studies of loan guarantee schemes have been carried out in Europe. For example, there have been a number of studies that have evaluated the contribution of the UK Small Firms Loan Guarantee Scheme since it was introduced in 1981. There are also some evaluations of all schemes. However, in the case of low-income countries, Vogel and Adams (1997) state that they were unable to find any evaluation of loan guarantee programmes. Thus, in reviewing the previous studies, we must rely on British and American experience.

In this section, we will focus on the methods used to evaluate the Small Firms Loan Guarantee Scheme (SFLGS) in the UK. This is due to the following reasons. Firstly, the easy access to evaluation studies on the SFLGS. Secondly, the SFLGS is close to the Jordanian Loan Guarantee Scheme. Finally, the evaluations of the American scheme are not separately identified by the Small Business Association, so that it is difficult to disentangle its effects. The evaluation studies of the UK scheme are by NERA (1990), PIEDA (1992) and KPMG (1999). These cover differ phases of the SFLGS, although the methodologies adopted in these three evaluations are similar, most likely to ensure that useful comparisons can be made over time. The OECD small and medium enterprises Outlook Report (2000) points out that “the goals of evaluation may thus be different but complementary and call for different evaluation methods and tools. The stock of evaluation tools and methodologies is extensive, including cost-benefit analysis, economic impact analysis, micro-level econometric analysis, peer review, survey of programme participants, and case studies. Certain methodologies are

best associated with given types of programmes or instruments” (p. 26). However, in practice, these evaluations almost uniformly rely on questionnaire surveys of recipient firms.

### The NERA Study

The NERA study of 1990 aimed to assess the ‘additionality’ that is generated by the scheme, ie. the extra activity generated by banks and firms that would not otherwise have occurred (see Chapter 4). This additionality may be in two forms; either economic, which is the economic activities generated by the scheme, which would not otherwise have taken place, or financial, which is the finance provided to the firm by the bank, and guaranteed under the scheme that would not have been available from other commercial sources or from the same sources in the absence of the loan guarantee scheme. The NERA evaluation was based on a thorough analysis of a sample of 125 loans guaranteed by the scheme in surviving firms. These surviving firms were selected at random from the total 260 firms throughout the UK that had a loan guarantee sanctioned under Phase IV of the scheme between August and October 1986 (see Table 4.3 in Chapter 4). The survey approach for this study depended on interviews, both with the proprietors of the firms and with the bank manager that advanced the guaranteed loan.

The general structure of the interviews with the recipient firms began by examining the steps leading up to the application for the guaranteed loan; the possibility of any alternative finance having been available; and the reasons for choosing SFLGS finance. At the next stage of the interview, they tried to build up a picture of the firm’s progress and activities since receiving the guaranteed loan and to establish what would have happened to the firm in the absence of the scheme. Finally, they noted the firm’s views on the advantages and disadvantages of the scheme, and any suggestions for improvements which might help future applicants and improve the operation of the scheme.

The interviews with the bank branch managers tried to explore the reasons why the managers had resorted to the SFLGS in specific cases, and what, if anything, they might have been prepared to lend in the absence of the scheme. The interviewers were interested in the banks’ opinions on what finance might have been available to the firms from other sources had the scheme not existed. This was followed by review of bank lending policy, especially

to small firms, and an assessment of the ways in which institutional factors affect the success of the scheme. Finally, the bank managers' views on the scheme and their suggestions for improvements were also sought.

### The PIEDA Study

The second evaluation of the scheme was carried out by the Planning, Economic and Development Consultants PIEDA, in 1992. They examined Phase V of the scheme (from 1989 to 1993), and again an important objective of the evaluation was to measure the scheme 'additionality', as well as the displacement of other activity by firms and the wider economic impacts of the scheme. They use a combination of survey techniques, including face-to-face surveys of companies receiving guaranteed loans, face-to-face and postal surveys with the bank managers approving and administering the loans, and a postal survey of the companies receiving guaranteed loans under the previous phase of the scheme (ie. Phase IV).

The face-to-face questionnaires for the company and bank managers were similar to those applied in the previous research by NERA. This was to ensure that useful comparisons could be made between 'additionality' levels at this study time and at the time of the previous study. Displacement effects were assessed by asking companies questions on the location of the product markets into which they sold and the identity of the firms' main competitors. The total eligible sample under Phase V was 188 firms and 123 bank branches. The response rates for both samples were around 75 percent. A further postal survey of firms received loans under Phase IV was also undertaken. This survey was designed to collect more factual information, particularly on the wider and longer term impact of the loan guarantee scheme on economic performance.

### The KPMG Study

The most recent evaluation of the Small Firms Loan Guarantee Scheme was by KPMG in 1999. This study covered Phase VI of the scheme (from 1993 to present), and it used a number of methods to investigate the impacts of the scheme. These included: a review of the small firm financing literature and interviews with experts in the field; an econometric investigation of the determinants of defaults cases, finance and economic additionality based

upon the SFLGS database; a large-scale telephone survey of 449 borrowers and 148 lenders' branches; and interviews with 50 borrowers, 17 lenders' SFLGS units (credit officers in the commercial banks dealing with the SFLGS) and 15 lender's branches.

The KPMG study examines the SFLGS and its use in terms of the take-up of loans and the types of loans provided. The analysis is based on the SFLGS database, held by the Department of Trade and Industry, and it provides a comparison of the use of the scheme in the current phase (ie. Phase VI) and previous phases. The large-scale telephone survey of borrowers considered a number of important issues, such as financing requirements, alternative financing possibilities, awareness of the scheme, reasons for the use of the scheme, and the understanding of mechanics of the scheme operation. The interviews with the lenders identified the policy of the lenders towards the SFLGS. Further information about the firms, as well as the lenders' views on the scheme is provided by a large-scale telephone survey of banks. An econometric analysis (ie. probit and logit models) identifies the types of firms that are more likely to default and the factors that influence the duration of the loan. This analysis also identifies the determinants of 'additionality' (either financial or economic) of the SFLGS loans.

### Overview

It can be observed that the methods used in all of the evaluations of the UK Small Firms Loan Guarantee Scheme are similar, relying on interviews with firms and banks. Hence, the questionnaire survey is the most popular method to evaluate the SFLGS in UK, and this is because the assessment involves highly-complex issues such as 'additionality' and displacement, which require personal interviews with the borrowers and lenders. PIEDA (1992) argue that the information contained in the SFLGS database is not sufficient by itself to address these issues. The consistency in the methods used makes comparison easier, but the main differences between the studies are the sample sizes from one evaluation to another.

With regard to the method of data analysis, the evaluations depend on a descriptive analysis of the data collected through the interview. NERA (1990) produce a detailed analysis of the characteristics of the sample, an assessment of financial and economic additionality and an analysis of the determinants of additionality. For the bank survey, NERA

obtained evidence on financial market effects and on bank lending practices. The analysis by PIEDA is also descriptive, but the KPMG study used both descriptive and econometric methods. The descriptive analysis is used for the data that collected from borrowers and lenders, while the econometric analysis is used both on the SFLGS database and on the data collected through the survey.

One way in which studies differ is their focus, both according to the issues that are addressed and the nature of the programme or policy measure that are evaluated. For NERA (1990), the main objective for the evaluation is to assess the extent to which the loan guarantee scheme generated additional finance and economic activity by the small firms using the scheme. They also examine the wider economic effects of the loan guarantee scheme, and the possible effects of the scheme on the conduct of lenders. The fundamental aim of the PIEDA study (1992) is to assess the extent to which the loan guarantee scheme has generated additional economic activity and remedied market failure. More specifically, the study considers whether there is a continuing need for the loan guarantee scheme, and if so, why the banks are unable to meet the needs of small business. Indeed, whether the scheme is truly additional and how the scheme might be improved.

The objective of the evaluation by KPMG (1999) is to examine the degree to which the SFLGS has supported small firms with viable propositions in accessing finance that under normal market criteria they would not have received. The evaluation tests not only the validity of the rationale behind the scheme, but it measures the benefits that the programme has delivered and whether the scheme represents value-for-money for public expenditure. The evaluation also considers whether the scheme addresses the problem of financing small firms, or if some other measures are needed.

### ***6.2.2 Problems in Evaluation***

An important difficulty in evaluating the loan guarantee scheme is the problem of accessing data on overall bank lending to small and medium-sized enterprises. This information is confidential to banks, and it means that we are unable to ascertain whether the banks' lending has changed as a result of the introduction of the scheme. This means that the evaluations tend to be carried at the including firm level through interview survey. The

survey approach has two main advantages. It means we can collect information on the loans and projects that is otherwise difficult to obtain, because of bank confidentiality constraints. It also means that more qualitative issues, and other more difficult issues such as project additionality, can be addressed. The remainder of this section concentrates on the problems and difficulties that confront us when evaluating the loan guarantee scheme in Jordan.

The main difficulties which faced this study can be summarized as follows. The Jordanian loan guarantee scheme was established in 1994, but this does not allow us enough data to evaluate the longer-term impacts of the scheme. The information which the JLGC has about the firms is also not enough, as it does not include details about the firm after receiving the guaranteed loan, due to a lack of follow-up for these projects. The scheme believes that it is up to the bank to monitor these firms after receiving the loans, while the bank believes that is up to the JLGC to carry out this task. The JLGC relies on the information that is provided by the commercial banks to make a decision, but the commercial banks consider some of this information to be confidential.

The other problems that we face in this study are related to the commercial banks. These include the commercial confidentiality of bank lending, in that the banks refuse to provide any of this information about their borrowers under any circumstances. This problem makes our mission to collect the data about the firms from the commercial banks branches virtually impossible. Thus, it was not easy to find the data that can help us to achieve the objectives of our study. A further problem relates to the unwillingness of the commercial banks to provide details of the total credit facilities provided to small and medium-sized enterprises before the scheme starts and after it carries out its task, so as to assess the scheme impact on its overall lending (see Chapter 3). Specific requests were made by this study to the commercial banks' and to the Central Bank of Jordan, but in both cases they refused to provide any of these data, because it is secret information.

Another problem faced by the study is that some borrowers do not even know if their loan is guaranteed by the JLGC. This is due to the abuse of the guarantee scheme by the commercial banks that provide the guarantees without telling the firms in order to boost their own lending profile. Finally, as elsewhere cooperation from the respondents to provide us with the needed information was sometimes weak. This is because the firms don't always

trust the researchers to maintain the confidentiality of any data supplied, and their fear that it will be passed on to the Tax Department. They also do not believe that they will get any benefits from the results of the research. Such beliefs push some borrowers to refuse to respond, while others show reluctance to give their answers quickly, indicating that they do not want to fully cooperate. Some of the cooperative borrowers, as we will see in the analysis of the sample firms below, do not answer any questions related to their income, profit, sales turnover and similar information. Also, there is the problem that comes from having incomplete addresses of the firms that received guaranteed loans supported by the scheme.

### **6.3 Methodology of this Study**

A total period of about four months was spent in Jordan on account of fieldwork. The objective of this section is to illustrate in detail the study approach, the advantages and disadvantages of the approach, and to outline the firm and bank questionnaires that were used for collecting the data. Finally, the section considers the methods of analysis that are used to examine the data in the next chapter.

#### ***6.3.1 The Approach for this Study***

The main objectives of this study are to evaluate the effect of the Jordanian loan guarantee scheme on SMEs, and to measure the scheme 'additionality' and the economic impacts of the scheme. In order to realise this target and to overcome the problems outlined above, the researcher believes that a well-designed questionnaire is the best instrument. This is because the data on the scheme provided by the JLGC is insufficient for a full evaluation, while the commercial banks refused to provide any data to us on their lending activities. To overcome these and the other problems mentioned in the previous section, the only feasible source of such information is from the recipients of the guaranteed loans. This also provides an opportunity to discover the firms' views on the loan guarantee scheme. The questionnaire is the most suitable tool to make measurement of additionality, because the data from the JLGC and the commercial banks do not provide any reliable indicators about whether a project or a loan would otherwise go ahead. Finally, the recipients of the guaranteed loans know better than anybody else about the economic effect of the loan on their business. This approach for data collection and information gathering is an adaptation of the UK experience

for evaluating the loan guarantee scheme, as we have seen in NERA, PIEDA and KPMG. In the evaluation of the UK scheme, which has been operating for more than two decades, the questionnaire survey of recipients is widely used, even though data from the scheme and from the commercial banks is more readily accessible.

Ideally, data on the borrowers should be collected from the commercial banks, as in the UK evaluation studies, but it was impossible to adopt the same approach due to the commercial confidentiality of this information from the banks' point of view, and also because of their mistrust of research generally. The banking system in Jordan is also not comparable with the UK banking system, as it is less well developed, and while the researcher promised to treat any information provided as strictly confidential, and to report it in an aggregate form only to protect the identity of the borrowers, no agreement could be reached. Some of the commercial banks are shareholders in the Jordan Loan Guarantee Corporation, but these still refused to give any information about their borrowers. However, the researcher undertook to arrange face-to-face interviews with the credit managers in the main offices of the banks, and this gave us their general views on the scheme.

For the firms, face-to-face interview questionnaires were used. This is better than a postal questionnaire, because of the impossibility of making an interview with any person in Jordan through the post, as it is rejected culturally. It is, indeed difficult for anybody to accept being interviewed by postal questionnaire without knowing and dealing personally with the interviewer. Operation of the face-to-face questionnaire as a suitable instrument for data collection is supported by the literature. For example, Wren (1999) reports that "conventional evaluations of business support measures rely on questionnaire survey of recipient firms in order to establish the direct benefits of policy" (see OECD (2000) and Venetoklis (2000a), for more details).

To assess the impact of loan guarantees it is necessary to determine the 'counterfactual position', that is, what the borrower would have done without the loan, and then to compare this with what was done with the loan (Camino and Cardone, (1999)). The determination of the counterfactual position helps determine the additionality of the scheme. There are many ways to determine the counterfactual, such as a control group, but this is difficult in Jordan because of the lack of information available about the other firms. Further,

if firms were chosen randomly then there was a high chance that they would refuse to provide any data. Venetoklis (2000a) also found that the selection of the control group is not an easy exercise; logically the treatment and the control group must be as similar as possible. Venetoklis (2000a) states that “in the case of firms receiving subsidies it is really hard to build the control group due to a couple of reasons. First, we can not use the random distribution of subsidies because aid is distributed under certain pre-defined criteria. Second, there is a high heterogeneity among all firms” (p. 18). Another method to determine the counterfactual is by the econometric techniques (see Wren and Storey (2002), for more details). However, this is also difficult due to insufficient information about the firms that received the guaranteed loans. Finally, the counterfactual can be determined by the direct interview with the recipients firms of the guarantees, and this is the approach used here. This is the most suitable way to determine the scheme effect and the additionality of the loan guarantee scheme.

### ***6.3.2 The Advantages and Disadvantages of the Approach***

A face-to-face interview questionnaire has several advantages, and a few disadvantages. The advantages can be summarised as follows (see Sekaran, 1992):

- (i) In-depth exploration of certain issues, which are difficult to determine in other ways, eg. the ‘counterfactual’ and the loan ‘additionality’.
- (ii) The researcher has the chance to explain the questions to avoid any misunderstanding, and people may be more co-operative when all they have to do is talk. In this situation, the researcher and the respondent may feel more relaxed and give more reliable information.
- (iii) By using this method, the researcher can guarantee that the majority of the questions will be answered. It gives a chance for illiterate people to be involved and not to be tempted to throw the questionnaire away because they cannot read it.
- (iv) It gives the researcher the chance to understand the small businesses more intimately because of the face-to-face contact involved.
- (v) It helps to create an atmosphere of confidence between the parties, ie. the researcher and the owner-manager. This may avoid the caution of

entrepreneurs when completing official forms, and lower their suspicion that there is any relationship with the tax authorities. It gives the respondents a greater sense of security, in that they have not formalised their views by committing information to paper.

- (vi) It gives the respondent the feeling that there is some interest being shown in them and their role in society.

In order to collect the appropriate and necessary information for achieving the objective of the study, the questionnaire survey technique was used. It is reasonable to believe that a questionnaire is the most convenient and efficient way to obtain the information needed, and this has been indicated by other researchers. Barnett (1991) reports the advantage of this technique by stating that the written questionnaire is typically more efficient and practical, and it allows for the use of a large sample. Also, see Wren (1999).

The main disadvantage of the face-to-face interview is that with a wide geographical area and a large sample it can be very difficult to achieve good coverage (Sekaran, 1992). This problem was solved in our study because we only concentrate on the main five governorates. The assistance provided by the JLGC also helped. Other disadvantages of this method are that firms may not be able to recall events belonging to the guaranteed loan; they might recall but make mistakes; they might not be able to articulate events in the firm due to the guaranteed loan; and they might seek to deliberately mislead.

### ***6.3.3 The Firm Questionnaire***

According to Sekaran (1992), “a questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives” (p. 200). Consequently, a number of criteria were used in designing the questionnaire for this study. The questions must be objective, should cover the widest range of possible answers reflecting different circumstances and should not be ambiguous.

The firm questionnaire was constructed and designed to elicit information specific to this study. The questionnaire in English is given in Appendix 6.1. It was then translated into

Arabic. The Arabic version is given in Appendix 6.2. The questionnaire has eight sections, and these are as follows:

- I. Section A. The interviewee: including questions on the name, job title of the respondents, experience and level of educational attainment.
- II. Section B. The firm: the main information on the firm, such as legal status, organisation of the firm, the field of activity, the age of the firm, the number of employees, the firm activity and the problems is facing the firm.
- III. Section C. The start-up of the firm: the main information about the financial issues at the start-up stage, such as the capital used, sources of finance, difficulties in obtaining finance, whether this was the first time the firm had received a loan guaranteed by the JLGC and information about any loans received prior to the guaranteed loan.
- IV. Section D. The take-up of JLGC support: details about the number of guaranteed loans received by the firm. The following questions (until the end of the questionnaire) then related to the most recent loan that guaranteed by the JLGC. The questions include the first approach to the JLGC for this loan, reasons cited by bank to take a guaranteed loan, time needed until funds became available for the project and the rate of interest and other terms of the guaranteed loan.
- V. Section E. The financing of the project: including questions about the most recent guaranteed loan, any other sources of finance used to fund the project, the use of the guaranteed loan, collateral pledged for the loan, bank advice and guidance after providing the loans. Other questions relate to the loan 'additionality' from the firm's point of view, and whether the guaranteed loan helped the firm obtain other finance after the loan.
- VI. Section F. The economic effects of the project: questions about the economic effects of the project funded by the guaranteed loan. Whether the project led to the opening-up of new markets, the development of new products, services or processes, the introduction of a leading-edge technology, an increase in exports or the creation of a new source of supply. The rest of this section concentrates on the changes in the firm's total assets, sales turnover and the number of employees one year before the loan and two years after the loan.

- VII. Section G. Feedback on the loan guarantee scheme: this section was designed to elicit the firm's view on the services provided by the JLGC. It includes questions about the problems faced by the firm when applying for the guaranteed loan, advantages or disadvantages of these loans, the changes they would like to see in the administrative procedures and any general comments.
- VIII. Section H. Interviewer's remarks: including some of the demographic data such as the age, gender, location, nature of premises and the presentation of premises.

The questions themselves were mostly multiple choice, in order to ease and speed-up the answering process, but covering a wide range of possible responses. Answering these questions should not only be much quicker, but it was anticipated that should evoke a higher response rate. Some of the other questions were open-ended, so that the respondents were not restricted in the answers or comments they may have wished to make. It was considered that the questionnaire may be too long, but the lack of information about firms that had received the guaranteed loans made this inevitable. The design of the questionnaire was inspired mainly by those used by KPMG (1999), and partly by the NERA (1990) and PIEDA (1992) studies. The intention was to learn from their experience, and to gain some benefits from these questionnaires, which were well tested. The lack of such studies, not only in Jordan but in most of the developing countries, encouraged the researcher to learn from the UK experience, because the SFLGS scheme is close to the Jordanian scheme.

The questionnaire (in Arabic) was piloted two times in order to make sure that the questions were easily understood. The first test was made by distributing five drafts of the questionnaire to Arab students in Newcastle. The second test was made by sending the questionnaire to the JLGC for some of their credit officers to check that the questions would be easily understood by different borrowers according to their experience. Amendments were made following these two tests, in order to make the questionnaire clearer. The final format was therefore established according to the maximum feasible amount of testing. It is this questionnaire that is given in Appendix 6.2 (in Arabic) and in Appendix 6.1 (in English).

#### **6.3.4 The Bank Questionnaire**

The bank questionnaire in English is given in Appendix 6.3. It was not translated into Arabic, because the bank managers are familiar with English. The structure of the questionnaire focuses on the following areas: general information about the bank, the bank's view on lending to SMEs, the circumstances in which the bank offers a loan guarantee, the procedures for applying for a guaranteed loan compared with a normal loan, the additionality of the guarantee, and finally whether the loan guarantee scheme changed the bank's behaviour in its lending policy to SMEs. It was considered that a short straightforward questionnaire would be better received by the banks on the understanding that the managers would be busy and their time valuable. One of the senior managers of the JLGC confirmed this when I sent him a copy of the questionnaire to comment upon. A letter in English from the dissertation supervisor was attached to each questionnaire to give a reassurance of confidentiality to the credit managers, and to reinforce the academic nature of the study (see Appendix 6.3).

The total number of banks participating in the loan guarantee scheme is nineteen, but questionnaire was delivered to only five banks. The researcher chose the five banks randomly, and followed the JLGC's advice to include both the cooperative and non-cooperative banks, in order to understand the views and opinions of both types of banks. The contact and interview arrangements with the credit managers in the commercial banks were organised through the JLGC management, because it was felt that this method would be more successful.

### **6.4 Structure of the Firm Sample**

The population of firms for this study are small and medium-sized enterprises in Jordan that received loans from commercial banks over the period 1994-99 guaranteed by the Jordan Loan Guarantee Corporation. Details of the firms were obtained from the JLGC. These details were released to the study as the researcher was a member of the JLGC's Studies and Research Department over 1997-99. The JLGC gave information on the borrower's name, the loan value, the guaranteed amount, the bank's name, the value of

collateral, and the contact details for the firm, including the telephone number (where connected) and the firm address (but the latter not in some cases).

To achieve the study aims we had to choose a representative sample from the total population of guarantee recipients in order to minimise costs and to save time. The following three criteria were used: the firms had taken a loan from a commercial bank which was guaranteed by the JLGC over the period 1994-99; the firms were located either in Amman, Irbid, Zarqa, Balqa or Aqaba, as these are the main business areas of Jordan (more than 90 percent of the guaranteed loans by JLGC are located in these governorates); and special attention had to be paid to the firms in the manufacturing sector, because this sector is the focus of development and government interest. Thus, the sample was both random and stratified. The period until the end of 1999 was chosen because one of the important aims of the study is to measure the impact of the scheme, and it takes at least 18 months after the receipt of the loan for the effects to appear (NERA, 1990).

#### ***6.4.1 Sample Selection***

From the data supplied by the JLGC, the total number of firms receiving guaranteed loans during the study period 1994-99 was 2,244, of which 2,052 were in the five main governorates. The desired achieved sample for the study is 150 firms. This is considered a suitable number of firms to be representative of the overall population. It is probable that any increase in this sample size will not affect the representativeness of the results of the study, as the SMEs have reasonably homogeneous characteristics. The information about the firms that the researcher received from the JLGC for the five governorates (Amman, Irbid, Zarqa, Balqa and Aqaba) was distributed between the four main economic sectors: manufacturing, services, retail and agriculture.

Table 6.1 shows the sample selection both by location and by economic sector. This table shows that the capital city Amman had 1,302 firms in the four main sectors, which is around 63 percent of firms receiving guaranteed loans in the five main governorates. As a result the total sample size for Amman was set at 75 firms, which is fifty percent of the total sample. In Irbid, there were 361 firms (18 percent) which had received guaranteed loans, and the sample was set at 30 firms. The number of firms sampled in the other three governorates,

Zarqa, Balqa and Aqaba was 132, 98, and 159 respectively, and a sample of 15 firms was taken for each of these. The sample was also stratified by economic sector. Given the focus on manufacturing referred to above, half the sampled firms (ie. 75) were in this sector. In total, we sought an achieved sample of 52 in services, 13 in retail and 10 in agriculture. This led to the pattern of sampling shown in Table 6.1, which partly reflects the total number of firms within each cell of the total. For each cell, the firms were selected randomly.

#### ***6.4.2 Achieved Sample***

In order to achieve the required sample of 150 firms, the researcher contacted 214 firms. After selecting the sample firms, the fieldwork began in Amman. The researcher approached the borrowers by telephone, explaining the aims of the research and arranging an appointment with each borrower in order to fill-out the questionnaire. For the first few days, the cooperation from the respondents was weak. The problem was explained to the JLGC General Manager, who wrote a letter, informing the borrowers that the JLGC was fully aware of this study and asking them to cooperate with the researcher in order to make improvements of the scheme which would be of benefit to the scheme in the future. The JLGC also asked two of its staff members to help the researcher with data collection. This support from the Jordan Loan Guarantee Corporation improved the respondents' cooperation substantially, because the researcher introduced himself as from the JLGC. On arriving at interview, the researcher gave a covering letter (in Arabic) to the firm explaining the nature of the study. The firm was also given the letter from the JLGC. In addition two other letters were given to the firm, a letter (in English) from the dissertation supervisor and a letter (in Arabic) from the Dean of the Faculty of Economics and Administrative Science at the Hashemite University. These letters were intended to give reassurance of confidentiality and to reinforce the academic nature of the study (see Appendix 6.4). If the firm agreed to participate then the questionnaire was filled-out. On average a questionnaire took around one hour to be filled-out.

Table 6.2 shows the sought and achieved samples in each governorate and sector. In Amman, the researcher aimed to fill-out 75 questionnaires, but distributed 94 questionnaires in order to achieve 75 (35 from the manufacturing sector, 30 from the services sector, and 5 each from the retail and agriculture sectors). The non-participating firms in this area numbered around 20 percent of the total questionnaires distributed. These firms refused to

fill-out a questionnaire as they did not wish to cooperate. In Irbid the researcher distributed 49 questionnaires to achieve the required sample, which is 30 firms, but the actual achieved sample was only 24 firms (9 in of each manufacturing and services and 3 in each of retail and the agriculture sectors). For both Zarqa and Balqa, the required sample was 15 firms, and this was achieved (see Table 6.2). The non-participating firms in these governorates were 32 and 37 percent respectively. From the 214 questionnaires distributed in the five governorates 142 were completed which is around 95 percent of the sought sample. Table 6.2 shows that overall the required sample was broadly achieved, both by location and by economic sector.

## **6.5 Conclusions**

This chapter has considered the previous approaches that have been used to evaluate loan guarantee schemes, especially in the UK. It was found that the approach depended on the kind of information or data to be collected from the recipients of the loan guarantees and from the commercial bank, but generally they relied on interviews with senior managers of firms. The purpose of the previous evaluations was to assess the additionality that was generated by the schemes. The chapter has also outlined the problems that arose regarding contact and communication with the guaranteed loan recipients and the commercial banks. The methodology of this study, described in this chapter, is based on the information collected directly from the recipients of the guaranteed loans through questionnaire survey. This reflects the lack of information available about both the loans and the recipients of guarantees from the JLGC, and an unwillingness of the banks to provide any data about their borrowers, due to commercial confidentiality constraints.

In order to achieve the aims of this research and to collect the suitable information the study relies on face-to-face interviews with firms and banks using a structured questionnaire. This instrument has several advantages. The respondents are more cooperative, misunderstandings may be more easily avoided, while it provides information additionality and the scheme effects. The chapter presents the firm and bank questionnaires to be used as part of this work, and the criteria for the sample selection from the total population of firms receiving loan guarantees. The response rate to the sample was 66 percent, so that 214 questionnaires were collected of which 142 were completed. These focus on Amman and the manufacturing sector. In the next chapter we present the survey results, and in Chapter 8 we undertake some statistical analysis of the data.

Table 6.1: The Sample Selection

		Manufacturing	Services	Retail	Agriculture	Total
Amman	Sample	35	30	5	5	75
	Population	336	830	123	13	1302
Irbid	Sample	12	10	5	3	30
	Population	35	284	33	9	361
Zarqa	Sample	8	4	3	0	15
	Population	28	93	9	2	132
Balqa	Sample	7	6	0	2	15
	Population	25	60	4	9	98
Aqaba	Sample	13	2	0	0	15
	Population	108	39	12	0	159
Total	Sample	75	52	13	10	150
	Population	532	1306	181	33	2052

Note: The total number of firms in receipt of guaranteed loans during 1994-1999 was 2244 in Jordan, but there were 2052 in five governorates.

Service sector include all other activities in this sector except retail.

Table 6.2: Achieved Sample

		Manufacturing	Services	Retail	Agriculture	Total	Non Participants	
Amman	Achieved	35	30	5	5	75		
	Sought	35	30	5	5	75	19	(20%)
Irbid	Achieved	9	9	3	3	24		
	Sought	12	10	5	3	30	19	(44%)
Zarqa	Achieved	8	4	3	0	15		
	Sought	8	4	3	0	15	7	(32%)
Balqa	Achieved	7	6	0	2	15		
	Sought	7	6	0	2	15	9	(37%)
Aqaba	Achieved	11	2	0	0	13		
	Sought	13	2	0	0	15	10	(40%)
Total	Achieved	70	51	11	10	142		
	Sought	75	52	13	10	150	64	(31%)

## CHAPTER 7

### THE SURVEY RESULTS

#### 7.1 Introduction

This chapter is concerned with the analysis and presentation of the data collected as part of the survey of 142 firms. This is the sample of firms drawn from the population of 2,052 firms receiving loan guarantees over the period 1994-99 and distributed across the five main governorates of Jordan (Amman, Irbid, Zarqa, Balqa and Aqaba). The collection of this data was described in Chapter 6. The purpose of this chapter is to identify and examine the following kinds of issues: general information about the interviewees; information about the firms taking-up guaranteed loans; details of loans taken-up prior to JLGC support; the characteristics and financing of the project; the economic effects of the project; additional information, including feedback on the operation of the scheme; and the view of commercial banks on the loan guarantee scheme. The importance of this chapter is to reflect directly the view point of the recipients of the loan guarantees on the impacts and efforts of the scheme. The qualitative analysis of the chapter is based on a cross-tabulation of the variables and responses that appear in the questionnaire, distributed according to the four main economic sectors. This enables us to focus special attention on the manufacturing sector, reflecting its special significance, but also to examine the effect of the scheme across the three sectors.

The econometric analysis of the survey data is carried out in Chapter 8, where the variables are given labels (see Appendix Table 8.1). In order to help relate the different analysis (ie. in this chapter and the next), and to cross-reference the material, the variables are also referred to in capital letters in the tables of this chapter. For example, *TITLE* refers to the job title of the interviewee (see Table 7.1, Appendix Table 8.1). Not all of the survey data is subsequently included in the statistical analysis; especially where the data is subjective in nature, so that some of the variables do not have labels, while others subsequently are excluded because they prove not to be very useful. Unless specifically indicated, the term 'firm' is used to describe the plant that was surveyed, even though there may be other plants within the same group.

## **7.2 Demographic Data on Interviewees**

This section describes the demographic characteristics of the sample respondents, including such factors as job title, educational attainment, gender and age. This type of information is very useful in order to determine the nature of small and medium-sized firms in Jordan that take up loan guarantees. The information is summarized in Table 7.1.

### ***7.2.1 Job Title***

The vast majority of the respondents were general managers, around 90 percent, whilst only 3 percent were sales managers and 4 percent were financial managers (see Table 7.1). This is consistent with the main characteristics of small and medium-sized enterprises in Jordan and elsewhere. The owners of the SMEs are also the managers, as the type and scale of the activities do not require specially-qualified managers (see Chapter 3). All the interviewees in both the retail and agriculture sectors are both managers and owners. This reflects the nature and culture of work in these sectors. Interviewees in the manufacturing sector have different job titles, 86 percent are general managers, 4 percent are financial managers and 3 percent each sales managers and partners. Despite the low percentage of other job titles, this reflects the complexity and variety of work in this sector compared with the other sectors, and its requirements for different kind of qualification (see Table 7.1).

### ***7.2.2 Educational Attainment***

Table 7.1 shows that more than half of the respondents are qualified with a first degree or higher (BSc, MSc and PhD), while those who were illiterate or had not completed secondary schools represented 44 percent. The majority of interviewees in all sectors had a first degree at least, so that they are generally high-quality firms. Around half of the interviewees in the manufacturing and agriculture sectors have a secondary school diploma or less, but this drops to around one third in the service and retail sectors. This reflects the fact that the majority of SMEs in Jordan are family businesses, and the researcher observed during his survey work that the interviewees often left school in order to inherit the family business. Also Table 7.1 shows the very low percentage of interviewees that gained a higher

degree (MSc or PhD). In Jordan, as elsewhere, it is not necessary to have an extremely high level of educational attainment in order to manage a small or medium-sized enterprise.

### ***7.2.3 Gender***

As was mentioned in Chapter 2, the participation of Jordanian women in the labour force is relatively low. Also, the questionnaire findings presented in Table 7.1 show that the participation of women in entrepreneurship is as low as 10 percent. This may reflect the predominance of the social values in Jordanian society, which does not encourage women to practice ownership. It is apparent that women prefer to work in the service and manufacturing sectors (Five Year Plan, 1993-1997); 15 percent of the interviewees in the service sector are female and they represent around 10 percent in the manufacturing sector. Overall, 90 percent of the interviewees are male. All of the interviewees in the agriculture sector are male, which is probably due to the physical nature of work in this sector, and that land tends to be inherited by males.

### ***7.2.4 Age and Experience***

More than one third (33 percent) of the sample interviewees were under 40 years of age, but those between 41 – 50 years old represent more than half of the interviewees in our sample firms (56 percent). This is not representative, as the majority of the population is less than forty years old (see Figure 7.1). It is apparent from Table 7.1 that in each sector most of the interviewees are in the age group 41 – 50 years. The average age for the interviewees in the sample is around 45 years old, but 45, 44, 47 and 51 years old for the interviewees in the manufacturing, services, retail and agriculture sectors respectively (for more details see Figure 7.1). The highest age density among male interviewee is in the 41 – 50 age group, whilst among women it is in the 25 – 40 age group. This may indicate that the majority of the respondents, whether male or female, were young (but not very young), which reflects the characteristics of the Jordanian population (see Chapter 2). The average year of experience of interviewees in the sample firms is around 15 years. This is little different between sectors (it is 16 years for interviewees in manufacturing and agriculture and 15 and 14 years in the service and retail sectors respectively).

### 7.3 Characteristics of the Sample Firms

The purpose of this section is to present some background information about the nature of the sample firms, such as their legal status, organisation, location, date of start-up, size of firm, main competitors and the constraints facing the sample firms.

#### *7.3.1 The Legal Status, Organisation and Location of Firms*

The legal status of the sample firms is shown in Table 7.2. Overall, it tells us that roughly two-thirds (65 percent) of the firms are sole traders. This is representative of the Jordanian economy as a whole, where more than 70 percent of the firms are sole traders. Another 27 percent of the sample firms are partnerships, and the remaining 8 percent are privately owned, where the difference between partnership and private ownership is that the latter are registered as private shareholding firms.

If the pattern is examined across the different activities, then we see that a much higher proportion of the manufacturing firms are either in partnership or private ownership. This because these firms are generally much larger in scale (see Table 7.2). Firms in retail or agriculture are nearly always sole traders, while around a quarter of the service firms are partnerships, again reflecting a larger scale of operation.

The legal status of firms is closely associated with the organisational structure of the firm. Table 7.2 shows that nearly 90 percent of the sample firms are single-plant establishments. This is relatively lower for manufacturing, where 10 percent of firms are multi-plant operations and 6 percent of firms are part of a larger group. In the case of retail and agriculture all the firms are single plant, while 92 percent of the service firms are also single plant. Table 7.2 shows that around half of the sample firms (52 percent) are located in Amman, while 17 percent of the sample is in Irbid, 11 percent in each of Zarqa and Balqa, and only 9 percent of the sample firms is located in Aqaba.

#### *7.3.2 The Start-Up Date of Firms*

The start-up date of the firms is shown in Table 7.3. This table shows both the start-up date of the plant that was surveyed, and its start-up date at the present site. These give a very similar pattern because there is relatively little relocation. Table 7.3 also shows that

around two-thirds of the sample firms started in the 1990s, and another 23 percent started in the 1980s, so that only 10 percent of firms started prior to this time. This means that all the sample firms are relatively new enterprises.

### ***7.3.3 The Size of the Firm***

Questions were asked to assess the size of the firms, including its number in employment and sales turnover. Table 7.4 shows that around one-third of the sample firms employed less than five workers, whilst 80 percent of the firms in the sample employed less than 20 workers. The average number of employees in the sample firms is only 12. In the manufacturing sector around 20 percent of the sample firms employed less than five workers, and around a half of the employees in this sector were located in the firms that employed between 10 to 50 workers (Table 7.4), so that these firms are larger. All of the sample firms in the retail sector employed less than 10 workers, as did 70 percent of the firms in both the agriculture and service sectors.

A second question was asked to assess the size of the firms according to their sales turnover. The results are also presented in Table 7.4. The majority of the sample firms (65 percent) had current sales turnover of between J.D 26 thousand and 1 million, whilst around 20 percent of them had a turnover of less than J.D 25 thousand. In general, it is very rare to find a small or medium-sized firm with a current sales turnover of more than J.D 1 million, and Table 7.4 shows only 3 percent of the sample firms are in this category. Table 7.4 shows that 5 percent of the firms in the manufacturing sector have sales of more than J.D 1 million, and 22 percent of firms have sales of more than J.D 300 thousand. This last figure is 10 percent in agriculture and only 4 percent in the service sector, but zero in the retail sector. This is related to the size of the activities.

It is apparent from Figure 7.2 that around 80 percent of the sample firms provided between 75 – 100 percent of their sales to the local market, while more than 90 percent of firms provide more than a half of their sales to the local market. Only one-third of firms sell more than 50 percent of their output to the national market (excluding the local market), and only 10 percent of the firms provide more than 10 percent of their sales to the international market (all of which are in the manufacturing and service sectors). This is because the vast

majority of SMEs depend on the local market due to the high cost of selling in national and international markets.

### *7.3.4 The Constraints Facing Firms*

Firms were also quizzed on the major constraints facing them. Table 7.5 illustrates the main constraints and problems that face the firms in our sample. The main problems are placed in order from the most important to the least important from the interviewee's point of view. It is apparent that 'competition' is the most important problem with 70 percent of the sample firms pointing to this, while only 9 percent consider the 'low level of technology' that they use as a problem. An explanation of the most important constraints facing the firms is now given. These are given in Table 7.5.

Competition: The overwhelming problem perceived by respondents is competition in price and marketing. In fact, competition accounted for as much as 68 percent of the responses. They felt that their businesses suffered mainly from small firms competition in Jordan (77 percent), followed by larger firms in Jordan (19 percent) and imports (19 percent) (see Appendix Table 7.1). The main causes of local competition (either for small or large firms) may be due to the policy of the free-market economics, which leads to a high level of competition. However, some of the respondents quoted that the competition they face is normal and not severe, whilst some stressed strongly the heavy burden of competition. Approximately two-thirds of manufacturing, retail and agriculture interviewees complained about competition in price and marketing.

Lack of Finance: This was the second most common constraint that SMEs in Jordan experienced in their view. This problem was felt by around 60 percent of the sample firms. It may indicate that there are not enough loans available, which could be used by owner-managers to develop their businesses, and possibly indicates a 'finance gap' in the credit market. Some respondents described the current loan conditions as "slavery conditions", because of high interest rates and high collateral requirements. The agriculture sector had the higher proportion of firms reporting that they suffer from a lack of finance, and accounted around 80 percent of the sample firms, followed by services (63 percent) and manufacturing (57 percent).

Labour Market: Around 42 percent of the sample firms said that they experienced problems with the labour market, including a lack of skilled labour. The majority of the interviewees who complained about this were from the manufacturing sector (50 percent).

Government Regulations: Government regulations were the fourth-ranked factor perceived as problematic. More than 25 percent of the respondents cited this. Government regulations on trade in national and international currencies, taxation, bureaucracy in the implementation of the law and custom duty procedures were the subjects raised by the interviewees. These problem areas perhaps should be made the subject of specific study to assess how systems and methods could be modified to be more supportive of small firms. One-third of interviewees complained about government regulations in the manufacturing and service sectors, but only 9 percent in the retail sector. However, in the agriculture sector none of the respondents complained about government regulations. This is due to the support that the government has always provided in order to encourage the production of agricultural products, and to help counter other problems in this sector.

Other Constraints: Finally, the other constraints facing the firms are marketing (25 percent of interviewees complain that this is a serious problem), the price of raw materials (15 percent) and the lack of appropriate of technology (9 percent).

## **7.4 The Start-Up of the Firms**

In this section we will discuss the start-up capital of the firms in our sample and the principal financial resources. This will help clarify some of the potential factors affecting the firms' relationships with the commercial banks.

### ***7.4.1 Start-Up of the Firm***

The upper portion of Table 7.6 shows the start-up capital of the sample firms, according to that reported by interviewees. It can be seen that around one-third (32 percent) of the sample firms were started-up with capital sums between J.D 10 thousand and J.D 40 thousand, 27 percent of the firms had less than J.D 10 thousand to start-up, while more than

40 percent of the firms used more than J.D 40 thousand to start-up. Firms with loans of less than J.D 40 thousand get a higher proportion of the loan guaranteed by the JLGC.

Interviewees in the manufacturing sector were the largest group which stated that they used more than J.D 100 thousand to start-up their firms, accounting for as much as 25 percent of these firms, followed by services (18 percent) and agriculture sector (10 percent). This is because the cost of start-up for firms in the manufacturing sector is greater than in any other sector, and because they are larger in scale. However, Table 7.6 shows that around half of the sample firms (46 percent) in the retail sector used less than J.D 10 thousand to start-up.

#### ***7.4.2 The Financial Resources for Start-Up***

The financing of small and medium-sized enterprises in Jordan was expected to be mainly from private sources, self-financing or from relatives. Previous research, such as Al-Mahrouq (1999), has shown that the financial institutions offer conditions which are not found to be suitable to many entrepreneurs in SMEs. Also, the commercial banks are reluctant to provide loans to SMEs due to the high rate of risk. The phenomena of limited dealing between small firms and commercial banks (or formalised systems of raising funding) do not only affect Jordan but also the advanced countries. As Storey (1994), Haque (1999) and Aqel (1998) describe, this may be viewed as discrimination against SMEs.

The interviewees were asked about their financial resources for start-up. The majority of the sample firms indicated that their main source of funds was self financing. It can be seen from Table 7.6 that self financing accounts for around 29 percent of the sample firms as the only source for start-up capital. Around 32 percent of interviewees said that self financing and bank loans combined were the sources for financing their start-up. Around one-fifth (19 percent) of respondents were reliant on private resources for start-up (self-financing and relatives or friends), while private sources and banks came next in priority at 6 percent and banks came fifth (5 percent). Dependence on ordinary shares (partner and investors) took the lowest priority among the respondents (only 1 percent).

As Table 7.6 shows, firms in the agriculture sector depended on self-finance, the banks and private sources for financing the start-up of their businesses. Firms in the

manufacturing sector used all of the sources mentioned, including partners and investors which reflect the financial problems facing small manufacturing and how they fall back upon a greater range of sources of finance. In the important start-up stage of a firm's life cycle, more than a half (56 percent) of the respondents stated that they did not face any difficulties in obtaining financial support for starting their businesses (see Table 7.6). In the agriculture sector, 80 percent said they had no problem, whilst half of the manufacturing firms (50 percent) found it difficult to obtain finance at the start-up stage (see Table 7.6). This table also illustrates that 30 percent of the sample firms received their first guaranteed loan by the Jordan Loan Guarantee Corporation (JLGC) for start-up. In the retail and agriculture sectors only 18 and 10 percent respectively received the guaranteed loan for start-up, compared with one-third of respondents (33 percent) in each of the manufacturing and service sectors.

## **7.5 Loans Prior to JLGC Support**

Questions were asked to find out whether the firms received loans from commercial banks or any other sources before the first loan that was guaranteed by the JLGC. Table 7.7 shows that one-third (36 percent) of interviewees received loans from other sources before the guaranteed loan, while for another third (34 percent) of respondents the guaranteed loan was the first loan that they received. The question was not applicable to the other 30 percent of interviewees, as they received the guaranteed loan at the start-up stage (Table 7.7).

It is predominantly retail firms who received loans from banks or other sources before the guarantee loan, accounting for 45 percent of the sample firms in the retail sector, while 40 percent of the firms in the agriculture sector had received loans and one-third each of the manufacturing and service sectors. The remainder of Table 7.7 concentrates on those firms that received loans before the guaranteed loan by JLGC, ie. the 36 percent or 51 sample firms. It is evident from the table that 31 percent of the firms (ie. 31 percent of 51 firms) used the loans received prior to the JLGC support for working-capital purposes, whilst around 24 percent used them for each of start-up, capital purchases and financing new products or services. The most interesting point is that the majority of the firms in the manufacturing sector used the loans for two purposes working capital (42 percent) and financing new products or services (25 percent), while 39 percent of loans were used for capital purchases

in the service sector. Sixty and 50 percent of loans (prior JLGC support) in the retail and agriculture sectors were used for start-up purposes (see Table 7.7).

Firms were also asked about what security they pledged to receive the loans. More than a half of the firms that received loans prior to JLGC support (54 percent) used real-estate assets as securities for these loans, while 25 percent of respondents used another guarantor as security followed by goods and equipment (19 percent), as in Table 7.7. Only one interviewee in the service sector said he didn't pledge any type of security, and he reported that:

*“As you see the location of my firm is close to my bank branch. I have been dealing with this branch for 15 years or more and I have a very good relationship with the manager of the branch. They can notice my activities and they can hear and know about my reputation in the market, so I don't need to insure the loan. The branch manager told me that he would transfer my application form to the JLGC to guaranteed the loan without any other kind of securities, and he would do this because I am a friend of his and he knows my work well, even though the amount of the loan was J.D 10,000”.*

It can be seen from Table 7.7, that only firms in the manufacturing and service sectors used goods and equipments as a security for borrowing from the commercial banks, around 13 percent in manufacturing and 33 percent in service sector

According to Table 7.7, the value of collateral pledged to insure the banks rights was more than the value of the loan for 58 percent of the sample firms, while for 21 percent the value of collateral was less than the value of the loan, and only for 19 percent of the total sample firms were the amounts equal. The answer to the questions about the kind and value of collateral used as security for the loans from the commercial banks reflects the importance of real-estate as a major type of collateral in the Jordanian credit market. For example, Aqel (1998) and Al-Mahrouq (1999) report that more than two-thirds of loans provided to SMEs by commercial banks in Jordan were secured by real-estate assets to insure the banks rights, and most likely the value of real-estate assets were more than the value of the loan.

## **7.6 The Take-Up of JLGC Support**

It is useful to discuss the basis for the take-up of JLGC support to clarify the firms' experience with the guaranteed loans. This is achieved by discussing the awareness of JLGC loans, the purpose of the JLGC loans, the loan and project size, and the arrangement of the most recent JLGC loan.

### ***7.6.1 Awareness of JLGC Loans***

Table 7.8 shows that more than three-quarters (77 percent) of the sample firms were first aware of the JLGC guarantees through the commercial banks, while 22 percent of our sample firms stated that they heard about the JLGC loans through one of the following: family and friends (8 percent), a colleague in the firm (6 percent), another business (3 percent) or Chamber of Commerce/Industry body (3 percent). Finally, just 2 percent of respondents found out about the JLGC loans through others sources, such as an advertisement in a newspapers or magazine. This means that none of the respondents became aware of JLGC loan through the Jordan Loan Guarantee Corporation itself. This is a reflection of the JLGC marketing policy, which is clearly not active enough and not getting through to the relevant businesses. A lot more work must be done in this area if the target businesses are to benefit. Firms in all of the economic sectors were aware of JLGC loans through their bank (more than two-thirds of the sample firms confirmed this).

Half of the interviewees (50 percent) found themselves more likely to seek a bank loan once they became aware of the existence of the JLGC, whilst the rest said that awareness of the JLGC had made no difference to them. Thus, the first impression gained is that the JLGC supports borrowers plans to use commercial banks as sources of finance (see Table 7.8).

It was asked whether the sample firms had approached their bank or the JLGC itself when they had applied for JLGC support. Only 15 percent of respondents had approached the JLGC directly and this was because they had heard about the JLGC from sources rather than their bank (22 percent of firms were in this category). This confirms the problem with the scheme's marketing strategy. It was also confirmed by the fact that more than 70 percent of the firms first approach was to the bank, and that they discussed a normal bank loan before the guaranteed loan by the JLGC. The interviewees went to their bank seeking a loan and

when it became clear that they were unable to meet the bank's conditions, the bank staff had then about the JLGC as a way of support, if they found the project to be a feasible and successful project (see Table 7.8).

### ***7.6.2 Purpose of JLGC Loans***

The sample consists of 142 firms in total and they received 154 loans guaranteed by the JLGC, which means that 12 firms (8 percent) received two guaranteed loans. Table 7.9 shows that all firms in the retail and agriculture sectors only received one guaranteed loan, while more than 10 percent of respondents in the manufacturing sector received two guaranteed loans, followed by 8 percent in the service sector. The purpose of the first guaranteed loan received by sample firms is explained in Table 7.9. More than one-third (37 percent) of interviewees used the first loan for capital purchases, and 30 percent of these loans were used for start-up or the financing of new products or services.

According to Table 7.9, most of the first guaranteed loans in agriculture were used for working capital (60 percent), whilst the vast majority of guaranteed loans in both the retail and service sectors were used for capital purchases and working capital. However, one-third of the first guaranteed loans in the manufacturing sector were used for start-up purposes, and more than one-third (39 percent) for capital purchases.

More than a half (58 percent) of the sample firms that received a second guaranteed loan used it for capital purchases, while the remainder (42 percent) used it for working capital. As mentioned above, the second guaranteed loans were received only by firms in the manufacturing and service sectors. Two-thirds of firms in the manufacturing sector used the second guaranteed loans for capital purchases, while half of the loans were used for the same purpose in the service sector (see Table 7.9). In the remainder of this chapter the discussion focuses on the most recent loans received by the sample firms. This means that for 12 firms we refer to the second loan received.

### ***7.6.3 Size of Loans and Projects***

Table 7.10 shows that more than two-thirds (69 percent) of the most recent loans were used for capital purchases and working capital. Whilst 28 percent of respondents used the loans for starting-up their businesses, and only 3 interviewees (2 percent) stated that their

most recent guaranteed loan was used for financing new products or services. This reflects a lack of innovation or ability of SMEs to introduce new products or services.

The most recent loans that were used to finance new products or services were in the manufacturing sector (two of the total loans) and only one was in the retail sector, as Table 7.10 shows. In spite of the low percentage of these firms in the manufacturing sector, it gives an indication that this sector is relatively better at innovation and introducing new products or services in order to enter new markets. However, small and medium-sized firms in all sectors need more encouragement to involve by the provision of financial support. Table 7.10 shows that more than 30 percent of sample firms in the manufacturing sector had used the most recent loans to start-up their project; this presumably is because the manufacturing sector is more flexible in allowing new firms to enter it.

The average amount of the most recent loans guaranteed by JLGC; the size of the project for different purposes; and the ratio of the loan size to the project size are shown in Table 7.11. The average loan amount used for start-up in the manufacturing sector was around J.D 20 thousand, while the lowest average value of the loan for start-up purposes was little different and in the service sector, at around J.D 18 thousand. The average amount of guaranteed loan used for start-up is between J.D 18 thousand in the service sector to 30 thousand in the agriculture sector. The manufacturing sector used the highest average amount of recent guaranteed loans for purposes other than start-up-for capital purchases the average value was around J.D 26 thousand, while it was around J.D 15 thousand on average for the other sectors as shown in Table 7.11. The average amount of loan for working capital purposes was around J.D 38 thousand in the manufacturing, but only J.D 23 thousand in the service sector and J.D 14 and J.D 13 thousand for loans in the retail and agriculture sectors respectively.

The average size of the project that the firms were trying to finance is also shown in Table 7.11. Generally, the size of the project in the manufacturing sector is greater than that in other sectors. The exceptions are start-up projects in the agriculture sector, the average being around J.D 80 thousand, while the lowest project size is for start-ups in retail at around J.D 17 thousand on average (see Table 7.11).

Table 7.11 also shows the ratio of the average loan size to the average project size, which reflects the percentage of what the borrower needed, and that was partially covered by the guarantee. In the case of start-ups, the highest ratio of loan to project size is in the service sector at around 50 percent, but the lowest is in the agriculture sector at 38 percent. This is the lowest ratio not only for start-up projects, but for all sectors and all purposes. This is due to the high level of risk in the agriculture sector and the lack of information available about firms' performance at this critical stage. Therefore, banks are reluctant to cover all of the project needs, and they let the borrower participate in financing the project as far as possible, so as to reduce the moral hazard for borrowers.

Projects concerned with a capital purchase have the greatest ratio of loan to project size. The highest ratio is 100 percent in the agriculture sector, and the lowest ratio is in the service sector at around 70 percent. The projects involving working capital have ratios of 75 percent in the manufacturing sector and 60 percent in the retail sector. This reflects the fact that the banks and financial institutions prefer to provide loans to firms that are looking for projects related to capital purchases or working capital, because the firms at this stage have enough indicators about their performance. The maximum ratio of loan to project size is not more than 50 percent in projects concerned with start-up or the financing of new products or services. This reflects the lack of information about the firms in the start-up stage, and the uncertainty about products that are seeking new markets. These are factors which contribute to the high cost of innovation in SMEs.

#### ***7.6.4 Arranging the Loans***

In the case of the most recent loans that were guaranteed by the JLGC the vast majority of the sample firms (82 percent) had approached their bank first, while only 18 percent approached the JLGC directly (see Table 7.12). Table 7.12 gives the responses to the question: "Why did the firm take a JLGC loan?" Around half of the interviewees (48 percent) justified their need to take a guaranteed loan as being due to the lack of collateral that can be pledged to the banks. Some other respondents (26 percent) replied that they had taken the guaranteed loan following their bank's request and policy. Thirteen percent of the sample firms said that they had taken the guaranteed loans because of insufficient track records, and

only 6 percent replied they used the guaranteed loans for other reasons. One of them summarised these reasons as follows:

*“Just to encourage the banks to lend us we pledge collateral, equal to more than the value of the amount of the loan. And we requested from the bank to transfer our loans to the JLGC to get its guarantee for the loan, so the total value of security (real-estate collateral and the JLGC guarantee) was around 200 percent of the amount of the loan, so we use the JLGC guarantees just to encourage the bank to lend us.”*

More than one-third (40 percent) of the sample firms in the agriculture sector did not know the reasons that they had received a guaranteed loan, since they had enough collateral. This reflects a lack of trust by the commercial banks in the agriculture sector generally. This was shown in Chapter 3, where the total credit facilities provided to this sector is the lowest compared with the other sectors, and the banks just transfer applications to the JLGC. Table 7.12 also shows that around three quarters (75 percent) of the sample firms reported that the guaranteed loans took more than three weeks to arrange. Seven percent of the interviewees found that the loans need less than a week to arrange, and half of them said that the loans needed three to five weeks.

The survey result shows that around 90 percent of the respondents reported that the rate of interest on the guaranteed loans was between 10 and 15 percent, as shown in Table 7.12. This result is consistent with the Central Bank of Jordan (2000) report, which states the average interest rate in the Jordanian credit market is between 10 – 15 percent. Only 9 percent of interviewees said the interest rate was less than 10 percent. All firms in the retail and agriculture sectors were charged between 13-15 percent, but 14 percent and 6 percent of interviewees in the manufacturing and service sectors respectively paid less than 10 percent. This is because these firms received their guaranteed loans from the Industrial Development Bank (IDB), which is funded by the government to support SMEs in the manufacturing sector and some activities in the service sector. This is under special conditions, so that the interest rate is lower than the rate for the commercial banks. Overall, Table 7.12 shows that three-quarters of the respondents believed that the interest rate on the guaranteed loan was the same as the market rate for (77 percent), while 13 percent believe that the interest rate on these loans was higher, and only 8 percent had the opposite view point.

## 7.7 Financing of the Project

The purpose of this section is to give an idea about the finance of the projects receiving JLGC loan guarantees. This includes details on the administration of the bank loans, the size of the guaranteed loan, the sources of finance, the security offered, the additionality of the guarantee and subsequent finance after the guaranteed loan. As mentioned above the focus of the discussion is on the most recent loan.

### *7.7.1 Administration of the Bank Loan*

Table 7.13 shows the administration of the bank loan, and whether the firms prepared any documents to support their application. Nearly 70 percent of the interviewees reported that the commercial banks asked them for a business plan or a feasibility study, or possibly both. However, one-quarter of the firms reported that the business plan was enough for the banks to provide them with the loan and to secure a guarantee, and 13 percent said a feasibility study was sufficient alone. Around one-quarter of the sample firms did not prepare any special documents. A cash-flow statement was rarely prepared for the guaranteed loan, since only 5 percent of total sample prepared one. This is because the cash-flow concept is a new idea in Jordan, and the vast majority of entrepreneurs do not know what it is nor how to prepare it.

Table 7.13 shows that three-quarters (76 percent) of the firms in the service sector prepared a business plan or a feasibility study, or both, according to the commercial banks' request. Two-thirds of firms in the manufacturing sector were asked by the commercial banks to prepare any or both of the above documents. It can be observed from the table that the firms in the retail and agriculture sector were asked to prepare a business plan only, due to the simplicity of the work in these two sectors compared with work in the other sectors. However, firms in manufacturing were more able to prepare a cash-flow statement compared with the other sectors (5 firms out of a 7 firms), despite the low number of firms that prepared a cash-flow statement in total. This reflects the ability of this sector to adopt broader approaches to obtain more funds, and it explains this sector's liability to develop its accounting and financial systems and regulations in order to pursue this.

The vast majority of the interviewees believed (70 percent) that the preparation of a business plan, feasibility study or a cash-flow statement helped them to secure the guaranteed loan (see Table 7.13). This was lower in manufacturing (66 percent), but more important in retail (82 percent) and services (76 percent). However, the commercial banks' follow-up activities were not good enough from the interviewee's point of view. More than two-thirds (60 percent) of the sample firms said they did not receive ongoing advice and guidance after receiving the guaranteed loan (see Table 7.13). The manufacturing sector had the lion's share of advice and guidance (44 percent received such support), and this may partly be explained by the lack of default cases in this sector. In the agriculture sector, no ongoing bank guidance was received, which can lead to firms having a higher rate of default (Salah, 1998).

### ***7.7.2 The Size of the Loan Guaranteed***

Table 7.14 shows that the average size of loan is J.D 22,600. However, more than one-third (39 percent) of the sample firms receiving a guarantee had a loan of less than J.D 10 thousand. Around 24 percent of the guaranteed loans were between J.D 10-20 thousand, and 25 percent of respondents said that the value of their loan was between J.D 20-40 thousand. Only 12 percent (17 loans) of the guaranteed loans were more than J.D 40 thousand, and they averaged around J.D 65 thousand. The JLGC guarantees 50 percent of these large loans above J.D 40 thousand, so that the other 88 percent of loans received guarantees of 75 percent of the loan value (see Table 7.14). The vast majority of the loans of over J.D 40 thousand are to the manufacturing sector (65 percent). As a result, Table 7.14 shows that the size of guaranteed loans provided to the manufacturing sector is larger than the value of loans provided to any other sector. In manufacturing, 54 percent of loans are less than J.D 20 thousand, compared with roughly two-thirds in the other sectors. Excluding the manufacturing sector, the JLGC guarantees 75 percent of the loans that were provided to more than 90 percent of the firms. In manufacturing, it is 84 percent.

### ***7.7.3 Other Sources of Finance***

It is useful to know if the sample firms used any other sources of finance in addition to the guaranteed loan. Table 7.15 shows that 58 percent of the sample firms used finance from other sources in order to cover the project's requirements, whereas 41 percent of

interviewees found that the guaranteed loan was enough for the project (one percent of cases are missing). The manufacturing sector had less recourse to other finance. Around a half of the manufacturing firms use other additional financial sources to execute their projects (47 percent), compared with at least 60 percent in the other sectors. This means that projects within this sector are more able to access all of the amount that they require, presumably due to the good feasibility and performance of their projects.

The sources of the other finance used by the sample firms are also shown in Table 7.15. Of those cases using other sources of finance, the vast majority (93 percent) used their own sources (self financing). Only 3 percent of firms used family and friends' or other banks as a source. All of the firms in the retail and agriculture sector used their own sources, if the guaranteed loan did not cover all of the project's need (see Table 7.15).

The reasons why the loan did not cover all of the project's requirements is explored in Table 7.15 (ie. why the firm required other sources of finance). According to the interviewees, around half of the sample found that the bank refused to lend them any more. Around 34 percent of interviewees did not require more funds for their projects, as they were depending on their own sources to cover the project's need. Only 6 percent of the sample firms believed that the reason for the loan's inability to cover all the project's need was due to a lack of collateral. However, some borrowers believed that the banks refused to provide more to them due to a lack of collateral, even though they thought they had sufficient collateral. The manufacturing sector accounts for over 90 percent of firms who believe that lack of collateral is the only reason for the loan being inadequate to cover the whole of the project's need. This again partly reflects the greater awareness of this sector compared with the other sectors.

#### ***7.7.4 The Security for the Guaranteed Loans***

Even where the loans provided by banks to the sample firms are guaranteed by the Jordan Loan Guarantee Corporation, Table 7.16 shows that around 80 percent of firms still extended collateral for the guaranteed loans. This is very surprising, as the guarantees are meant to go to firms that do not have any or inadequate collateral. Around 90 percent of manufacturing sector firms extended collateral for the guaranteed loans, followed by the

retail sector (82 percent), the service sector (75 percent) and agriculture (60 percent). Around two-thirds (61 percent) of the firms that extended collateral used real-estate collateral for their loans. This reflects the importance of this kind of collateral. Usually the value of real-estate is greater than the value of the loan, and lenders prefer this kind of collateral to protect their rights. 'Another guarantor' was used as a second kind of collateral (23 percent), followed by 'goods and equipment' (14 percent) (see Table 7.16).

Manufacturing follows a similar pattern to that of all firms. An important point to notice from Table 7.16 is that the firms in the service sector are the lowest users of real-estate, as the most important kind of collateral. Only 36 percent of the firms in this sector use real-estate, while around one-third use 'another guarantor' as security, and a further one-third use 'goods and equipment'. Firms in the retail and agriculture sectors do not use 'goods and equipment' at all as collateral. This is due to a lack of equipment to pledge; thus they prefer to use real-estate and 'another guarantor' as collateral, because it is easier to provide.

Table 7.16 also shows that 68 percent of the sample firms said that the value of collateral was more than the value of the loan, while 19 percent found that the value of collateral was less, followed by 13 percent of respondents who said that the value of collateral was equal to the loan value. In the manufacturing sector around one-quarter of respondents believe that the value of collateral is lower than the value of the loans. This is higher than in other sectors, and it probably reflects the more successful performance of firms in this sector, which makes it less risky for the commercial banks. Also, some of the firms in this sector may have a long-term relationship with their bank.

### ***7.7.5 'Additionality' of the Guarantee***

This section provides an analysis of the finance 'additionality' from the interviewees' point of view. This is the extra finance that the borrower received due to the existence of JLGC, which the firm would not have received in the absence of the guarantee. In our survey we asked the firms how much extra bank loan they think they received due to the existence of the loan guarantee. The interviewees' answers are categorized in Table 7.17. More than one-third (36 percent) of the firms believe that the guarantee did not offer any additionality at all, which means that they would have received the same amount of the loan even in absence

of the JLGC. Around 21 percent of respondents believed the additionality was between 1 – 25 percent of the total loan value, 15 percent believe it was between 25 – 50 percent and 6 percent believe it was between 50 – 75 percent. Only around 10 percent of the firms believe the additional finance was greater than 75 percent of the loan value, and of these full finance additionality (ie. 100 percent) occurred in around 8 percent of firms. This means that 92 percent of the firms received only partial additionality, or none at all.

There is little difference in finance additionality between the manufacturing and service sector. In each case, around one-third of firms said the guarantee had no effect on the loan size at all, while about another third of firms put this at between 1 and 50 percent of the loan value. This contrasts with the retail sector, where over half said the guarantee had no effect, and 91 percent said it was no greater than 50 percent on the loan size. In agriculture, the guarantee seemed to have a greater effect, with half of firms saying that at least half the loan depended on the guarantee.

The interviewees were asked whether or not in their opinion the commercial banks would have been interested in lending in the absence of the loan guarantee scheme. This is another way at getting the finance additionality of the project. Table 7.17 shows that only around one-third (29 percent) of the sample firms thought that the bank would not have lent in the absence of the guarantee. This could be due to a lack of collateral or insufficient track record with the banks. Thus, around two-thirds of respondents (70 percent) think they would have been able to receive loans from the commercial banks in the absence of the guarantee scheme. This situation is similar in all sectors, as shown in Table 7.17.

The above point about finance additionality was confirmed when we asked the interviewees to make a choice between three sentences best-describing their situation when the firm applied for the guaranteed loan. Table 7.17 shows that 28 percent of the total sample firms found that the loan guaranteed by the JLGC was the only option available for them at that time. This is followed by 27 percent of firms who said “other sources of finance were available but they would only have covered part of the amount provided by JLGC”. Around 41 percent replied that the sentence which best-described their situation was that “other sources of finance were available and would have covered the full amount available through

the JLGC guaranteed loan, but they still preferred the JLGC support”. This is consistent with our other evidence reported above.

If other sources of funds were available, either for a part or for the full amount of the loan, the firms were asked why they needed to take-up the guaranteed loan? Around two-thirds of the firms said that the bank transferred their applications to the JLGC due to the bank’s requirements but without informing them, while only around 20 percent of firms took up the guaranteed loan either due to a lack of collateral (10 percent) or because they had no collateral (10 percent). This lack of information and transparency would seem to be a serious deficiency with the scheme.

#### ***7.7.6 Subsequent Finance after the Guaranteed Loan***

This section investigates whether the borrower has looked for finance subsequent to the project for which it received the guaranteed loan. It also examines if the guarantee was helpful to the firm in obtaining other loans from commercial banks, or if it made progress easier. Table 7.18 shows that only 31 percent of the sample firms (44 firms) received extra finance since the guaranteed loan. The retail sector had the lowest number of firms (18 percent) looking for extra finance, which reflects the limited needs of these firms and the relatively small scale of activities in this sector.

Obtaining subsequent finance was very easy for 39 percent of the total interviewees, as Table 7.18 shows. Only 11 percent of the firms found it very difficult to obtain other finance. In the manufacturing sector 13 of 22 firms (58 percent) found that the obtaining for subsequent finance was relatively easier after the guaranteed loan. All of the retail sector firms obtaining subsequent finance since the guaranteed loan found it very easy, although there are only two cases. Table 7.18 also illustrates that around 90 percent of the firms that obtained other finance (ie. 90 percent of 44 firms) found that the guaranteed loan was helpful to them, so that only 10 percent of firms said that the guaranteed loan did not help obtain new finance. All of the firms saying it was not helpful were in the manufacturing sector.

### **7.8 The Economic Effects of the Project**

This section reports the findings on the most important economic effects of the projects that were supported by JLGC guaranteed loans. This includes the projects’ effect on

the total assets, sales turnover and the firm employment levels. These are based on responses given by the interviewees (i.e. not from financial data).

### ***7.8.1 The Project's Effects***

The most important effects of the projects can be seen from Table 7.19. The interviewees were asked whether the project led to any of the following: the opening-up of new markets, the development of new products or services, the development of new processes, leading-edge technology, an increase in exports or the creation of a new source of supply. More than half of the projects in the sample led to the opening-up of new markets (59 percent) and the development of new products or services (54 percent). Forty-eight percent created new sources of supply, while more than one-third of the projects led to new development processes (41 percent) or leading-edge technologies (35 percent). Only ten percent of projects lead to an increase in exports, which is consistent with the concentration of these firms in local and national markets (see Table 7.19 and section 7.3).

It is interesting to note that in the retail sector more than two-thirds of projects led to the development of new products or services, because the firms in this sector face strong competition from one another. Therefore they are always on the look-out for new products to market. The manufacturing projects concentrate on developing new processes (53 percent) and leading-edge technology (46 percent). This is due to the multi-process and technical systems necessary in this sector, compared with say the retail sector, where only around 10 percent of the projects led to the development of new processes and did not lead to leading-edge technology at all. Table 7.19 shows that projects in the manufacturing sector were much more likely to lead to an increase in exports. This fits in well with the previous information about the sales of these firms in international markets (see section 7.3).

### ***7.8.2 The Effect on Total Assets***

The total assets (including land) of the firms one year before they received the most recent guaranteed loan are shown in Table 7.20. Around 20 percent of sample firms did not have any assets, because they had not yet started-up. Of those that had started, one-quarter had assets between J.D 1 – 25 thousand, and a further quarter had assets of between J.D 100

– 500 thousand. Assets in the manufacturing and agriculture sectors were greater than those in the other sectors. Around 50 percent of these firms had assets of more than J.D 100 thousand, while it is only about one-third in the service sector. The maximum amount of assets in the retail sector was around J.D 100 thousand (see Table 7.20).

The assets can be expected to change due to the effect of the project that was financed by the guaranteed loan. Table 7.21 shows the changes in the firms' assets two years and three years after the date of the loan. Overall, the average amount of total assets a year before the loan was around J.D 136 thousand, but the average change in total assets was J.D 53 thousand after two years and J.D 95 thousand after three years. These appear to be strong effect. However, on average, only J.D 22 thousand (23 percent) of the change after three years was due to the project, according to the interviewees' responses. Table 7.21 also shows that the average assets for the manufacturing sector, both before and after the loan, were greater than that for other sectors. The change in assets in this sector due to the project was 26.6 percent, which is around J.D 27 thousand (ie. 26.6 percent of J.D 101.2 thousand). The smallest effects are in the retail sector, at 13 percent or J.D 6 thousands.

### ***7.8.3 The Effect on Sales Turnover***

It is also useful to have some idea of the most recent project on sales turnover. The turnover one year before the loan is shown in Table 7.20. Again, 20 percent of firms had not yet started. Around 43 percent of respondents replied that their sales turnover was between J.D 1 – 100 thousand and the remainder (38 percent) had a turnover of more than J.D 100 thousand. Around 50 percent of the firm's turnover was more than J.D 100 thousand in both manufacturing and agriculture, while it is only one-third in the service and retail sectors.

Average sales turnover one year before the loan was around J.D 121 thousand on average for all firms, while the average change in turnover after two years of the loan was nearly J.D 39 thousand and around J.D 70 thousand after three years (Table 7.21). The table also shows that the average change in sales due to the project were roughly one-sixth of total change after three years (ie. 16.7 percent). The manufacturing sector has the highest value of sales turnover before and after the project, and it was affected by the change in the sales turnover more than any other sector. According to the interviewees' responses, around 20 percent of the average sales change in manufacturing was due to the project, while this figure

was not more than 15 percent in any other sector. Again, firms' turnover in the retail sector has the lowest effect of the project after three years, at only 11 percent, which is equal to J.D 4 thousand.

#### *7.8.4 The Effect on Employment Level*

Employment is one of the most important measurements of the economic impact because of high unemployment. Table 7.20 shows that half of the sample firms (47 percent) employed between 1 – 5 employees one year before the loan, while nearly one-third (30 percent) employed between 6 – 20 workers, followed by 8 percent of firms which employed more than 20 workers. Firms in the retail sector did not employ more than 5 workers. In the manufacturing sector 13 percent of firms employed more than 20.

The average number of employees in the sample firms one year before the loan was around 7.7 workers, but this changed to 10.2 workers two years after the loan, and then to 11.9 workers after three years (Table 7.21). The average change was 4.2 workers, but only one of these jobs depended on the project that was supported by the JLGC. This table shows that the average number of workers one year before the loan in the manufacturing sector was 11 workers, which is greater than for the other sectors. It is followed by 5 employees in the service sector, 3 workers in agriculture and 2 workers in the retail sector. Also, the average change of employment in the manufacturing sector three years after the loan was greater than for other sectors. The change due to the supported project was 1.6 jobs in manufacturing and one job in the agriculture sector.

Due to the importance of employment in small and medium-sized enterprises, the interviewees were asked about the nature of the jobs that were attributable to the project three years after its implementation. A breakdown between the jobs 'created' and 'retained' is shown in Table 7.22. It shows that around 21 percent of respondents did not create any new jobs, while 46 percent of the sample firms created 1 – 5 jobs. Only 8 percent created 6 – 10 jobs and 6 percent created 11 - 50 jobs. The manufacturing sector was able to create more jobs. Table 7.22 shows that 37 percent of the firms in manufacturing created more than 5 jobs, but in the service sector only 14 percent did the same. This suggests that the manufacturing sector's ability to create jobs is greater than that for other sectors.

Regarding the jobs that are retained due to the project, 64 percent of firms reported that they didn't retain any jobs. Of those retaining jobs, most retained a very small number (generally less than 6 jobs). The manufacturing sector was able to retain a greater number of jobs, which a gain perhaps shows the greater ability of the manufacturing sector to help in solving the unemployment problem. Fifty-seven percent of manufacturers said they retained some jobs, of which a quarter retained more than 5 jobs. Firms were also asked whether their new employees had previously experience of the firm's activity. It was found that around 57 percent of firms (ie. 73 of 129 firms responding) provided jobs for workers without any experience. Of those firms responding 43 percent (ie. 56 out of 129 firms) only employed new workers with experience. The manufacturing and agriculture sectors tend to employ more people without experience compared with other sectors.

## **7.9 Feedback on the Loan Guarantee Scheme**

This section looks at the difficulties encountered by firms in receipt of guaranteed loans, the advantages and disadvantages of these loans, and the changes that the borrowers would like to see in the way that both the banks and the loan guarantee scheme operate. These comments might help improve the scheme for future applicants. The section also presents interviewees' general comments about the guaranteed loans. This feedback is based on both structured and open-ended questions.

### ***7.9.1 Difficulties Encountered with the Scheme***

Table 7.23 lists the main difficulties encountered by the sample firms with the scheme. These are in response to structured questions. It is encouraging that nearly two-thirds (60 percent) of the firms did not face any difficulties at all, according to their responses. However, for others, meeting the asset security condition is the most important problem, with around one-third (32 percent) of the firms citing it as a serious difficulty. This reflects the main problem facing small and medium-sized enterprises (ie. lack of collateral) when they seek finance from commercial banks. Banks tend to concentrate on the value of these assets, which they require to be greater than the amount of the loan. Filling-out the application form and the administrative process was not a big problem for our sample, as only one percent of respondents cited it as a difficulty. However, it should be remembered that around 70 percent were unaware that they had a guarantee. Likewise, preparing a

business plan, feasibility study or cash-flow statement was a problem for only around 7 percent of the respondents.

Firms in the manufacturing sector faced more difficulties than firms in other sectors. Forty percent of manufacturers found it difficult to meet asset security condition, and around 6 percent of these firms found it difficult to prepare a business plan, feasibility study or cash-flow statement. This might reflect the greater need of these firms for more funds. The vast majority of the firms in the retail sector did not have any difficulties at all, and only 9 percent found it difficult to meet the asset security condition. Again, it may reflect the loan size, which is smaller in this sector. The interviewees were also asked how helpful the bank was in securing the guaranteed loan. Table 7.23 shows that 81 percent of the sample firms thought the bank was helpful or very helpful, while only 3 percent found it very unhelpful. These are positive effects.

### ***7.9.2 Advantages and Disadvantages of the Guaranteed Loans***

The firms were also asked about whether the guaranteed loan had advantages over other commercial bank finance. The possible responses are given in Table 7.24, and firms could select more than one. The collateral pledged to the bank for the guaranteed loan is less than that required for a normal commercial bank loan, and according to 35 percent of respondents this was an advantage of the scheme. The grace period for the guaranteed loan was also an advantage, and was cited by 25 percent of respondents, while 22 percent found that the longer repayment period was an advantage. Other advantages were the larger available loan size (17 percent), the lower interest rate (9 percent) and the lower administrative cost of the scheme (3 percent).

During the research survey it was rare for interviewees to reply to any open-ended questions, because they tended to lack confidence in their ability, and instead preferred to choose answers from structured questions. However, we asked the interviewees if they found any disadvantages with the guaranteed loans. Only 41 interviewees responded out of the 142 firms, so that the majority could not find any disadvantages. The most important disadvantage, mentioned by 21 of the borrowers, was that they did not feel that there was any difference between the guaranteed loan and a normal loan. Other disadvantages mentioned

were that the grace period was not long enough, the monthly payment was too high, the administrative cost was the same as the commercial loans, and there is no any guidance or follow-up from the JLGC.

### ***7.9.3 Feedback on the Bank***

The feedback on the commercial banks relied on open-ended questions. However, as we mentioned above, the interviewees often did not reply to such questions, so that we do not have high responses to these questions. As such, their answers are summarized below in the form of bullet points. The most important criticisms of the commercial banks were as follows:

- The banks did not care enough about the track record of the borrower, so that when the borrower had a good track record with the bank, the banks still asked for collateral.
- Some borrowers did not know that their loan was guaranteed by the JLGC from the first day, but discovered it after few months. This is because the banks did not explain to the borrowers about the JLGC services and how they can use it.
- The borrowers did not feel that the guarantee loans were any different to other bank loans, and did offer any benefit to them.
- The banks tried to pass on to the firms the fees that they paid to the JLGC as part of the scheme.
- The loan guarantee scheme was abused by the banks, as they used it as quick source of cash in the event of loan default. They did not really care about small and medium-sized enterprises.

### ***7.9.4 Feedback on the JLGC***

The feedback on the JLGC also relied on open-ended questions. The changes that the interviewees considered would be useful to the procedures of the JLGC in the future operation of the loan guarantee scheme were as follows:

- The Jordan Loan Guarantee Scheme should deal directly with the borrowers' right from the start of the loan application process. Some borrowers reported that their

guarantee had run for a few years but that they had never met with any of the JLGC scheme staff or received any information about the scheme.

- The JLGC did not care enough about the business plan, feasibility study or cash flow statements, and usually left everything for the banks to decide. If the bank was satisfied with the documents that the borrowers provided, then so was the JLGC.
- The marketing activities for the scheme were very weak. The scheme should reach the enterprises directly, so that the JLGC does not need to wait for the bank to market the scheme's services.
- Some borrowers said that JLGC did not provide any services to SMEs, and they felt that the scheme just provided services to the commercial banks. They did not feel any difference between the guaranteed loans and other loans, so that the role of JLGC is still unclear to the borrowers.
- The JLGC work concentrates on the capital city, Amman. This will enhance the pattern of uneven development that the other governorates suffer from.
- Ninety percent of firms said they were able to pay 1 – 3 percent of the loan amount as a fee to the JLGC instead of pledge real estate collateral. Because they are paying fees to the Central Government, around 1.6 percent of the value of real estate collateral that they pledged to the commercial banks.

## 7.10 The Survey of Commercial Banks

As well as the questionnaire survey of loan recipients, the study also carried out a survey of a small number of commercial banks, in order to get their point of view on the loan guarantee scheme. These interviews were conducted with the credit managers of five out of the 19 banks participating in the scheme. All of these banks signed the Amman Agreement with the Jordan Loan Guarantee Corporation in 1994 or 1995. The commercial bank questionnaire was discussed and presented in Chapter 6. Only one of the interviewee didn't give us the precise number of the credit facilities that is provided by his bank at 1999, but for the other banks the total credit facilities they provided in 1999 was between J.D 142 million and J.D 580 million. They reported that not more than 25 percent of their total credit facilities were provided to small and medium-sized firms and of these only up to 30 percent received a guarantee under the loan guarantee scheme. The SMEs seek funds from the commercial

banks for two main reasons, working capital and start-up purposes. This result is consistent with the survey of loan guarantee recipients.

The banks told us that they put forward a firm for the guaranteed loan if the firm has a viable project, but does not have enough collateral or a sufficient history with the commercial bank, or if the firm perceived as high risk. In these cases the bank looks for more security and insurance, which is given by the JLGC. However, they reported that the most important factor to ask the firms to apply for the guaranteed loan is the lack of conventional collateral. So it is clear that collateral has a main role in the commercial bank's decision to provide loans to small and medium-size projects. Further, it is the main source of security for the loans even when guaranteed under the loan guarantee scheme. These are consistent with the firm survey results.

The documents that banks request from the firms applying for a normal loan concentrate on the business plan and feasibility study. These are generally the same documents requested from the firms if they apply for a guaranteed loan, even though the loan guarantee scheme encourages the firms to prepare a cash-flow analysis in addition to the other two kinds of documents. The scheme also asks for other documents (see Chapter 5), but these are not always seen to be so important, and indeed the banks sometimes did not give much attention to these documents at all, and the banks reported that the documents prepared by firms were often of a poor quality. Nonetheless, according to the banks the scheme always encourages the commercial banks to apply credit policy that gives priority to a project's economic feasibility and to a cash-flow analysis, and not to concentrate solely on conventional collateral. Thus, it is not surprising that the commercial banks told us that the only difference between a normal small firm loan and a JLGC guaranteed loan is the fact that the total value of collateral is less than that pledged for a normal loan.

According to the banks, they do not think that the recipient of the guaranteed loan performs any different to that at a firm receiving a normal loan. All of the banks said that the existence of the loan guarantee scheme encourages the commercial banks to make more loans to small firms, but that it was not much as they expected. This was because of the bureaucracy and form-filling involved in administering the scheme. When we asked the credit managers about the proportion of the guaranteed loans and how many would have been provided if the scheme did not exist, one of the managers reported that his bank would

provide the same loans even if the scheme did not exist at all, suggesting no finance additionality. The others reported that they would provide at least two-thirds of the loans in the absence of the guarantee.

The commercial banks were also asked about the advantages and disadvantages of the loan guarantee scheme. The advantages were as follows. It ignores the conventional collateral requirement, so that if a project is a 'good' one and has a certain profitability then it is funded. A second advantage is the provision of liquidity to banks in the event of loan default. The scheme settles the guarantee amount within three months of the claim. The other advantage is the incentives that the commercial banks can receive from the Central Bank of Jordan (see Chapter 5). One of the credit managers reported that these advantages are the main reasons for some of the banks to participate in the loan guarantee scheme.

The disadvantages are that the loan guarantees take long time to progress, especially in the case of compensation when the borrower defaults. A lot of documents are requested by the scheme, and a lot of forms need to be filled-in by the borrower. A second disadvantage is the ineffective marketing strategy for the scheme. The credit officers reported that the borrowers often seem to have no idea at all about the scheme, and some firms refuse the guarantee because they do not want a third part involved in their loan contract. Thirdly, some banks feel that in the case of loan defaults the loan guarantee scheme keeps searching until they find a mistake that has been made by the bank, and against the Amman Agreement, so as not to pay any compensation to the bank. This greatly diminishes the bank's confidence in the scheme. Finally, the banks also report that scheme decision on guaranteed loans depends more or less solely on the banks decision, rather than a separate study or evaluation of the project.

The changes that the commercial banks believe are necessary to make the loan guarantee scheme more effective are: to reduce the quantity of documents requested from the borrower and the reports and forms requested from the banks in case of default; market the scheme and carry out fieldwork to develop the scheme and to evaluate it; to trust the banks and the borrowers more; and to make it easier to progress claims in the event of default.

Finally, the last point discussed at interview was to find out the extent to which participation in the loan guarantee scheme changed the bank's behaviour in lending to SMEs. The interviewee responses varied from one to another, but we can summarise them as

follows: Participation in the loan guarantee scheme gives the banks more range to lend to SMEs in different sectors than was possible before. Not many changes in the banks' behaviour took place due to the scheme, because the scheme was still relatively new and the banks' experience with it is not substantial. The changes were not great because of the bureaucratic nature of the scheme, which made the banks wary of participating in the scheme. Generally, because of this and the difficulties in receiving compensation in the event of default the banks only lent to firms they would otherwise have lent to.

## **7.11 Conclusions**

The survey of JLGC guarantee loan recipients gives evidence on the characteristics of the scheme and its effects. In particular, it gives information on the status of the interviewees, the firms, the start-up stage, the take-up the JLGC support and the nature of projects, and the economic effects of the JLGC-supported projects. Demographic data on the interviewees' shows that 90 percent of them are managers and for half of them they have a first degree. Only 10 percent of sample participants in the scheme are women. The approximate age of a respondent is around 45 years on average, with 15 years experience. Characteristics of the sample firms show that around two-thirds of the firms were sole-trader and the majority of these firms were single-plants. Only few firms of this sample considered as old firms, because most of the sample firms were established in the last two decades.

The start-up stage capital used by the sample firms was generally less than J.D 100 thousand, indicating that the firms are generally small size. Also at this stage apparent that the self-finance and commercial banks were the principal financial sources for capital at the start-up stage. Despite the lack of the firms that have a history with commercial banks. The loans that were received from commercial banks before the JLGC support were used for working capital purposes, and around half of these loans were used real-estate assets as a security for loan as expected the value of these security were more than the values of the loan.

Most of these guaranteed loans used for capital purchases, start-up stage and working capital. The vast majority of sample firms made aware about the loan guarantee scheme by their banks. This reflects the borrowers' lack of information about the loan guarantee scheme. Around 80 percent of the guaranteed loans recipients still extended conventional collateral for the guaranteed loan. This is very surprising, as the guarantees are meant to go to

firms that do not have any or inadequate collateral. In addition to the conventional collateral, commercial banks requested from the sample firms to prepare some other documents such as feasibility study or business plan or both of them. But the commercial banks still caring more about the conventional collateral despite of the loan guaranteed by JLGC, and the documents that supported the project successful. This means that the JLGC was fall to adopt a credit policy that gives a priority to the firms that have a viable project; even they have not enough collateral.

The survey analysis shows that more than one-third of the sample firms didn't receive financial additionality at all, while 8 percent of the firms received full additionality (100 percent of the value of the loan was extra). Also one-third of the interviewees will never get the loan from the commercial banks in the absence of JLGC, which also help them to apply for subsequent finance after the guaranteed loan. The other effects of the guaranteed loan on the project that financed by the guaranteed loan are assimilate in open-up new markets, development new products or services and development of new process. Around one-quarter of the changes in total assets, one-third of changes in sales turnover and one-quarter of changes in employees after three years were due to the project that funded by guaranteed loan, which means the guaranteed loan was create some economic effects.

Here, we can observe that the loan guarantee scheme has some positive effects on the firms that received a guaranteed loans, but it is still need to do more because the scheme fall in two main points which are the conventional collateral that still requested by the banks despite the loan is guaranteed by the JLGC. And the scheme did not adopt the credit policy completely or successfully. So the scheme faces some difficulties and some improvements to be do its mission. Finally, the survey analysis of the commercial banks shows that the changes in the banks' behaviour in lending to SMEs were not great, due to the bureaucratic nature of the scheme, and difficulties in receiving compensation in the event of default, the banks only lent to the firms they would otherwise have lent to.

Having described the nature of the sample survey of firms and the nature of the data at our disposal, in the next chapter we utilize this data to undertake some econometric analysis.

Table 7.1: Status of Interviewee

Job Title ( <i>TITLE</i> )	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Manager	61	(86)	47	(92)	11	(100)	10	(100)	129	(90)
Sales Manager	2	(3)	2	(4)	0	(0)	0	(0)	4	(3)
Financial Manager	5	(8)	0	(0)	0	(0)	0	(0)	5	(4)
Partner	2	(3)	2	(4)	0	(0)	0	(0)	4	(3)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Level of education ( <i>EDUC</i> )	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
PhD	2	(3)	3	(6)	0	(0)	1	(10)	6	(4)
Master degree	3	(4)	2	(4)	0	(0)	0	(0)	5	(3)
First degree	32	(46)	26	(51)	7	(64)	4	(40)	69	(49)
A level or less	33	(47)	20	(39)	4	(36)	5	(50)	62	(44)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Gender ( <i>GENDER</i> )	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Male	64	(91)	44	(86)	10	(91)	10	(100)	128	(90)
Female	6	(9)	7	(14)	1	(9)	0	(0)	14	(10)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Age and Experience	Mean	Mean	Mean	Mean	Mean
Approximate age ( <i>AGE-INT</i> )	45	44	47	51	45
Years Experience ( <i>EXPER</i> )	16	14	15	16	15

Table 7.2: Legal Status Organisation and Location of Firms

Legal status ( <i>LEGAL</i> )	Manufacturing		Services		Retail		Agriculture		Total	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
Sole-trader	36	51	36	71	10	91	10	100	92	65
Partnership	24	34	14	27	1	9	0	0	39	27
Private ownership	10	15	1	2	0	0	0	0	11	8
<b>Total</b>	<b>70</b>	<b>100</b>	<b>51</b>	<b>100</b>	<b>11</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>142</b>	<b>100</b>

Organisation ( <i>ORG</i> )	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Single-Plant	59	84	47	92	10	91	10	100	126	89
Multi-Plant	7	10	3	6	0	0	0	0	10	7
Part of Large group	4	6	1	2	1	9	0	0	6	4
<b>Total</b>	<b>70</b>	<b>100</b>	<b>51</b>	<b>100</b>	<b>11</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>142</b>	<b>100</b>

Location ( <i>LOCATE</i> )	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Amman	35	50	30	58	5	46	5	50	75	52
Irbid	9	13	9	18	3	27	3	30	24	17
Zarqa	8	11	4	8	3	27	0	0	15	11
Balqa	7	10	6	12	0	0	2	20	15	11
Aqaba	11	16	2	4	0	0	0	0	13	9
<b>Total</b>	<b>70</b>	<b>100</b>	<b>51</b>	<b>100</b>	<b>11</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>142</b>	<b>100</b>

Table 7.3: Age of the Firms

Start-up Date of Firm	Manufacturing		Services		Retail		Agriculture		Total	
	Year (AGE)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.
1996-1999	25	(36)	21	(41)	3	(27)	1	(10)	50	(35)
1990-1995	21	(30)	13	(25)	6	(55)	5	(50)	45	(32)
1980-1989	17	(24)	11	(22)	1	(9)	4	(40)	33	(23)
1960-1979	3	(4)	6	(12)	1	(9)	0	(0)	10	(7)
1946-1960	2	(3)	0	(0)	0	(0)	0	(0)	2	(1.5)
Pre-war	2	(3)	0	(0)	0	(0)	0	(0)	2	(1.5)
n/known	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>100</b>

Start-up Date of Firm at this Site											
Year	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	
1996-1999	27	(39)	21	(41)	3	(27)	1	(10)	50	(35)	
1990-1995	22	(31)	13	(25)	6	(55)	5	(50)	45	(32)	
1980-1989	16	(23)	12	(24)	1	(9)	4	(40)	33	(23)	
1960-1979	4	(4)	5	(10)	1	(9)	0	(0)	10	(7)	
1946-1960	1	(3)	0	(0)	0	(0)	0	(0)	2	(1.5)	
Pre-war	0	(0)	0	(0)	0	(0)	0	(0)	2	(1.5)	
n/known	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>	

Note: There is no variable label for the start-up date at this site as it more or less identical to the AGE variable.

Table 7.4: Size of the Firm

Employment size of plants (EMP)												
No. of employees	Manufacturing		Services		Retail		Agriculture				Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No. of employees	Mean
0 - 4	15	(21)	22	(43)	7	(64)	4	(40)	48	(34)	133	3
5 - 9	15	(22)	15	(29)	4	(36)	3	(30)	37	(26)	230	6
10 - 19	17	(24)	11	(22)	0	(0)	2	(20)	30	(21)	418	14
20 - 50	20	(20)	2	(4)	0	(0)	1	(10)	23	(16)	658	29
More than 50	3	(4)	1	(2)	0	(0)	0	(0)	4	(3)	320	80
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>	<b>1759</b>	<b>12</b>

Sales turnover of plants (TURN)												
Turnover (JD'000s)	Sector										Total (JD,000)	Mean
	Manufacturing		Services		Retail		Agriculture					
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)		
Less 25	11	(16)	11	(22)	1	(9)	3	(30)	26	(18)	392	15
26 - 75	10	(14)	14	(27)	2	(18)	2	(20)	28	(20)	1,276	46
76 - 150	12	(17)	8	(16)	4	(36)	0	(0)	24	(17)	2,665	111
151 - 300	14	(20)	9	(17)	1	(9)	2	(20)	26	(18)	5,950	229
301 - 1,000	12	(17)	1	(2)	0	(0)	1	(10)	14	(10)	7,420	530
1,000 - 2,000	1	(2)	0	(0)	0	(0)	0	(0)	1	(1)	1,500	1,500
More 2,000	2	(3)	1	(2)	0	(0)	0	(0)	3	(2)	7,800	2,600
Missing	8	(11)	7	(14)	3	(28)	2	(20)	20	(14)		
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>	<b>27003</b>	<b>190</b>

Table 7.5: Constraints Facing Firms

Nature of Constraints	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Price Competition	51	(73)	30	(59)	8	(73)	7	(70)	96	(68)
Lack of Finance	40	(57)	32	(63)	5	(45)	8	(80)	85	(60)
Labour Market	36	(51)	19	(37)	2	(18)	3	(30)	60	(42)
Government Regulations	22	(31)	15	(29)	1	(9)	0	(0)	38	(27)
Marketing	21	(30)	7	(14)	1	(9)	6	(60)	35	(25)
Price of Raw Materials	16	(23)	5	(10)	0	(0)	1	(10)	22	(15)
Technology	7	(10)	4	(8)	0	(0)	2	(20)	13	(9)
Other	1	(1)	0	(0)	0	(0)	0	(0)	1	(1)

Note: The interviewee can choose more one answer.

Table 7.6: Start-Up of the Firm

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Start-Up Capital (JD 000's) (CAP)</b>										
Up to 10	20	(29)	12	(23)	5	(46)	1	(10)	38	(27)
10 to 40	20	(29)	20	(39)	2	(18)	4	(40)	46	(32)
40 to 100	12	(17)	10	(20)	4	(36)	4	(40)	30	(21)
More than 100	18	(25)	9	(18)	0	(0)	1	(10)	28	(20)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Principal financial resources</b>										
Self finance and banks	22	(32)	16	(31)	5	(46)	3	(30)	46	(32)
Self finance	22	(31)	15	(29)	4	(36)	1	(10)	42	(29)
Self finance and relatives or friends	9	(13)	11	(22)	2	(18)	5	(50)	27	(19)
Self finance, relatives or friends and banks	5	(7)	3	(6)	0	(0)	0	(0)	8	(6)
Banks	2	(3)	5	(10)	0	(0)	0	(0)	7	(5)
Relatives or friends	4	(6)	0	(0)	0	(0)	1	(10)	5	(3)
Self finance and partners or investors	2	(3)	0	(0)	0	(0)	0	(0)	2	(2)
Partner or investors	1	(1)	0	(0)	0	(0)	0	(0)	1	(1)
Other	3	(4)	1	(2)	0	(0)	0	(0)	4	(3)
<b>Total</b>	<b>70</b>	<b>(68)</b>	<b>51</b>	<b>69</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Difficult to obtain financial support</b>										
Yes	35	(50)	21	(41)	5	(45)	2	(20)	63	(44)
No	35	(50)	30	(59)	6	(55)	8	(80)	79	(56)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Was the first guaranteed loan for start-up</b>										
Yes	23	(33)	17	(33)	2	(18)	1	(10)	43	(30)
No	47	(67)	34	(67)	9	(82)	9	(90)	99	(70)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.7: Loans Prior to JLGC Support

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Receipt of bank loan? (PL1)</b>										
Yes	24	(51)	18	(53)	5	(56)	4	(44)	51	(52)
No	23	(49)	16	(47)	4	(44)	5	(56)	48	(48)
Not applicable	23	---	17	---	2	---	1	---	43	---
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Purpose of bank loan (PL4)</b>										
Not applicable	46	---	33	---	6	---	6	---	91	---
Working capital	10	(42)	4	(22)	1	(20)	1	(25)	16	(31)
Start-up	3	(13)	4	(22)	3	(60)	2	(50)	12	(24)
Capital purchases	4	(17)	7	(39)	1	(20)	0	(0)	12	(24)
New products or services	6	(25)	3	(17)	0	(0)	1	(25)	10	(19)
Other (Building)	1	(3)	0	(0)	0	(0)	0	(0)	1	(2)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Type of security for loan (PL5)</b>										
Not applicable	46	---	33	---	6	---	6	---	91	---
Real-estate assets	16	(67)	6	(33)	4	(80)	2	(50)	28	(54)
Other guarantor	5	(21)	5	(28)	1	(20)	2	(50)	13	(25)
Goods and Equipment	3	(12)	6	(33)	0	(0)	0	(0)	9	(19)
None	0	(0)	1	(6)	0	(0)	0	(0)	1	(2)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Value of collateral (PL6)</b>										
More than the loan	17	(71)	7	(38)	4	(80)	2	(50)	30	(58)
Less than the loan	3	(12)	5	(28)	1	(20)	2	(50)	11	(21)
Of equal amount	4	(17)	5	(28)	0	(0)	0	(0)	9	(19)
Missing	0	(0)	1	(6)	0	(0)	0	(0)	1	(2)
Not applicable	46	---	33	---	6	---	6	---	91	---
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Note: The variables *PL2* and *PL3* are given in Appendix Table 8.1.

Table 7.8 Awareness of JLGC Loans

How did you first become aware of JLGC loan? (NEG2)	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Bank	54	(77)	40	(78)	8	(73)	8	(80)	110	(77)
Family and friends	6	(9)	4	(8)	1	(9)	0	(0)	11	(8)
Colleague in firm	2	(3)	4	(8)	2	(18)	0	(0)	8	(6)
Another business	2	(3)	2	(4)	0	(0)	1	(10)	5	(3)
Chamber of Commerce/ Industry body	5	(7)	0	(0)	0	(0)	0	(0)	5	(3)
Other	1	(1)	0	(0)	0	(0)	1	(10)	2	(2)
Missing	0	(0)	1	(2)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Did awareness of JLGC make you more likely seek bank loan? (NEG3)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Yes	36	(51)	25	(49)	5	(45)	5	(50)	71	(50)
No	34	(49)	25	(49)	6	(55)	5	(50)	70	(49)
Missing	0	(0)	1	(2)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>100</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Did you first approach:	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Bank	63	(90)	40	(78)	8	(73)	10	(100)	121	(85)
JLGC	7	(10)	11	(22)	3	(27)	0	(0)	21	(15)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>100</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

When visiting bank did you first discuss a normal loan before a JLGC guaranteed loan?	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Yes	51	(72)	36	(70)	7	(64)	8	(80)	102	(71)
No	12	(18)	4	(10)	1	(9)	2	(20)	19	(14)
Not applicable	7	(10)	11	(20)	3	(27)	0	(0)	21	(15)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>100</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Note: The variables *NEG1* and *NEG4* are given in Table 7.12; and *NEG5* and *NEG6* are given in Table 7.13.

**Table 7.9: Number and Purpose of JLGC Loans Received by Firm**

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Number of JLGC loans received by firm (LG1)										
One	62	(89)	47	(92)	11	(100)	10	(100)	130	(92)
Two	8	(11)	4	(8)	0	(0)	0	(0)	12	(8)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Purpose of first JLGC loan	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Capital Purchase	27	(39)	20	(39)	4	(36)	2	(20)	53	(37)
Start-Up	23	(33)	15	(29)	2	(19)	2	(20)	42	(30)
Working capital	17	(24)	16	(32)	4	(36)	6	(60)	43	(30)
New products or service	2	(3)	0	(0)	1	(9)	0	(0)	3	(2)
Missing	1	(1)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Purpose of second JLGC loan	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Capital purchase	5	(63)	2	(50)	0	(0)	0	(0)	7	(58)
Working capital	3	(37)	2	(50)	0	(0)	0	(0)	5	(42)
<b>Total</b>	<b>8</b>	<b>(100)</b>	<b>4</b>	<b>(100)</b>	<b>0</b>	<b>(0)</b>	<b>0</b>	<b>(0)</b>	<b>12</b>	<b>(100)</b>

**Note:** The variables *LG2* and *LG3* are given in Table 7.11; variable *LG4* is given in Table 7.10; variable *LG5* is given in Appendix Table 8.1; *LG6* and *LG7* are given in Table 7.15; *LG8* is given in Appendix Table 8.1; variables *LG9* and *LG10* are given in Table 7.12; variable *LG11* is given in Table 7.14; variables *LG12*, *LG13* and *LG14* are given in Table 7.16 and variable *LG15* is given in Table 7.13.

**Table 7.10: Purpose of Most Recent JLGC Loan**

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Purpose of most recent loan (LG4)										
Start-Up	22	(32)	14	(27)	2	(18)	2	(20)	40	(28)
Capital purchase	28	(40)	21	(41)	4	(36)	2	(20)	55	(39)
Working capital	17	(24)	16	(32)	4	(36)	6	(60)	43	(30)
New products / services	2	(3)	0	(0)	1	(10)	0	(0)	3	(2)
Missing	1	(1)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.11: Average Size of Most Recent JLGC Loans

	Manufacturing		Services		Retail		Agriculture	
	Mean	c.v	Mean	c.v	Mean	c.v	Mean	c.v
<b>Amount of JLGC loan (JD 000's) (LG2)</b>								
Start-Up	19.8	0.82	17.9	0.81	26.5	1.25	30.0	0.71
Capital purchase	25.9	0.97	19.0	1.01	11.8	0.78	17.5	0.2
Working capital	37.6	0.92	23.3	0.71	13.9	0.58	12.8	1.16
New products / services	24.3	0.25	0.0	0.0	2.5	0.0	0.0	0.0
<b>Project size (JD 000's) (LG3)</b>								
Start-Up	69.0	1.06	42.6	0.94	55.0	1.16	80.0	0.71
Capital purchase	37.9	0.99	36.1	1.3	17.8	0.6	17.5	0.01
Working capital	50.2	0.88	53.1	1.47	27.8	0.65	23.6	1.19
New products / services	60.0	0.23	0.0	0.0	5.0	0.0	0.0	0.0
<b>Loan size to Project size (%)</b>								
Start-Up	45.0	0.6	50.0	0.4	40.0	0.35	38.0	0.0
Capital purchase	78.0	0.4	68.0	0.37	73.0	0.44	1.0	0.0
Working capital	75.0	0.33	71.0	0.42	60.0	0.45	61.0	0.56
New products / services	43.0	0.47	0.0	0	50.0	0.0	0.0	0.0

Table 7.12: Arrangement of the Most Recent JLGC Loan

	Manufacturing		Services		Retail		Agriculture		Total	
Did you first approach: (NEG1)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Bank	61	(87)	38	(75)	8	(73)	10	(100)	117	(82)
JLGC	9	(13)	13	(25)	3	(27)	0	(0)	25	(18)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Why did firm take a JLGC loan: (NEG4)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Lack of collateral	37	(52)	24	(47)	2	(18)	5	(50)	68	(48)
Insufficient track of record	8	(11)	9	(18)	1	(10)	0	(0)	18	(13)
Bank request	20	(29)	13	(25)	3	(27)	1	(10)	37	(26)
Other	2	(3)	2	(4)	3	(27)	0	(0)	6	(4)
Not known	3	(4)	3	(6)	2	(18)	4	(40)	12	(8)
Missing	1	(1)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Time taken to arrange loan	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
less than a week	5	(7)	2	(4)	2	(18)	1	(10)	10	(7)
1 - 2 weeks	11	(16)	11	(22)	3	(27)	1	(10)	26	(18)
3- 5 weeks	32	(46)	23	(45)	5	(46)	5	(50)	65	(46)
more than 5 weeks	22	(31)	15	(29)	1	(9)	3	(30)	41	(29)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Interest rate on loan (LG9)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
10% or less	10	(14)	3	(6)	0	(0)	0	(0)	13	(9)
10% to 12%	20	(28)	4	(8)	0	(0)	0	(0)	24	(17)
13% to 15%	39	(56)	44	(86)	11	(100)	10	(100)	104	(73)
More than 15%	1	(2)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Interest rate relative to market rate (LG10)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Higher	12	(17)	6	(12)	0	(0)	0	(0)	18	(13)
Same	48	(69)	41	(80)	10	(90)	10	(100)	109	(77)
Lower	8	(11)	4	(8)	1	(10)	0	(0)	13	(8)
Missing	2	(3)	0	(0)	0	(0)	0	(0)	2	(2)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.13: Administration of JLGC Loan

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Were the following prepared for loan: (NEG5)										
Business plan	14	(20)	11	(22)	5	(46)	5	(50)	35	(25)
Feasibility study	10	(14)	7	(14)	0	(0)	1	(10)	18	(13)
Business plan and feasibility study	19	(27)	21	(40)	3	(27)	2	(20)	45	(31)
Cash flow statement	5	(7)	1	(2)	1	(9)	0	(0)	7	(5)
None of the above	22	(32)	11	(22)	2	(18)	2	(20)	37	(26)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Did this help secure guarantee: (NEG6)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Yes	46	(66)	38	(75)	9	(82)	7	(70)	100	(70)
On-going bank guidance after loan: (LG15)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Yes	31	(44)	13	(25)	2	(18)	0	(0)	46	(32)
No	39	(56)	38	(75)	9	(82)	10	(100)	96	(68)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.14: Size of the Loan and Guarantee Percentage

Loan Amount (JD 000's)	Manufacturing		Services		Retail		Agriculture		Total		Total amount of loans (JD 000's)
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	
10 or less	23	(33)	22	(43)	6	(55)	4	(40)	55	(39)	383.0
10 to 20	15	(21)	13	(25)	2	(18)	4	(40)	34	(24)	535.2
20 to 40	21	(30)	12	(24)	2	(18)	1	(10)	36	(25)	1,180.0
More than 40	11	(16)	4	(8)	1	(9)	1	(10)	17	(12)	1,115.0
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>	<b>3,213.2</b>
Percentage guarantee (LG11)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	--
75 percent	59	(84)	47	(92)	10	(91)	9	(90)	125	(88)	--
50 percent	11	(16)	4	(8)	1	(9)	1	(10)	17	(12)	--
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>	<b>--</b>

Table 7.15: Other Sources of Finance for the Project

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Did firm use other sources of finance: (LG6)										
Yes	33	(47)	37	(73)	7	(64)	6	(60)	83	(58)
No	36	(51)	14	(27)	4	(36)	4	(40)	58	(41)
Missing	1	(2)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Source of other finance (LG7)										
Self financing	30	(88)	34	(92)	7	(100)	6	(100)	77	(93)
Family and friends	1	(3)	2	(5)	0	(0)	0	(0)	3	(3)
Other banks	2	(6)	1	(3)	0	(0)	0	(0)	3	(3)
Not applicable	36	---	14	---	4	---	4	---	58	---
Missing	1	(3)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Why the loan did not cover all the project's need										
Bank refused to provide more	14	(41)	18	(49)	6	(86)	2	(40)	40	(48)
More funding not required	10	(29)	15	(41)	1	(14)	3	(60)	29	(34)
Lack of the collateral	8	(24)	1	(3)	0	(0)	0	(0)	9	(11)
Not applicable	36	---	14	---	4	---	4	---	58	---
Missing	2	(6)	3	(7)	0	(0)	1	(20)	6	(7)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
Was the loan used as intended:										
Yes	69	(99)	51	(100)	11	(100)	9	(90)	140	(99)
No	1	(1)	0	(0)	0	(0)	1	(10)	2	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.16: Collateral for the Guaranteed Loan

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Was collateral extended for the loan: (LG12)										
Yes	62	(89)	38	(75)	9	(82)	6	(60)	115	(81)
No	8	(11)	13	(25)	2	(18)	4	(40)	27	(19)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
The kind of collateral (LG13)										
Real estate	46	(74)	14	(36)	6	(67)	4	(80)	70	(61)
Another guarantor	10	(16)	12	(32)	3	(33)	2	(20)	27	(23)
Goods and equipment	4	(7)	12	(32)	0	(0)	0	(0)	16	(14)
Other	2	(3)	0	(0)	0	(0)	0	(0)	2	(2)
Not applicable	8	---	13	---	2	---	4	---	27	---
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
The value of collateral (LG14)										
More than the loan	42	(68)	24	(63)	7	(78)	5	(83)	78	(68)
The same	6	(10)	8	(21)	1	(11)	0	(0)	15	(13)
Less than the loan	14	(22)	6	(16)	1	(11)	1	(17)	22	(19)
Not applicable	8	---	13	---	2	---	4	---	27	---
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.17: 'Additionality' of Guarantee

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Value of extra bank loan due to guarantee:</b>										
Zero	24	(33)	19	(37)	6	(55)	3	(30)	52	(36)
1% to 25%	16	(23)	10	(20)	3	(27)	1	(10)	30	(21)
25% to 50%	11	(16)	8	(15)	1	(9)	1	(10)	21	(15)
50% to 75%	4	(6)	2	(4)	0	(0)	2	(20)	8	(6)
75% to 99%	3	(4)	1	(2)	0	(0)	0	(00)	4	(2)
100%	6	(9)	1	(2)	1	(9)	2	(20)	10	(8)
Missing	6	(9)	10	(20)	0	(0)	1	(10)	17	(12)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Would bank have lent in absence of guarantee (ADD)</b>										
Yes	47	(67)	37	(73)	8	(73)	8	(80)	100	(70)
No	22	(31)	14	(27)	3	(27)	2	(20)	41	(29)
Missing	1	(2)	0	(0)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>What sentence best describes firm's situation</b>										
a- "The JLGC was the only option available"	21	(30)	14	(27)	4	(36)	1	(10)	40	(28)
b- "Other sources were available but they would only have covered part of the amount provided by JLGC"	20	(29)	13	(25)	2	(18)	4	(40)	39	(27)
c- "Other sources of finance were available to me, that would have covered the full amount available through the JLGC guaranteed loan, but I still prefer the JLGC"	28	(40)	21	42	4	(36)	5	(50)	58	(41)
Missing	1	(1)	3	(6)	1	(10)	0	(0)	5	(4)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>100</b>	<b>142</b>	<b>(100)</b>
<b>If other sources were available (b or c) why did the firm take up the guaranteed loan: (REQUEST)</b>										
Bank requirement without informing the firm	32	(64)	29	(76)	6	(75)	6	(67)	73	(70)
The firm didn't have enough collateral	7	(14)	2	(5)	0	(0)	2	(22)	11	(10)
The firm didn't have any collateral	7	(14)	2	(5)	0	(0)	1	(11)	10	(10)
Not applicable	20	---	13	---	3	---	1	---	37	---
Missing	4	(8)	5	(14)	2	(25)	0	(0)	11	(10)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.18: Subsequent Finance after Loan

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Additional bank finance since loan: (NEWFIN1)</b>										
Yes	22	(31)	16	(31)	2	(18)	4	(40)	44	(31)
No	48	(69)	35	(69)	9	(82)	6	(60)	98	(69)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Ease with which other finance obtained: (NEWFIN2)</b>										
1 : Very easy	6	(27)	7	(44)	2	(100)	2	(50)	17	(39)
2 :	7	(31)	4	(24)	0	(0)	0	(0)	11	(25)
3 :	3	(14)	2	(13)	0	(0)	1	(25)	6	(14)
4 :	3	(14)	1	(6)	0	(0)	1	(25)	5	(11)
5 : Very difficult	3	(14)	2	(13)	0	(0)	0	(0)	5	(11)
Not applicable	48	---	35	---	9	---	6	---	98	---
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Did the loan help obtain other finance: (NEWFIN3)</b>										
Yes	17	(77)	16	(100)	2	(100)	4	(100)	39	(89)
No	5	(23)	0	(0)	0	(0)	0	(0)	5	(11)
Not applicable	48	---	35	---	9	---	6	---	98	---
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.19: Most Important Effect of the Project

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Open-up new markets (EFFECT1)</b>										
Yes	45	(64)	28	(55)	5	(45)	6	(60)	84	(59)
No	25	(36)	22	(43)	6	(55)	4	(40)	57	(40)
Missing	0	(0)	1	(2)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Development new product or service (EFFECT2)</b>										
Yes	38	(54)	33	(65)	8	(73)	5	(50)	84	(59)
No	32	(46)	17	(33)	3	(27)	5	(50)	57	(40)
Missing	0	(0)	1	(2)	0	(0)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Development of new process (EFFECT3)</b>										
Yes	37	(53)	17	(33)	1	(9)	4	(40)	59	(41)
No	33	(47)	34	(67)	9	(82)	6	(60)	82	(58)
Missing	0	(0)	0	(0)	1	(9)	0	(0)	1	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Leading-edge technology (EFFECT4)</b>										
Yes	32	(46)	16	(31)	0	(0)	1	(10)	49	(35)
No	38	(54)	33	(65)	11	(100)	9	(90)	91	(64)
Missing	0	(0)	2	(4)	0	(0)	0	(0)	2	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Increase the exports (EFFECT5)</b>										
Yes	12	(17)	2	(4)	0	(0)	0	(0)	14	(10)
No	58	(83)	47	(92)	11	(100)	10	(100)	126	(89)
Missing	0	(0)	2	(4)	0	(0)	0	(0)	2	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Create new source of supply (EFFECT6)</b>										
Yes	30	(43)	25	(49)	9	(82)	4	(40)	68	(48)
No	40	(57)	24	(47)	2	(18)	6	(60)	72	(51)
Missing	0	(0)	2	(4)	0	(0)	0	(0)	2	(1)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.20: Characteristics of Firms Year before the Loan

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Assets (JD 000's)</b>										
Zero	13	(19)	12	(24)	2	(18)	0	(0)	27	(19)
1 to 25	14	(20)	14	(26)	2	(18)	1	(10)	31	(22)
25 to 50	7	(10)	5	(10)	1	(9)	0	(0)	13	(9)
50 to 100	7	(10)	4	(8)	6	(55)	4	(40)	21	(15)
100 to 500	23	(33)	12	(24)	0	(0)	4	(40)	39	(27)
More than 500	6	(8)	4	(8)	0	(0)	1	(10)	11	(8)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Sales turnover (JD 000's)</b>										
Zero	13	(18)	12	(23)	2	(18)	0	(00)	27	(19)
1 to 25	13	(18)	12	(23)	1	(9)	4	(40)	30	(21)
25 to 50	9	(13)	4	(9)	0	(0)	1	(10)	14	(10)
50 to 100	6	(9)	8	(16)	4	(37)	0	(0)	18	(12)
100 to 500	18	(26)	9	(18)	1	(9)	4	(40)	32	(23)
More than 500	11	(16)	6	(11)	3	(27)	1	(10)	21	(15)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>100</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Employment</b>										
Zero	10	(14)	8	(16)	1	(9)	2	(20)	21	(15)
1 to 5	24	(34)	26	(51)	10	(91)	7	(70)	67	(47)
6 to 10	14	(20)	12	(23)	0	(0)	1	(10)	27	(19)
11 to 20	13	(19)	3	(6)	0	(0)	0	(0)	16	(11)
21 to 50	5	(7)	2	(4)	0	(0)	0	(0)	7	(5)
More than 50	4	(6)	0	(0)	0	(0)	0	(0)	4	(3)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.21: Change in Firms Characteristics after Loan

	Manufacturing		Services		Retail		Agriculture		Total	
	Mean	C.V	Mean	C.V	Mean	C.V	Mean	C.V	Mean	C.V
<b>Assets (JD 000's) (ADDASSET)</b>										
Average assets before loan	169.1	2.05	108.7	1.92	49.0	0.77	146.1	0.97	136.1	2.04
Two year change in assets	52.7	1.58	60	1.69	28.1	1.34	40.8	1.95	52.6	1.66
Three years change in assets	101.2	1.79	98.6	1.93	45.7	1.08	89.0	1.76	95.0	1.86
Change due to project after three years (%)	26.6	0.96	20.0	1.20	13.0	0.46	20.0	1.00	23.0	1.07
<b>Sales turnover (JD 000's) (ADDSALES)</b>										
Average turnover before loan	157.1	2.17	91.6	2.83	52.3	1.00	81.7	1.29	121.1	2.39
Two year change in turnover	54.7	2.30	22.7	1.66	21.8	1.05	28.6	1.94	39.1	2.41
Three years change in turnover	92.4	2.00	44.4	1.00	35.8	0.68	63.8	1.56	69.3	2.06
Change due to project after three years (%)	19.1	3.64	15.3	1.46	11.2	1.00	14.7	1.13	16.7	2.72
<b>Employment (ADDEMP)</b>										
Average of employment before loan	11.2	1.45	5.1	1.40	2.1	0.50	3.2	0.66	7.7	1.50
Two year change in employment	3.40	1.33	1.7	1.00	0.8	1.00	2.5	1.33	2.5	1.50
Three years change in employment	6.00	1.67	2.6	1.00	1.2	1.00	4.6	1.80	4.2	1.25
Change due to project after three years (%)	25.0	3.85	19.0	2.00	7.0	1.22	20.0	1.45	19.0	3.89

Note: The change due to the project is based on the firms' responses on 'additionality'.

Table 7.22: Jobs Created and Retained in the Firm

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Jobs created due to the project impact (ECOADD1)</b>										
Zero	13	(19)	12	(24)	4	(36)	0	(0)	29	(21)
1 to 5	20	(28)	31	(60)	7	(64)	8	(80)	66	(46)
6 to 10	19	(27)	6	(12)	0	(0)	0	(0)	25	(18)
11 to 20	5	(7)	1	(2)	0	(0)	0	(0)	6	(4)
21 to 50	2	(3)	0	(0)	0	(0)	1	(10)	3	(2)
Missing	11	(16)	1	(2)	0	(0)	1	(10)	13	(9)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Jobs retained due to the project impact (ECOADD2)</b>										
Zero	31	(43)	44	(86)	9	(82)	7	(70)	91	(64)
1 to 5	21	(30)	5	(10)	2	(18)	2	(20)	30	(21)
6 to 10	6	(9)	1	(2)	0	(0)	0	(0)	7	(5)
11 to 20	1	(2)	0	(0)	0	(0)	0	(0)	1	(1)
Missing	11	(16)	1	(2)	0	(0)	1	(10)	13	(9)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Employees in new jobs without previous experience (ECOADD3)</b>										
Zero	21	(30)	25	(49)	7	(64)	3	(30)	56	(39)
1 to 5	29	(41)	23	(45)	4	(36)	5	(50)	61	(44)
6 to 10	6	(9)	2	(4)	0	(0)	1	(10)	9	(6)
11 to 20	3	(4)	0	(0)	0	(0)	0	(0)	3	(2)
Missing	11	(16)	1	(2)	0	(0)	1	(10)	13	(9)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Table 7.23 Firms Experience of Loan Guarantee Process

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>Did firm encounter any difficulties with:</b>										
Filling in the application form	0	(0)	1	(2)	0	(0)	0	(0)	1	(1)
Preparing a business plan/feasibility study / cash flow statement	4	(6)	6	(12)	0	(0)	0	(0)	10	(7)
Meeting asset security condition	28	(40)	13	(25)	1	(9)	4	(40)	46	(32)
No difficulties	38	(54)	31	(61)	10	(91)	6	(60)	85	(60)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>How helpful was the bank in securing the loan?</b>										
1 : Very helpful	18	(25)	21	(41)	4	(36)	5	(50)	48	(34)
2 :	34	(49)	22	(43)	7	(64)	4	(40)	67	(47)
3 :	13	(19)	7	(14)	0	(0)	1	(10)	21	(15)
4 :	2	(3)	0	(0)	0	(0)	0	(0)	2	(1)
5 : Very unhelpful	3	(4)	1	(2)	0	(0)	0	(0)	4	(3)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(1000)</b>	<b>142</b>	<b>(100)</b>

Table 7.24: Advantages of the Guaranteed Loan

	Manufacturing		Services		Retail		Agriculture		Total	
Advantages of guaranteed loan over other commercial bank finance										
The value of the loan	10	(14)	11	(22)	1	(9)	2	(20)	24	(17)
The grace period	15	(21)	15	(29)	4	(36)	1	(10)	35	(25)
The collateral	18	(26)	26	(51)	2	(18)	4	(40)	50	(35)
The repayment period	13	(19)	14	(27)	1	(9)	3	(30)	31	(22)
The cost of the loan	2	(3)	2	(4)	0	(0)	0	(0)	4	(3)
The interest rate	9	(13)	3	(6)	1	(9)	0	(0)	13	(9)

Note: The table shows the answers responding 'yes'.

Figure 7.1 Age of Interviewee

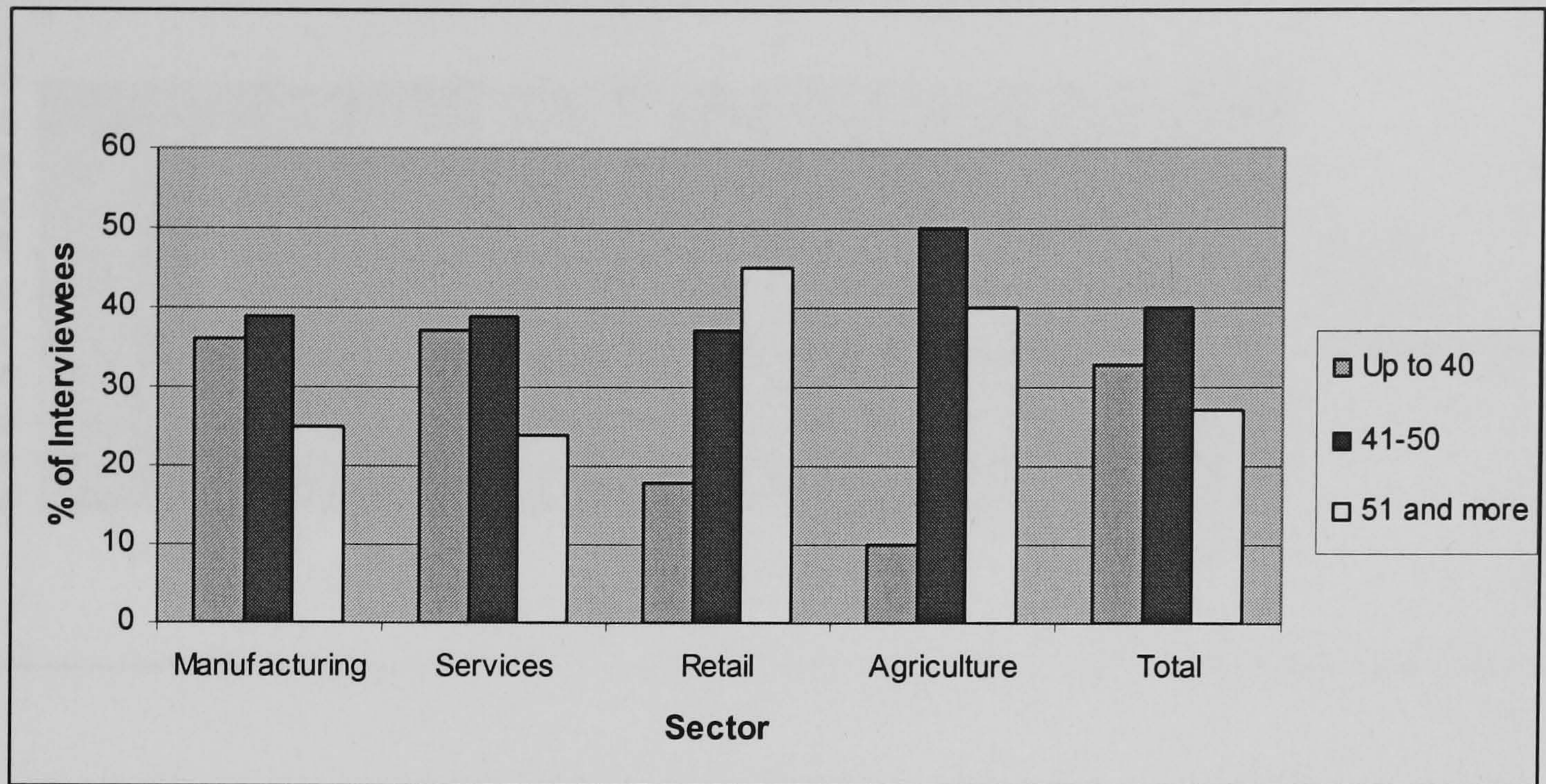
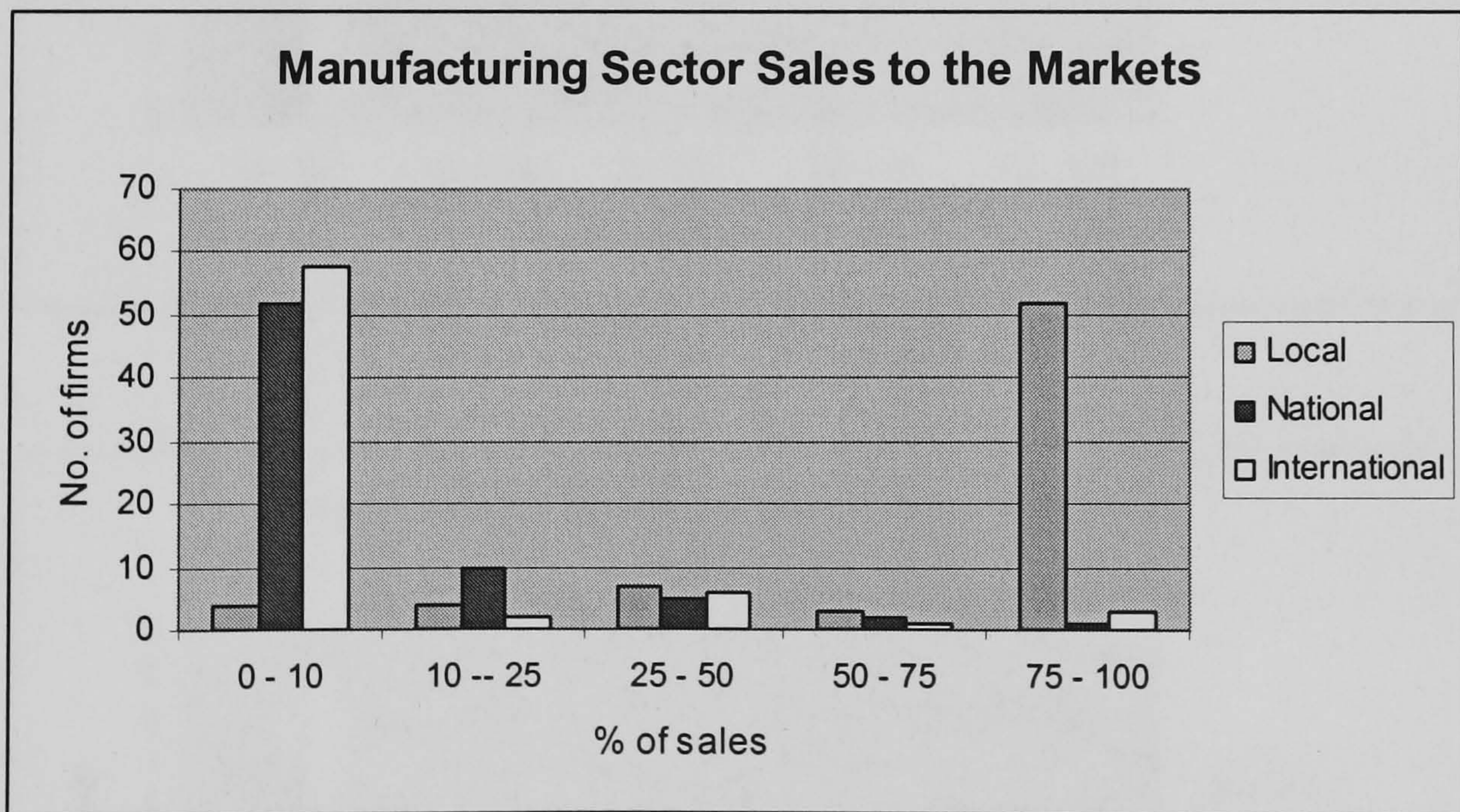
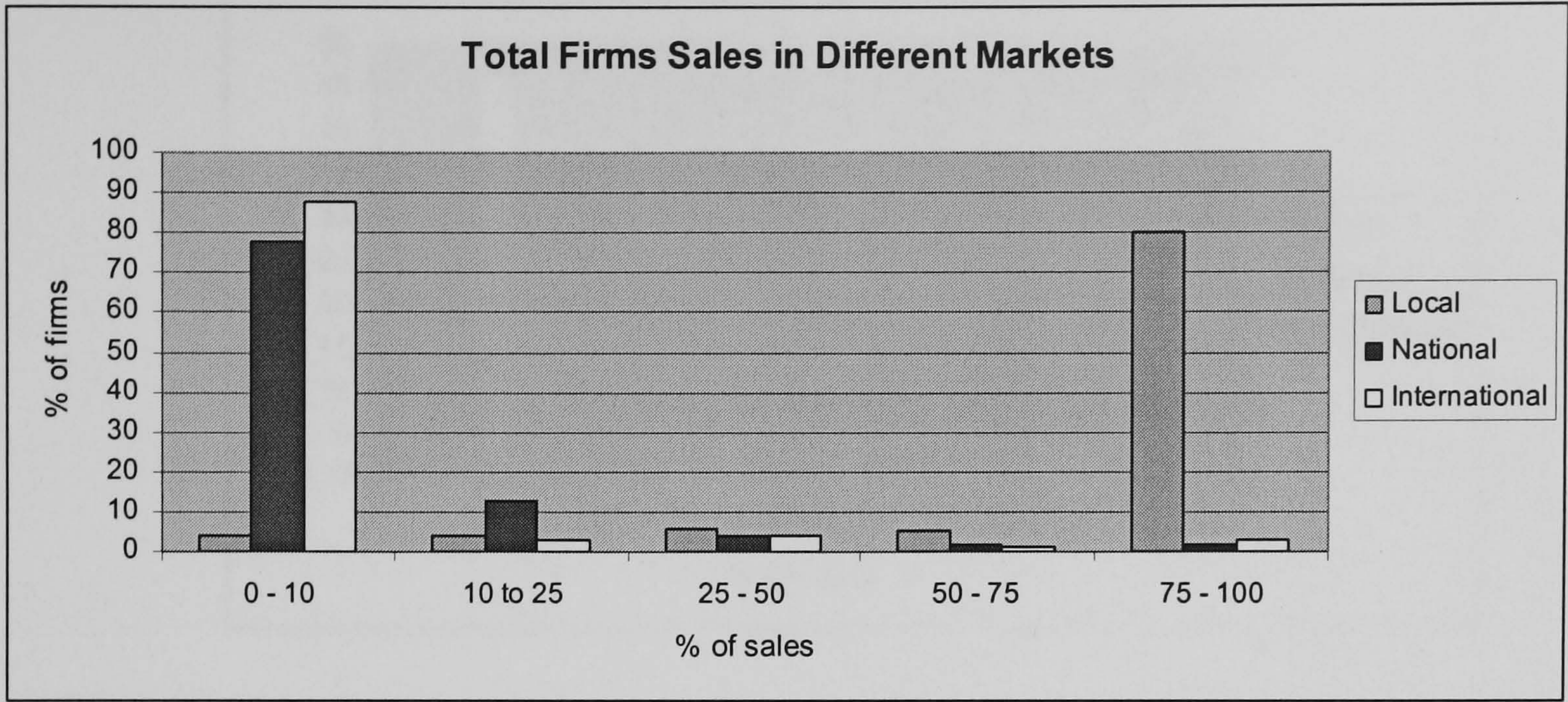
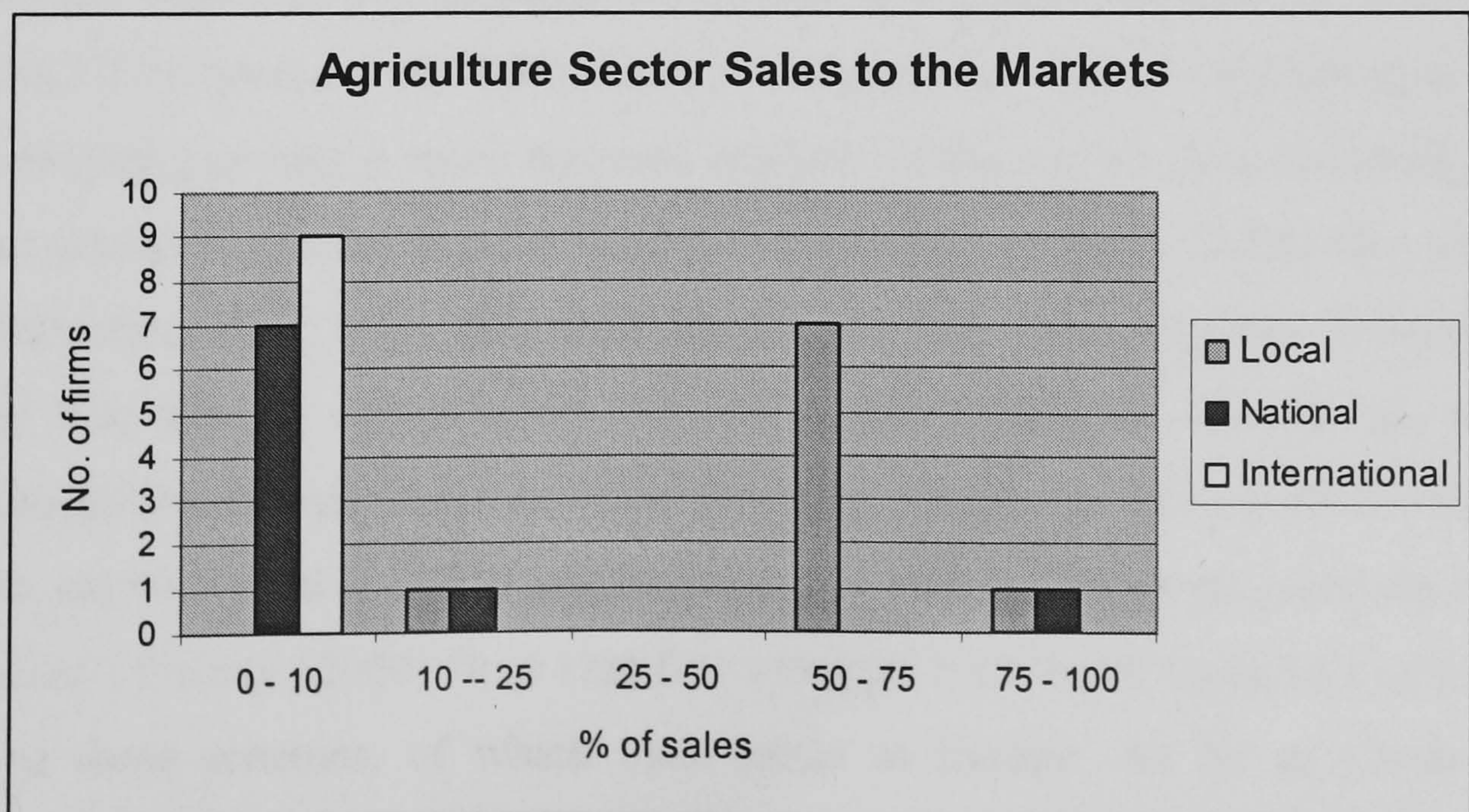
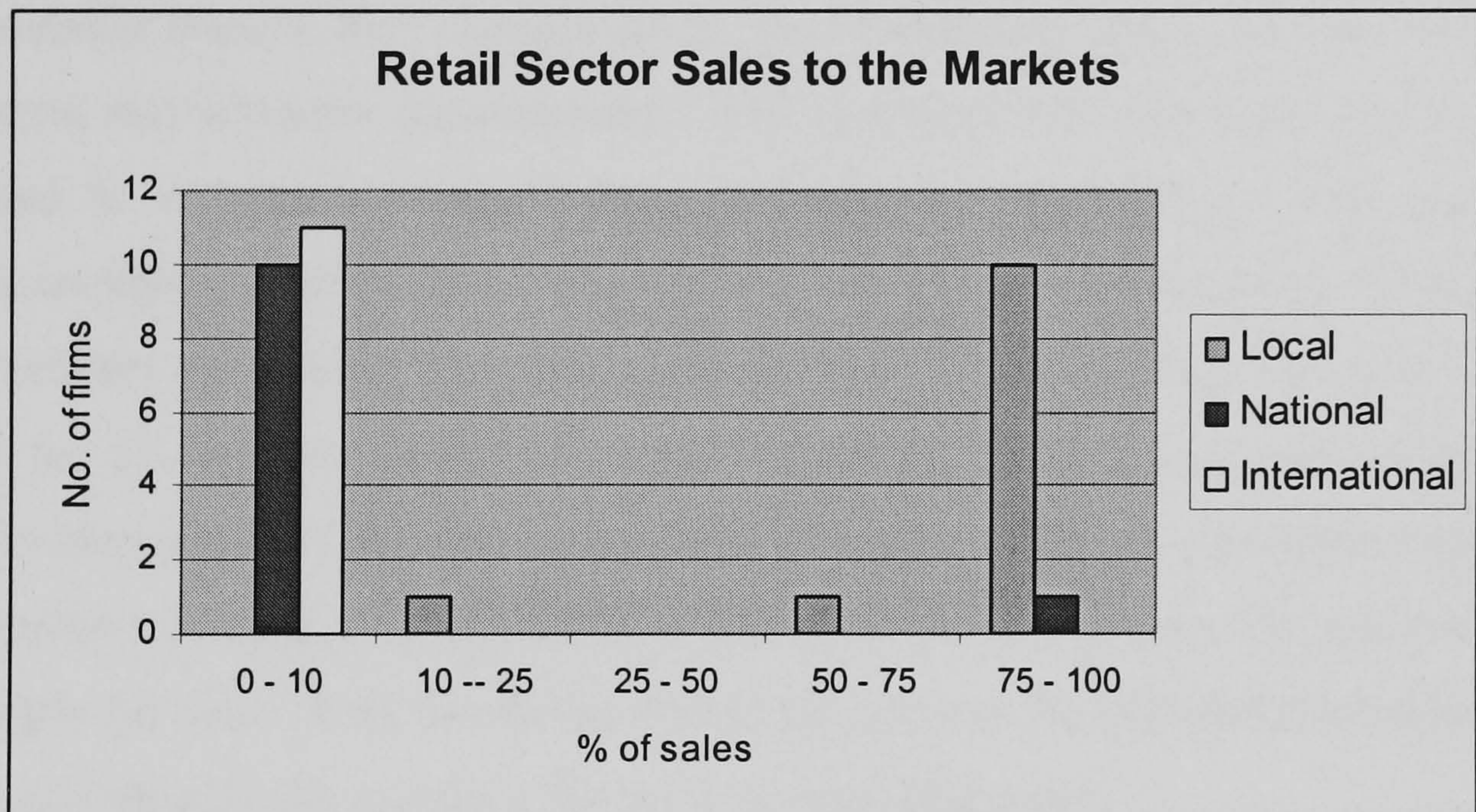
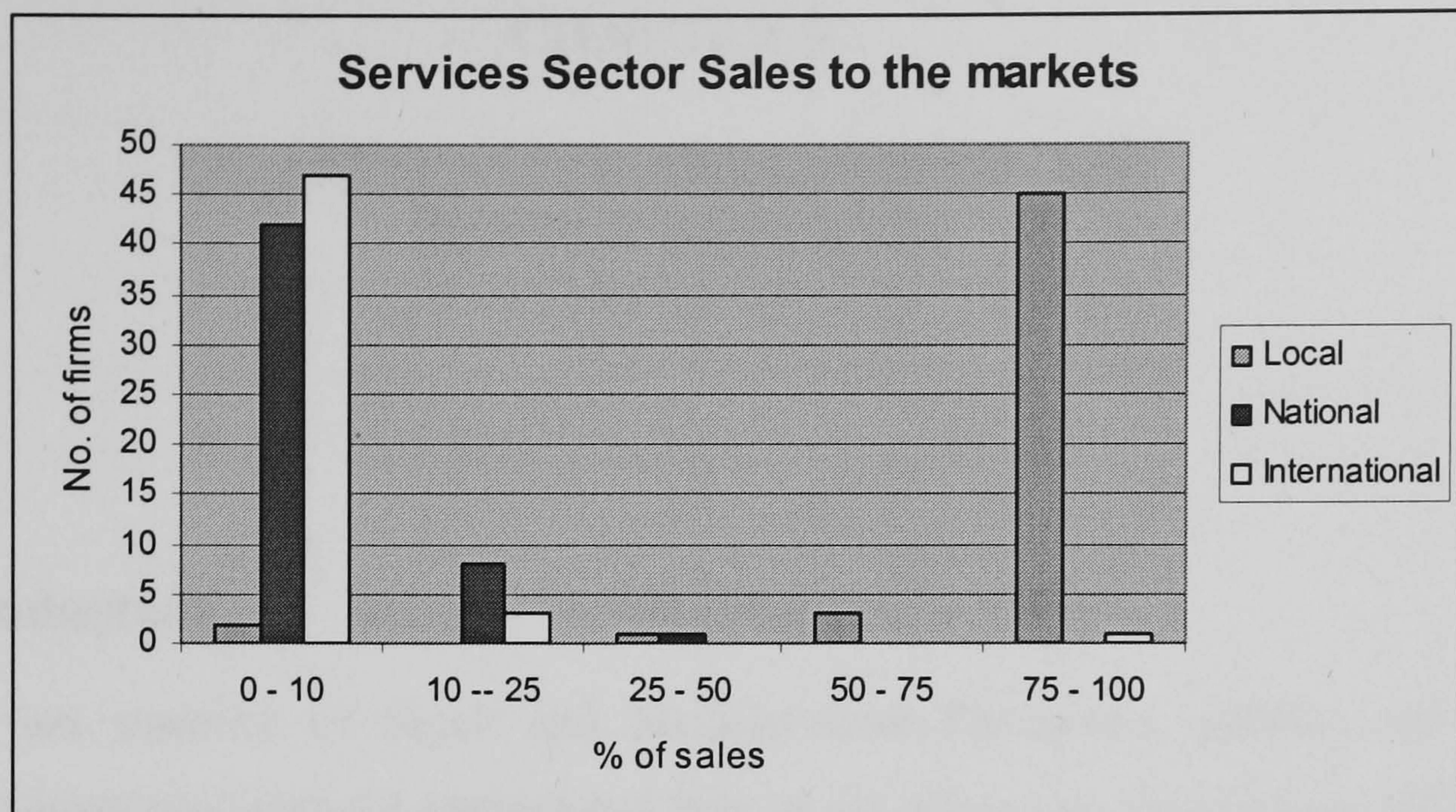


Figure 7.2: Sales of Firms in Different Markets





## **CHAPTER 8**

### **QUANTITATIVE ANALYSIS OF THE SURVEY RESULTS**

#### **8.1 Introduction**

The vast majority of Small and Medium-sized Enterprises (SMEs) start their operations without any financial institutional help at all. However, they find it difficult to grow without access to credit. Restrictions on access stem from the perceived high risks on the part of potential lenders, lack of information, high transaction costs, and lack of a track record, collateral and adequate documentation, plus ignorance and prejudice. Governments have attempted to overcome some of these problems by establishing credit guarantee schemes. The common objective of the schemes is to share risk with the banks, so that when a borrower defaults on a loan, and thus incurs a loss for the lender, the bank will be compensated for all, or part, of the loss involved. Such schemes also seek to help the borrowers who have good projects but cannot offer as much collateral as the banks require. A successful guarantee scheme must contribute to lowering the cost of loans and make it easier for firms to apply for these. Such a scheme should not increase the administrative burden for the borrower, and should help to reduce the costs of extending credit.

There have been very few attempts to evaluate loan guarantee schemes despite their widespread use; 85 countries in the world have a loan guarantee scheme according to Green (2000). This chapter provides a more rigorous analysis of the survey data collected on the loan guarantee scheme in Jordan in order to discover its effect on SMEs. These data and their method of collection have been described in the previous two chapters. Overall, this represents the first attempt to rigorously evaluate a loan guarantee scheme, not only in Jordan, but also in low-income countries more generally; Vogel and Adams (1997) state that “unfortunately, we were unable to find any evaluation of loan guarantee programmes in low-income countries”. Cressy (2000) finds that few attempts have been made to evaluate the contribution of these schemes, of which most relate to Europe. As far as Camion and Cardone (1999) know, there is no comprehensive evaluation of loan guarantee schemes.

This chapter undertakes a detailed statistical analysis of the data obtained from the survey. It represents a development of the purely descriptive analysis of the survey data in Chapter 7. It has the advantage of utilising regression techniques, which enables many of the variables to be considered together, in order to identify the key effects. An OECD (2000) report says that the combination of evaluation tools and approaches (both qualitative and quantitative) is required for maximum coverage of the evaluation process, for increasing the credibility of evaluation results and by extension the policy recommendations that emerge from such an exercise. The purpose is to consider the effect of different firm characteristics on the take-up and effect of the projects receiving guaranteed loans from the JLGC. It includes an empirical analysis of such things as the factors affecting the firm's approach to the JLGC, the value of the guaranteed loan, the 'additionality' of the guarantee and the effects of the project. However, some of the analysis of this chapter is from the firms' viewpoint, because it relies on subjective data gathered from the survey. More is said about this in Chapter 9.

## 8.2 The Variables

The data relate to 142 firms that were interviewed as part of the survey of firms in the five main governorates of Amman, Irbid, Zarqa, Balqa and Aqaba (see Chapter 6). The quantitative analysis of these data does not allow us to use all of the variables in the survey. This is because some data are not relevant to the empirical analysis in this chapter, some of the variables are highly subjective in nature and others have a large number of missing cases. However, Chapter 7 includes a qualitative analysis for all of the variables gathered from the survey. The purpose of this chapter is to undertake a quantitative examination, which improves on the analysis of Chapter 7. The variables used in this chapter are divided into six broad groups, and these are considered below. Full details of each variable within these six groups are given in Appendix Table 8.1, which should be read alongside the text. There are potentially 142 observations on each variable, but due to non-response there are some missing observations, which are indicated below.

### (A) Demographic data

These data relate to the interviewees of the survey firms. They are categorized as follows: job title of interviewee (*TITLE*), education level (*EDUC*), gender (*GENDER*), age of

interviewee (*AGE-INT*) and experience of interviewee (*EXPER*). These data are known for all 142 firms, except for the experience of the interviewee, which has two missing observations. In the case of the job title (*TITLE*) there are four statuses, and each of these is considered as an individual variable. They are: general manager (*TITLE1*), sales manager (*TITLE2*), financial manager (*TITLE3*) and partner in the firm (*TITLE4*). The age and experience of interviewee are measured in years.

### (B) Characteristics of the sample firms

The characteristics of the sample firms refer to the legal status of the firm (*LEGAL*), the organization of the firm (*ORG*), the location of the firm (*LOCATE*), the age of the firm (*AGE*), the firm's principal activity (*SECTOR*), the number of employees (*EMP*), sales turnover (*TURN*) and capital used for start-up (*CAP*). These are known for all 142 observations except for the current sales turnover (*TURN*), which is known for 122 firms. In the case of the legal status (*LEGAL*) there are three statuses: sole-trader (*LEGAL1*), partnership (*LEGAL2*) and private ownership (*LEGAL3*). The organization of the firm also has three statuses: single plant (*ORG1*), multi-plant (*ORG2*) and part of a large group (*ORG3*). Finally, the firm's principal activity has four statuses: manufacturing (*SECTOR1*), services (*SECTOR2*), retail (*SECTOR3*) and agriculture (*SECTOR4*).

### (C) Loans prior to JLGC support

To investigate the effect of the loans prior to the JLGC support, we asked the sample firms about whether they had ever received loans from commercial banks before the first loan guaranteed by JLGC (*PL1*). This variable is available for 99 observations, because the other 43 firms had no history with commercial banks and they used the first loan supported by the JLGC for start-up. In addition, this group of variables includes the number of loans received from commercial banks before the guaranteed loan (*PL2*), the amount of these loans (*PL3*), the purpose of the previous loans (*PL4*), assets pledged as collateral for the previous loans (*PL5*) and the value of the collateral compared with the value of the loan (*PL6*).

While 99 firms had some history prior to the JLGC loan, only 51 of these received loans from the commercial banks before the guaranteed loan. However, the variable labeled (*PL2*) is known only for 46 observations, which means there are 5 missing observations, while (*PL3*) is known for 45 observations. Unfortunately, with regard to quantitative

information such as income, sales, assets and so on, the interviewees were worried about divulging such information, so there are some missing cases on such questions, and so these are not included. With regard to the purpose of the previous loans and the kinds of collateral pledged for these loans there are 51 observations. There are 50 observations on the value of collateral compared with the value of the loan.

In the case of the purpose of the previous loan obtained from the commercial banks, data are categorised into five statuses: loan for start-up (*PL4.1*), capital purchase (*PL4.2*), working capital (*PL4.3*), financing new products/services (*PL4.4*) and other purposes (*PL4.5*). Assets pledged as collateral (*PL5*), are sub-divided into four statuses: real estate (*PL5.1*), goods and equipment (*PL5.2*), other guarantor (*PL5.3*) and if they did not pledge any collateral at all (*PL5.4*). The value of collateral compared with the value of the loan (*PL6*) is sub-divided into three statuses: more than the value of the loan (*PL6.1*), less than the value of the loan (*PL6.2*) and equal to the value of the loan (*PL6.3*).

#### (D) Negotiation of the loan

The analysis of the loan guarantee focuses on the most recent loan obtained from the JLGC. For this loan, we know if the firm approached the JLGC directly or through the bank (*NEG1*), how the firm first heard of the loan guarantee scheme (*NEG2*), and if knowledge of the guarantee provided by JLGC made the firm more likely to seek a bank loan (*NEG3*). This group of variables also includes the reasons given to the firm by the bank as to why it should take out a guaranteed loan (*NEG4*), and which kind of documents the firm had prepared (*NEG5*). The firm's approach, whether to the JLGC or the bank, and the kind of documents prepared for the loan are known for 142 observations; the other variables are known for 141 observations.

In the case of how the firm heard of the guarantee (*NEG2*), there are six statuses: the bank (*NEG2.1*), colleague/member of staff (*NEG2.2*), family and friends (*NEG2.3*), other businesses (*NEG2.4*), chamber of commerce/industry (*NEG2.5*) and other sources (*NEG2.6*). The reasons given to the firm to take a guaranteed loan (*NEG4*) has five statuses: lack of collateral (*NEG4.1*), insufficient track record (*NEG4.2*), bank's request (*NEG4.3*), other reasons (*NEG4.4*) and unknown reasons (*NEG4.5*). In the case of the documents prepared by the borrower in order to get the guaranteed loan (*NEG5*), there are five statuses: business

plan (*NEG5.1*), feasibility study (*NEG5.2*), cash-flow analysis (*NEG5.3*), business plan and feasibility study (*NEG5.4*) and if the borrower did not prepare any documents at all (*NEG5.5*).

#### (E) Characteristics of the guaranteed loan

These data are concerned with the characteristics of the most recent guaranteed loan and are categorized as follows: the number of guaranteed loans that the firm has received (*LG1*), the amount of the guaranteed loan (*LG2*), and the size of the project financed by the guaranteed loan (*LG3*). They are all known for each case, except *LG3*, for which there are seven missing observations. The purpose of the project (*LG4*) has four statuses: start-up (*LG4.1*), capital purchase (*LG4.2*), working capital (*LG4.3*) and finance of new products or services (*LG4.4*). The bank that provided the most recent guaranteed loan (*LG5*) is subdivided into seventeen statuses each representing the name of the bank participating in the loan guarantee scheme. For example, if the guaranteed loan is provided by the Housing Bank then the variable is labeled as *LG5.1*, and so on for all of the participating banks (see Appendix Table 8.2). This variable is known for all 142 observations.

This group of variables includes some information on the finance used to fund the project in addition to the guaranteed loan. Whether they used sources of finance (*LG6*) is known for 141 observations, but in fact only 84 did so. The source of the other finance (*LG7*) is known for 83 of these 84 observations. The other 57 firms did not use other sources of finance, but for these there are three statuses: self finance (*LG7.1*), family and friends (*LG7.2*) and other banks (*LG7.3*). There is also a variable related to the amount of the other finance (*LG8*) and this is known for 81 observations out of the 84 who used other sources of finance. The rate of interest (*LG9*) is one of the main characteristics of the guaranteed loan. A comparison is also made between the rate of interest on the guaranteed loan and the interest rate on other banks loans (*LG10*). It is sub-divided into three statuses: higher than the rate on other bank loans (*LG10.1*), lower (*LG10.2*) and no difference (*LG10.3*). The percentage of the loan covered by the JLGC (*LG11*) has two statuses: 75 percent of the loan (*LG11.1*) and 50 percent (*LG11.2*). These last three variables are known in all cases, except *LG10*, for which there are a couple of missing observations.

As regards the collateral provided to the bank the following variables were constructed: the provision of collateral (*LG12*) and the type of collateral (*LG13*). The former binary variable *LG12* is known in all cases, but *LG13* is known for 115 observations because 27 observations did not provide any collateral for the guaranteed loans. These data were subdivided into four statuses: real estate (*LG13.1*), equipment and goods (*LG13.2*), another guarantor (*LG13.3*) and another kind of collateral (*LG13.4*). Another variable relates the value of the collateral to the value of the loan (*LG14*), which has three statuses: equal to the loan (*LG14.1*), more than the loan (*LG14.2*) and less than the loan (*LG14.3*). This is known for 115 observations.

The last five variables in this group are: whether the bank is provided ongoing advice and guidance after the borrower received the guaranteed loan (*LG15*), whether the project received the guarantee at the higher rate (*LG16*), the value of collateral for the guaranteed loans according to the JLGC (*LG17*), the ratio of the guaranteed loan to the project size (*LG18*) and the ratio of the collateral value to the project size (*LG19*). All of these variables are known for 142 observations except *LG19*, which is constructed from *LG17* and *LG3*, but for which there are seven missing values for the project size (*LG3*).

#### (F) Firms' performance

The variables in this group indicate the firm's performance related to the project funded by the guaranteed loan. The variables are: the firm believes that the bank would have lent to them if the guarantee was not available (*ADD*), and the reasons that the firm chose the JLGC loan (*REQUEST*). This last variable is known for 94 observations because there are eight missing observations and because 40 firms believed that the JLGC was the only source of support they needed. Of the 94 firms some of them chose the JLGC support due to the bank's request (*REQUEST1*) and the others did so by their own request (*REQUEST2*). Concerning the effect of the project financed by the guaranteed loan (*EFFECT*), there are six statuses: if the project opened-up new markets (*EFFECT1*), if the project developed new products or services (*EFFECT2*), developed new processes (*EFFECT3*), introduced leading-edge technology (*EFFECT4*), increased exports (*EFFECT5*) and created a new source of supply (*EFFECT6*). The first three of these are known for 141 observations, while the rest are known for 140 observations.

The project's effects on the firm's assets are described using the following variables: the difference between the assets two years after the guaranteed loan and one year before the loan (*ASSETCHG*), the percentage change in the firm's total assets that reflect the impact of the project according to the firm (*ASSETADD*), and change in the value of the total assets due to the effect of the project according to the firm (*ASSETCHGADD*). The *ASSETCHG* variable has four missing cases, while the other two variables each have 10 missing cases. Similar variables are constructed for each of the firm's sales turnover and the firm's number of employees. There are *SALECHG*, *SALEADD* and *SALECHGADD* for turnover. There are known for 126, 113 and 111 cases respectively. For employees the variables are *EMPCHG*, *EMPADD* and *EMPCHGADD*, which are known for 142, 125 and 125 firms respectively.

### 8.3 Model Estimation

To improve on the cross-tabulation of the previous chapter, we now employ regression techniques. A big advantage of this is that it gives the evaluator an indication of probable casual relationships between variables, and it allows him to make inferences about these relationships, but within a multivariate setting. It also allows the direction and the magnitude of changes to be established. The data are categorical in nature and they can be expressed as probabilities, so that in order to achieve the research objectives, we explored several models, but the most suitable of these was the Linear Probability Model (LPM). An alternative to this is the logit model, but it seemed to perform no better, while being more difficult to interpret. The choice of the LPM was despite some potential problems that are associated with it, which are given in Gujarati (1995) as follows: non-normality of the errors; heteroscedasticity; the possibility that the predicted values of the dependent variable lie outside the 0-1 range; and the generally lower  $R^2$  values. However, Gujarati (1995) reports that these problems are surmountable. The use of LPM in this study has the following good features: it is used quite extensively because of its simplicity and it is easier to interpret. In addition, as we mentioned above, it does not seem to give inferior results. To simplify the presentation, the parsimonious versions of the results are given, which includes only those variables that are significant at about the 15 percent level.

There are 142 firms included in the survey, which means that each variable should have this number of observations. However, as we have seen there are some missing cases

due to non-response, especially for the variables that concern financial matters, such as income, profit, sales and so on. In order to solve this problem, we created a dummy variable for each term with missing observations. These dummy variables are included in the regression, so that it can be run for the maximum number of observations. For example, the variable on the experience of interviewees *EXPER* is known for 140 observations, which means that there are two missing observations. In this case, we include dummy variable *EXPERM* that equals 1 if *EXPER* is missing, but which otherwise is zero. This means we can in principle run each regression for all 142 observations. Another feature of the data is non-applicable cases, which is when the interviewee is unable to answer a question because it is not relevant. For example, for the variable relating to the receipt of previous bank loans, *PL1*, only 99 firms were able to answer this question because the other 43 firms are new start-ups, and therefore have no history with the commercial banks. In these cases we estimate the LPM model for the applicable cases only.

As a further point, many of the variables are categorical in nature, and this means we are also confronted with the problem of a dummy-variable trap. For example, the firms' principal activity, *SECTOR*, has four statuses: manufacturing, services, retail and agriculture (*SECTOR1* to *SECTOR4*). If we include these variables in one of the models then we have to drop one of the statuses. Usually, where the variables can be ranked then this is the lowest ranked status, or if not then it is the least important category with a small number of non-zero observations. For example, in the case of *SECTOR* then we drop *SECTOR4*, because only seven percent of the total sample is in this category (ie. agriculture). Appendix Tables 8.2 examine whether there is a problem of multi-collinearity between the variables by examining the correlation coefficient for each of the six groups. However, as the tables indicate we do not believe that this is a serious problem. Further, in our analysis we use a number of variables that could each be considered as measuring the size of the firm. These include the firm employment size (*EMP*), the firm sales turnover (*TURN*), the capital used for start-up (*CAP*), the loan size (*LG2*) and the project size (*LG3*). The correlation coefficients between these are shown in Table 8.1. It shows that there is some correlation between *EMP* and *TURN* and between *LG2* and *LG3*, but our results suggest that this is not a serious problem.

The remainder of this chapter presents the econometric analysis of the data described above. The chapter is divided to three main sections. Firstly, it examines the firms'

experience prior to the project, and leading up to the time that it gets the loan. Secondly it discusses the factors influencing the nature of the loan. Finally, it explores the ‘additionality’ of the guarantee. For the econometric analysis in this study we used the STATA 7 package as the most suitable statistical package. Since we use the linear probability model, a robust estimator is used and the t-ratios that are reported are based on heteroskedasticity consistent standard errors.

## 8.4 Prior to the Project

The following discussion presents the empirical results for the period prior to the project. It examines the general factors affecting the firm’s approach and whether the firm’s history with the commercial banks had any role in this. It also examines the reasons for the firm taking a guaranteed loan and the documents needed and prepared for these loans. However, the theme of this section is to explain the main factors affecting the firm’s approach to the JLGC and the firms’ preparation for securing the guaranteed loan.

### 8.4.1 The Approach to the JLGC

This section illustrates the effect of the interviewee demographic data (group A of variables) and the sample firms characteristics (group B of variables) on the firm’s approach to the JLGC, both separately and together. In order to know if any of these variables affects the firm’s approach, according to the demographic data or firm characteristics, the discussion will concentrate on the most recent loan. Table 8.2 presents the effect of the demographic data and firm characteristics on whether the firm’s first approach for a guaranteed loan was through the bank or directly to the JLGC. The dependent variable is *NEG1*, ie. whether the firm first approached the JLGC (*NEG1*=1) or bank (*NEG1*=0). The first model (I) in Table 8.2 gives the relationship between this and the demographic data; the second model (II) with the characteristic data; and the third model (III) examines both of these together. They show that there are not big differences between the coefficients of demographic data whether in model I or III, and likewise for the variables for the firm characteristics between II and III.

Model (IV) gives the parsimonious version of model III and we focus on this result. It shows that if the interviewee was a manager of the firm (*TITLE1* to *TITLE3*), the firm is more likely to approach the JLGC directly. This is consistent with the main character of

SMEs, that the majority of the managers are the owners as well, and they are usually looking for new channels to develop their firms. One of the other significant variables is the gender of the interviewee (*GENDER*), so that if the interviewee is male, then the firm is more likely to apply for the guaranteed loan directly through the JLGC. This result sits well with the traditional background in Jordanian society, in which males usually have more access to different sources of funding, as they are more able to search for financial services. Females have obstacles when looking for funds for their projects in a conservative society, as the banks prefer to lend to men.

The experience of the interviewee (*EXPER*) is negatively related to the firm's approach to the JLGC. This means that if the interviewee has more experience of the small-firms sector, they are less likely to approach the JLGC. This might be due to the track record that a borrower can build during his long experience, and the relations established with the commercial banks during this time. Thus, such a borrower does not need to go through the JLGC for the guaranteed loan, and prefers to approach the bank directly. The less-experienced borrower is more likely to approach the JLGC first, due to their lack of experience and insufficient track record.

Both sole-trader and partnership firms (*LEGAL1* and *LEGAL2*) are more likely to approach the JLGC directly, compared with privately-owned firms. Independent firms also seem more likely to approach the JLGC, whether they are single plant (*ORG1*) or multi-plant (*ORG2*). Finally, firms in agriculture sector (*SECTOR4*) are less likely to approach to the JLGC. Once these variables are included there is no evidence that other variables are significant, whether measuring the size of the plant (*EMP*, *TURN*, and *CAP*) or its age (*AGE*). Also, the results suggest that the firms in the service and retail sectors are more likely to approach the JLGC than are firms in manufacturing (but the difference is not significant). This comes as a result of the fact that firms are more developed in this sector, of which the majority is located in Amman. We also notice that the logit model does not give superior results to the LPM model. This is shown by comparing the LPM models (I to IV) in Table 8.2 with the logit results for the same models as in Appendix Table 8.3.

### 8.4.2 Previous Loans

The firm's history and previous relationship with the commercial banks is potentially an important factor in a bank's decision to lend the small firms. So, it was important to measure the effect of the previous loans, received by the firms before the guaranteed loan, on the firm's approach to the JLGC or to the bank. The estimation in Table 8.3 examines this effect. These exclude the new start-up firms, so that there are a total 99 observations. Model V examines the effect of the main three variables, (*PL1*, *PL2*, *PL3*) on the nature of the firm's approach (*NEG1*). However, none of these variables is significant. This remains the case when the demographic variables are included (model V & IV). Since this is based on a small number of observations the table also repeats the results for model IV from Table 8.2. In this model some of the demographic variables are insignificant, even though they are significant in Table 8.2. This is no doubt because we are excluding the start-up plants.

Table 8.4 examines the effect of previous loan experience on the firm's decision to approach the JLGC. It examines the purpose of the previous loan (*PL4*), the asset collateral pledge (*PL5*) and the value of collateral (*PL6*). It includes only those firms receiving previous loans, so that there are 51 observations. The demographic variables from the parsimonious version of model IV are also included. In the case of model VII all the variables are insignificant. In the case of model VIII all forms of collateral (real estate, goods and equipments, and another guarantor) make the firms less likely to approach the JLGC directly. However, model IX shows that the greater is the total value of collateral pledged the more likely the firms to approach the JLGC. This might be a signal that these are actually better firms and more confident in seeking other sources of finance.

### 8.4.3 Reasons to take the Guaranteed Loans

In our survey, according to the firms, there were three main reasons why the bank suggested that the firm should take a guaranteed loan: a lack of collateral, insufficient track record and due to the bank request (ie. no specific reason was given). Table 8.5 examines interviewee demographics and firm characteristics for firms receiving guaranteed loans and falling into each of these three categories. It shows the full and parsimonious version of each model, but we focus on the latter only.

Model X in Table 8.5 shows the characteristics of those firms that have a lack of collateral. If the interviewee is a general manager then he is more likely to not have enough collateral. This is consistent with a manager (who may also be the owner) who may be more forthcoming about his firm than other respondents. The coefficient (t-value) of the variables *EDUC* and *GENDER* are 0.091 (1.75) and 0.230 (1.89) respectively, as shown in Table 8.5. This means that if the interviewee was more educated and was a male then he is also likely to have a lack of collateral. This might reflect the fact that these borrowers are more entrepreneurial and able to approach the JLGC even though they have insufficient collateral.

Model X also shows that if the firm is a single plant (*ORGI*) it is less likely to have enough collateral, and will therefore apply for a guaranteed loan. This result is consistent with the fact that the single-plant SMEs have less assets, which directly affects their ability to provide enough collateral to commercial banks. Firms located in Amman are also less likely to have enough collateral. However, it suggests that the borrowers may try to use their location to get the funds they need. In particular, firms in Amman are more able to glean information about the services and support provided by the JLGC, compared with the firms elsewhere. Finally, firms in the retail sector have less of a problem with collateral. This might be because they have smaller loans (see Chapter 7), and their retail goods act as collateral. However, the size and age of the firm (measured by *CAP* and *AGE*) are insignificant, so that they have no impact on whether the collateral is sufficient or not.

The characteristics of those firms that do not have a sufficient track record are shown in model XI of Table 8.5. If the interviewee is a sales manager then the firm is more likely to have an insufficient track record, possibly for the same reason as before. The coefficient (t-value) of variables *EDUC* and *GENDER* are -0.081 (2.55) and -0.216 (1.66) respectively (see Table 8.5). This means that if the interviewee is less educated or is a female then they are more likely to have no track record. This is plausible as these borrowers are less likely to have a history with the commercial banks, and they are also less likely to search for different and new sources of funds, due to their inability and other social obstacles (ie. less educated and female). Model XI also shows that firms in private ownership and services are less likely to have a track record. In the case of services, this is because it is easier for the new entrepreneurs to enter to this sector (see Chapter 2). However, the size of the firm (whether

measured by sales turnover *TURN*, or employment *EMP*) is negatively related to the dependent variable. Thus, smaller firms have more of a problem with a track record.

Model XII in Table 8.5 shows the characteristics of those firms that were requested by the commercial banks to take a guaranteed loan, but where no specific reason was given. The older is the interviewee then he is less likely to be requested by the bank to take a guaranteed loan. This is most likely because he has more experience, so there may be no specific reason for the bank not to lend to such borrowers. Model XII also shows that the bank will request the borrowers to take a guaranteed loan if they are not a single-plant firm or located outside Amman. This means that firms located in Amman fare better than those in the other governorates, which may be due to the accessibility to the sources of finance and more readily-available information about these firms; something which might make them appear less risky. Again, the size of the firm (whether measured by *EMP* or *CAP*) is negatively related to the dependent variable, but it is not significant. Thus, overall the smaller micro-firms (generally with less than 5 employees) have a much greater problem in obtaining finance due to a lack of collateral or due to insufficient track record.

#### ***8.4.4 Documents Prepared for the Guaranteed Loan***

Usually, commercial banks ask firms to prepare certain documents when they apply for a loan. This provides information about their ability to repay the amount of the loan on time. The documents that are usually requested are business plans, feasibility studies and cash-flow analyses, as well as other documents such as licenses. The banks might request all or some of the above documents. Table 8.6 examines the interviewee demographics and firm characteristics for those receiving guaranteed loans and falling into each of three categories (ie. business plan, feasibility study, or any document including the first two). It shows the full and parsimonious version of each model, but again we focus on the latter only.

Model XIII in Table 8.6 shows the characteristics of those firms that have prepared a business plan. If the interviewee is a financial manager then he is more likely to prepare a plan, which probably reflects the ability of these borrowers to understand the concept of a business plan, and how it can help in applying for a guaranteed loan. An interviewee with more experience is more likely to prepare a business plan, which may be because they have

more experience in dealing with the commercial banks. However, if the interviewee is male, the legal status of the firm is a partnership or the firm is located in Amman, then they are less likely to prepare a business plan. This is because all of these reflect the ability of the firms to pledge the conventional collateral, which is considered the best insurance for these loans. For example, if the borrower is a male or the legal status is a partnership then the firm generally able to pledge enough collateral due to high assets, so that a business plan is not needed.

The characteristics of the firms that have prepared the feasibility study for the guaranteed loan are shown as model XIV in Table 8.6. The significant interviewee demographic variables are the same as for model XIII. However, in the case of the firm characteristics, the sole-traders are more likely to prepare a feasibility study, but if the firm is a part of a large group then it is less likely to do so. Again, these may be because the firms are less or more able to extend sufficient collateral when they apply for a loan from commercial banks (see Table 8.5). The age of the firm *AGE* and the capital used for start-up *CAP* are negatively related to the dependent variable. This means that if the firm is younger or used less capital for start-up then it will be required to prepare a feasibility study in order to receive a guaranteed loan. This reflects the problems facing young and small start-up firms.

Around 30 percent of firms prepared a business plan and a feasibility study. To maximize the number of observations, model XV in Table 8.6 examines the characteristics of those firms preparing any document (including a business plan or a feasibility study). The table shows that 74 percent of firms prepared a document (105 out of 142 firms), but only 56 percent of firms prepared a business plan and 44 percent prepared a feasibility study. Exactly the same demographic variables are significant in model XV as in models XIII and XIV, but few of the firm characteristics are significant. If the firm is in the service sector then it is less likely to prepare any document. This is because their activities can be much more clearly observed by banks than those in other sectors. Finally, if the capital used for start-up was low, then the firms were required to prepare more documents. The size of the firm, whether measured by *EMP* or *TURN*, is negatively related to the dependent variable, but again it is not significant.

## 8.5 The Guaranteed Loan

This section analyses the characteristics affecting the value of the loan receiving a guarantee. It examines the factors which are associated with larger or smaller loans. It also examines whether the identity of the participating bank affects the loan value. In addition, it analyses the factors affecting the rate of interest and the value of collateral.

### 8.5.1 Factors Affecting the Loan Size

The factors affecting the value of the loan is analysed in several stages in Table 8.7. Initially, the effect of the interviewee demographic data (group A of variables) and the firm's characteristics (group B of variables) are examined (model XVI). We then consider adding other variables on the loan characteristics (group E of variables). Firstly, the guarantee ratio (*LG16*) and the value of collateral (*LG17*), shown as model XVII. Secondly, for the purpose of the loan (*LG4*), shown as model XVIII. However, there is a possibility that the value of collateral and the guarantee ratio may be endogenous to the value of the loan, and thus the possibility that the coefficients on these variables may be subject to simultaneity bias. Finally, for all of variables together (model XIX), together with the parsimonious version of this model.

The results suggest that where the purpose is not to finance a new product or service (*LG4.4*), the loan is larger in size on average, at anywhere between J.D 13,000 to J.D 16,000. However, if the variable *LG16* is included for those firms receiving a guarantee at the higher rate (ie. loans above J.D 40,000) then these terms (*LG4*) are no longer significant, suggesting that it is these other purposes that tend to get the larger loans. The results in model XIX also suggest that the loan size is positively related to the value of collateral (*LG17*). This is perhaps not surprising, and comparison with model XVI suggests that the inclusion of *LG16* and *LG17* do not materially affect obtained coefficients on the other variables (see models XVI and XVII). However, the term for financial managers (*TITLE3*) in model XVI is significant, but this is because they tend to be employed in larger firms.

Given the above effects model XIX in Table 8.7 shows that the value of the guaranteed loan decreases as the age of the borrower increases. This means that the banks are

more likely to provide larger loans (each receiving a guarantee) to younger entrepreneurs, which is consistent with the JLGC target group and general policy towards encouraging young entrepreneurs. It is also consistent with bank policies for maximizing profit, as they prefer to lend to younger borrowers with lower health risks, because they are more able to provide life insurance policies as security. The table also shows that sole traders receive smaller loans on average (*LEGAL1*), but that firms located in Amman get larger loans (*LOCATE*). Not surprisingly, larger firms, as measured by *EMP* or *CAP*, also get larger loans.

### ***8.5.2 The Participating Banks***

This section examines whether some of the commercial banks are associated with larger or smaller loans. This is interesting as it potentially illustrates how the banks' credit policies may differ from one bank to another. Table 8.8 analyses this in several stages. Initially it shows in model XX the effect of the bank's identity and the purpose of the loan on the size of the loan receiving a guarantee. The significant demographic and firm characteristic variables in model XXI, are then added, and then finally we add the guarantee ratio (*LG16*) and the value of collateral (*LG17*) in addition to all of the previous variables. This is model XXII, for which the parsimonious version is also given in Table 8.8. Again, the results in Table 8.8 show that there are significant variations in the size of the loan from different banks, but that there is no consistent pattern. Some banks are associated with larger loans, and others with smaller loans. However, it also shows that the purpose of the loan is not a factor in the size of the loan. The rest of significant variables affecting the size of the loan in model XXII are the same exactly as in model XIX in Table 8.7.

### ***8.5.3 The Rate of Interest***

This section examines the factors affecting the rate of interest on the guaranteed loan. Table 8.9 analyses the interviewee demographics, the firm characteristics, the purpose of the loan, the bank identity and some other variables on the rate of interest. These other variables include the project size (*LG3*), the ratio of the loan to project size (*LG18*), the loan size (*LG16*), the value of collateral (*LG17*) and whether a firm had previously received a loan from a commercial bank (*PL1*). It gives the full and parsimonious version of this model, but again we focus on the latter. Here there is a possibility that the rate of interest may be

endogenous to the value of the loan, and thus the possibility that the coefficients on these variables may be subject to simultaneity bias.

Table 8.9 shows that older interviewees are more likely to pay a higher interest rate. This means that younger borrowers not only receive larger loans, but they pay a relatively lower rate of interest. This might be due to the lower health risk of younger borrowers. The more-experienced interviewees are also more likely to receive a lower interest rate, something that illustrates the importance of experience in the provision of loans to SMEs. Sole traders and service-sector firms are also more likely to receive a guaranteed loan with a lower rate of interest. It was mentioned above that the activities in the service sector are more readily observable, which means lending to these firms can be made with greater confidence. The size of the firm (measured by *TURN*) is negatively related to the interest rate, because this reflects the firm's ability to repay the loan on time, and it makes lending to these firms more secure. However, both the project size and the loan size have no effect on the interest rate, so that it is the firm size that matters.

Table 8.9 shows that if the purpose of the project is for start-up or for capital purchase the firm pays a lower interest rate on average. This result shows the importance of clearly-defined project, so that projects concerned with working capital pay a higher interest rate. Table 8.9 shows that there are significant variations in the interest rate charged by different banks, but that there is no consistent pattern between different types of bank. It also shows that there is a negative relationship between the rate of interest and the ratio of the loan to the project size (*LG18*). This result is consistent with the view that an increase in this ratio increases the borrower's own funding of the project, which makes the loan a less risky for the bank. Usually, when the borrower's financial stake increases the bank's willingness to lend also increases (JLGC, 1994). Besanko and Thakor (1987) report that low-risk borrowers choose contracts with a lower interest rate, but a higher level of collateral requirement. This supports this, but we now investigate the issue of collateral.

#### **8.5.4 The Collateral**

The main objective of the loan guarantee scheme is to encourage the commercial banks to provide loans to the viable small and medium-sized enterprises that do not have

enough collateral. But as we have seen in Chapter 7 the firms still pledge collateral for the guaranteed loans. In this section we analyse the effect of the interviewee demographics, the firm characteristics, the purpose of the guaranteed loan, the bank identity and some other variables on the value of the collateral pledged for the guaranteed loan (*LG17*). This is shown in Table 8.10 as model XXIV. We also examine the effect of these variables on the ratio of collateral to the total project size (*LG19*). This is shown as model XXV. Again, we focus on the parsimonious version of the models.

Model XXIV shows that very few variables have an effect on the level of collateral. If the interviewee is a financial manager then he is more likely to pledge substantial more collateral for the guaranteed loan. This is probably a size-related effect, as financial managers work in larger firms. The level of educational attainment is negatively related to the value of collateral, but as mentioned before, this is probably a signal to the bank that the borrower has a good understanding of how to manage and use the loan (it is a ‘demand’ factor). However, if the borrower is male, then he is more likely to pledge more collateral for the guaranteed loan, which is because males in Jordanian society are more likely to own property (a ‘supply’ factor). This result suggests that the JLGC has to care more for female borrowers, because they can not necessarily provide the collateral required by banks. The value of collateral decreases as the age of the firm increases, so that newer firms have to pledge more collateral even if the loan is guaranteed by the JLGC. This increases the onus on young firms. The only other significant variable in the model is the number of employees, which can again be taken as an indicator of firm size. When a firm is larger then it is more likely to pledge more collateral for the guaranteed loan. This shows that the commercial banks are still looking to secure their rights even the loans under consideration are guaranteed by the JLGC.

Model XXV in Table 8.10 shows the effect of the same variables on the ratio of collateral to the project size (*LG19*). The results are very different to before. None of the demographic or characteristics variables are significant. Some of the banks participating in the scheme clearly require a higher proportion of the loan to be secured. The only variable to be significant is the ratio of loan size to the project size. This has a positive relationship, suggesting that banks require a higher level of security where the value of the loan is for a greater proportion of the total project size. This seems quite plausible.

## 8.6 Finance Additionality

One of the main issues for any type of scheme providing finance to firms is whether the finance would have been available from other sources or not. Finance, which would not be available through other sources is defined as 'finance additionality' (see Chapter 4). This section examines the loan finance 'additionality'. It examines the effect of the interviewee demographics (group A of variables), the firm characteristics (group B of variables) and some other variables on whether the firm believes that the bank would have lent to them if the guarantee had not been available (*ADD*) (ie. *ADD*= 1:'additional'; *ADD* =0:'non-additional'). This is model XXVI, and Table 8.11 shows the full and parsimonious versions of the results.

Table 8.11 shows that if the interviewee has a high level of education (*EDUC*) then in his or her opinion the provision of loan finance is more likely to have depended on the guarantee. This may reflect the fact that educational advantage has helped the borrower to take advantage of the scheme or it could be that these people are more sophisticated in their answers (ie. an interview bias). Interviewees with a long experience (*EXPER*) indicate that the guarantee is less likely to be additional, so they could have got finance elsewhere. These borrowers may have a sufficient track record and be more knowledgeable about the sources of funding available. Guarantees to private ownership firms (*LEGAL3*) are more likely to be additional, and when the firm is a single plant enterprise (*ORGI*) the guarantee is also more likely to be additional. These kinds of plant may have more limited access to finance. Model XXVI in Table 8.11 also shows that older firms (*AGE*) seem to get more benefit from the loan guarantee scheme. Firms in the manufacturing sector (*SECTOR1*) are also more likely to have financial additionality. These may have more need for funds than the firms in other sectors, as they are larger in size (see Chapter 7). This is an important result, as the manufacturing sector has a key role in the Jordanian economy, and much attention is paid to it by the JLGC. The size of the firm (measured by the capital used for start-up *CAP*) is negatively related to the additionality variable, so that interestingly the finance additionality is greater the smaller is the size of the firm at start-up. There is evidence that the current size of firm (*TURN*) is also significant and negative, while there is also evidence for the project size ( see below).

The remainder of Table 8.11 shows the effect of a number of other variables on finance additionality (*ADD*). It shows that if the firm approached the JLGC directly for a guaranteed loan (*NEGI*) then they are less likely to have needed the guarantee. Thus, the direct approach seems to be a bad signal. The size of the project (*LG3*) has a negative relationship with the additionality variable, so that smaller projects are more likely to need a guarantee. This is in addition to the size of the firms. The value of collateral (*LG17*) also shows a negative relationship, which is encouraging, as the more collateral projects have the less they are in need of a guarantee. This is in line with the JLGC's objective which is to encourage the banks to lend to SMEs without sufficient collateral. The other variables are for the purpose of the guaranteed loan (*LG4*). All of the included variables have a positive relationship with the dependent variable, suggesting that guarantees for projects concerning with new products and services (*LG4.4*) are less likely to be additional.

The factors influencing the level of additionality of the SFLGS in UK according to the KPMG study (1999) are as follows: geographical region, sources of finance, markets, competition, firm-level objectives, personal characteristics, legal form and loan size. The main findings is that none of these variables is significantly related (at 5 percent level) to the level of finance additionality. At 10 percent level, two variables were significant: larger firms (measured by sales) lower finance additionality, which similar to our study; and firms facing regional competitors had more finance additionality. However, in our study we have found a range of other effects related to demographic data, firm characteristics and variables including the loan size, the purpose of the loan, the project size, the value of collateral, the history of receiving loans from banks and the firm's approach to the loan guaranteed corporation (we don't have data on regional competition as it is difficult to obtain in Jordan). Thus, we are able to obtain a much richer set of results.

## 8.7 The Economic Effect of the Project

The finance additionality may lead to 'economic additionality', which are economic effects of the project that would not otherwise occur without the guarantee. These include such things as the opening-up of new markets, new products and services, new processes, the introduction of leading-edge technologies, an increase in exports and new sources of supply. They also include other effects on the level of firm activity, such as on sales turnover, total

assets or employment (see Chapter 4). Together, these are the main indicators of the economic effects of the loan guarantee scheme. The following discussion presents the empirical results for those effects, beginning with the first six effects identified above.

### 8.7.1 *The Effects of the Project*

This section analyses the interviewee demographics, firm characteristics and some other variables on each of the following effects of the project: opening-up of new markets (*EFFECT1*); developing new products and services (*EFFECT2*); developing new processes (*EFFECT3*); the introduction of leading-edge technologies (*EFFECT4*); increases in exports (*EFFECT5*); and the creation of new sources of supply (*EFFECT6*). The parsimonious results for each of these are given in Table 8.12. As well as the variables indicated above, it includes a regressor for the finance additionality (*ADD*) of the project. This variable has little effect on the other estimates obtained, and this can be seen from results without the additionality term, which are given in Appendix Table 8.4.

Opening-up of new markets (*EFFECT1*): Model XXVII of Table 8.12 shows that if the interviewee has a long experience (*EXPER*) then he or she is less likely to open-up a new market. This might be because the interviewee already has an established share of the market, and sees no need for new markets. However, partnership firms (*LEGAL2*) or firms located in Amman (*LOCATE*) are more able to open new markets. The first of these reflects the more dynamic nature of partnership firms (it was found above that they are able to access greater finance), while for firms in Amman it may reflect the greater market opportunities (see Chapter 2). However, newer firms (*AGE*) are less able to open-up new markets because they probably have less capacity and they are focusing on their existing markets, while firms in manufacturing (*SECTOR1*) are more able to open-up new markets, possibly reflecting greater competition in this sector. Likewise, smaller firms (measured by *EMP*) are more likely to open-up new markets, possibly due to competition (see Chapter 7). The additionality variable (*ADD*) has a positive relationship with the dependent variable, but it is only mildly significant. It means that if the borrower believes that the loan was made because of the guarantee then he or she is more likely to open-up new markets.

New products and services (*EFFECT2*): Model XXVIII of Table 8.12 shows that the interviewees with a higher level of educational attainment (*EDUC*) are more likely to

develop new products or services. This reflects the ability of such interviewee to realise the advantages of developing their product or service and to be more innovative. Firms in the service or retail sectors (*SECTOR2* and *SECTOR3*) are also more able to develop new products or services, possibly due to the lower costs of introducing these. The size of the firm (measured by *EMP*) has a significant positive coefficient, which means that larger firms are more likely to develop new products or services. This is also the case for projects receiving larger loans (*LG2*), suggesting that scale considerations are important. However, firms that pledged more collateral are less likely to develop new products or services, possibly reflecting the more risk averse nature of these firms. The additionality of the guarantee (*ADD*) is insignificant, so that projects depending on the guarantee are no more likely to have introduced a new products or services.

New processes (*EFFEFFECT3*): Model XXIX of Table 8.12 shows that if the interviewee is a partner (*TITLE4*) then he or she is more likely to develop new processes. It is also more likely the better educated is the interviewee (*EDUC*), and the younger is the interviewee (*AGE-INT*). The results also suggest that single-plant firms (*ORG1*) are more able to develop new processes, as are firms in the manufacturing sector (*SECTOR1*). This no doubt result reflects the higher level of technology used in this sector, and interestingly it also seems to be associated with single-plant firms. The size of the firm (whether measured by *EMP* or *CAP*) is positively related to the development of new, but as may be expected start-ups is less likely to. Finally, if the loan that the firm received was additional, then it is more likely to develop new processes, suggesting that this is an important effect of the loan guarantee scheme.

Leading-edge technologies (*EFFEFFECT4*): Model XXX shows that if the interviewee is a financial manager then the project is less likely to introduce a new level of technology. These managers work in larger firms, and it may be that they already have a high level of technology, or possibly that there are less dynamic. The more educated borrower (*EDUC*) is more likely introduce a new technology, while borrowers with a long experience (*EXPER*) are less likely to, possibly because they see no reason to change and are suspicious of new technology. Firms in the manufacturing sector (*SECTOR1*) are more likely to introduce a new technology, while the firms in the retail sector (*SECTOR3*) are less likely to, because they do not need a high level of technology. Also, when the number of employees decreases (*EMP*) the firm is more likely to use new technology, supporting the idea that it is associated

with smaller and more dynamic firms. Model XXX also shows that the firms that approach the JLGC directly (*NEG1*) are more likely to introduce a new technology, and the size of the loan and project are also positively related to the dependent variable. This suggests that new technology is associated with larger projects in smaller firms, but they are no more likely to occur in projects that are additional.

Exports (*EFFECT5*): In model XXXI relatively few of the variables are significant. It shows that if the interviewee is a financial manager (*TITLE3*) then the firm is less likely to increase its exports due to the project. This is worrying, as firms with financial managers tend to be larger in size. A multi-plant firm (*ORG2*) is also less likely to increase its exports as a result of the project. However, a firm in the manufacturing sector (*SECTOR1*) is more likely to increase its exports, no doubt because it aspires to be in foreign markets more than firms in other sectors (see Chapter 7). Model XXXI also shows that the size of the loan (*LG2*) is positively related to an increase in exports, but that the additionality of the guarantee does not affect this.

New sources of supply (*EFFECT6*): Finally, model XXXII of Table 8.12 shows that if the interviewee is a manager or a financial manager (*TITLE3*) then he or she is less likely to create a new source of supply, and this is also the case for those that are more highly educated (*EDUC*). Firms in the retail sector (*SECTOR3*) are more able to create a new source of supply, which is plausible, as these firms are looking to provide different kinds of goods or services and can do so at relatively low cost. The size of the loan (*LG2*) and the size of project (*LG3*) are positively related to new sources of supply, but larger firms (*EMP*) are less likely to, so that again it is larger projects in smaller firms that count. The additionality variable (*ADD*) is insignificant.

Overall, these results indicate many interesting and plausible results concerning the effects of projects implemented by SMEs in Jordan. These represent new results, and they suggest that smaller firms with larger projects or loans are much more dynamic, and are having a range of desirable effects. However, the loan guarantee is generally insignificant, and really only has an effect in opening-up new markets and developing new processes. Nevertheless, these are important effects.

### 8.7.2 The Effects on Firm Activity

We now investigate the effect of the project on the firm's activities, comprising its assets, sales turnover and its employment level. In so doing, we examine the change in these activity variables that the firm attributes directly to the project (so that we ignore other changes in the firm's activities that are not attributable to the project). This measures the change in the firm's activity from one year before the guaranteed loan until two years afterwards, so that the interpretation of the coefficients is now different. The purpose is to identify the characteristics of those projects that have larger or smaller changes in activity. However, for completeness, in Appendix Table 8.5 the total change in the firms' activity over the same period is examined, whether due to the project or not. As can be seen, these produce rather different results, but they are not preferred, as they include effects that are not due to the project. Throughout, we again include the term *ADD* for the finance additionality of the loan guarantee, and we focus on the parsimonious results.

Change in assets: The dependent variable in the case is the change in the firms assets (*ASSTCHGADD*), measured in J.D 000's, but multiplied by the percentage of this change that the interviewee attributes to the project (but not necessarily the loan or the guarantee). Model XXXIII of Table 8.13 gives the results. It shows that if the interviewee is male (*GENDER*) then the greater will be the asset change, suggesting that male entrepreneurs are able to get more benefits from the project. The experience of the interviewee (*EXPER*) is negatively related to the asset change, which again supports the idea that new and younger borrowers are able to get greater advantages. The size of the firm (whether measured by *EMP* or *TURN*) is positively related to the asset change. These support the JLGC's aim to help the young, new and smaller borrowers. This result is confirmed by the negative relationship between the asset change and partnership firms (*LEGAL2*) and multi-plant firms (*ORG2*). Both of these tend to be larger in size. The loan additionality variable (*ADD*) is insignificant, although in the full regression it is mildly significant but negative. However, there could be multicollinearity between the explanatory variables in this model, which is perhaps suggested by the relatively high value of the  $R^2$  but relatively low t-ratios on the individual explanatory variables.

Change in sales turnover: The dependent variable in this case is measured in a similar fashion to before, but for sales turnover, and given in J.D 000's. The results are shown as model XXXIV in Table 8.13 and there is a similar pattern to the asset change model. It reveals that if the interviewee is a financial manager (*TITLE3*) then the greater is the change in sales, although smaller the greater is the level of educational attainment (*EDUC*). However, both of these are significant at the 10 percent level only. Male interviewees (*GENDER*) are associated with greater turnover changes, and this supports the earlier results on asset changes. However, interviewees with a long experience (*EXPER*) or in older firms (*AGE*) have smaller changes in sales. This confirms our earlier results that these are less dynamic firms. However, larger firms (whether measured by *EMP* or *TURN*) have greater sales changes. Model XXXIV also indicates a range of other effects. A firm that has a history with the commercial banks (*PL1*) is less likely to increase its turnover, as is a larger project (*LG3*). However, the size of the loan (*LG2*) and the value of collateral (*LG17*) are positively related to the sales change. The additionality of the guarantee has no effect on the sales.

In the KPMG study, there are three terms that show a positive relationship with the change in sales turnover due to the guaranteed loan: personal capital output (ie. the initial start-up capital of owner), new markets and new products. These last two seem self-explanatory. The variables that have a negative relationship with an increase in sales turnover are related to market share, whether at the UK or European levels, but none of these variables are included in our study, although we find a large range of effects from variables that were not used in the KPMG study.

Change in number of employees: Again, the dependent variable in this case is measured in a similar fashion to before, and it is equal to the increase (or decrease) in the number of employees attributable to the project two years after its implementation. The findings of model XXXV of Table 8.13 show that the change in employment is negatively related to the level of educational attainment (*EDUC*). This is consistent with earlier results, as these individuals seem more able to use new processes and new technology in their operations, which are less labour intensive. Male interviewees (*GENDER*) and sole-trader firms (*LEGAL1*) are also less likely to have a positive change in the number of employees, the latter no doubt because these owners are reluctant to expand the firm beyond the personal span of control. This result is consistent with the results of the KPMG study. Regarding the

location (*LOCATE*), model XXXV shows that firms located in Amman have a greater employment change, although firms in services or retail (*SECTOR2* and *SECTOR3*) are less likely to do so. This supports the view that firms in the manufacturing sector create more jobs than other sectors, which is supported by the qualitative results in Chapter 7. The KPMG study did not identify any sector effects.

The results show that the employment change is positively related to the employment size of the firm (*EMP*). Thus, surprisingly, larger firms seem to grow more. This is consistent with the results for sales turnover. However, once allowance is made for the effect of employment size, then there is a negative relationship between employment growth and turnover (*TURN*). This suggests that is the larger but relatively inefficient or low-value activity firms (ie. high employment but small turnover) that put on most jobs. The negative relationship with turnover is also found in the KPMG study (they do not include a term for employment).

As regards the purpose of the loan, firms engaged in capital purchases or working capital (*LG4.2* and *LG4.3*) have lower employment change than those who use the loan for start up. The firms that have a history with the commercial banks (*PLI*) are less likely to have positive employment change, although the reason for this is not known. The KPMG study found that the age of the firm had a positive relationship with the employment change, although in our study age is not significant (*AGE*), and the initial start-up capital of the owner also had a positive relationship, but again in our study it is insignificant (*CAP*). The additionality of the guarantee (*ADD*) has no effect on the employment change in this study, suggesting that projects relying on the guarantee are no more likely to increase or lose jobs.

## 8.8 Summary and Conclusions

This chapter has presented the quantitative analysis of the survey results using regression analysis. It examines issues such as firm's approach to the JLGC, the size of the guaranteed loan, the finance 'additionality' of the guarantee and the effects of the project. Overall, the analysis provides a consistent set of results that indicate many interesting findings on the operation of the loan guarantee scheme. In particular, it shows that there are seven broad groups of firms and entrepreneurs that have difficulty in obtaining bank finance

and where the scheme seems to have had its main effects; these are: smaller firms, manufacturing firms, firms outside Amman, newer firms, younger borrowers, less-educated borrowers and female borrowers. We conclude by summarizing the main results in respect of each of these broad groups.

Smaller firms: The results suggest that the smaller-micro firms (generally less than five workers) have a much greater problem in obtaining finance due to a lack of collateral or due to an insufficient track record. These firms are more risky, and the results show that they have to prepare more documents to prove their ability to repay the loan on time. This risk causes the banks to charge these firms significantly higher interest rates. The results also show that these smaller firms (in terms of capital employed; see page 213) were not able to receive the funds from the commercial banks in the absence of the loan guarantee scheme, which means that the finance additionality is greater, so that they are more likely to need a guarantee. As regards the economic effects of the projects implemented by these firms, it can be observed that they are significantly more likely to open up new markets, but less likely to develop new products or services. Finally, the smaller is the firm then the lower is the sales turnover change, while the growth in assets and employment are not affected by the size of the firm.

Manufacturing firms: The manufacturing sector has a key role in the Jordanian economy, and much attention is paid to this sector by the government and the JLGC. This is perhaps reflected in the fact that the manufacturing firms are significantly more likely to apply for a guaranteed loan directly through the JLGC. These firms are more likely to prepare a feasibility study, and the results show that they are more likely to need a guarantee. In terms of the economic effects of the projects implemented by these firms, we find that they are more likely to open-up new markets, develop new processes, introduce a new technology and increase exports. However, if a firm is in manufacturing then the greater is the employee change, but the change in assets and sales turnover are no different than for other firms. Overall, projects implemented by manufacturing firms have a great range of effects than firms in other sectors, which no doubt reflects the key role attributed to this sector in the Jordanian economy.

Firms outside Amman: Generally, the level of development outside Amman is less than the level of development inside Amman, which makes firms outside Amman more

risky. This is reflected in the results from the quantitative analysis. The commercial banks are significantly more likely to request that a borrower takes a guarantee loan if they are located outside Amman, despite having conventional collateral that comparable to firms inside Amman. Further, the size of loans received by firms outside Amman is significantly smaller. To put this another way, it could be argued that firms inside Amman have more information on the services of the JLGC and are able to extract larger loans. As regards the economic effects of the projects implemented by the firms outside Amman, it can be observed that they are less likely to open-up new markets, but otherwise there are no significant differences. Finally, firms located outside Amman are less likely to create new jobs but there are no effects on assets or on sales change.

Newer firms: The results suggest that the newer firms are more likely to be required to prepare a feasibility study in order to receive a guaranteed loan. This is in addition to the collateral that they have to pledge for the loan, even though the loan is guaranteed by the JLGC. However, the newer firms do not believe that the guarantee is additional, as they have sufficient collateral to obtain a loan elsewhere. The results show that the newer firms are less likely to open-up new markets, but they are more likely to have a significantly greater change in sales. The change in assets and employment are not affected by the age of the firm.

Younger borrowers: In the case of younger entrepreneurs, the results show that they are more likely to apply for a guaranteed loan directly through the JLGC. For this they have to prepare more documents, but they are able to receive larger loans and pay a relatively lower rate of interest. These borrowers are more likely to develop new processes, but there are no significantly different, economic effects and changes in the firm's employment, assets or sales turnover. The guarantees also do not appear to be additional.

Less-educated borrowers: The results show that the less-educated borrowers do not have problems associated with a lack of collateral, but they have an insufficient track record that makes obtaining finance relatively difficult. Due to the availability of collateral, they believe that provision of a loan is less likely to depend on a guarantee. Their projects are significantly less likely to have the following economic effects: develop new products or services, develop new processes and introduce new technologies, but they can have a new source of supply due to the project. The results also show that the lower is level of educational attainment the greater is sales and employee change.

Female borrowers: In the case of female borrowers, the results show that female entrepreneurs are less likely to apply for a guaranteed loan directly through the JLGC. They do not have a problem in obtaining sufficient collateral, but their problem in obtaining finance is a lack of track record. The commercial banks request these borrowers to prepare many kinds of documents to demonstrate their ability to repay the loan. As regards the economic effects of the projects implemented by such borrowers, it can be observed that there are no significant differences, but the results show that if the borrower is female then the lower is the asset and sales change, while the change in the number of employees is greater.

Overall, these results indicate a number of client groups experiencing difficulties in obtaining bank finance. Apart from the smaller firms, these problems do not appear to arise from a lack of collateral, but because of an insufficient track record, which makes the banks reluctant to lend to them. This not only applies to newer firms and younger borrowers, but also to less-educated and female borrowers. These borrowers often dismiss the importance of the loan guarantee scheme, arguing that they have sufficient collateral and they would have been able to obtain a loan in any event (ie. The loan guarantee scheme was non-additional). However, this may reflect these borrowers' lack of understanding of the financial system, in which a lack of track record plays a very important role. Thus, we believe the additionality of the scheme is greater for these borrowers than their responses would suggest.

In the case of other important client groups of firm (ie. Smaller firms, manufacturing firms and firms outside Amman) we find that there is generally good additionality, enabling these firms to obtain loan finance that would not otherwise have obtained. Their projects also seem to be having many important effects. In these senses, the results that we report for the loan guarantee scheme are encouraging.

**Table 8.1: Correlation Coefficients of the Firm Size**

	<i>EMP</i>	<i>TURN</i>	<i>CAP</i>	<i>LG2</i>	<i>LG3</i>
<i>EMP</i>	1.0000				
<i>TURN</i>	0.6381	1.0000			
<i>CAP</i>	0.2624	0.2848	1.0000		
<i>LG2</i>	0.4836	0.4618	0.3403	1.0000	
<i>LG3</i>	0.3181	0.2673	0.3829	0.5477	1.0000

Note: *EMP* = number of firm employees; *TURN* = sales turnover of firm; *CAP* = capital used for start-up; *LG2* = loan size; and *LG3* = project scale.

**Table 8.2: Factors Determining the Approach to the JLGC**

	Model I		Model II		Model III		Model IV		
	Coef.	t	Coef.	t	Coef.	t	Coef.	t	
<b>Demographic Data</b>	<b>NEG1</b>								
	<i>TITLE1</i>	0.245	(3.43)	---		0.251	(2.30)	0.302	(3.32)
	<i>TITLE2</i>	0.286	(1.28)	---		0.273	(1.12)	0.387	(1.68)
	<i>TITLE3</i>	0.191	(0.96)	---		0.353	(1.48)	0.405	(2.29)
	<i>EDUC</i>	0.068	(1.24)	---		0.048	(0.93)	---	
	<i>GENDER</i>	0.197	(1.97)	---		0.253	(2.18)	0.263	(2.30)
	<i>AGE_INT</i>	0.003	(0.86)	---		0.005	(1.38)	0.005	(1.45)
	<i>EXPER</i>	-0.007	(1.66)	---		-0.009	(1.88)	-0.01	(2.53)
<i>EXPERM</i>	0.403	(1.18)	---		0.475	(1.26)	0.613	(1.99)	
<b>Characteristics of the Sample Firms</b>	<i>LEGAL1</i>	---		0.170	(2.38)	0.255	(2.74)	0.243	(3.02)
	<i>LEGAL2</i>	---		-0.245	(2.70)	0.306	(2.93)	0.305	(3.26)
	<i>ORG1</i>	---		0.233	(2.61)	0.223	(2.25)	0.254	(3.06)
	<i>ORG2</i>	---		0.199	(1.22)	0.189	(1.08)	0.199	(1.29)
	<i>LOCATE</i>	---		0.057	(0.77)	0.071	(0.91)	---	
	<i>AGE</i>	---		-0.003	(0.08)	-0.010	(0.29)	---	
	<i>SECTOR1</i>	---		0.128	(1.97)	0.211	(2.34)	0.216	(3.01)
	<i>SECTOR2</i>	---		0.250	(3.27)	0.312	(3.37)	0.316	(3.84)
	<i>SECTOR3</i>	---		0.302	(2.18)	0.319	(2.12)	0.322	(2.20)
	<i>EMP</i>	---		0.005	(1.50)	0.003	(0.92)	---	
	<i>TURN</i>	---		-0.0001	(1.44)	-0.0001	(1.09)	---	
	<i>CAP</i>	---		0.002	(0.06)	-0.017	(0.45)	---	
	<i>TURNM</i>	---		0.095	(0.86)	0.081	(0.75)	---	
	Constant	-0.382	(2.09)	-0.477	(2.43)	-1.186	(3.50)	-1.164	(3.84)
N	142		142		142		142		
F	3.84		2.24		1.58		2.37		
R <sup>2</sup>	0.07		0.11		0.37		0.15		

**Notes:** The dependent variable is *NEG1*; ie. whether the firm first approached the JLGC (*NEG1*=1) or a bank (*NEG1*=0). Models I to III estimate different versions, and model IV gives the parsimonious results for model III. The t-ratios are based on heteroskedasticity errors.

Table 8.3: Approach to JLGC: Previous Loans

		Model V		Model V & IV		Model IV	
		Coef.	t	Coef.	t	Coef.	t
variables Prior JLGC loan	<i>NEG1</i>						
	<i>PL1</i>	0.044	(0.25)	0.092	(0.46)	---	
	<i>PL2</i>	-0.038	(0.33)	-0.054	(0.39)	---	
	<i>PL3</i>	-0.0003	(0.98)	0.0002	(0.32)	---	
	<i>PL2M</i>	0.51	(0.54)	0.665	(0.55)	---	
	<i>PL3M</i>	-0.214	(2.84)	-0.192	(2.03)	---	
Variables significant at 15% level in model III	<i>TITLE1</i>	---		0.106	(0.41)	0.035	(0.34)
	<i>TITLE2</i>	---		0.195	(0.51)	0.103	(0.42)
	<i>TITLE3</i>	---		---		---	
	<i>GENDER</i>	---		0.230	(1.45)	0.219	(1.38)
	<i>AGE-INT</i>	---		0.007	1.44	0.007	(1.50)
	<i>EXPER</i>	---		-0.008	(1.56)	-0.008	(1.68)
	<i>EXPERM</i>	---		0.501	(1.18)	0.466	(1.17)
	<i>LEGAL1</i>	---		0.225	(2.40)	0.212	(2.24)
	<i>LEGAL2</i>	---		0.308	(2.62)	0.297	(2.70)
	<i>ORG1</i>	---		0.290	(1.97)	0.292	(2.31)
	<i>ORG2</i>	---		0.190	(0.89)	0.218	(1.16)
	<i>SECTOR1</i>	---		0.235	(2.54)	0.226	(2.60)
	<i>SECTOR2</i>	---		0.343	(3.13)	0.344	(3.24)
	<i>SECTOR3</i>	---		0.290	(1.78)	0.289	(1.81)
		Constant	0.208	(3.44)	-1.097	(2.32)	-0.960
	N	<b>99</b>		<b>99</b>		<b>99</b>	
	F	---		---		<b>2.32</b>	
	R <sup>2</sup>	<b>0.01</b>		<b>0.13</b>		<b>0.13</b>	

**Notes:** The dependent variable in each case is *NEG1*; ie. whether the firm first approached the JLGC (*NEG1*=1) or a bank (*NEG1* =0). There are 99 observations, as the regressions exclude those firms that received the JLGC guaranteed loan for start-up, and which have no history of previous loans. Model V estimates the firm's history with commercial banks on the first approach. Models V & IV estimates the firm's history with the parsimonious version of model III. Model IV re-estimates the model shown in Table 8.2, but with 99 observations. *TITLE3* is dropped as there are no non-zero observations. The t-ratios are based on heteroskedasticity errors.

Table 8.4: Approach to JLGC: Collateral for Previous Loans

		Model VII		Model VIII		Model IX	
<i>NEG1</i>		Coef.	t	Coef.	t	Coef.	t
Some variables Prior JLGC support	<i>PL4.1</i>	0.069	(0.33)	---		---	
	<i>PL4.2</i>	0.028	(0.17)	---		---	
	<i>PL4.3</i>	0.214	(0.97)	---		---	
	<i>PL4.4</i>	0.352	(1.29)	---		---	
	<i>PL5.1</i>	---		-0.577	(2.84)	---	
	<i>PL5.2</i>	---		-0.819	(4.56)	---	
	<i>PL5.3</i>	---		-0.661	(4.10)	---	
	<i>PL6.1</i>	---		---		0.344	(2.22)
	<i>PL6.2</i>	---		---		0.452	(2.33)
	<i>PL6.3</i>	---		---		---	
<i>PL6.1M</i>	--		---		-6.148	(2.21)	
Variables significant at 15% level in model III	<i>TITLE1</i>	-0.015	(0.12)	0.165	(1.03)	0.317	(1.88)
	<i>TITLE2</i>	0.381	(1.18)	0.549	(1.60)	0.576	(2.20)
	<i>TITLE3</i>	---		---		---	
	<i>GENDER</i>	0.008	(0.03)	0.129	(0.51)	0.102	(0.42)
	<i>AGE-INT</i>	0.011	(1.40)	0.008	(1.08)	0.006	(0.80)
	<i>EXPER</i>	-0.008	(0.85)	-0.008	(0.99)	-0.013	(1.56)
	<i>EXPERM</i>	0.630	(0.77)	0.421	(0.66)	1.209	(1.55)
	<i>LEGAL1</i>	0.086	(0.47)	0.116	(0.76)	0.099	(0.68)
	<i>LEGAL2</i>	0.154	(0.04)	0.206	(1.04)	0.239	(1.35)
	<i>ORG1</i>	0.222	(0.47)	0.324	(1.59)	-0.079	(1.90)
	<i>ORG2</i>	-0.112	(0.64)	-0.067	(0.36)	0.448	(0.46)
	<i>SECTOR1</i>	0.298	(1.28)	0.343	(1.65)	0.447	(1.68)
	<i>SECTOR2</i>	0.415	(1.95)	0.402	(2.03)	0.437	(2.11)
	<i>SECTOR3</i>	0.355	(1.18)	0.257	(1.06)	0.348	(1.30)
	Constant	-0.920	(1.29)	-0.419	(0.57)	-1.439	(1.91)
N	<b>51</b>		<b>51</b>		<b>51</b>		
F	---		---		---		
R <sup>2</sup>	<b>0.28</b>		<b>0.31</b>		<b>0.36</b>		

Notes: The dependent variable in each case is *NEG1*; ie. whether the firm first approached the JLGC (*NEG1*=1) or a bank (*NEG1* =0). There are 51 observations, as the regressions include only those firms in receipt of a previous loan. *TITLE3* is dropped as there are no non-zero observations. *PL4* is the purpose of the previous loan; *PL5* is the kind of assets pledged as collateral for the previous loan; and *PL6* is the value of the collateral. The t-ratios are based on heteroskedasticity errors.

Table 8.5: Reasons to Take a Guaranteed Loan

Dependent variable		Lack of collateral (NEG 4.1)				No track record (NEG 4.2)				Bank request (NEG 4.3)			
		Model X		Model XI		Model XII		Model XII		Model XII		Model XII	
		Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
Demographic Data	TITLE1	0.178	(0.92)	0.216	(1.62)	-0.104	(0.52)	---		0.196	(0.65)	---	
	TITLE2	-0.154	(0.53)	---		-0.336	(1.52)	-0.160	(2.38)	0.518	(1.34)	---	
	TITLE3	0.082	(0.27)	---		-0.255	(1.07)	---		0.431	(1.09)	---	
	EDUC	0.129	(2.43)	0.091	(1.75)	-0.080	(2.32)	-0.081	(2.55)	-0.028	(0.58)	---	
	GENDER	0.173	(1.12)	0.230	(1.89)	-0.210	(1.51)	-0.216	(1.66)	0.050	(0.35)	---	
	AGE-INT	0.005	(0.93)	---		0.003	(0.99)	---		-0.005	(1.12)	-0.007	(1.86)
	EXPER	0.004	(0.66)	---		-0.003	(0.69)	---		-0.003	(0.58)	---	
	EXPERM	-0.054	(0.09)	---		0.139	(0.33)	---		0.110	(0.25)	---	
Characteristics of the Sample Firms	LEGAL1	0.055	(0.29)	---		-0.280	(1.78)	-0.263	(1.82)	0.164	(1.40)	---	
	LEGAL2	0.006	(0.03)	---		-0.284	(1.82)	-0.229	(1.61)	0.262	(2.12)	---	
	ORG1	0.267	(1.75)	0.219	(1.99)	-0.065	(0.49)	---		-0.333	(1.54)	-0.264	(2.02)
	ORG2	0.139	(0.61)	---		0.079	(0.45)	---		-0.287	(1.14)	---	
	LOCATE	0.268	(2.69)	0.202	(2.49)	0.043	(0.66)	---		-0.201	(2.30)	-0.167	(2.28)
	AGE	-0.071	(1.40)	---		0.016	(0.48)	---		0.024	(0.55)	---	
	SECTOR1	0.125	(0.67)	---		0.088	(1.38)	---		0.100	(0.72)	---	
	SECTOR2	0.006	(0.03)	---		0.166	(2.22)	0.095	(1.46)	0.113	(0.90)	---	
	SECTOR3	-0.242	(1.16)	-0.333	(2.73)	0.086	(0.76)	---		0.192	(1.01)	---	
	EMP	0.0001	(0.04)	---		-0.001	(0.62)	---		-0.0003	(0.11)	---	
	TURN	9.99E-06	(0.09)	---		-0.0001	(1.23)	-0.0001	(1.91)	0.0001	(0.43)	---	
	CAP	-0.015	(0.36)	---		0.033	(1.18)	---		-0.021	(0.50)	---	
	TURNM	-0.246	(2.05)	---		-0.023	(0.27)	-0.017	(0.22)	0.025	(0.21)	---	
	Constant	-0.590	(1.27)	-0.35	(2.00)	0.557	(1.32)	0.679	(3.14)	0.447	(0.97)	0.877	(4.33)
n	68		68		18		18		37		37		
N	141		141		141		141		141		141		
F	13.96		6.52		1.04		1.75		3.14		4.75		
R <sup>2</sup>	0.22		0.14		0.16		0.11		0.15		0.09		

Note: The dependent variables are *NEG4.1* for model X, *NEG4.2* for model XI and *NEG4.3* for model XII. The parsimonious version of each model is also given, but only those variables significant at 15% level are included. N= total number of observations and n = number of observations where the borrowers response was equal to 1; otherwise zero. There was a missing case in each regression, so N = 141. The t-ratios are based on heteroskedasticity errors.

Table 8.6: Documents Prepared for the Guaranteed Loan

Dependent variable		Business plan (NEG5.1 or NEG5.4)				Feasibility study (NEG5.2 or NEG5.4)				Any document (NEG5.1 to NEG5.4)			
		Model XIII		Model XIV		Model XIV		Model XV		Model XV		Model XV	
		Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
Demographic Data	TITLE1	-0.562	(2.42)	-0.458	(3.00)	-0.268	(1.26)	-0.357	(2.08)	-0.598	(4.69)	-0.385	(3.49)
	TITLE2	0.799	(2.94)	-0.720	(4.36)	-0.458	(1.88)	-0.615	(3.36)	-0.896	(4.15)	-0.739	(2.44)
	TITLE3	-0.005	(0.01)	---		0.202	(0.63)	---		-0.01	(0.05)	---	
	EDUC	0.018	(0.34)	---		-0.010	(0.17)	---		0.044	(0.97)	---	
	GENDER	-0.113	(1.70)	-0.244	(1.95)	-0.245	(1.75)	-0.236	(1.75)	-0.387	(4.00)	-0.392	(3.77)
	AGE-INT	-0.006	(1.27)	---		-0.003	(0.58)	---		-0.005	(1.26)	---	
	EXPER	0.016	(2.50)	0.017	(3.77)	0.017	(2.98)	0.017	(3.83)	0.02	(3.73)	0.015	(4.10)
	EXPERM	-0.659	(1.21)	-0.882	(2.36)	-0.876	(1.75)	-0.791	(2.18)	-1.207	(2.65)	-0.815	(2.55)
Characteristics of the Sample Firms	LEGAL1	0.06	(0.46)	---		0.152	(0.90)	0.197	(2.39)	0.068	(0.42)	---	
	LEGAL2	-0.179	(1.23)	-0.268	(2.97)	-0.045	(0.25)	---		-0.019	(0.11)	---	
	ORG1	0.09	(0.47)	---		0.29	(2.21)	0.283	(2.66)	0.172	(0.77)	---	
	ORG2	0.261	(0.97)	---		0.233	(1.53)	0.193	(1.51)	0.378	(1.38)	---	
	LOCATE	-0.238	(2.75)	-0.205	(2.57)	0.008	(0.09)	---		-0.069	(0.84)	---	
	AGE	0.037	(0.86)	---		-0.106	(2.48)	-0.111	(3.25)	-0.038	(0.95)	---	
	SECTOR1	-0.186	(1.11)	---		0.188	(0.92)	0.179	(2.46)	-0.126	(0.93)	---	
	SECTOR2	-0.25	(1.51)	---		0.034	(0.17)	---		-0.277	(2.08)	-0.135	(1.82)
	SECTOR3	-0.125	(0.56)	---		-0.174	(0.76)	---		-0.164	(0.88)	---	
	EMP	0.001	(0.43)	---		-0.003	(0.47)	---		-0.002	(0.33)	---	
	TURN	-0.0001	(0.69)	---		-0.0001	(0.43)	---		-0.0001	(0.88)	---	
	CAP	-0.073	(1.77)	---		-0.066	(1.88)	-0.074	(2.22)	-0.058	(1.45)	-0.092	(2.78)
	TURNM	0.197	(1.74)	---		-0.098	(0.73)	---		0.196	(2.19)	---	
	Constant	1.536	(3.56)	1.078	(5.66)	0.710	(1.71)	0.609	(2.72)	1.686	(4.68)	1.440	(9.77)
n	80	80	62	62	105	105							
N	142	142	142	142	142	142							
F	11.48	4.69	31.83	37.53	6.04	7.11							
R <sup>2</sup>	0.33	0.22	0.31	0.27	0.32	0.23							

Note: For model XIII the dependent variable is *NEG5.1 or NEG5.4* ("Business plan" or "Business plan & Feasibility study"); for model XIV it is *NEG5.2 or NEG5.4* ("Feasibility study" and "Business plan & Feasibility study"); and for model XV it is *NEG5.1 to NEG5.4* (Business plan, Feasibility study, cash flow analysis or "Business plan and Feasibility study"). The parsimonious version of the models also given including only those variables significant at 15% level. N= number of observations and n = number of observations where the borrowers response equal to 1; otherwise zero. The t-ratios are based on heteroskedasticity errors.

Table 8.7: Value of the Guaranteed Loan

		Model XVI		Model XVII		Model XVIII		Model XIX			
<b>LG2</b>		Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
<b>Demographic Data</b>	<i>TITLE1</i>	-3.070	(0.55)	-6.737	(1.14)	-5.571	(0.88)	-10.381	(1.48)	---	
	<i>TITLE2</i>	-7.911	(0.79)	0.568	(0.07)	-11.823	(1.12)	-4.505	(0.49)	---	
	<i>TITLE3</i>	35.349	(2.02)	13.732	(0.82)	31.871	(1.81)	10.126	(0.60)	---	
	<i>EDUC</i>	-0.550	(0.33)	-0.039	(0.03)	-0.302	(0.15)	0.226	(0.14)	---	
	<i>GENDER</i>	-1.863	(0.39)	-0.751	(0.26)	-1.902	(0.39)	-0.995	(0.33)	---	
	<i>AGE-INT</i>	-0.440	(2.75)	-0.234	(2.08)	-0.408	(2.60)	-0.205	(1.92)	-0.202	(2.25)
	<i>EXPER</i>	0.165	(0.85)	0.145	(1.17)	0.105	(0.51)	0.109	(0.85)	---	
	<i>EXPERM</i>	-18.548	(0.96)	-10.483	(0.69)	-14.287	(0.69)	-8.325	(0.54)	---	
<b>Characteristics of the Sample Firms</b>	<i>LEGAL1</i>	-18.753	(2.24)	-13.573	(2.05)	-19.028	(2.39)	-13.445	(2.10)	-7.321	(3.15)
	<i>LEGAL2</i>	-13.939	(1.54)	-8.941	(1.24)	-14.037	(1.60)	-8.737	(1.23)	---	
	<i>ORG1</i>	-8.687	(0.94)	2.595	(0.36)	-7.794	(0.82)	2.760	(0.39)	---	
	<i>ORG2</i>	-10.651	(1.03)	0.453	(0.06)	-9.570	(0.88)	0.918	(0.11)	---	
	<i>LOCATE</i>	4.436	(1.45)	2.756	(1.26)	5.745	(1.90)	3.781	(1.79)	4.857	(3.05)
	<i>AGE</i>	0.551	(0.27)	0.864	(0.54)	0.615	(0.26)	-0.607	(0.33)	---	
	<i>SECTOR1</i>	-3.343	(0.59)	0.574	(0.18)	-1.778	(0.29)	2.775	(0.64)	---	
	<i>SECTOR2</i>	-0.505	(0.09)	2.418	(0.77)	0.101	(0.02)	3.093	(0.93)	---	
	<i>SECTOR3</i>	-0.680	(0.09)	1.369	(0.41)	1.397	(0.19)	2.610	(0.75)	---	
	<i>EMP</i>	0.366	(2.69)	0.224	(2.39)	0.369	(2.60)	0.219	(2.29)	0.190	(2.77)
	<i>TURN</i>	0.003	(0.62)	-0.005	(1.92)	0.003	(0.56)	-0.005	(1.72)	---	
	<i>CAP</i>	4.001	(2.77)	3.027	(2.74)	3.713	(2.44)	2.684	(2.31)	2.157	(1.53)
	<i>TURNM</i>	1.291	(0.37)	-0.002	(0.00)	0.377	(0.11)	-0.727	(0.30)	---	
	<i>LG16</i>	---		33.031	(8.98)	---		32.595	(8.26)	34.474	(6.04)
	<i>LG17</i>	---		0.037	(2.56)	---		0.037	(2.92)	0.045	(3.90)
	<i>LG4.1</i>	---		---		14.531	(2.12)	6.605	(0.98)	---	
	<i>LG4.2</i>	---		---		12.825	(2.26)	6.121	(0.98)	---	
	<i>LG4.3</i>	---		---		16.083	(2.70)	9.380	(1.41)	---	
	<i>LG4.1M</i>	---		---		-388.526	(2.65)	-206.149	(1.26)	---	
	Constant	52.555	(3.36)	6.665	(2.04)	38.353	(2.28)	21.659	(1.57)	9.615	(3.05)
<b>N</b>		<b>142</b>		<b>142</b>		<b>142</b>		<b>142</b>		<b>142</b>	
<b>F</b>		<b>11.30</b>		<b>22.40</b>		<b>6.11</b>		<b>10.68</b>		<b>33.14</b>	
<b>R<sup>2</sup></b>		<b>0.57</b>		<b>0.77</b>		<b>0.58</b>		<b>0.78</b>		<b>0.73</b>	

**Note:** The dependent variable in each case is *LG2*, which is the value of the loan guaranteed by JLGC measured by J.D 000's. Model XVI estimates the effect of demographic data and characteristics of the sample firms on the value of the loan Model XVII also includes whether the guaranteed ratio is 50% or 75% and the value of collateral, while model XVIII includes the purpose of the project in addition to the variables in model XVI. Model XIX includes all of the variables together and it gives the parsimonious version of also, only variables significant at 15% level are included. *LG4* is the purpose of the guaranteed loan. *LG16* is the size of the loan and *LG17* is the value of collateral. The models in this table are estimated using OLS.

Table 8.8: Value of the Guaranteed Loan: Participating Banks

<b>LG2</b>	<b>Model XX</b>		<b>Model XXI</b>		<b>Model XXII</b>			
	Coef.	t	Coef.	t	Coef.	t	Coef.	t
<i>Housing Bank</i>	-7.247	(1.77)	4.197	(0.60)	-5.022	(1.15)	---	
<i>Union Bank</i>	-23.791	(11.11)	-3.822	(0.57)	-12.626	(3.11)	-7.813	(3.93)
<i>Industrial Development Bank</i>	0.237	(0.04)	6.396	(0.74)	-7.546	(1.40)	---	
<i>Cairo Amman Bank</i>	-1.389	(0.14)	8.861	(0.83)	-9.746	(2.57)	---	
<i>Arab Bank Association</i>	-11.645	(2.72)	-8.471	(1.43)	-13.511	(3.95)	-7.806	(3.37)
<i>Jordan Gulf Bank</i>	-26.000	.	-11.540	(1.54)	-15.873	(3.14)	-11.211	(6.68)
<i>Jordan Kuwait Bank</i>	-7.405	(0.99)	3.990	(0.45)	-6.092	(1.44)	---	
<i>Jordan Bank</i>	-14.755	(2.76)	-0.146	(0.02)	-7.111	(1.21)	---	
<i>Jordan Investment Bank</i>	8.497	(2.22)	15.728	(3.00)	-7.749	(0.90)	---	
<i>Middle East Bank</i>	-23.752	(12.68)	-8.132	(1.33)	-16.993	(3.37)	-10.727	(3.94)
<i>Arab Bank</i>	-2.378	(0.25)	-1.068	(0.14)	-11.785	(4.07)	---	
<i>Arab Land Bank</i>	-10.550	(1.28)	4.970	(0.47)	-12.106	(2.66)	-5.719	(2.31)
<i>National Bank</i>	-16.068	(3.43)	-4.295	(0.63)	-11.122	(2.73)	-3.778	(1.51)
<i>Arab Investment Bank</i>	45.834	(10.00)	21.932	(3.47)	-6.274	(1.47)	---	
<i>Grindlays Bank</i>	-28.755	(5.39)	2.868	(0.36)	-10.831	(2.45)	-2.530	(1.46)
<i>Export and Finance Bank</i>	1.748	(0.75)	2.121	(0.26)	4.192	(0.74)	---	
<i>LG4.1 Start-Up</i>	-5.648	(1.16)	15.141	(3.06)	6.875	(1.57)	---	
<i>LG4.2 Capital purchases</i>	0.186	(0.04)	15.546	(3.25)	7.214	(1.79)	---	
<i>LG4.3 Working capital</i>	4.941	(0.94)	17.718	(3.01)	10.137	(2.10)	---	
<i>LG4.1M</i>	-7.879	(0.08)	-438.144	(3.46)	-223.575	(2.06)	---	
<i>AGE-INT</i>	---		-0.374	(2.39)	-0.173	(1.86)	-0.146	(1.51)
<i>LEGAL1</i>	---		-9.734	(2.53)	-8.080	(3.17)	-7.995	(3.56)
<i>LOCATE</i>	---		9.131	(2.67)	4.021	(1.77)	4.251	(2.36)
<i>EMP</i>	---		0.560	(3.69)	0.211	(2.75)	0.259	(3.80)
<i>CAP</i>	---		2.917	(1.51)	1.395	(0.87)	---	
<i>LG16</i>	---				34.392	(5.65)	34.143	(6.36)
<i>LG17</i>	---				0.043	(3.33)	0.043	(3.69)
Constant	29.814	(6.65)	9.550	(1.08)	21.424	(3.48)	24.332	(4.55)
N	<b>142</b>		<b>142</b>		<b>142</b>		<b>142</b>	
F	<b>1.25</b>		<b>4.46</b>		<b>13.35</b>		<b>27.21</b>	
R <sup>2</sup>	<b>0.18</b>		<b>0.50</b>		<b>0.76</b>		<b>0.75</b>	

**Note:** The dependent variable in each case is *LG2*; which is the size of the loan receiving a guarantee from the JLGC. Model XX estimates the effect of the purpose of the guaranteed loan and the bank identity on the size of the loan. Model XXI also includes some demographic and firm characteristics that are significant in model XIX in Table 8.7. Model XXII includes *LG16* and *LG17* in addition the variables in model XXI and finally it gives the parsimonious version of as well. *LG4* purpose of the guaranteed loan, *LG16* is the size of the loan, and *LG17* is the value of collateral. The models in this table are estimated using OLS.

Table 8.9: The Rate of Interest on the Guaranteed Loans

		Model XXIII			
<i>LG9</i>		Coef.	t	Coef.	t
Demographic Data	<i>TITLE1</i>	0.007	(0.61)	---	
	<i>TITLE2</i>	0.005	(0.40)	---	
	<i>TITLE3</i>	0.002	(0.15)	---	
	<i>EDUC</i>	-0.001	(0.79)	---	
	<i>GENDER</i>	0.001	(0.25)	---	
	<i>AGE-INT</i>	0.0002	(1.54)	0.0002	(2.06)
	<i>EXPER</i>	-0.0002	(1.43)	-0.0002	(1.77)
	<i>EXPERM</i>	0.006	(0.33)	0.004	(0.34)
Characteristics of the Sample Firms	<i>LEGAL1</i>	-0.006	(1.17)	-0.005	(2.41)
	<i>LEGAL2</i>	-0.003	(0.65)	---	
	<i>ORG1</i>	-0.007	(1.03)	---	
	<i>ORG2</i>	-0.010	(1.34)	---	
	<i>LOCATE</i>	0.002	(0.85)	---	
	<i>AGE</i>	-0.001	(0.64)	---	
	<i>SECTOR1</i>	0.0002	(0.07)	---	
	<i>SECTOR2</i>	-0.005	(1.75)	-0.006	(3.68)
	<i>SECTOR3</i>	-0.002	(0.45)	---	
	<i>EMP</i>	0.0001	(0.75)	---	
	<i>TURN</i>	-0.000004	(1.28)	-0.000004	(2.53)
	<i>CAP</i>	0.0002	(0.15)	---	
	<i>TURNM</i>	0.002	(0.84)	-0.0004	(0.20)
	Banks participating in JLGC programme	Start-Up <i>LG4.1</i>	-0.017	(1.96)	-0.006
Capital purchases <i>LG4.2</i>		-0.011	(1.39)	-0.004	(1.85)
Working capital <i>LG4.3</i>		-0.009	(1.18)	---	
Dummy <i>LG4.1M</i>		0.324	(1.59)	0.085	(2.77)
<i>Housing Bank</i>		-0.008	(1.14)	---	
<i>Union Bank</i>		-0.009	(1.29)	---	
<i>Industrial Development Bank</i>		-0.038	(5.74)	-0.029	(11.68)
<i>Cairo Amman Bank</i>		-0.023	(2.27)	-0.013	(2.15)
<i>Arab Bank Association</i>		-0.009	(1.46)	---	
<i>Jordan Gulf Bank</i>		-0.019	(2.35)	-0.006	(2.57)
<i>Jordan Kuwait Bank</i>		-0.009	(1.27)	---	
<i>Jordan Bank</i>		-0.016	(2.08)	-0.008	(3.93)
<i>Jordan Investment Bank</i>		-0.013	(1.37)	-0.007	(1.78)
<i>Middle East Bank</i>		-0.010	(1.39)	-0.004	(1.89)
<i>Arab Bank</i>		-0.011	(1.56)	-0.007	(1.89)
<i>Arab Land Bank</i>		-0.013	(1.32)	---	
<i>National Bank</i>		-0.008	(1.18)	---	
<i>Arab Investment Bank</i>		0.019	(1.17)	0.016	(1.79)
<i>Grindlays Bank</i>		0.003	(0.33)	---	
<i>Export and Finance Bank</i>		-0.006	(0.76)	---	
<i>LG3</i> (Project size)	-0.00002	(1.05)	---		
<i>LG3M</i>	0.011	(1.13)	---		
<i>LG18</i> (Loan size to project size)	-0.008	(2.47)	-0.004	(3.10)	
<i>LG16</i> (Size of loan)	0.00004	(0.01)	---		
<i>LG17</i> (Value of collateral)	0.00001	(0.42)	---		
<i>PL1</i> (Receiving loan previously)	0.0004	(0.72)	---		
Constant	0.168	(8.86)	0.146	(37.65)	
N		142		142	
F		6.20		14.81	
R <sup>2</sup>		0.76		0.71	

Note: The dependent variable in each case is *LG9*, which is the rate of interest. The full model and the parsimonious version of the full model are shown. The models in this table are estimated using OLS.

Table 8.10: The Value of Collateral for the Guaranteed Loans

Dependent Variable	LG17				LG19				
	Model XXIV		Model XXV		Model XXV		Model XXV		
	Coef.	t	Coef.	t	Coef.	t	Coef.	t	
Demographic Data	TITLE1	-19.34	(0.41)	---	---	-0.200	(0.28)	---	---
	TITLE2	-36.64	(0.36)	---	---	0.965	(0.65)	---	---
	TITLE3	196.07	(1.32)	268.41	(2.17)	1.643	(0.85)	---	---
	EDUC	-13.32	(1.29)	-11.16	(1.64)	-0.328	(1.28)	---	---
	GENDER	19.97	(0.62)	23.71	(1.82)	-0.804	(0.79)	---	---
	AGE-INT	0.32	(0.30)	---	---	0.008	(0.33)	---	---
	EXPER	0.19	(0.10)	---	---	0.013	(0.28)	---	---
	EXPERM	-52.07	(0.28)	---	---	-2.215	(0.52)	---	---
Characteristics of the Sample Firms	LEGAL1	32.98	(0.57)	---	---	0.739	(0.82)	---	---
	LEGAL2	36.64	(0.62)	---	---	0.445	(0.48)	---	---
	ORG1	58.05	(1.09)	---	---	0.625	(0.75)	---	---
	ORG2	14.76	(0.25)	---	---	0.270	(0.30)	---	---
	LOCATE	7.66	(0.26)	---	---	-0.493	(0.69)	---	---
	AGE	-21.08	(1.25)	-15.95	(1.99)	-0.254	(0.70)	---	---
	SECTOR1	-41.72	(0.78)	---	---	0.391	(0.32)	---	---
	SECTOR2	-21.51	(0.45)	---	---	0.114	(0.10)	---	---
	SECTOR3	-23.33	(0.43)	---	---	0.044	(0.03)	---	---
	EMP	1.96	(1.29)	2.10	(2.35)	-0.002	(0.07)	---	---
	TURN	0.02	(0.42)	---	---	0.000	(0.28)	---	---
	CAP	6.50	(0.49)	---	---	0.092	(0.29)	---	---
	TURNM	10.96	(0.42)	---	---	-0.187	(0.39)	---	---
	LG4.1 Start-Up	-23.62	(0.27)	---	---	-0.648	(0.35)	---	---
LG4.2 Capital purchases	31.56	(0.38)	---	---	-0.245	(0.15)	---	---	
LG4.3 Working capital	-9.85	(0.12)	---	---	-0.733	(0.48)	---	---	
LG4.1M	-64.66	(0.03)	---	---	---	---	---	---	
Banks participating in JLGC programme	Housing Bank	28.62	(0.39)	---	---	1.802	(2.30)	---	---
	Union Bank	-2.48	(0.04)	---	---	0.663	(0.58)	---	---
	Industrial Development Bank	73.82	(0.80)	---	---	2.504	(1.32)	0.813	(1.66)
	Cairo Amman Bank	-13.41	(0.18)	---	---	1.625	(1.28)	---	---
	Arab Bank Association	-8.00	(0.13)	---	---	1.677	(1.62)	---	---
	Jordan Gulf Bank	-56.75	(0.66)	---	---	0.392	(0.32)	---	---
	Jordan Kuwait Bank	22.65	(0.39)	---	---	1.560	(1.25)	---	---
	Jordan Bank	57.69	(0.76)	---	---	2.903	(1.89)	1.024	(5.05)
	Jordan Investment Bank	173.67	(1.31)	---	---	3.707	(1.82)	2.215	(1.93)
	Middle East Bank	33.93	(0.50)	---	---	2.496	(2.03)	---	---
	Arab Bank	75.63	(0.94)	---	---	2.756	(1.45)	---	---
	Arab Land Bank	55.02	(0.60)	---	---	1.994	(1.66)	---	---
	National Bank	25.64	(0.43)	---	---	3.800	(2.12)	1.954	(1.85)
	Arab Investment Bank	127.27	(0.86)	---	---	-0.017	(0.02)	---	---
	Grindlays Bank	2.64	(0.03)	---	---	---	---	---	---
	Export and Finance Bank	-23.93	(0.28)	---	---	---	---	---	---
	LG3 (Project size)	0.22	(0.85)	---	---	0.002	(0.37)	---	---
LG3M	37.63	(0.48)	---	---	---	---	---	---	
LG18 (Loan size to project size)	-13.80	(0.55)	---	---	1.405	(1.07)	0.949	(1.57)	
LG16 (Loan size)	24.53	(0.55)	---	---	-0.196	(0.25)	---	---	
LG9 (Rate of interest)	704.51	(0.43)	---	---	9.536	(0.27)	---	---	
PL1 (Receiving loans previously)	-1.61	(0.38)	---	---	-0.093	(0.67)	---	---	
NEG1 (Firms approach to JLGC)	-15.49	(0.36)	---	---	0.305	(0.28)	---	---	
Constant	-122.70	(0.41)	58.22	(2.88)	-2.013	(0.31)	0.511	(1.76)	
N	142		142		135		135		
F	1.60		3.02		0.64		2.78		
R <sup>2</sup>	0.46		0.34		0.23		0.11		

Note: The dependent variable in model XXIV is *LG1*, which is the value of collateral. It estimates the effect of different variables on the value of collateral, and it gives the parsimonious version as well. The variables *NEG5.1* to *NEG5.4* were included in model XXIV, but dropped because they were insignificant. The dependent variable in model XXV is *LG19*, which is the ratio of collateral to the project size for which these a total of 135 observations. It estimates the effect of different variables on the ratio, and it gives the parsimonious version only those variables significant at 15% level are included. The variables *LG4.1M* and *LG3M* were not included in model XXVI as there were no missing cases for the 135 observations. The *Arab Investment Bank* and *Grindlays Bank* were not also included as they were not present in the for 135 observations. The models in this table are estimated using OLS.

Table 8.11: Finance Additionality

		Model XXVI			
	<i>ADD</i>	Coef.	t	Coef.	t
Demographic Data	<i>TITLE1</i>	0.187	(0.96)	---	
	<i>TITLE2</i>	0.139	(0.54)	---	
	<i>TITLE3</i>	0.356	(1.10)	---	
	<i>EDUC</i>	0.233	(1.80)	0.250	(2.27)
	<i>GENDER</i>	0.044	(0.77)	---	
	<i>AGE-INT</i>	0.005	(1.19)	---	
	<i>EXPER</i>	-0.017	(3.33)	-0.015	(3.81)
	<i>EXPERM</i>	1.648	(3.62)	1.503	(4.18)
Characteristics of the Firm	<i>LEGAL1</i>	-0.516	(3.32)	-0.520	(4.26)
	<i>LEGAL2</i>	-0.475	(3.16)	-0.502	(3.97)
	<i>ORG1</i>	0.268	(2.22)	0.210	(2.09)
	<i>ORG2</i>	0.157	(0.89)	---	
	<i>LOCATE</i>	0.028	(0.30)	---	
	<i>AGE</i>	0.058	(1.22)	0.068	(1.71)
	<i>SECTOR1</i>	0.188	(1.09)	0.114	(1.51)
	<i>SECTOR2</i>	0.086	(0.50)	---	
	<i>SECTOR3</i>	0.101	(0.54)	---	
	<i>EMP</i>	-0.001	(0.03)	---	
	<i>TURN</i>	-0.001	(1.34)	---	
	<i>CAP</i>	-0.089	(2.39)	-0.086	(2.44)
	<i>TURNM</i>	-0.157	(1.51)	---	
	<i>PL1</i> (Receiving loan previously)	-0.014	(0.79)	---	
	<i>NEG1</i> (Firms approach)	0.110	(0.95)	0.155	(1.46)
	<i>LG2</i> (Loan size)	-0.002	(0.82)	---	
<i>LG3</i> (Project size)	-0.001	(0.93)	-0.001	(2.00)	
<i>LG3M</i>	-0.346	(1.55)	-0.494	(2.51)	
<i>LG4.1</i> (Start-up)	0.667	(2.60)	0.543	(3.22)	
<i>LG4.2</i> (Capital purchases)	0.664	(3.24)	0.651	(3.84)	
<i>LG4.3</i> (Working capital)	0.689	(3.25)	0.615	(3.58)	
<i>LG4.1M</i>	-16.647	(3.05)	-14.846	(3.54)	
<i>LG17</i> (Value of collateral)	-0.001	(1.15)	-0.001	(1.96)	
Constant	-1.501	(2.88)	-0.932	(3.63)	
	N	<b>141</b>		<b>141</b>	
	F	<b>2.10</b>		<b>3.86</b>	
	R <sup>2</sup>	<b>0.38</b>		<b>0.35</b>	

Note: The dependent variable in each case is *ADD*, which is whether the firm's believes that the bank will lend to them if the guarantee were not available ie. 1 = 'additional' and 0 = 'non-additional. There was one non-response. The t-ratios are based on heteroskedasticity errors.

Table 8.12: The Economic Effects of the Project

Dependent Variable	<i>EFFECT1</i>		<i>EFFECT2</i>		<i>EFFECT3</i>		<i>EFFECT4</i>		<i>EFFECT5</i>		<i>EFFECT6</i>		
	Model XXVII		Model XXVIII		Model XXIX		Model XXX		Model XXXI		Model XXXII		
	Coef.	t	Coef.	t	Coef.	T	Coef.	T	Coef.	t	Coef.	T	
Demographic Data	<i>TITLE1</i>	---	---	---	-0.544	(2.43)	---	---	---	---	-0.280	(1.69)	
	<i>TITLE2</i>	---	---	---	-0.399	(1.40)	---	---	---	---	---	---	
	<i>TITLE3</i>	---	---	---	-1.062	(3.95)	-0.510	(1.95)	-0.474	(3.05)	-0.591	(1.92)	
	<i>EDUC</i>	---	---	0.173	(3.66)	0.079	(1.40)	0.114	(2.09)	---	---	-0.106	(2.27)
	<i>GENDER</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>AGE-INT</i>	---	---	---	---	-0.009	(2.17)	---	---	---	---	---	
	<i>EXPER</i>	-0.006	(1.32)	---	---	---	---	-0.006	(1.51)	---	---	---	---
	<i>EXPERM</i>	0.360	(0.76)	---	---	---	---	1.291	(3.69)	---	---	---	---
Characteristics of the Firm	<i>LEGAL1</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>LEGAL2</i>	0.175	(1.98)	---	---	---	---	---	---	---	---	---	
	<i>ORG1</i>	---	---	---	---	0.186	(1.68)	---	---	---	---	---	
	<i>ORG2</i>	---	---	---	---	---	---	---	-0.161	(3.06)	---	---	
	<i>LOCATE</i>	0.213	(2.58)	---	---	---	---	---	---	---	---	---	
	<i>AGE</i>	0.063	(1.74)	---	---	---	---	---	---	---	---	---	
	<i>SECTOR1</i>	0.141	(1.70)	---	---	0.196	(2.31)	0.184	(2.15)	0.156	(2.93)	---	---
	<i>SECTOR2</i>	---	---	0.153	(1.77)	---	---	---	---	---	---	---	
	<i>SECTOR3</i>	---	---	0.293	(1.99)	---	---	-0.293	(3.69)	---	---	0.378	(3.03)
	<i>EMP</i>	-0.007	(3.71)	0.006	(3.06)	0.008	(3.43)	-0.004	(1.36)	---	---	-0.005	(2.13)
	<i>TURN</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>CAP</i>	---	---	---	---	0.097	(2.70)	---	---	---	---	---	
	<i>TURNM</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>PL1</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>NEG1</i>	---	---	---	---	---	---	0.250	(2.43)	---	---	---	---
	<i>LG2</i>	---	---	0.004	(2.14)	---	---	0.007	(3.27)	0.004	(2.49)	0.004	(1.52)
	<i>LG3</i>	---	---	---	---	---	---	0.002	(1.74)	---	---	0.002	(2.22)
<i>LG3M</i>	---	---	---	---	---	---	0.024	(0.11)	---	---	-0.204	(1.03)	
<i>LG4.1</i>	---	---	---	---	-0.162	(1.80)	-0.540	(3.53)	---	---	---	---	
<i>LG4.2</i>	---	---	---	---	---	---	-0.348	(2.29)	---	---	---	---	
<i>LG4.3</i>	---	---	---	---	---	---	-0.499	(3.27)	---	---	---	---	
<i>LG4.1M</i>	---	---	---	---	0.368	(0.50)	11.555	(3.09)	---	---	---	---	
<i>LG17</i>	---	---	-0.001	(1.85)	---	---	---	---	---	---	---	---	
<i>ADD</i>	0.111	(1.24)	-0.047	(0.54)	0.138	(1.44)	0.067	(0.74)	-0.025	(0.49)	0.058	(0.64)	
<i>ADDM</i>	-0.744	(0.96)	0.892	(1.21)	-0.592	(0.74)	0.154	(0.20)	0.077	(0.18)	0.175	(0.22)	
Constant	0.380	(3.34)	0.113	(1.09)	0.654	(1.93)	0.380	(2.07)	-0.035	(1.07)	0.782	(3.87)	
N	141		141		141		140		140		140		
F	2.48		3.22		3.67		4.12		3.32		2.54		
R <sup>2</sup>	0.16		0.18		0.29		0.38		0.15		0.18		

Note: The dependent variables record the effects of the project as follows: *EFFECT1* (opening-up of new markets), *EFFECT2* (new products or service), *EFFECT3* (new processes), *EFFECT4* (leading-edge technology), *EFFECT5* (increase in exports) and *EFFECT6* (new source of supply). The parsimonious versions of the full models excluding the ADD term are shown in Appendix Table 8.4. In the first three models there is one non-response, and in the other model there are two non-responses. The t-ratios are based on heteroskedasticity errors.

Table 8.13: Effects of Firm Activity Due to Project

Dependent Variable		ASSTCHGADD				SALECHGADD				EMPCHGADD			
		Model XXXIII				Model XXXIV				Model XXXV			
		Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
Demographic Data	TITLE1	0.37	(0.02)	---		-0.16	(0.04)	---		0.63	(1.06)	---	
	TITLE2	45.07	(0.56)	---		-9.31	(0.98)	---		2.12	(1.65)	---	
	TITLE3	132.14	(1.62)	---		10.57	(1.17)	15.39	(1.63)	-0.12	(0.11)	---	
	EDUC	-12.23	(1.47)	---		-2.39	(1.85)	-1.97	(1.63)	-0.33	(2.16)	-0.28	(2.31)
	GENDER	32.79	(1.88)	36.80	(1.83)	6.91	(2.31)	6.27	(2.29)	-0.66	(1.12)	-0.77	(1.33)
	AGE-INT	0.12	(0.26)	---		-0.03	(0.30)	---		0.01	(0.98)	---	
	EXPER	-1.01	(1.47)	-1.12	(1.57)	-0.19	(1.48)	-0.14	(1.57)	-0.01	(0.33)	---	
	EXPERM	74.72	(1.23)	64.41	(1.14)	10.13	(0.97)	9.21	(1.22)	2.46	(1.75)	---	
Characteristics of the Firm	LEGAL1	-25.47	(0.76)	---		-6.31	(1.23)	---		-0.51	(0.99)	-0.60	(1.75)
	LEGAL2	-54.65	(1.34)	-30.96	(1.66)	-10.97	(1.92)	-6.47	(2.41)	0.24	(0.39)	---	
	ORG1	-5.82	(0.24)	---		3.52	(1.22)	---		-0.08	(0.08)	---	
	ORG2	-34.76	(1.11)	-40.34	(1.53)	-0.14	(0.03)	---		-0.83	(0.75)	---	
	LOCATE	4.45	(0.49)	---		2.39	(1.16)	---		0.28	(0.99)	0.40	(1.84)
	AGE	-5.54	(0.67)	---		-2.58	(1.70)	-2.43	(1.79)	0.03	(0.23)	---	
	SECTOR1	-2.12	(0.14)	---		2.82	(0.79)	---		-0.32	(0.90)	---	
	SECTOR2	17.44	(1.16)	---		3.04	(0.84)	---		-0.73	(1.87)	-0.37	(1.59)
	SECTOR3	6.01	(0.42)	---		3.72	(1.01)	---		-0.93	(2.36)	-0.56	(2.40)
	EMP	1.21	(1.19)	1.56	(1.40)	0.24	(2.22)	0.21	(2.24)	0.02	(2.48)	0.02	(2.82)
	TURN	0.04	(1.40)	0.08	(1.59)	0.01	(2.86)	0.01	(2.47)	-0.01	(1.84)	-0.01	(2.40)
	CAP	-7.11	(1.14)	---		-0.08	(0.07)	---		0.01	(0.07)	---	
	TURNM	8.58	(0.51)	15.21	(1.08)	2.34	(0.82)	1.06	(0.43)	0.37	(0.76)	0.34	(0.76)
	PL1	-1.37	(0.56)	---		-0.74	(2.00)	-0.37	(1.47)	-0.06	(0.94)	-0.09	(2.47)
	NEG1	9.11	(0.73)	---		-1.71	(0.76)	---		0.07	(0.24)	---	
	LG2	0.36	(0.66)	---		0.13	(1.74)	0.14	(1.85)	0.01	(0.29)	---	
	LG3	0.13	(0.54)	---		-0.05	(2.02)	-0.03	(1.56)	0.01	(0.39)	---	
LG3M	8.18	(0.27)	---		21.60	(1.57)	24.61	(2.19)	-0.52	(0.80)	---		
LG4.1	35.38	(0.81)	---		7.64	(1.34)	---		-0.35	(0.47)	---		
LG4.2	43.18	(1.10)	---		5.99	(1.21)	---		-0.85	(1.34)	-0.75	(2.08)	
LG4.3	32.25	(0.98)	---		3.72	(0.84)	---		-1.25	(2.32)	-1.03	(2.86)	
LG4.1M	-921.43	(0.97)	---		---		---		---		---		
LG17	0.01	(0.08)	---		0.03	(2.09)	0.03	(2.26)	0.01	(0.11)	---		
ADD	-17.78	(1.55)	-7.97	(0.84)	-0.05	(0.02)	0.94	(0.45)	0.22	(0.87)	0.20	(0.93)	
ADDM	---		---		---		---		-2.54	(1.02)	-2.26	(1.12)	
Constant	4.33	(0.07)	-18.66	(1.04)	3.88	(0.38)	5.87	(1.27)	1.96	(1.43)	2.79	(2.54)	
N	<b>122</b>		<b>122</b>		<b>111</b>		<b>111</b>		<b>125</b>		<b>125</b>		
F	<b>4.54</b>		<b>10.26</b>		<b>8.16</b>		<b>15.57</b>		<b>1.37</b>		<b>1.96</b>		
R <sup>2</sup>	<b>0.62</b>		<b>0.48</b>		<b>0.77</b>		<b>0.74</b>		<b>0.32</b>		<b>0.23</b>		

Note: The dependent variables are ASSTCHGADD (= ASSTCHG multiplied by the percentage of change in assets due to the project in the firm's view) in model XXXIII, SALECHGADD (= SALECHG multiplied by the percentage of change in sales due to the project in the firm's view) in model XXXIV and EMPCHGADD (= EMPCHG multiplied by the percentage of change in number of employees due to the project in the firm's view) in model XXXV. Each model shows the full and parsimonious versions. ADDM is not included in models XXXIII and XXXIV, as there were no missing cases for the 122 and 111 observations. Likewise LG4.1M is not included in models XXXIV and XXXV because there were no missing cases for the 111 and 125 observations. The models in this table are estimated using OLS.

## **CHAPTER 9**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **9.1 Introduction**

The Jordan Loan Guarantee Corporation (JLGC) was established in 1994 to cover the risks associated with loans extended by commercial banks to small and medium-sized firms in Jordan, whether these firms are in manufacturing, agriculture, services or retail. It seeks to improve the ability of small and medium-sized enterprises (SMEs) to borrow from the banks to implement viable projects, especially where these firms do not meet the conventional requirements for collateral. This inability of SMEs to provide collateral makes the banks extremely conservative and risk averse in their lending to these small firms. The loan guarantee scheme provides the commercial banks with guarantees to cover 50 or 75 percent of outstanding balance of a loan to an eligible SME. It also offers the commercial banks liquidity in the case of loan default, where the scheme settles the guarantee amount within three months of the bank's claim. It encourages banks to apply credit policies that give priority to a project's economic feasibility and cash flow, and not to conventional collateral.

This study has been directed towards an examination of the impact of the Jordanian loan guarantee scheme on SMEs. The broad objective of the research, as set out in the introduction, is to evaluate the effects of the Jordanian loan guarantee scheme to establish its role in improving the supply of funds for SMEs in Jordan. Apart from the introduction and concluding chapters, the thesis is structured around seven chapters. In Chapter Two, a general overview of the Jordanian economy is given, while the third Chapter examines the role of SMEs in the Jordanian economy, and considers the problems facing these firms, including the difficulties for SMEs in raising finance in Jordan. In Chapter Four a survey of the loan guarantee literature is presented, including other evaluations, while Chapter Five explores the Jordanian experience of loan guarantees. The methodology for the study is set out in Chapter Six, which considers the surveys of loan guarantee recipients and commercial

banks. The analysis of these data commences in Chapter Seven, with a qualitative analysis of the main results, while Chapter Eight undertakes a more quantitative analysis of the firm survey data using regression techniques. We now seek to draw out the main conclusions for the evaluation of the Jordanian loan guarantee scheme. The chapter also presents the recommendations and suggestions for improving the policy and procedures, in order to make SME access to finance easier.

## 9.2 Main Findings

### *9.2.1 The Characteristics of a Successful Scheme*

The Jordanian loan guarantee scheme is designed to encourage the commercial banks to provide loans to SMEs, and to encourage small and medium-scale projects with good prospects of profitability and success to apply for funds from the commercial banks. The aim of the loan guarantee scheme is to cover the risks of SMEs, thereby making their lending from the commercial banks much easier. However, the success of the loan guarantee scheme depends on how well it encourages the commercial banks to provide loans to a number of broad groups of firms and projects that appear have the greatest difficulty in obtaining bank finance. These are: firms that suffer from a lack of conventional collateral; projects with uncertain profitability (ie. smaller projects or in manufacturing); and projects that are deemed by banks to be 'low-quality' (ie. located outside Amman, undertaken by females or by low-educated borrowers). Finally, the scheme may be considered successful if it encourages the commercial banks to lend to newer firms or to younger borrowers.

The commercial banks are extremely conservative in their lending to above firms and borrowers, even though they may have perfectly good projects. Hence, the purpose of the loan guarantee scheme is to encourage the banks to lend to small and medium-sized firms with viable projects with any of these characteristics. To the extent that this happens, we can judge the success of the loan guarantee scheme in Jordan. This is our main purpose in this section, and it serves to summarise the main results and conclusions from the thesis.

### ***9.2.2 Survey Results***

Demographic data on the interviewees shows that ninety percent of them are managers, and that half have a first degree. Only ten percent of the scheme participants in the sample are women. The approximate age of a respondent is around 45 years on average, with 15 years of experience. Characteristics of the sample firms show that around two-third of the firms are sole-traders, and the vast majority of the sample firms are single-plant establishments. Only a few firms may be considered as old firms, because most were established in the last two decades. Self-finance and the commercial banks are the principal sources for capital at the start-up stage, which is generally less than J.D 100 thousand, indicating that the firms are mostly very small in size. In general, there is a lack of firms that have a history with the commercial banks. Those that have received previous bank loans used these for working capital purposes, and around half of them used real-estate assets as collateral.

The vast majority of the sample firms were made aware about the loan guarantee scheme by their banks. This reflects the borrowers' lack of information on the scheme and the services offered by the Jordan Loan Guarantee Corporation. The loans receiving guarantees are most likely to be used for capital purchases, start-up or for working capital, while a high proportion of the recipients still extended conventional collateral for the guaranteed loan. This is surprising, as the guarantees are meant to go to firms that do not have adequate or any collateral. In addition to the collateral the banks requested the firms to prepare other documents, such as a feasibility study, business plan or possibly both. However, despite these showing the potential viability of the project, the commercial banks still sought conventional collateral, even though the loan was guaranteed.

The survey analysis shows that more than one-third of the sample firms didn't produce any finance additionality at all, while only 8 percent offered full additionality (ie. the full amount of the loan would not otherwise have been made). In total, only 16 percent of the firms said that they thought more than half of the loan depended on the guarantee, while 72 percent said it less than fifty percent and possibly zero (the reminder were non-responses). The main effects of the projects financed by the guaranteed loans were to open-up new markets, develop new products or services and to implement new processes. Three years after the

project, around one-quarter of the change in the firms' assets, one-third of the change in their sales turnover and one-quarter of the change in employment were due to the project funded by guaranteed loan. However, given that the finance additionality is low, then the economic additionality is also low.

The survey of a small number of commercial banks participating in the loan guarantee scheme shows that less than one-quarter of the banks' total credit facilities were provided to SMEs, and that of this only about one-third was guaranteed under the scheme. The banks report that the SMEs seek funds from them for two main reasons: working capital and start-up purposes; which is consistent with the survey of loan guarantee recipients. However, the banks also report that conventional collateral is the main factor in their decision to provide loans to small and medium-sized projects. Further, it is the main source of security for loans even when guaranteed under the loan guarantee scheme, which is also consistent with the firm survey results. The banks state that the main advantages of the loan guarantee scheme are the provision of liquidity in the event of loan default and the lower cash reserves required by the Central Bank of Jordan. The disadvantages are that the guarantees take a long time to progress, especially in the case of compensation where the borrower defaults. Also, many forms need to be filled-in, in their opinion the marketing strategy for the scheme was largely ineffective, and the documents that were prepared by firms were often of a poor quality.

Finally, it was found that there was little change in the banks' behaviour due to the loan guarantee scheme. This was partly because the scheme was relatively new and the banks' experience of it was not substantial, but also, the bureaucratic nature of the scheme made banks wary of participating in it. Generally, because of the difficulties in receiving compensation in the event of loan default, the banks said that they only lent to firms that they would otherwise have lent to in the absence of the scheme, suggesting that it has had a poor effect. Again, it is consistent with the evidence obtained from the survey of firms.

### ***9.2.3 Quantitative Analysis Results***

The main findings of the quantitative analysis show that there are several broad groups of firms and clients that have difficulty in obtaining bank finance, and where the scheme may have had its main effects. These are: smaller firms, manufacturing firms, firms

outside Amman, newer firms, and younger, less-educated or female borrowers. We consider these in turn.

The quantitative analysis found that the smaller firms (less than 5 employees) suffered from a lack of collateral, as well as an insufficient track record, which made obtaining finance much more difficult. These smaller firms are more risky, and they have to prepare more documents to prove their ability to repay the loan. The finance additionality for the smaller firms was also greater, and the size of the firm had a negative relationship with the change in sales turnover after the project, but there were no effects on assets or employment. It was found that manufacturing firms were more able to get a loan guarantee because they were more able to prepare feasibility studies, cash-flow statements and other documents. These manufacturing firms were also more likely to have finance additionality. Overall, projects implemented by manufacturing firms have a greater range of effects than firms in other sectors, which no doubt reflects the key role attributed to this sector in the Jordanian economy. The firms also had a greater change in employment due to the project, and the scheme seems to have been relatively more effective in the manufacturing sector.

The commercial banks consider projects outside Amman, and those undertaken by female entrepreneurs or by less-educated borrowers to be 'low-quality'. In the case of firms located outside Amman, we found that the commercial banks requested them to take a guarantee, despite of the availability of conventional collateral. The size of the loans received by these firms was also smaller, and they were less likely to open-up new markets or to create new jobs. In the case of female borrowers, the results showed that they did not have a difficulty with collateral, but their problem in obtaining finance was due to a lack of a track record. The commercial banks requested these borrowers to prepare many kinds of documents to demonstrate their ability to repay the loan. The results show that if the borrower was female the lower were the asset and sales changes, while the change in the number of employees was greater. Finally, in the case of less-educated borrowers, the difficulty in obtaining for finance was also due to an insufficient track record. These borrowers believed that the provision of the loan was less likely to depend on the guarantee, perhaps erroneously and indicating some kind of response bias. These borrowers were less likely to develop new products or services or introduce new processes or technologies. However, the lower was the level of educational attainment the greater were the sales and employee changes.

In the case of newer firms, they were more likely to prepare a feasibility study in order to receive a guaranteed loan, in addition to conventional collateral. The collateral made them believe that the guarantee was not additional for them. The results showed that they were less likely to open-up new markets, but more likely to have a greater change in sales. Finally, younger borrowers were more able to prepare documents, because they needed to prove their profitability, especially if they did not have a sufficient track record. Despite receiving larger loans and paying lower rates of interest, they did not believe that the guarantee was additional. However, we found that the newer firms and younger borrowers had a greater tendency to get more advantages from the loan guarantee scheme.

#### *9.2.4 Is the Scheme a Success?*

From the firm and the commercial bank surveys, we can observe that the loan guarantee scheme seems to have had a relatively poor effect overall. In the case of firms that received the guaranteed loans, we found only 8 percent of them reported full additionality (ie. the full amount of the loan would not otherwise have been made). In total, only 16 percent of the firms said that they thought more than half of the loan depended on the guarantee, while 72 percent said it less than fifty percent and possibly zero. The banks also reported that there was little change in their behaviour as a result of the loan guarantee scheme. The scheme had a weak effect because the commercial banks requested conventional collateral, despite the fact that the loan was guaranteed by the JLGC. As such, and the banks failed to adopt the appropriate credit policy, which requires them to give priority to projects that are viable, even though they do not have enough collateral.

There are a number of client groups experiencing difficulties in obtaining bank finance, as indicated above. However, the quantitative analysis revealed that, apart from the smaller firms with less than five employees, these problems did not arise from a lack of collateral, but because of an insufficient track record. This makes the banks reluctant to lend to these firms, and it not only applies to newer firms and younger borrowers, but also to 'low-quality' projects, such as projects outside Amman and female and less-educated borrowers. In the case of the female and less-educated borrowers, they often tend to dismiss the importance of the loan guarantee scheme, arguing that they have sufficient collateral and they would have been able to obtain a loan in any event (ie. the loan guarantee scheme was non-additional). However, in part this may reflect their poor understanding of the financial

system, in which a lack of track record does play a very important role. Thus, we believe the additionality of the scheme to be greater for these borrowers than their responses would appear to suggest, but still to be quite low.

Overall, the additionality of the loan guarantee scheme is poor, although it is better for some firms or borrowers. In the case of smaller firms, manufacturing firms and firms outside Amman we find that the additionality is greater, enabling these firms to obtain loan finance that would not otherwise have got. Their projects also seem to have many important effects, so that in this sense the results are encouraging. The results also show that the loan guarantee scheme is relatively more successful in encouraging the banks to adopt the appropriate credit policy in the case of some kinds of firms or borrower. These are smaller firms, manufacturing firms, newer firms and younger borrowers. However, the bureaucratic nature of the scheme, including the difficulty in the banks receiving compensation in the event of a loan default, tends to make the banks lend only to those firms that they would otherwise have lent to. This is part of the reason for the limited change in the banks' lending behaviour to SMEs as a result of the loan guarantee scheme, and it leads us to make the following set of recommendations.

### 9.3 Recommendations

This section offers some recommendations to the Jordan Loan Guarantee Corporation (JLGC) in order to improve the operation and effectiveness of the Jordanian loan guarantee scheme. These recommendations are divided in to five categories. These are: application and procedures; project approval; nature of the scheme; the target group; and the follow-up and evaluation. For each category our recommendations are as follows:

#### **The loan guarantee scheme should:**

##### Application and procedures:

- Activate its marketing strategy to reach the target groups directly, and not to concentrate on marketing its services to the commercial banks only. It must try to find an appropriate way to deal directly with potential borrowers to show that the loan guarantee scheme is providing services to them and not just to the banks. In

the absence of such a marketing strategy, the scheme is open to abuse by the banks.

- Merge the information required by the scheme into a few number of forms. There is no need for the huge number of documents that are currently requested from the commercial banks, especially in the case of the loan default.
- Reduce the processing time in dealing with the commercial banks, especially in compensation cases. These processes increase the cost to the banks in dealing with the scheme, meaning that there is no advantage to them from seeking to guarantee the loans.
- Give attention to training programmes, not only for the credit officers of the commercial banks, but also some training programmes and workshops for the target groups of firms and borrowers.

#### Project approval:

- Give more attention and support to projects that have economic feasibility and a good cash-flow. The Loan Corporation needs to be involved in the decision to lend to these projects, and not to leave it solely to the banks, especially where the borrower has good indicators of success.
- Establish a specialised unit to prepare feasibility studies, cash-flow analysis and business plans, which will be more objective and much better prepared than is the case currently. This will encourage the commercial banks to give more attention to the projects that have economic feasibility and a good cash-flow analysis by reducing the amount of conventional collateral that is requested.

#### Nature of the scheme:

- Equalise the ratio of the guarantee, as the commercial banks report, to be the same whatever is the amount of the loan. In addition, the scheme should be flexible, so that this may change from time to time in response to the needs of the firms and the commercial banks, including changes to the guarantee ratio.
- The banks should not pass on the guarantee fee that they pay to the Loan Corporation through the charge of a higher interest rate to the borrowers, as the

borrowers report. This makes the rate of interest on the guaranteed loan higher (by between 1 and 2 percentage points), and makes a guarantee less attractive to the firm.

- Encourage the banks to reduce the rate of interest, especially for guaranteed loans provided to small and medium-sized enterprises.
- Tighten procedures to ensure that only those projects genuinely in need of a guarantee receive a guarantee. This can be done by imposing greater controls on the banks, and removing the incentives for the banks to use the scheme purely to provide cash-flow on loans that are already secure.

#### The target group:

- Offer its service across the whole country, especially in rural areas. Currently, the guaranteed loans are concentrated in a few governorates. The Loan Guarantee Corporation may also consider extending the scheme to all economic sectors.
- Provide special services for new entrepreneurs and new graduate students to encourage them to start their own business. This is consistent with the government policy of reducing the unemployment rate.
- Give special attention and support to female entrepreneurs and to less-educated borrowers, which have sufficient collateral but often have a lack of track record.

#### Follow-up and evaluation:

- The Jordan Loan Guarantee Corporation has an Evaluation Department, but it only examines the cases where there are defaults on guaranteed loans. It does not follow-up or monitor firms that received guaranteed loans and are still operating, but it is possible that this kind of activity may help to reduce the number defaults, especially in the lack of any follow-up and guidance to the firms from the commercial banks.
- Take advantage of the lessons learned from other loan guarantee schemes. The UK scheme is the closest to that of the Jordanian scheme, so the Jordan Loan Guarantee Corporation should try to learn and get as much as they can from the UK experience, which appears not to be going on currently.

- Make the ease of access and ease of use of data on loan guarantee cases much easier for researchers. The commercial banks should also be more indulgent to researchers, by providing a greater level of data than was the case of this study

#### **9.4 Future Research**

Research on loan guarantee schemes is a new area of study, not only in Jordan but in all of the developing countries, whereas there is a much greater experience of such scheme in developed countries. This research is therefore a pioneering study in the context of developing countries. For future research in this area the following points should be of interest and borne in mind, as potentially fruitful avenues of research:

- The loan guarantee scheme in Jordan has to be evaluated from time to time, possibly using different methods of evaluations, which can provide answers to different kind of questions.
- The loan guarantee scheme as a tool of government policy to support small and medium-sized enterprises should be compared with other policies to support SMEs, such as other kinds of subsidy.
- Examine if the loan guarantee varies in its impact between regions, and discover the factors affecting this.
- Study the role of the loan guarantee scheme in reducing or affecting the default rates of SMEs and the macroeconomic effects of the scheme on small firm growth and investment.

## APPENDICES

Appendix 5.1:	Inquiry Application Form (101)	248
Appendix 5.2:	Summary of the Loan Granted by the Bank Notification of Approval (102)	251
Appendix 5.3:	The Quarterly Report on the Guaranteed Loans (103)	254
Appendix 5.4:	Monthly Report on Due But Unpaid Loans (104)	255
Appendix 5.5:	Claim to the Amount of the Loan (105)	256
Appendix 5.6:	Letter of Claim to the Amount of Guarantee (105/A)	259
Appendix 6.1:	The Firm Questionnaire	261
Appendix 6.2:	The Firm Questionnaire in Arabic	271
Appendix 6.3:	The Commercial Banks Questionnaire	277
Appendix 6.4:	Letters Attached to the Firms Questionnaire	281
Appendix Table 7.1:	Main Competitors for the Firm	285
Appendix Table 7.2:	Nature and Presentation of Premises	285
Appendix Table 8.1:	Variable Labels that Used in the Empirical Analysis	286
Appendix Table 8.2:	Correlation Matrices	291
Appendix Table 8.3:	Factor Determining the Approach to the JLGC: Logit Model	296
Appendix Table 8.4:	The Economic Effects of the Project	297
Appendix Table 8.5:	Effects of the Project on the Firm Activity	298

Appendix 5.1: Inquiry Application Form (101)

THE JORDAN LOAN GUARANTEE CORPORATION LTD.

Date.....

Form (101)

Inquiry Application Form No ( )

Name of the Bank /Financial Institution.....

Messrs The Jordan Loan Guarantee Corporation Ltd.,

Greetings,

Please be kind enough to provide us with the information available with you on whether the under mentioned client has previously obtained loans from other banks pursuant to the loan risk guarantee system and whether the aim sought by the loan was acceptable for purposes of offering guarantees to cover the risks of such a loan.

- Name of the Borrower
- Address of the Borrower
- Amount of the required loan
- Purpose of the loan
- Name of the owner / partners

Bank Signature

.....

<u>Questions for the Jordan Loan Guarantee co.</u>	Yes	No
The Corporation has previously guaranteed loans for the client.	_____	_____
The Corporation has previously guaranteed loans for the owner.	_____	_____
Purpose of the loan is in line with the terms of the guarantee Agreement and its addenda.	_____	_____
The Corporation has approved the loan.	_____	_____

The Corporation's signature

.....

Subsequent to the inquiry application form No ( ) submitted by the bank..... relating to the Borrower.....

Summary of the purposes of the loan, the financing sources and the guarantees in kind

1. Type of activity:

2. Number of employees:

3. Purposes of the loan:

JDs

\* Purchase of machinery, equipment and tools .....

\* Financing of working capital

.....

\* others (To be specified) .....

Total: \_\_\_\_\_

4. Assets and other expenses:

- \* Machinery, equipment and goods .....
- \* Cost of installation of machinery and electrical works .....
- \* Start-up costs and rent .....
- \* Others (To be specified) .....

Total: \_\_\_\_\_

5. Internal Sources of Finance:

JDs

- \* Paid up capital .....
- \* Loans from banks .....
- \* Other creditors .....
- \* Retained profits and current accounts of partners .....

Total: \_\_\_\_\_

6. Other income sources for the owner/partners/guarantors:

7. Guarantees that may be provided:

Real Estate \_\_\_\_\_ Shares and Bonds \_\_\_\_\_

Personal \_\_\_\_\_ Machinery and Equipment \_\_\_\_\_

8. Estimated values for the guarantees:

- Real Estate of the value of: .....
- Shares and Bonds of the value of: .....
- Machinery and equipment of the value of: .....
- Others (To be specifies): .....

9. Previous dealings with the bank/Statements from the Central Bank.....

.....

**Appendix 5.2: Summary of the Loan Granted by the  
Bank Notification of Approval (102)**

THE JORDAN LOAN GUARANTEE CORPORATION LTD.

Date.....

(102)

Summary of the loan granted by the Bank  
Notification of approval

---

Name of the Bank/Financial Institution.....

Messrs The Jordan Loan Guarantee Corporation Ltd.

Greetings,

We have the pleasure to inform you of the approval of our Bank/our financial institution to grant the loan, of which the details are indicated herebelow:

1. Information on the client

- \* Name of the owner/Names of the partners:
- \* Nationality of owner/Nationality of the company:
- \* Name of the authorized director:
- \* Years of experience of the owner/director:

2. Information on the loan

- \* Amount of required loan:
- \* Amount of approved loan:
- \* Date of bank approval for granting the loan:
- \* Purposes of the loan:
- \* Number of the granted loan:
- \* Number of the client's account:
- \* Date of first drawdown:
- \* Duration of the grace period:
- \* Number of installments and their dates:
- \* Amount of one installment and date of the first one:

3. Information on the interest rate and commission

- \* Interest rate applicable on the loan:
- \* Rate of collected commission:
- \* Method of collection of interest:

4. Information on the project

- \* Nature of activity of the project:
- \* Date of setting up the project:
- \* Number of work force including owner:
- \* Trade name of the project:
- \* Number of the project's trade register:
- \* Number and validity date of the project's trade license:
- \* Size of exports and its percentage:

5. Information on the financing sources and cash flows

- \* Paid up capital:
- \* Amounts borrowed from banks:
- \* Owner account/Partners current account:
- \* Suppliers and other creditors:
- \* Size of actual sales/projected:
- \* Size of actual purchases/projected:
- \* Size of actual inventory/projected:
- \* Amount of actual profits/projected:
- \* Other sources of income of the owner/partners:
- \* Value of existing equipment/projected:

6. Information on Guarantees whether personal or in kind

- \* Names of personal guarantors:
- \* Sources of income of the guarantors:
- \* Type of pledged guarantees:
- \* Degree of mortgage
- \* Estimated value of the guarantees:
- \* Ratio of coverage of the guarantees in kind:

---

7. General Information

- \* Name of Governorate:
- \* Location of the project (city/village):
- \* Legal status of the borrower:
- \* Relationship of the borrower with the bank:
- \* Previous experience with the borrower:
- \* Checking obtained from the Central Bank:
- \* Name and number of the bank branch providing the loan:
- \* Name of the responsible employee:

As per our convictions we hereby do assert to you that the loan, of which the details are described above, meet in conditions and purposes with the conditions and purposes as indicated in the guarantee Agreement and its addenda. Therefore the ratio of the risk coverage for this loan will be \_\_\_\_\_%.

Please accept our due respect,

Name and Rank of Signatory

Signature

---

---



Appendix 5.4: Monthly Report on Due But Unpaid Loans (104)

THE JORDAN LOAN GUARANTEE CORPORATION LTD.

Date \_\_\_\_\_

FROM (104)

MONTHLY REPORT ON DUE BUT UNPAID LOANS\*

Name of the Bank/Financial Institution: \_\_\_\_\_

Loan No.	Name of Borrower	Amount of the Granted Loan	Outstanding Balance	Amount of Unpaid Installments	Date of First Unpaid Installment	Number of Days In Delay	Reasons for Non-Repayment	Endeavors for Collection	Other Notes

Total: \_\_\_\_\_ Name and Rank of Signatory \_\_\_\_\_ Bank Signature \_\_\_\_\_

- Reasons for non-repayment
1. Delay in payment
  2. Financial Difficulties
  3. No contact has yet been made with the client
  4. No response from the client
  5. Others (Give detail)
- Collection Endeavors
- a. Contacts over telephone
  - b. Reminder Notification
  - c. field Visits
  - d. Requests for repayment
  - e. Legal warning
  - f. Seizure for security
  - g. Recourse to guarantors
  - h. Filing of lawsuits
  - i. Others (Detail)

\* The due loans intended by this form are those loans for which thirty days have lapsed since their due dates.

Appendix 5.5: Claim to the Amount of the Loan (105)

THE JORDAN LOAN GUARANTEE CORPORATION LTD.

Date.....

Form (105)

CLAIM TO THE AMOUNT OF THE LOAN

Name of the Bank / Financial Institution:.....

1. Loan Number:.....

2. Name of the Borrower / Owner: .....

3. <u>Address of the borrower</u>	<u>Address of the project</u>
.....	.....
.....	.....

4. <u>Address the Owner</u>	<u>Address of the authorized director</u>
-----------------------------	---

5. Amount of the granted loan	Guarantee coverage ratio %
-------------------------------	----------------------------

6. Rate of interest %	Commission rate %
-----------------------	-------------------

7. Date of approval / /19	Date of first installment %
---------------------------	-----------------------------

8. Recurrence of instalments and amount of each one:

9. Kind of existing guarantees (Real Estate, Shares, Bonds, Personal Guarantees, others)

10. Estimated amount for the existing guarantees:

11. Degree of the guarantee:

Continuation for Addendum (f) - Form (105)

- 12. Other creditors taking part in the loan and amount of their credit: \_\_\_\_\_
- 13. Measures taken by the participants in the loan: \_\_\_\_\_
- 14. Date of last paid installment        /    /19
- 15. Amounts of collections after the date of last paid installment:
- 16. Dates of unrepaid installments:
- 17. Reasons for non-performance: \_\_\_\_\_
- 18. The outstanding balance of the loan principal upon the start of the non-performing period of the loan:
- 19. Accumulated interest for the non-performing period:
- 20. Amount required to be paid:
- 21. Terms of the Bank upon granting the loan: \_\_\_\_\_
- 22. Procedures for follow up and collection: \_\_\_\_\_
- 23. Legal procedures taken: \_\_\_\_\_
- 24. Other comments: \_\_\_\_\_

We hereby do assert that the above mentioned data is correct and that we have undertaken and will undertake to follow up on the borrower and the guarantors thereof by way of taking all legal and judicial measures for collection pursuant to what is stipulated in the Guarantee Agreement concluded with you.

Name and Rank of Signatory

Bank Signature

---

---

**Appendix 5.6: Letter of Claim to the Amount of Guarantee (105/A)**

THE JORDAN LOAN GUARANTEE CORPORATION LTD.

Date \_\_\_\_\_

FORM (105/a)

LETTER OF CLAIM TO THE AMOUNT OF THE GUARANTEE

Name of the Bank/Financial Institution.....

Messrs Jordan Loan Guarantee Company Ltd.

Greetings,

We confirm that the loan No. \_\_\_\_\_ granted by us to the client \_\_\_\_\_ has been in default for a period exceeding 180 days, therefore it has become due for repayment of a sum equalling the already approved risk coverage ratio pursuant to the articles of the Guarantee Agreement concluded with you on \_\_\_\_\_ and in execution of what is stated in the articles of the Agreement and its addenda, we do hereby submit to you the following forms and documents:

1. A photocopy of the Loan Agreement concluded between us and the borrower.
2. A photocopy of the client's balance sheet as of the date of disbursement of the loan.
3. Form No.(105), Appendix (e) duly filled out.

- 
4. A photocopy of the bank recommendation and its approval on granting the loan.
  
  5. The Credit Feasibility study of the loan comprising the financial and profit and loss statements, the financial analysis and the cash flows.
  
  6. A photocopy of the mortgage documents, the trade license and the trade registration certificate.
  
  7. A photocopy of the statements and documents which evidence the exerted efforts for collection. These documents and statements include visits paid to the work site of the borrower, a study of his financial position, letters of claims, warnings, notices sent to guarantors, measures taken for collection such as seizure for security and foreclosure of the collaterals in kind in addition to other relevant legal and judicial procedures.
  
  8. The bank's opinion on the possibility of collecting the due amounts.

Furthermore, we will provide you with any information or other dates you deem necessary to facilitate the procedures for this claim.

Name and Rank of Signatory

Bank Signature

---

**Appendix 6.1: The Firm Questionnaire**

**University of Newcastle upon Tyne**

**Department of Economics**

**The Loan Guarantee Scheme in Jordan  
and Its Impact on SMEs**

*Firm Code Number*

Thank you for agreeing to talk to me. I can confirm that any information you divulge to us will be held on an anonymous basis and treated in strictest confidence. Our purpose of the research is to evaluate the effect of the JLGC loan guarantee scheme on small and medium-sized enterprises in Jordan.

**Section A: The Interviewee**

1. Name of interviewee-----
2. What is your job title? -----
3. For how many years have you experience of the small-firm sector? -----
4. Level of educational attainment? -----

**Section B: The Firm**

In this section we would like you to tell us something about the nature of your business.

1. What is the legal status of your firm? (Circle all that apply)
  - a- Sole-trader
  - b- Partnership
  - c- Private ownership
  - d- Public ownership
  - e- Other (specify please)-----
2. Is it single-plant, multi-plant or part of a larger group? (Specify please)
 

-----

-----
3. When did the firm start trading? -----
4. When did the firm start trading at this site? -----
5. What are the main products or services that your company manufactures or supplies? -----
 

-----

6. Please specify the number of employees at this plant including yourself?

-----

7. Who are your main competitors? Are they:

- a- Small firms in Jordan
- b- Large firms in Jordan
- c- Foreign firms

8. What is your current turnover? -----

9. Roughly, what percent of your sales go to the following markets?

- a- Local ----- Percent
- b- National ----- Percent
- c- International ----- Percent

10. Roughly, what is your share of the local market?

-----

11. In your view, what are the main problems facing the firm? (Please specify)

- a- Lack of Finance -----
  - b- Labour Market-----
  - c- Price of Raw Materials-----
  - d- Competition-----
  - e- Marketing-----
  - f- Technology-----
  - g- Government Regulations-----
  - h- Other (Specify please)-----
- 

**Section C: The Start-up of the Firm**

In this section we would like to find out the initial start-up of the firm, either at this site or at another site.

1. What was the broad amount of capital used to start-up the firm (By Jordanian Dinar)?

- a- up to 10,000
- b- 10,001 - 40,000
- c- 40,001 - 100,000
- d- More than 100,000

2. What were the main financial resources used at the start-up stage? (Circle all that apply)

- a- Self finance
- b- Loans from relatives or friends
- c- Bank borrowing
- d- Partners and investors (shares)
- e- Others (specify please)-----

3. Did you find it difficult to obtain financial support for starting your business?

- a- Yes, Why? -----
- b- No

4. In what year did you first receive a loan that was guaranteed by the Jordan Loan Guarantee Corporation (JLGC)? -----

5. Was this to start-up the firm?

- a- Yes ( Go to next section)
- b- No

6. Did you receive loans from commercial banks (or any other resources) before this first loan that was guaranteed by JLGC?

- a- Yes, Please specify the number and total amount -----
- b- No (Go to next section)

7. What was the main purpose of the loans from the commercial banks? (Circle all that apply)

- a- Start-up
- b- Capital purchases
- c- Working capital
- d- Financing of new products/service
- e- Other (specify please) -----

8. What assets did you pledge as security against these loans? (Circle all that apply)

- a- Real-estate assets
- b- Securities and bills of exchange
- c- Goods and equipment
- d- Other guarantor
- e- None ( Go to next section)

9. What was the value of the collateral that was offered against these loans?

- a- More than the loan
- b- Less than the loan
- c- Of equal amount

**Section D: The Take-up of JLGC- Support**

As you know in this study we are interested in the support that you received from the Jordan Loan Guarantee Corporation. This section seeks to discuss the nature of the loans that you obtained and were guaranteed by the JLGC.

1. How many awards has the plant received in total? -----  
Please give details.

a. Project 1: Date-----Loan Award-----Bank---  
----- Size of project-----Purpose of the  
project-----

b. Project 2: Date-----Loan Award-----Bank---  
----- Size of project-----Purpose of the  
project-----

c. Project 3: Date-----Loan Award-----Bank---  
----- Size of project-----Purpose of the  
project-----

*In Relation to the First of the Loans*

2. How did you first hear of the JLGC guaranteed loans?

- a- Bank
- b- Colleague/ member of staff
- c- Family and friends
- d- Another business
- e- Chamber of commerce/ industry
- f- Other (Specify please)-----

3. Did knowledge of the guarantees provided by the JLGC make you more likely to seek a bank loan?

- a- Yes
- b- No

4. Did you first approach the Bank or the JLGC directly?

- a- Bank (Go to Q. 5)
- b- JLGC (Go to Q. 6, which is about the most recent loan)

5. When you visited the Bank did you discuss a normal loan before considering a JLGC guaranteed loan?

- a- Yes
- b- No

**The following questions until the end of the questionnaire are about the most recent loan that was guaranteed by JLGC (Where there is only one loan then this is the first loan referred to above)**

6. Regarding the most recent loan, did you first approach the Bank or the JLGC?
  - a. Yes
  - b. No
  
7. Which of the following did the Bank cite as a reason that you should take a JLGC guaranteed loan?
  - a- Lack of Collateral
  - b- Insufficient track record
  - c- Other (specify please)-----
  
8. How many weeks did it take for the funds to become available to you from the time of submitting your formal application for the JLGC guaranteed loan?
  - a- Less than one week
  - b- One – Two weeks
  - c- Three - Five weeks
  - d- Over Five weeks
  
9. What is the rate of interest on your loan paid to the Bank? -----
  
10. Does this rate of interest differ from that at which you think you could otherwise obtain loans from the commercial banks?
  - a- Yes, - Higher.
  - b- Yes, - Lower.
  - c- No

**Section E: The Financing of the Project**

To remind you that we are interested in the project in respect of the most recent guaranteed loan from the JLGC. In this section we would like to talk about the financing of this project as a whole.

1. What was the amount of the loan provided by the Bank and guaranteed by the JLGC? -----  
-----
  
2. In addition to the guaranteed loan were there any other sources used to finance the project?
  - a. Yes, Please specify the sources and amounts-----  
-----
  - b. No (Go to Q. 4)

3. Why did the guaranteed loan not cover all of the project's cost? -----  
-----

4. What percentage of the Bank loan was covered by the guarantee? (The answer to this question should be 50 or 75 percent). -----

5. Have you used the guaranteed loan broadly in the way you described in your application to the JLGC?

- a- Yes
- b- No, why? -----  
-----

6. Did you extend any kind of collateral for the guaranteed loan?

- a- Yes, why? -----
- b- No (Go to Q. 9)

7. What was the collateral? (Circle all that apply)

- a- Real estate
- b- Equipment
- c- Another Guarantor
- d- Others (Specify please)-----

8. What was the value of the collateral compared to the value of the guaranteed loan?

- a- Equal
- b- More than the loan
- c- Less than the loan

9. Did the Bank provide ongoing advice and guidance after you took out the guaranteed loan?

- a- Yes
- b- No

10. In your view, how much extra Bank loan do you think you received because of the existence of the loan guarantee? -----  
-----

11. Do you think that the Bank would have lent to you if the guarantee was not available?

- a- Yes
- b- No

12. Did you prepare (Circle all that apply)?

- a- Business plan
- b- Feasibility study

- c- Cash Flow statement
- d- None of the above ( Go to Q. 15)

13. In your view, was the existence of the Business plan / feasibility study / cash-flow analysis the most important reason for the JLGC guaranteeing the loan that you obtained from the Bank?

- a. Yes (Go to Q. 15)
- b. No

14. If no, what was the most important reason in your view?

-----  
 -----  
 -----

15. Thinking about the time that you applied for the guaranteed loan, which of the following statements best describes your situation?

- a- “The JLGC was the only option available to me”(Go to Q.17)
- b- “Other sources of finance were available to me but they would only have covered part of the amount provided by JLGC”.(Go to Q.16)
- c- “ Other sources of finance were available to me that would have covered the full amount available through the JLGC guaranteed loan, but I still preferred the JLGC”.(Go to Q.16)

16. Why did you take up the guaranteed loan, when other sources of finance were available?

-----  
 -----

17. Since obtaining the loan guaranteed by JLGC, have you used any additional finance from the commercial banks?

- a- Yes
- b- No (Go to next section)

18. In your opinion how easy was it for you to obtain this other finance?

Very easy    1        2        3        4        5    Very difficult

19. Did the guaranteed loan help you obtain this other finance?

- a. Yes
- b. No

**Section F: The Economic Effects of the Project**

In this section I would like ask you about the economic effects of the project that was funded by the JLGC guaranteed loan. Remember we are interested in the most recent project receiving a guaranteed loan.

1. In your view, what were the most important effects of the project?-----  
-----  
-----

2. Did the project lead to any of the following?

	Yes	No
a. Open-up new markets? - in this case, were these new markets <i>local</i> or <i>overseas</i> ? (Please circle if apply)	-----	-----
b. Development of new products/services? -in this case, were these products/ services already supplied by another firm, either <i>locally</i> , <i>nationally</i> or <i>internationally</i> ? (Please circle if apply)	-----	-----
c. Development of new process? -in this case, has it improved the efficiency of your firm <i>marginally</i> , <i>a lot</i> or <i>substantially</i> ?( Please circle if apply)	-----	-----
d. Introduction of a leading-edge technology?	-----	-----
e. Increase in exports?	-----	-----
f. New source of supply?	-----	-----

3. What are the total assets of the firm?

- a- Year before loan-----
- b- Year after loan-----
- c- Two years after loan-----

4. To what extent does the change in the total assets of the firm reflect the impact of the project? -----

5. What is the total sales turnover of the firm?

- a- Year before loan-----
- b- Year after loan-----
- c- Two years after loan-----

6. To what extent does the change in the total sales turnover of the firm reflect the impact of the project? -----
7. How many staff did employ in your firm (including your self)?
  - a. Year before loan-----
  - b. Year after loan-----
  - c. Two years after loan-----
8. To what extent does the change in the employment level of the firm reflect the impact of the project? -----
9. How many new jobs would you say have been created/retained by the project?  
(Please specify number)
  - a. Created-----
  - b. Retained-----
10. Were any of the employees taking these new jobs previously unemployed? (Please specify the number)-----

**Section G: Feedback on the Loan Guarantee Scheme**

Finally, this section is designed to help us to understand your general view on the service provided by the JLGC.

1. Did you encounter any difficulties with the following: (Please circle all that apply and explain)?
  - a- Filling in the application form for the loan-----
  - b- Preparing a Business Plan/ Feasibility Study/ Cash Flow Statement-----
  - c- Meeting the asset security conditions-----
  - d- Any other difficulties-----

2. How helpful was the Bank in securing the guaranteed loan?

Not very helpful    1    2    3    4    5    Very helpful

3. Are there any changes you would like to see in the way the Bank handles the process? -----  
-----  
-----

4. Are there any changes that you think could usefully be made to the procedures of the loan guarantee scheme that will help future applicants? -----  
-----  
-----

5. Do you think that the guaranteed loan scheme has a advantages over alternative of commercial banks finance, in respect of each of the following? (Please explain)

- a- The value of the loan-----
- b- The grace period-----
- c- Collateral-----
- d- The repayment period-----
- e- The administrative cost of the loan-----
- f- Interest rate-----

6. Are there any disadvantages?  
-----  
-----

7. Have you any other comments you would wish to make about the loan guarantee scheme?  
-----  
-----

***That is all. Thank you very much for your time. It has been very useful.***

**Section H: Interviewers Remarks**

- 1. Approximate age of interviewee,-----
- 2. Gender of interviewee -----
- 3. Location of the plant
  - a. Inside Amman.
  - b. Outside Amman, Specify-----
- 4. Nature of premises:
  - a. Domestic, work from home.
  - b. Small office.
  - c. Shop.
  - d. Large office.
  - e. Warehouse.
  - f. Factory.
  - g. Office.

5. Presentation of premises: Poor 1 2 3 4 5 Excellent

## Appendix 6.2: The Firm Questionnaire in Arabic

بسم الله الرحمن الرحيم

قسم الاقتصاد

جامعة نيوكاسل

ضمان القروض و أثره على المشروعات الصغيرة و المتوسطة  
في الأردن

رقم المنشأة

الاستبيان

6. عدد العاملين في المنشأة (مع  
المجيب).....7. من هم المنافسون الرئيسيون لمنشأتكم؟  
a. مؤسسات أردنية صغيرة الحجم  
b. مؤسسات أردنية كبيرة الحجم  
c. مؤسسات أجنبية8. ما هي قيمة اجمالي المبيعات، تقريبا؟  
.....9. ما هي نسبة المبيعات التي تذهب الى كل من الاسواق التالية؟  
a. المحلية.....  
b. الوطنية.....  
c. الدولية.....10. تقريبا، ما هي حصة المؤسسة من السوق المحلي؟  
.....11. من خلال خبراتك فان المشاكل الرئيسة التي تواجهها  
المنشأة، مع الشرح هي:-a. قلة مصادر التمويل.....  
b. سوق العمل.....  
c. أسعار المواد الأولية.....  
d. المنافسة.....  
e. التسويق.....  
f. التكنولوجيا.....  
g. الإجراءات الحكومية.....  
h. أخرى.....القسم الثالث: التأسيسفي هذا القسم نرغب بالتعرف على بدايات المنشأة  
سواء كانت على هذا النحو أم على نحو مختلفأشكركم على اتاحة الفرصة لأجراء هذه المقابلة معكم.  
كما و أؤكد لكم على سرية المعلومات الواردة فيها و أنها  
لأغراض البحث العلمي فقط، وتهدف هذه الدراسة الى تقييم أثر  
برنامج ضمان القروض للمشروعات الصغيرة و المتوسطة المنفذ  
من خلال الشركة الاردنية لضمان القروض، على المشروعات  
الصغيرة و المتوسطة في الاردنالقسم الاول: معلومات عامة1. الاسم.....  
2. المسمى الوظيفي.....  
3. الخبرة العملية في قطاع المشروعات الصغيرة و  
المتوسطة.....  
4. المستوى التعليمي.....القسم الثاني: المنشأة

في هذا القسم نرغب بالتعرف على طبيعة المنشأة

1. ما هو الوضع القانوني لمؤسستكم  
a. مؤسسة فردية  
b. مؤسسة تضامن خاصة  
c. مساهمة خاصة  
d. مساهمة عامة  
e. أخرى.....  
2. هل هذه المؤسسة ذات فرع واحد او متعددة الفروع أم هي  
جزء من مجموعة أعمال؟ الرجاء  
التحديد.....  
3. متى بدأت المنشأة بممارسة نشاطها.....  
4. متى بدأت المؤسسة بممارسة نشاطها على هذا النحو  
(ان كان قد حدث تغيير في طبيعة نشاطها)  
.....  
5. ما هي طبيعة المنتجات او الخدمات التي تقدمها  
المنشأة.....

e لآ شيء (اذهب الى القسم الرابع)

9. ما هي قيمة الضمانات المقدمة مقارنة بقيمة القرض؟

- a أكبر من قيمة القرض  
b أقل من قيمة القرض  
c مساوية لقيمة القرض

### القسم الرابع : ضمان القروض

كما سبق و تم اعلامكم بأن هذه الدراسة مهمة بالدعم و الضمان المقدم من الشركة الاردنية لضمان القروض ، للقرض الذي حصلت عليه من البنك لذا فاننا نرغب بالحديث عن هذا القرض /القروض تحديدا في هذا القسم .

1. عدد المرات التي حصلت فيها المنشأة على قروض مضمونة؟  
الرجاء اعطاء التفاصيل التالية

المشروع 1: التاريخ ..... قيمة القرض.....

البنك ..... حجم المشروع..... الهدف من المشروع.....

المشروع 2: التاريخ ..... قيمة القرض.....

البنك ..... حجم المشروع..... الهدف من المشروع.....

المشروع 3: التاريخ ..... قيمة القرض.....

البنك ..... حجم المشروع..... الهدف من المشروع.....

2. من كان أول من اقترح ضمان القروض كبديل أو مصدر محتمل للحصول على قرض من بنك تجاري؟

- a. البنك  
b. زميل أو أحد العاملين في المنشأة  
c. أحد أفراد العائلة - أو الاصدقاء  
d. مؤسسات أخرى  
e. غرفة الصناعة/التجارة  
f. أخرى (حدد).....

3. هل الخدمات المقدمة من الشركة الاردنية لضمان القروض دفعتك للحصول على قرض من البنك؟

- a. نعم  
b. لا

1. ما هو حجم رأس المال المستخدم عند التأسيس (دينار)؟

- a. حتى 10,000 دينار  
b. من 10,001 حتى 40,000  
c. من 40,001 حتى 100,000  
d. أكثر من 100,000

2. تم تمويل المنشأة في مرحلة التأسيس من أي من المصادر التالية؟

- a. تمويل ذاتي (مدخرات ذاتية)  
b. الاقتراض من العائلة أو الاصدقاء  
c. اقتراض من البنوك  
d. شراكة مع مستثمرين  
e. أخرى (حدد).....

3. هل واجهت أي صعوبات في الحصول على تمويل عند التأسيس

- a. نعم ، لماذا؟  
b. لا

4. متى حصلت على أول قرض مضمون من الشركة الأردنية لضمان القروض؟

5. هل كان هذا القرض لأغراض التأسيس؟  
a. نعم (اذهب الى القسم الرابع)  
b. لا

6. هل حصلت على قرض/قروض من بنوك تجارية (أى مصادر أخرى) قبل حصولك على القرض المضمون من الشركة الأردنية لضمان القروض؟

- a. نعم، قيمة القرض، رجاءاً.....  
b. لا (اذهب الى القسم الرابع)

7. أي من التالية تعتبر السبب أو الغاية الرئيسة وراء اللجوء للبنوك التجارية للحصول على التمويل:-

- a. مرحلة التأسيس  
b. شراء أصول و مواد رأسمالية  
c. تشغيل رأسمال عامل  
d. تمويل انتاج منتج جديد أو خدمة جديدة  
e. أخرى (حدد).....

8. أي من الموجودات التالية قدمتها كرهن أو تأمين لهذا القرض؟

- a. عقارات  
b. سندات أو أسهم أو كمبيالات  
c. بضائع أو معدات  
d. ضمانات شخصية

1. قيمة القرض الذي حصلت عليه و مضمون من ضمان القروض.....

2. بالإضافة للقرض المضمون هل استخدمت أي مصادر أخرى لتمويل المشروع؟

- a. نعم، الرجاء تحديد المصادر والمبلغ.....  
b. لا (اذهب الى السؤال 4)

3. لماذا لم يغطي القرض المضمون كل احتياجات المشروع؟.....

4. ما هي نسبة الضمان لهذا القرض (الاجابة اما 50% أو 75% من قيمة القرض).....

5. هل تم استخدام القرض لنفس الغاية او الاسباب المحددة في الطلب المقدم لضمان القروض؟

- a. نعم  
b. لا، لماذا؟.....

6. هل قدمت أي نوع من أنواع الضمانات حتى تحصل على هذا القرض؟

- a. نعم ، لماذا؟.....  
b. لا(اذهب الى سؤال 9)

7. ما هي طبيعة هذه الضمانات؟

- a. عقارية  
b. معدات و بضائع  
c. ضمانات شخصية  
d. أخرى (حدد).....

8. قيمة الضمانات بالمقارنة مع قيمة لقرض هل هي؟

- a. متساوية  
b. أكبر من قيمة القرض  
c. أقل من قيمة القرض

9. هل قام البنك بأى عمليات متابعة أو زيارات للمشروع بعد حصولك على القرض المضمون؟

- a. نعم  
b. لا

10. برأيك ما هي قيمة الإضافة او الزيادة الناجمة عن الخدمة المقدمة من شركة ضمان القروض في القرض الذي حصلت عليه من البنك؟.....

4. هل ذهبت الى البنك بداية أم طلبت القرض من خلال الشركة مباشرة؟

- a. البنك (اذهب الى السؤال 5)  
b. الشركة (اذهب الى السؤال 6 الذي يهتم بأخر قرض مضمون حصلت عليه)

5. عندما قمت بالزيارة الأولى للبنك هل ناقشت القرض العادي قبل القرض الذي تم ضمانه من الاردنية لضمان القروض؟

- a. نعم  
b. لا

\*\*\*\*\*

الاسئلة المطروحة لاحقا حتى نهاية الاستبيان متعلقة بأحدث قرض حصلت عليه و مضمون من الأردنية لضمان القروض

6. بالنسبة لأخر قرض مضمون حصلت عليه هل طلبته من البنك أم من خلال الشركة مباشرة؟.....

7. الى أي من الاسباب التالية برر البنك ضرورة ضمان القرض الذي حصلت عليه من شركة ضمان القروض؟

- a. قلة الضمانات المقدمة منك  
b. ضعف الكفاءة الأتتمانية للمقترض  
c. أخرى(حدد).....

8. كم استغرق حصولك على القرض من تاريخ تحويل الطلب الى الاردنية لضمان القروض؟

- a. أقل من أسبوع واحد  
b. أسبوع الى أسبوعين  
c. ثلاثة الى خمسة أسابيع  
d. أكثر من خمسة أسابيع

9. سعر الفائدة على هذا القرض.....

10. هل هناك فرق ما بين سعر الفائدة على القرض المضمون و القرض العادي؟

- a. نعم أعلى  
b. نعم أقل  
c. لا

### القسم الخامس: تمويل المشروع

لأغراض إعادة التذكير بأننا نناقش أحر قرض حصلت عليه من البنك و مضمون من الشركة الأردنية لضمان القروض و عليه في هذا القسم سنناقش الجوانب المتعلقة بتمويل المشروع.

19. هل القرض المضمون الذي حصلت عليه ساعدك في التقدم للحصول على تمويل من مصادر تمويل أخرى مستقبلاً؟
- c. نعم  
d. لا

القسم السادس: الأثار الاقتصادية للضمان

في هذا الجزء نرغب بالتعرف على التطورات التي ظهرت في المنشأة وأثر المشروع الذي قمت به بعد حصولك على القرض المضمون تحت مظلة شركة ضمان القروض ، نتحدث عن آخر قرض مضمون حصلت عليه.

1. برأيك ما هي أهم أثار المشروع الذي قمت به؟  
.....  
.....

2. هل أدى المشروع الذي قمت به الى أى من التالية:-

- نعم لا
- a. فتح أسواق جديدة؟  
هل هذه الأسواق محلية أم خارجية (ضع دائرة)
- b. تطوير أو تقديم منتج أو خدمة جديدة؟  
هل هذه الخدمات أو المنتجات مقدمة من قبل مؤسسات أخرى سواء محلية أو وطنية أو دولية
- c. تطوير أساليب إنتاجية جديدة؟  
هل هذه الأساليب أثرت على كفاءة المنشأة بشكل ثانوي أم كبير أم جوهري
- d. استخدام تكنولوجيا جديدة؟
- e. زيادة الصادرات؟
- f. خلق مصادر تزويد جديدة؟

3. ما هو متوسط قيمة إجمالي الموجودات في المشروع خلال الفترات التالية؟

- a. سنة قبل الحصول على القرض.....  
b. سنة بعد الحصول على القرض.....  
c. سنتين بعد القرض.....

4. الى أى مدى تعزى التغيرات في إجمالي الموجودات الى أثر المشروع الذي قمت به

- به  
.....  
.....

11. هل تعتقد بأن البنك كان سيقترضك في حال غياب شركة ضمان القروض؟
- a. نعم  
b. لا

12. هل تقدمت بأي من التالية (اختر ما يلائم)

- a. خطة العمل  
b. دراسة الجدوى الاقتصادية  
c. تحليل التدفقات النقدية  
d. لاشيء مما ذكر (اذهب الى السؤال 15)

13. هل كانت خطة العمل ، دراسة الجدوى أو تحليل التدفقات النقدية للمشروع السبب الرئيس وراء موافقة شركة ضمان القروض لضمان القرض الذي حصلت عليه؟
- a. نعم ( اذهب الى السؤال 15)  
b. لا

14. اذا كانت الاجابة لا فما هي الاسباب الرئيسة برأيك؟

- .....  
.....

15. بالرجوع الى الوقت الذي حصلت فيه على القرض المضمون من شركة ضمان القروض أي من العبارات التالية أقدر على وصف وضعك؟

- a. شركة ضمان القروض كانت الخيار الوحيد المتاح أمامي ( اذهب الى السؤال 17)
- b. مصادر أخرى كانت متاحة ولكن تغطي جزء بسيط من المبلغ الذي أحتهاجه ( اذهب الى السؤال 16).
- c. مصادر أخرى كانت متاحة وقادرة على تغطية كامل المبلغ الذي أحتهاجه و حصلت عليه بمساعدة ضمان القروض ولكنني فضلت من خلال ضمان القروض ( اذهب الى السؤال 16)

16. لماذا لجأت الى القرض المضمون اذا كانت مصادر التمويل الأخرى متوفرة؟

17. منذ حصولك على القرض المضمون هل احتجت الى تمويل اضافي من البنوك التجارية؟
- a. نعم  
b. لا ( اذهب الى القسم التالي)

18. من وجهة نظرك كيف كانت سهولة التقدم بطلب للحصول على قرض من بنك تجاري؟

- سهل جدا 1 2 3 4 5 صعب جدا



القسم الثامن: معلومات إضافية عن المجيب

1. عمر المجيب تقريبا.....
2. جنس المجيب.....
3. موقع المشروع
- a. داخل عمان
- b. خارج عمان.....
4. طبيعة أو مكان المقابلة
- a. عمل من داخل البيت
- b. مكتب صغير
- c. محل تجاري
- d. مكتب كبير
- e. مشغل ملابس
- f. مصنع
- g. مكتب
5. تقييم أداء المجيب
- ضعيف 1 2 3 4 5 ممتاز



---

**Appendix 6.3: The Commercial Banks Questionnaire**

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**To Whom It May Concern**

Maher Al-Mahrouq is a Ph.D. student in the Department of Economics at the University of Newcastle upon Tyne, UK. He is carrying out research looking at the effects on Small and Medium Enterprises of the loan guarantees provided by the Jordan Loan Guarantee Corporation.

I would be grateful if every help and assistance could be given to Mr. Al-Mahrouq whilst he is gathering information for his study. Any information given will of course be treated in the strictest confidence, and will only be reported in an aggregated form to protect the identify of participant banks.

Your help and assistance is much appreciated.

Yours faithfully

Dr. Colin Wren

Reader in Economics  
Department of Economics

University of Newcastle

Department of Economics

The Loan Guarantee Scheme in Jordan  
and Its Impact on SMEs

-----  
Interview with the credit managers in the commercial banks that participating in the loan guarantee scheme by signing 'Amman Agreement' with Jordan Loan Guarantee Corporation.  
-----

Thank you for agreeing to talk to me. I can confirm that the interview is completely confidential. Our purpose of this research is to evaluate the effect of the loan guarantee scheme, which executed by JLGC, on the small and medium-sized enterprises in Jordan. So we are going to the general discussion about the loans that provided to SMEs from commercial banks and guaranteed by JLGC.

---

1. Bank Name.-----
2. Name of interviewee.-----
3. Job title of interviewee-----
4. When did the bank sign the 'Amman agreement' with the JLGC? -----
5. Approximately what is the value of loans made last year (JD' millions) -----  
-----
6. Approximately what percentages of these loans were to SMEs (%)? -----
7. Approximately what percentages of the SME loans were guaranteed by JLGC (%)? -----
8. What is the main purpose of the projects for which small firms seek finance from bank? -----  
-----
9. a) In what circumstances would you put forward a firm for a loan guarantee?-----  
-----  
-----  
-----

9 b) What is the most important of these factors?-----  
 -----  
 -----

10. a) Is it important for a small firm applying for a bank loan to prepare (tick all that apply):

	<u>Bank</u>	<u>JLGC</u>
- Business plan	<input type="checkbox"/>	<input type="checkbox"/>
- Feasibility study	<input type="checkbox"/>	<input type="checkbox"/>
- Cash-flow analysis	<input type="checkbox"/>	<input type="checkbox"/>

10 b) How does this differ for a firm applying for a loan guarantee? (See Q 10.a)---  
 -----  
 -----  
 -----  
 -----  
 -

11. In what ways do you think a normal small firm loan and a JLGC guaranteed loan differ? (please explain)

- Collateral provided -----  
 -----
- Interest rate offered -----  
 -----
- Track record of recipient -----  
 -----
- Other (please specify) -----  
 -----  
 -----

12. Do you think that the recipients of JLGC loans perform any different in their projects than other small firm loan recipients? -----  
 -----

-----  
-----  
-----  
-----

13. Do you think that the existence of the JLGC loan guarantee scheme encourages you to make more loans to small firms? (please explain) -----

-----  
-----

14. Approximately what proportion of the JLGC supported loans would in your opinion have been made if the scheme had not existed? -----

-----

15. In your opinion what are the main advantages and disadvantages of participating in the JLGC loan guarantee scheme?-----

-----  
-----  
-----  
-----

16. What changes do you think would help make the loan guarantee scheme more effective? -----

-----  
-----  
-----  
-----

17. In what ways has participation in the loan guarantee scheme changed the banks behaviour in its lending SMEs? -----

-----  
-----  
-----  
-----  
-----

*Thank you very much*



## Appendix 6.4: Letters Attached to the Firm Questionnaire



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حضرة السيدة/صاحب/ة العمل المحترم تحية و بعد  
بداية اشكركم على موافقتكم بالتحدث الي

لقد تحول اهتمام متخذي القرار في العقود الماضية من الاهتمام بالمشروعات و المنشآت الكبيرة الى المنشآت الصغيرة. على اعتبار انها احد المصادر الرئيسية لتوفير فرص العمل و تحقيق نمو اقتصادي مستدام. وعلى الرغم من أهمية هذه الفئة من المنشآت ألا أنها مازالت تعاني من قلة المصادر التمويلية خصوصا من البنوك التجارية. و في محاولة للتغلب على هذه المشكلة في الاردن تم تأسيس الشركة الاردنية لضمان القروض في عام 1994 في محاولة لتجسير الفجوة التمويلية ما بين ما تطلبه هذه المنشآت من تمويل و ما هو متوفر من عرض تمويلي. و محاولة لتشجيع البنوك التجارية لتوفير المزيد من التمويل لهذه المشروعات خصوصا ذات الجدوى الاقتصادية العالية.

كما و اعلمكم بأن الباحث ماهر المحروق محاضر في قسم الاقتصاد في الجامعة الهاشمية / الزرقاء و الان يقوم باعداد هذه الدراسة لأغراض الحصول على درجة الدكتوراه من جامعة نيوكاسل في المملكة المتحدة. , أن هذه الدراسة تهدف الى تقييم أثار برنامج ضمان القروض في الاردن و قدرته على زيادة العرض من مصادر التمويل هذا علاوة على الاضافة و الاثار الاقتصادية لهذا البرنامج و اقتراح مجموعة من السياسات لتطوير و تحسين اداء البرنامج في حال حاجته لذلك. لقد تم اختيار منشآتكم عشوائيا من بين مجموعة من المنشآت الصغيرة و المتوسطة الحجم و حصلت على قروض من بنوك تجارية مضمونة من الشركة الاردنية لضمان القروض.

و عليه نرغب بالتعرف على تجربتكم و الاستفادة منها في هذا المجال. علما بأن هذه الاستبانة تحتاج الى بضع دقائق من وقتكم. و المعلومات التي تزودونا بها لاغراض البحث العلمي فقط و ستعامل بسرية تامة.

مع فائق الشكر و التقدير

ماهر المحروق

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الشركة الأردنية لضمان القروض م.ع.م  
Jordan Loan Guarantee Corp. Ltd.



Ref. No : \_\_\_\_\_

الرقم : ٩٠٥٦ / ١١ / ٤١ / ١

Date : \_\_\_\_\_

التاريخ : ١٦ شوال ١٤٢٢

الموافق : ٣٠ كانون اول ٢٠٠٦

الى من يهمه الأمر

يقوم السيد ماهر حسن المحروق باجراء دراسة ميدانية حول أثر خدمات ضمان القروض على المشروعات الصغيرة والمتوسطة في الأردن ، بهدف الحصول على درجة الدكتوراة في الاقتصاد من جامعة نيوكاسل ، المملكة المتحدة .

ونود اعلامكم بأن المعلومات التي سيتم الحصول عليها ستبقى سرية وتستخدم لأغراض البحث العلمي فقط ، وعليه ، نرجو منكم التعاون معه بتعبئة الاستبيان المرفق لانجاز هذا البحث لما نراه من فائدة كبيرة ستعمل على خدمة قطاع المشروعات الصغيرة والمتوسطة في الأردن .

شاكرين ومقدرين لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام ،،،

المدير العام

محمد سعيد الحمامي





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**To Whom It May Concern**

Maher Al-Mahrouq is a Ph.D. student in the Department of Economics at the University of Newcastle upon Tyne, UK. He is carrying out research looking at the effects on Small and Medium Enterprises of the loan guarantees provided by the Jordan Loan Guarantee Corporation. As part of this work he will need to collect firm-based data from interview surveys of the recipients of these loan guarantees.

I would be grateful if every help and assistance could be given to Mr. Al-Mahrouq whilst he is gathering this information for his study. Any information given will of course be treated in the strictest confidence, and will only be reported in an aggregated form to protect the identify of participant firms.

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Yours faithfully

Dr. Colin Wren

Reader in Economics  
Department of Economics



Appendix Table 7.1: Main Competitors for the Firms

	Sector									
	Manufacturing		Services		Retail		Agriculture		Total	
Main Competitors	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Small firms in Jordan	53	(75)	41	(80)	9	(82)	7	(70)	110	(77)
Large firms in Jordan	14	(20)	10	(20)	3	(27)	0	(0)	27	(19)
Foreign firms	22	(31)	3	(6)	1	(9)	1	(10)	27	(19)
Missing	2	(3)	1	(2)	0	(0)	2	(20)	4	(3)

**Note:** The table shows the total number of firms citing each category.

Appendix Table 7.2: Nature and Presentation of Premises

	Manufacturing		Services		Retail		Agriculture		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<b>The nature of the premises</b>										
Small office	25	(37)	21	(41)	2	(18)	6	(60)	54	(38)
Shop	8	(11)	11	(22)	8	(73)	0	(0)	27	(19)
Large office	11	(16)	13	(25)	0	(0)	0	(0)	24	(17)
Factory	22	(31)	1	(2)	0	(0)	0	(0)	23	(16)
Domestic, work from home	1	(1)	5	(10)	1	(9)	4	(40)	11	(8)
Warehouse	3	(4)	0	(0)	0	(0)	0	(0)	3	(2)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>
<b>Presentation of premises</b>										
Excellent	41	(59)	37	(73)	6	(55)	9	(91)	93	(65)
Good	26	(37)	14	(27)	5	(45)	0	(0)	45	(32)
Well	3	(4)	0	(0)	0	(0)	1	(9)	4	(3)
<b>Total</b>	<b>70</b>	<b>(100)</b>	<b>51</b>	<b>(100)</b>	<b>11</b>	<b>(100)</b>	<b>10</b>	<b>(100)</b>	<b>142</b>	<b>(100)</b>

Appendix Table 8.1: Variable Labels that Used in the Empirical Analysis

I: Demographic Data						
Variable Label	Name	No. of obser.	Min	Max	Mean	C.V
TITLE	Job title of interviewee:					
	1 = Manager	142	0	1	0.9	---
	2 = Sales manager	142	0	1	0.03	---
	3 = Financial manager	142	0	1	0.04	---
	4 = Partner	142	0	1	0.03	---
EDUC	Level of educational attainment 1=A level or less; 2= First degree; 3= Master degree; 4= PhD	142	1	4	1.68	---
GENDER	The gender of interviewee 1 = Male; 0 = Female	142	0	1	0.9	---
AGE INT	Age of the interviewee (years)	142	25	68	45	0.22
EXPER	Experience of the interviewee (years)	140	2	40	15	0.59
II. Characteristics of the Sample Firms						
Variable Label	Name	No. of obser.	Min	Max	Mean	C.V
LEGAL	Legal status of the firm					
	1 = Sole-trader	142	0	1	0.65	---
	2 = Partnership	142	0	1	0.27	---
	3 = Private ownership	142	0	1	0.08	---
ORG	Organisation of the firm					
	1= Single - Plant	142	0	1	0.89	---
	2 = Multi - Plant	142	0	1	0.07	---
	3 = Part of Large group	142	0	1	0.04	---
LOCATE	The location of the plant 1= Inside Amman: 0 = Elsewhere	142	0	1	0.53	---
AGE	Age of the firm 1 = 1 - 4 years 2 = 5 - 10 years 3 = 11 - 20 years 4 = 21 - 40 years 5 = more than 40 years	142	1	5	2.11	0.5
SECTOR	The firm's principal activity:					
	1 = Manufacturing	142	0	1	0.49	---
	2 = Services	142	0	1	0.36	---
	3 = Retail	142	0	1	0.08	---
	4 = Agriculture	142	0	1	0.07	---
EMP	Number of employees	142	1	95	12	1.22
TURN	Current turnover (J.D' 000s)	122	5	2,800	221	1.96

<b>CAP</b>	Capital used for the start-up (JD) 1= up to 10,000; 2= 10,001 - 40,000; 3= 40,001 - 100,000; 4= more than 100,000	142	1	4	2.34	0.46
------------	---	-----	---	---	------	------

### III. Loans Prior to JLGC Support

Variable Label	Name	No. of obser.	Min	Max	Mean	C.V
<b>PL1</b>	Did the firm receive loans from commercial banks before the first loan from JLGC 1 = Yes; 0 = No (99 cases applicable)	99	0	1	0.51	---
<b>PL2</b>	Number of loans from commercial banks before the guaranteed loan by JLGC (51 non-zero cases)	46	1	3	1.39	0.47
<b>PL3</b>	The amount of loans before the JLGC loans (J.D' 000s) (51 non-zero cases)	45	5	500	74	1.6
<b>PL4</b>	Purpose of the previous loan from commercial banks: 1 = Start-up 2 = Capital purchases 3 = Working capital 4 = Financing new products/service 5 = Other purposes (51 cases applicable)	51 51 51 51 51	0 0 0 0 0	1 1 1 1 1	0.24 0.24 0.3 0.2 0.02	--- --- --- --- ---
<b>PL5</b>	Assets pledge as a collateral are: 1 = Real estate 2 = Goods and equipments 3 = Other guarantor 4 = Did not pledge any collateral (51 cases applicable)	51 51 51 51	0 0 0 0	1 1 1 1	0.55 0.18 0.25 0.02	--- --- --- ---
<b>PL6</b>	The value of collateral compared with the value of loan 1 = More 2 = Less 3 = Equal the value of the loan (51 cases applicable)	50 50 50	0 0 0	1 1 1	0.6 0.22 0.18	--- --- ---

### IV. Negotiation of the Loan

Variable Label	Name	No. of obser.	Min	Max	Mean	C.V
<b>NEG1</b>	The firm approached most recent loan through: 1 = JLGC; 0 = Bank	142	0	1	0.18	---
<b>NEG2</b>	The first time that the firm hear of JLGC was from: 1 = Bank 2 = Colleague/member of staff 3 = Family and friends 4 = Another business 5 = Chamber of commerce/Industry 6 = Other ways	141 141 141 141 141 141	0 0 0 0 0 0	1 1 1 1 1 1	110/141 8/141 11/141 5/141 5/141 2/141	--- --- --- --- --- ---

NEG3	Knowledge of the guarantee provided by JLGC make firm more likely to seek a bank loan 1 = Yes; 0 = No	141	0	1	0.5	---
NEG4	Bank cites firm should take loan guarantee due to:					
	1 = Lack of collateral	141	0	1	0.48	---
	2 = Insufficient track record	141	0	1	0.13	---
	3 = Bank request	141	0	1	0.26	---
	4 = Other reasons	141	0	1	0.04	---
	5 = Unknown	141	0	1	0.09	---
NEG5	Did the firm prepare:					
	1 = Business plan	142	0	1	0.25	---
	2 = Feasibility study	142	0	1	0.13	---
	3 = Cash flow analysis	142	0	1	0.05	---
	4 = Business and plan and feasibility study	142	0	1	0.31	---
	5 = The borrower did not prepare anything	142	0	1	0.26	---
NEG6	In your opinion, was the existence of a business plan, feasibility study or cash flow analysis the most important reason for JLGC guaranteeing the loan? 1 = Yes; 0 = No (119 cases applicable)	113	0	1	0.88	---

V. Characteristics of the Guaranteed Loan

Variable Label	Name	No. of obser.	Min	Max	Mean	C.V
LG1	Number of the guaranteed loans that the firm received	142	1	2	1.08	0.26
LG2	The amount of the guaranteed loan (J.D' 000s)	142	2	150	23	0.96
LG3	The size of the project (J.D' 000s)	135	3	300	45	1.16
LG4	The purpose of the project:					
	1 = Start-up	141	0	1	0.28	---
	2 = Capital purchases	141	0	1	0.39	---
	3 = Working capital	141	0	1	0.31	---
	4 = finance new product or service	141	0	1	0.02	---
LG5	The most recent guaranteed loan was from:					
	1 = Housing Bank	142	0	1	0.24	---
	2 = Union Bank	142	0	1	0.06	---
	3 = Industrial Development Bank	142	0	1	0.25	---
	4 = Cairo Amman Bank	142	0	1	0.02	---
	5 = Arab Bank Association ABC	142	0	1	0.13	---
	6 = Jordan Gulf Bank	142	0	1	0.01	---
	7 = Jordan Kuwait Bank	142	0	1	0.07	---
	8 = Jordan Bank	142	0	1	0.01	---
	9 = Jordan Investment Bank	142	0	1	0.02	---
	10 = Middle East Bank	142	0	1	0.02	---
	11 = Arab Bank PLC	142	0	1	0.03	---
	12 = Arab Land Bank	142	0	1	0.04	---
	13 = National Bank	142	0	1	0.06	---
	14 = Arab Investment Bank	142	0	1	0.01	---
	15 = Grindlays Bank	142	0	1	0.01	---
	16 = Export and Finance Bank	142	0	1	0.02	---
	17 = HSBC Bank	142	0	1	0.01	---

LG6	In addition to the guaranteed loan was the borrower used other source of finance 1 = Yes ; 0 = No	141	0	1	0.58	---
LG7	The Source of the other finance was: 1 = Self finance 2 = Family and friends 3 = Other banks (84 cases applicable)	83	0	1	0.93	---
		83	0	1	0.04	---
		83	0	1	0.04	---
LG8	The amount of other finance (J.D' 000s) (84 cases applicable)	81	2.5	280	33	1.45
LG9	The rate of interest	142	0.09	0.18	0.13	0.12
LG10	The rate of interest differ from that other bank loans 1 = Higher 2 = Lower 3 = No differences	140	0	1	0.14	---
		140	0	1	0.09	---
		140	0	1	0.77	---
LG11	The percentage of the loan covered by JLGC 1 = 75 percent 2 = 50 percent	142	0	1	0.88	---
		142	0	1	0.12	---
LG12	Extend any collateral for the guaranteed loans 1 = Yes; 0 = No	142	0	1	0.81	---
LG13	The Kind of collateral: 1 = Real estate 2 = Equipment and goods 3 = Another guarantor 4 = Another kind of collateral (115 cases applicable)	115	0	1	0.61	---
		115	0	1	0.14	---
		115	0	1	0.23	---
		115	0	1	0.02	---
LG14	The value of collateral compared to the value of the guaranteed loan 1 = Equal to the loan 2 = More than the loan 3 = Less than the loan (115 cases applicable)	115	0	1	0.12	---
		115	0	1	0.69	---
		115	0	1	0.19	---
LG15	The bank provide ongoing advice and guidance after the borrower receive the loan 1 = Yes; 0 = No	142	0	1	0.32	---
LG16	The size of the loan 1 = If the loan > 40,000; 0 = if the loan ≤ 40,000	142	0	1	0.12	---
LG17	The value of collateral (J.D '000's)	141	0	817	62.8	1.87
LG18	Ratio of the guaranteed loan to the project size	142	0.05	7.78	0.8	1.1
LG19	Ratio of the collateral to the project size	135	0	11.9	1.5	1.45

VI. Firms Performance						
Variable Label	Description	No. of obser.	Min	Max	Mean	C.V
<b>ADD</b>	Firm believes that the bank would lent them if the guarantee was not available 1 = additional ; 0 = Non-additional	141	0	1	0.29	---
<b>REQUEST</b>	Despite other sources of finance being available the firm chose JLGC loan due to:					
	1 = Bank request	94	0	1	0.78	---
	2 =Firms request (102 cases applicable)	94	0	1	0.22	---
<b>EFFECT</b>	Did the project lead to any of the following					
	1 = Open-up new market 1 = Yes; 0 = No	141	0	1	0.6	---
	2 = Development of new products/services 1 = Yes; 0 = No	141	0	1	0.6	---
	3 = Development of new process 1 = Yes; 0 = No	141	0	1	0.42	---
	4 = Introduction of a leading-edge technology 1 = Yes; 0 = No	140	0	1	0.35	---
	5 = Increase in exports 1 = Yes; 0 = No	140	0	1	0.1	---
	6 = New source of supply 1 = Yes; 0 = No	140	0	1	0.49	---
<b>ASSETADD</b>	In firms view, what change in total assets do you think reflects the impact of the project (percentage of changes).	122	0	100	23	1.07
<b>SALEADD</b>	In firms view, what change in sales turnover do you think reflects the impact of the project (percentage of changes)..	113	0	100	25	3.7
<b>EMPADD</b>	In firms view, what change in employees do you think reflects the impact of the project (percentage of changes)	125	0	100	19	3.92
<b>ASSTCHG</b>	Difference between assets two years after the loan and year before the loan (J.D '000s')	138	0	1,250	94.7	1.85
<b>ASSTCHGADD</b>	ASSETCHG * ASSETADD (J.D '000s')	122	0	800	23	3.5
<b>SALECHG</b>	Difference between sales turnover two years after the loan and year before the loan (J.D '000s')	126	-60	1,350	68.8	2.07
<b>SALECHGADD</b>	SALECHG * SALESADD (J.D '000s')	111	0	135	8.12	1.93
<b>EMPCHG</b>	Difference between number of employees two years after the loan and year before the loan	142	-8	30	4	1.4
<b>EMPCHGADD</b>	EMPCHG * EMPADD	125	0	8	1	1.3

**Appendix Table 8.2: Correlation Matrices**

**A: Demographic Data**

	Title1	TITLE2	TITLE3	TITLE4	EDUC	GENDER	AGE-INT	EXPER
<b>TITLE1</b>	1.0							
<b>TITLE2</b>	-0.54	1.00						
<b>TITLE3</b>	-0.60	-0.03	1.00					
<b>TITLE4</b>	-0.54	-0.03	-0.03	1.00				
<b>EDUC</b>	-0.10	0.07	0.13	-0.04	1.00			
<b>GENDER</b>	-0.02	-0.09	0.06	0.06	-0.08	1.00		
<b>AGE-INT</b>	0.13	-0.04	-0.16	-0.01	-0.05	0.11	1.00	
<b>EXPER</b>	0.18	-0.09	-0.09	-0.11	-0.25	0.24	0.22	1.00

Note: The table shows the correlation coefficient for the variables related to the interviewee demographics.

**B: Sample Firms Characteristics**

	LEGA L1	LEGA L2	LEGA L3	ORG1	ORG2	ORG3	LOCA TE	AGE	SECT OR1	SECT OR2	SECT OR3	SECT OR4	EM P	TU RN	CA P
LEGAL1	1.00														
LEGAL2	-0.84	1.00													
LEGAL3	-0.39	-0.17	1.00												
ORG1	0.20	-0.27	0.10	1.00											
ORG2	-0.08	0.13	-0.07	-0.77	1.00										
ORG3	-0.21	0.26	-0.06	-0.58	-0.05	1.00									
LOCATE	-0.07	0.01	0.11	0.02	-0.01	-0.01	1.00								
AGE	0.04	0.01	-0.10	-0.11	0.07	0.07	0.26	1.00							
SECTOR1	-0.27	0.15	0.24	-0.13	0.11	0.07	-0.05	0.03	1.00						
SECTOR2	0.09	-0.00	-0.16	0.08	-0.03	-0.08	0.09	-0.04	-0.73	1.00					
SECTOR3	0.15	-0.11	-0.08	0.01	-0.07	0.07	-0.04	-0.02	-0.28	-0.21	1.00				
SECTOR4	0.20	-0.16	-0.07	0.09	-0.07	-0.05	-0.01	0.05	-0.27	-0.20	-0.07	1.00			
EMP	-0.31	0.18	0.24	-0.15	0.19	-0.00	0.01	0.04	0.31	-0.20	-0.17	-0.05	1.00		
TURN	-0.29	0.19	0.20	-0.10	0.15	-0.02	0.13	-0.04	0.15	-0.10	-0.08	-0.02	0.63	1.00	
CAP	-0.22	0.18	0.08	-0.13	0.04	0.16	0.01	-0.24	0.05	-0.01	-0.11	0.04	0.26	0.28	1.00

**C: Previous Loan Variables**

	PL1	PL2	PL3	PL4.1	PL4.2	PL4.3	PL4.4	PL5.1	PL5.1	PL5.1	PL5.3	PL5.4	PL6.1	PL6.2
PL1	1.00													
PL2	0.33	1.00												
PL3	-0.16	-0.40	1.00											
PL4.1	-0.15	-0.45	0.15	1.00										
PL4.2	-0.15	-0.39	0.07	-0.09	1.00									
PL4.3	-0.18	-0.40	0.23	-0.10	-0.10	1.00								
PL4.4	-0.14	-0.18	0.07	-0.08	-0.08	-0.09	1.00							
PL4.5	-0.04	-0.10	0.53	-0.02	-0.02	-0.03	-0.02	1.00						
PL5.1	-0.25	-0.63	0.44	0.35	0.10	0.32	0.27	0.16	1.00					
PL5.2	-0.13	-0.23	0.01	0.02	0.23	0.27	0.04	-0.02	-0.12	1.00				
PL5.3	-0.16	-0.40	0.09	0.16	0.34	0.11	0.10	-0.02	-0.15	-0.08	1.00			
PL5.4	-0.04	0.08	-0.02	-0.02	-0.02	-0.03	0.30	-0.01	-0.04	-0.02	-0.02	1.00		
PL6.1	-0.16	-0.24	0.14	0.14	0.02	0.14	0.43	0.07	0.38	0.01	-0.07	0.87	1.00	
PL6.2	-0.09	-0.04	0.04	0.01	0.07	0.04	0.29	-0.01	-0.04	-0.01	0.19	0.94	0.79	1.00
PL6.3	-0.08	0.01	-0.01	0.01	0.07	-0.00	0.30	-0.01	-0.07	0.14	0.07	0.95	0.81	0.88

Note: These variables exclude the not applicable variables or cases





**Cont. E: Characteristics of the Guaranteed Loan Variables**

	LG9	LG10.1	LG10.2	LG10.3	LG11.1	LG11.2	LG13.1	LG13.2	LG13.3	LG13.4	LG14.1	LG14.2	LG14.3	LG15	LG16	LG17	LG18	LG19	
LG9	1.00																		
LG10.1	-0.06	1.00																	
LG10.2	-0.07	0.86	1.00																
LG10.3	0.30	0.69	0.73	1.00															
LG11.1	0.13	0.04	0.05	0.02	1.00														
LG11.2	-0.13	-0.04	-0.05	-0.02	-1.00	1.00													
LG13.1	-0.16	0.13	0.10	-0.02	-0.05	0.05	1.00												
LG13.2	-0.07	-0.04	-0.05	-0.02	0.16	-0.16	-0.50	1.00											
LG13.3	0.25	-0.11	-0.09	0.05	-0.09	0.09	-0.69	-0.22	1.00										
LG13.4	-0.04	-0.03	0.05	-0.05	0.05	-0.05	-0.17	-0.05	-0.08	1.00									
LG14.1	0.01	-0.09	-0.08	0.07	0.07	-0.07	-0.31	0.40	0.04	-0.05	1.00								
LG14.2	0.01	0.14	0.07	-0.03	-0.04	0.04	0.47	-0.19	-0.42	0.09	-0.57	1.00							
LG14.3	-0.02	-0.09	-0.02	-0.02	-0.02	0.02	-0.30	-0.12	0.46	-0.06	-0.18	-0.70	1.00						
LG15	-0.30	0.24	0.17	-0.03	-0.18	0.18	0.19	-0.10	-0.15	0.05	-0.09	0.12	-0.07	1.00					
LG16	-0.13	-0.04	-0.05	-0.02	-1.00	1.00	0.05	-0.16	0.09	-0.05	-0.07	0.04	0.02	0.18	1.00				
LG17	-0.09	-0.07	-0.01	-0.06	-0.31	0.31	0.27	-0.18	0.09	-0.05	-0.07	0.14	-0.12	-0.02	0.31	1.00			
LG18	-0.13	-0.04	-0.03	-0.14	-0.12	0.12	-0.11	0.05	0.08	0.02	0.25	-0.28	0.12	0.07	0.12	0.03	1.00		
LG19	-0.03	-0.03	-0.02	-0.10	0.03	-0.03	0.26	-0.15	-0.16	-0.03	-0.01	0.22	-0.25	-0.07	-0.03	0.69	0.26	1.00	

**Note:** These variables exclude the not applicable cases. Variables LG6, LG7 and LG8 not included because they did not use in the qualitative analysis, while the LG5.14, LG5.15, LG5.17 and LG12 are excluded because they have not any correlation with any of the other variables.

**F: Firms Performance**

	ADD	EFFE CT1	EFFE CT2	EFFE CT3	EFFE CT4	EFFE CT5	EFFE CT6	ASST CHGADD	SALE CHGADD	EMP CHGADD	ASST CHG	SALE CHG	EMP CHG
ADD	1.00												
EFFECT1	0.14	1.00											
EFFECT2	-0.08	0.13	1.00										
EFFECT3	0.06	0.00	0.21	1.00									
EFFECT4	0.02	0.23	0.10	0.32	1.00								
EFFECT5	-0.12	0.14	0.07	0.24	0.16	1.00							
EFFECT6	-0.02	0.33	-0.04	-0.14	-0.06	0.07	1.00						
ASST CHGADD	-0.04	-0.09	0.10	0.12	0.19	0.01	-0.06	1.00					
SALE CHGADD	0.01	-0.03	0.16	0.23	0.18	0.08	0.00	0.86	1.00				
EMP CHGADD	0.10	0.01	0.03	0.05	0.08	0.10	0.02	0.03	0.20	1.00			
ASSTCHG	-0.17	-0.13	0.04	0.06	0.12	0.04	-0.01	0.60	0.63	0.04	1.00		
SALECHG	-0.13	-0.15	0.09	0.14	0.16	0.06	-0.07	0.89	0.85	0.05	0.81	1.00	
EMPCHG	0.03	0.02	0.18	0.32	0.19	0.18	0.02	0.32	0.47	0.43	0.40	0.49	1.00

Note: These variables exclude the non-applicable cases.

**Appendix Table 8.3: Factors Determining the Approach to the JLGC: Logit Model**

		Model I		Model II		Model III		Model IV	
<i>NEG1</i>		Coef.	z	Coef.	z	Coef.	z	Coef.	z
<b>Demographic Data</b>	<i>TITLE1</i>	1.013	(0.91)	---		0.744	(0.56)	0.879	(0.76)
	<i>TITLE2</i>	1.346	(0.87)	---		0.554	(0.34)	1.185	(0.76)
	<i>TITLE3**</i>	---		---		---		---	
	<i>EDUC</i>	0.450	(1.50)	---		0.251	(0.72)	---	
	<i>GENDER</i>	1.668	(1.41)	---		1.940	(1.31)	1.889	(1.40)
	<i>AGE-INT</i>	0.018	(0.79)	---		0.027	(1.03)	0.028	(1.18)
	<i>EXPER</i>	-0.052	(1.77)	---		-0.073	(2.15)	-0.066	(2.27)
	<i>EXPERM*</i>	---		---		---		---	
	<b>Characteristics of the Sample Firms</b>	<i>LEGAL1</i>	---		-0.180	(0.33)	0.030	(0.05)	0.011
<i>LEGAL2**</i>		---		---		---		---	
<i>ORG1**</i>		---		---		---		---	
<i>ORG2</i>		---		0.148	(0.16)	0.109	(0.12)	0.125	(0.14)
<i>LOCATE</i>		---		0.350	(0.65)	0.449	(0.74)	---	
<i>AGE</i>		---		-0.058	(0.25)	0.033	(0.13)	---	
<i>SECTOR1</i>		---		-0.326	(0.42)	0.083	(0.10)	0.115	(0.14)
<i>SECTOR2</i>		---		0.737	(1.03)	1.047	(1.30)	0.974	(1.23)
<i>SECTOR3**</i>		---		---		---		---	
<i>EMP</i>		---		0.029	(1.41)	0.022	(0.93)	---	
<i>TURN</i>		---		-0.0009	(1.20)	-0.0005	(0.54)	---	
<i>CAP</i>		---		-0.581	(0.22)	-0.108	(0.38)	---	
<i>TURNM</i>		---		0.769	(1.33)	0.852	(1.14)	---	
Constant		-4.94	(2.69)	-1.902	(1.45)	-5.593	(2.08)	-4.930	(2.13)
N		<b>142</b>		<b>142</b>		<b>142</b>		<b>142</b>	
X <sup>2</sup>		<b>9.57</b>		<b>7.44</b>		<b>19.23</b>		<b>10.13</b>	
Pseudo R <sup>2</sup>		<b>0.07</b>		<b>0.06</b>		<b>0.13</b>		<b>0.08</b>	

**Notes:** The table corresponds to Table 8.2 of the text, but using a logit model rather than the liner probability model. The dependent variable in each case is *NEG1* ie. whether the firm first approached the JLGC (*NEG1*=1) or a bank (*NEG1* =0). Models I to III estimate different versions, while model IV gives the parsimonious version of model III. \*Variables dropped due to the facts that predict failure perfectly. \*\* Variables dropped due to the collinearity. X<sup>2</sup> is tested the goodness of fit for these models at level of 5%.

**Appendix Table 8.4: The Economic Effects of the Project**

Dependent Variable	<i>EFFECT1</i>		<i>EFFECT2</i>		<i>EFFECT3</i>		<i>EFFECT4</i>		<i>EFFECT5</i>		<i>EFFECT6</i>		
	Model XXVII		Model XXVIII		Model XXIX		Model XXX		Model XXXI		Model XXXII		
	Coef.	t	Coef.	t	Coef.	T	Coef.	t	Coef.	t	Coef.	t	
<b>Demographic Data</b>	<i>TITLE1</i>	---	---	---	-0.537	(2.55)	---	---	---	---	-0.277	(1.69)	
	<i>TITLE2</i>	---	---	---	-0.394	(1.44)	---	---	---	---	---	---	
	<i>TITLE3</i>	---	---	---	-1.040	(4.13)	-0.484	(1.78)	-0.483	(3.13)	-0.566	(1.80)	
	<i>EDUC</i>	---	---	0.170	(3.89)	0.098	(1.88)	0.127	(2.39)	---	---	-0.096	(2.16)
	<i>GENDER</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>AGE-INT</i>	---	---	---	---	-0.008	(2.10)	---	---	---	---	---	
	<i>EXPER</i>	-0.008	(1.72)	---	---	---	---	-0.007	(1.72)	---	---	---	---
	<i>EXPERM</i>	0.513	(1.08)	---	---	---	---	1.386	(4.29)	---	---	---	---
<b>Characteristics of the Firm</b>	<i>LEGAL1</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>LEGAL2</i>	0.166	(1.91)	---	---	---	---	---	---	---	---	---	
	<i>ORG1</i>	---	---	---	---	0.209	(1.85)	---	---	---	---	---	
	<i>ORG2</i>	---	---	---	---	---	---	---	-0.157	(3.05)	---	---	
	<i>LOCATE</i>	0.209	(2.56)	---	---	---	---	---	---	---	---	---	
	<i>AGE</i>	0.075	(2.09)	---	---	---	---	---	---	---	---	---	
	<i>SECTOR1</i>	0.157	(1.92)	---	---	0.222	(2.68)	0.212	(2.52)	0.152	(2.93)	---	---
	<i>SECTOR2</i>	---	---	0.148	(1.75)	---	---	---	---	---	---	---	
	<i>SECTOR3</i>	---	---	0.287	(1.94)	---	---	-0.293	(3.81)	---	---	0.368	(3.00)
	<i>EMP</i>	-0.008	(4.00)	0.006	(3.04)	0.007	(3.24)	-0.004	(1.49)	---	---	-0.005	(2.14)
	<i>TURN</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>CAP</i>	---	---	---	---	0.080	(2.29)	---	---	---	---	---	
	<i>TURNM</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>PL1</i>	---	---	---	---	---	---	---	---	---	---	---	
	<i>NEG1</i>	---	---	---	---	---	---	0.248	(2.41)	---	---	---	---
	<i>LG2</i>	---	---	0.004	(2.08)	---	---	0.007	(3.03)	0.004	(2.63)	0.004	(1.43)
	<i>LG3</i>	---	---	---	---	---	---	0.002	(1.74)	---	---	0.002	(2.09)
	<i>LG3M</i>	---	---	---	---	---	---	0.015	(0.07)	---	---	-0.208	(1.05)
	<i>LG4.1</i>	---	---	---	---	-0.187	(2.09)	-0.521	(3.47)	---	---	---	---
	<i>LG4.2</i>	---	---	---	---	---	---	-0.321	(2.13)	---	---	---	---
<i>LG4.3</i>	---	---	---	---	---	---	-0.443	(2.96)	---	---	---	---	
<i>LG4.1M</i>	---	---	---	---	0.640	(0.88)	0.015	(2.90)	---	---	---	---	
<i>LG17</i>	---	---	-0.001	(1.81)	---	---	---	---	---	---	---	---	
Constant	0.413	(3.69)	0.111	(1.09)	0.6530	(1.99)	0.366	(1.96)	-0.045	(1.78)	0.796	(3.97)	
N	<b>141</b>		<b>141</b>		<b>141</b>		<b>140</b>		<b>140</b>		<b>140</b>		
F	<b>4.93</b>		<b>6.48</b>		<b>3.95</b>		<b>4.32</b>		<b>3.87</b>		<b>5.21</b>		
R <sup>2</sup>	<b>0.15</b>		<b>0.17</b>		<b>0.27</b>		<b>0.36</b>		<b>0.15</b>		<b>0.16</b>		

**Note:** The dependent variables record the effects of the project as follows: *EFFECT1* (opening-up of new markets), *EFFECT2* (new products or service), *EFFECT3* (new processes), *EFFECT4* (leading-edge technology), *EFFECT5* (increase in exports) and *EFFECT6* (new source of supply). The parsimonious versions of the full models including the ADD term are shown in Table 8.12. In the first three models there is one non-response, and in the other model there are two non-responses.

Appendix Table 8.5: Effects on Firm Activity

Dependent Variable	<i>ASSTCHG</i>				<i>SALECHG</i>				<i>EMPCHG</i>				
	Model XXXVI		Model XXXVII		Model XXXVII		Model XXXVIII		Model XXXVIII		Model XXXVIII		
	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	
Demographic Data	<i>TITLE1</i>	-15.366	(0.52)	---	6.456	(0.26)	---	0.739	(0.60)	---			
	<i>TITLE2</i>	171.801	(1.59)	168.330	(2.01)	-56.420	(0.84)	---	0.587	(0.21)	---		
	<i>TITLE3</i>	97.035	(0.99)	---	---	107.605	(1.04)	93.205	(1.15)	4.775	(1.18)	3.892	(1.12)
	<i>EDUC</i>	-9.880	(1.19)	---	---	-5.0907	(0.61)	---	---	1.167	(1.88)	1.393	(2.34)
	<i>GENDER</i>	-4.340	(0.15)	---	---	37.883	(2.09)	36.368	(2.36)	0.091	(0.08)	---	---
	<i>AGE-INT</i>	1.336	(1.40)	---	---	0.379	(0.72)	---	---	0.013	(0.35)	---	---
	<i>EXPER</i>	-0.510	(0.48)	---	---	-2.316	(2.57)	-2.285	(3.16)	-0.047	(0.83)	---	---
	<i>EXPERM</i>	66.517	(0.70)	---	---	212.270	(2.61)	214.549	(3.20)	5.026	(1.060)	---	---
Characteristics of the Firm	<i>LEGAL1</i>	11.136	(0.25)	---	---	-50.903	(1.37)	-51.077	(1.71)	-4.196	(2.24)	-4.177	(2.47)
	<i>LEGAL2</i>	25.528	(0.56)	---	---	-68.892	(1.55)	-76.651	(1.95)	-2.405	(1.20)	-2.798	(1.48)
	<i>ORG1</i>	68.269	(1.87)	---	---	12.578	(0.58)	---	---	0.550	(0.26)	---	---
	<i>ORG2</i>	64.531	(1.47)	---	---	-3.687	(0.13)	---	---	0.040	(0.02)	---	---
	<i>LOCATE</i>	12.680	(0.92)	---	---	5.439	(0.53)	---	---	0.375	(0.50)	---	---
	<i>AGE</i>	0.840	(0.08)	---	---	-8.404	(0.90)	---	---	0.544	(1.04)	0.534	(1.25)
	<i>SECTOR1</i>	-42.225	(1.05)	-35.462	(2.82)	-23.273	(0.97)	---	---	-1.192	(0.76)	---	---
	<i>SECTOR2</i>	11.084	(0.29)	---	---	-6.308	(0.30)	---	---	-1.699	(1.17)	-0.631	(1.20)
	<i>SECTOR3</i>	11.928	(0.31)	---	---	11.835	(0.53)	---	---	-1.124	(0.74)	---	---
	<i>EMP</i>	0.629	(0.54)	---	---	2.350	(2.01)	1.901	(2.09)	0.243	(5.88)	0.238	(6.46)
	<i>TURN</i>	0.283	(3.98)	0.358	(6.63)	0.201	(3.64)	0.201	(4.17)	-0.003	(1.86)	-0.003	(2.20)
	<i>CAP</i>	6.814	(0.63)	---	---	-0.926	(0.13)	---	---	1.107	(2.30)	1.188	(2.78)
	<i>TURNM</i>	-3.95	(0.20)	5.857	(0.31)	36.644	(1.43)	36.468	(1.82)	1.157	(1.22)	1.074	(1.21)
													---
	<i>PL1</i>	5.775	(1.97)	3.038	(2.02)	-0.567	(0.22)	---	---	-0.416	(1.150)	-0.427	(1.18)
	<i>NEG1</i>	-16.195	(1.07)	---	---	-4.866	(0.41)	---	---	-0.750	(0.93)	---	---
	<i>LG2</i>	0.644	(0.89)	---	---	-0.117	(0.21)	---	---	-0.045	(1.34)	-0.049	(1.55)
	<i>LG3</i>	0.146	(0.70)	---	---	0.056	(0.30)	---	---	0.015	(1.10)	0.015	(1.19)
	<i>LG3M</i>	34.682	(0.58)	---	---	38.332	(0.74)	---	---	0.727	(0.19)	0.949	(0.27)
	<i>LG4.1</i>	-0.420	(0.01)	---	---	100.699	(2.47)	94.351	(2.78)	6.032	(1.71)	5.936	(2.11)
<i>LG4.2</i>	23.968	(0.65)	---	---	86.639	(2.40)	76.435	(2.20)	0.316	(0.20)	---	---	
<i>LG4.3</i>	12.148	(0.40)	---	---	72.436	(2.30)	65.591	(2.04)	-0.333	(0.23)	---	---	
<i>LG4.1M</i>	-357.658	(0.40)	---	---	---	---	---	---	-52.438	(1.04)	-51.657	(2.24)	
<i>LG17</i>	0.093	(0.68)	---	---	0.101	(1.08)	0.117	(1.46)	-0.002	(0.75)	---	---	
<i>ADD</i>	-5.835	(0.40)	-10.308	(0.79)	-21.121	(1.43)	-26.214	(1.75)	-0.418	(0.53)	-0.328	(0.49)	
<i>ADDM</i>	---	---	---	---	---	---	---	---	4.364	(0.61)	3.593	(0.60)	
Constant	-136.800	(1.47)	30.466	(2.13)	-37.250	(0.47)	-26.393	(0.67)	-0.796	(0.16)	-0.997	(0.40)	
N	<b>138</b>		<b>138</b>		<b>126</b>		<b>126</b>		<b>142</b>		<b>142</b>		
F	<b>9.34</b>		<b>13.93</b>		<b>5.74</b>		<b>5.53</b>		<b>6.10</b>		<b>15.34</b>		
R <sup>2</sup>	<b>0.83</b>		<b>0.78</b>		<b>0.85</b>		<b>0.83</b>		<b>0.64</b>		<b>0.62</b>		

Note: The dependent variable in model XXXVI is *ASSTCHG* (= Assets two years after the loan – Assets year before the loan), for model XXXVII the dependent variable is *SALECHG* (= Total sales two years after the loan – sales year before the loan), and for model XXXVIII it is *EMPCHG* (= Number of employees two years after the loan – number of employees year before the loan) for model XXXVIII. *ADDM* not included in both XXXVI and XXXVII because there was no missing cases for 138 and 126 observations, also *LG4.1M* not include in model XXXVII because there was no missing cases for 126 observations.

## BIBLIOGRAPHY

- Abdel Jaber T. and Karmoul A., (1996), *Promoting Small and Medium-Sized Industries in Jordan*. Amman: Arab Consult Center.
- Abdullah M., (1999), *Small and Medium Enterprises in Malaysia: Policy Issues and challenges*. London: Ashgate.
- Abu-Jobara H., (1997), *Mortgage Collateral in Banking System*. Amman: Banking Studies Institution. (in Arabic).
- Abu-Karsh S., (1996), *Credit Risk Evaluation Practices of Selected Financial Intermediaries in the Philippines*, PhD, University of Sant Tomas.
- Aernoudt R., (2000), "European Loan Guarantee Schemes", in *Risk Behavior and Risk Management in Business Life*, Green B., (ed). London: Kluwer Academic Publisher.
- (2000), "European Union Enterprise Policy and Loan Guarantee Schemes", in *Risk Behavior and Risk Management in Business Life*, Green B., (ed). London: Kluwer Academic Publisher.
- Akerlof G., (1970), "The Market For 'Lemons': Quality Uncertainty and the Market Mechanism", *Quarterly Journal of Economics*, **84**, 488-500.
- Al-Kateeb H., (1991), "Small Firms; Their Role and Characteristics", in the Investment in SMEs and their Role in Economic Development Workshop Amman. (in Arabic).
- Al-Mahrouq M., (1999), *Activities of the Jordan Loan Guarantee Corporation: Department of Research and Studies*, Jordan Loan Guarantee Corporation. Amman (in Arabic)
- Al-Shama'a K., (1999), *Financing Small Firms*. Amman: The Arab Academy for Banking and Financial Sciences. (in Arabic)
- (1998), *The Industrial Credit and Development Banks*. Amman: The Arab Academy for Banking and Financial Sciences. (in Arabic).
- Amari N., Wedyan O. and Hajaj N., (1995), *The Impact of 1993-97 Plan Economic Policies on the Employment In SMEs*. Amman: Ministry of Planning. (in Arabic)
- Amman Chamber of Industry, (1991), "The Problems Facing SMEs in Jordan," in *The Investment in SMEs and their Role in Economic Development Workshop*. Amman. (in Arabic).
- Amman Chamber of Industry, (1999), *"Industrial Sector in Jordan,"* [www.asi.org.jo](http://www.asi.org.jo).
- Aqel M., (1998), "The Role of Commercial Banks in Financing SMEs in Jordan," in *the Economic and Social Development in Jordanian Villages Conference*. Mafrag: Al-albayett University. (in Arabic).

- Arabian Labour Organisation (ALO), (1994), *Small Industries and Handicrafts in the Arabian Countries*. Cairo: Arabian Labour Organisation. (in Arabic).
- Arrow K. and Lind R., (1970), "Uncertainty and the Evaluation of Public Investment Decisions," *The American Economic Review*, **60**, 364-78.
- Atoom R., (1998), "Microfinance in MENA Countries," in *Medleat and North Africa Net Conference (MENA)*. Cairo.
- Azam J., Biais D., Dia M. and Maurel C., (2001), "Informal and Formal Credit markets and Credit Rationing in Co'te D'ivoire," *Oxford Review of Economic Policy*, **17** (4), 520-34.
- Balkenhol B., (1990), "Guaranteeing Bank Loans to Smaller Entrepreneurs in West Africa," *International Labour Review*, **129** (2), 245-53.
- Banerjee S. and Cadot O., (1996), "Syndicated Lending Under Asymmetric Creditor Information", *Journal of Development Economics*, **49**, 289-306.
- Bank of England (2001), *Finance for Small Firm*. London: Bank of England.
- (1997), *Finance For Small Firms, A Fourth Report*. London: Bank of England.
- (1995), *Finance for Small Firms, A Second Report*. London: Bank of England.
- Bannock G., (1981), *The Economic of Small Firms*. England: Basil Blackwell.
- (1986), "The Economic Role of The Small Firm in Contemporary Industrial Society," in *The Survival of the Small Firm: The Economic of Survival and Entrepreneurship*, Stanworth J., Curran J. and Watkins D., (ed). England: Gower.
- (1976), *The Small Business in Britain and Germany*. London: Wilton House Publication.
- Baring Securities (1994), *"Jordanian Stock Market Review"*, London: Global Emerging Markets Research.
- Barkham R., Gudgin G., Hartm M. and Hanvey E., (1996), *The Determinants of Small Firm Growth*. London: Jessica Ingsley.
- Barlow D. and Robson M., (1999), "Have Unincorporated Businesses in the UK Been Constrained in Their Ability to Obtain Bank Lending?" Newcastle: Department of Economics, WP 2000-03, University of Newcastle.
- Barnes C. and Sebstad J., (1999), *Guidelines for Microfinance Impact Assessments*. Washington D.C.: *Assessing the Impact of Microenterprise Services (AIMS)*.
- Barnett V., (1991), *Sample Survey Principles and Methods*, First Edition. Bristol: Edward Arnold.

- Bassal M., (1995), "Financing Small and Medium Enterprises in Egypt," in Financing SMEs in Arabian Countries. Al-Kahrtoum-Sudan Workshop. (in Arabic).
- Baydas M. and Graham D., (1997), *Commercial Banks in Microfinance: New Actors in the Microfinance World*, Ohio: USAID.
- Baydas M., (1998), *The Demand for Microfinancial Services in the Micro and Small Scale Enterprises Sector in Jordan*. Amman: Access to Microfinance & Improved Implementation of Policy Reform (AMIR).
- Benacek and Zemplerova (1995), "Problems of Environment of Small Businesses in Czech Republic," *Small Business Economics*, **17**, 437-50.
- Bennett L. and Cuevas C., (1996), *"Sustainable Banking with the Poor."* Washington: The World Bank.
- Bennett R., Robson P. and Bratton W., (2001), "Government Advice Network for SMEs: An Assessment of Influence of Local Context on Business Link Use, Impact and Satisfaction", *Applied Economics*, **33** (7), 871-93.
- Berger A. and Udell F., (1992), "Some Evidence on the Empirical Significance of Credit Rationing", *The Journal of Political Economy*, **100** (5), 1047-77.
- Berger A. and Udell F., (1998), "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle", *Journal of Banking and Finance*, **22**, 613-73.
- Berger A. and Udell F., (1990), "Collateral, Loan Quality, and Bank Risk," *Journal Monetary of Economics*, **25**, 21-42.
- Besanko D. and Thakor A., (1987), "Collateral and Rationing: Sorting Equilibrium in Monopolistic and Competitive Credit markets," *International Economic Review*, **28** (3), 671-89.
- Besanko D. and Thakor A., (1987), "Notes, Comments, and Letters to the Editor Competitive Equilibrium in the Credit Market under Asymmetric Information", *Journal of Economic Theory*, **42**, 167-82.
- Bester H., (1987), "The Role of Collateral in Credit Markets with Imperfect Information", *European Economic Review*, **31** (4), 887-99.
- (1985), "Screening vs. Rationing in Credit Markets with Imperfect Information", *The American Economic Review*, **75** (4), 850-55.
- Binks M. and Ennew C., (1997), "The Relationship between UK Banks and Their Small Business Customers", *Small Business Economics*, **9**, 167-78.

- Binks M. and Ennew C., (1996), "Financing Small Firms," in *Small Business Entrepreneurship*, Dewhurst J. and Burns P., (ed). Second Edition. London: Macmillan Business.
- Binks M. and Jennings A., (1986), "Small Firms as a Source of Economic Rejuvenation," in *The Survival of the Small Firm: the Economics of Survival and Entrepreneurship*, Stanworth J., Curran J. and Watkins D., (ed). England: Gower.
- Binks M. and Ennew C., (1998), "Growing Firms and the Credit Constraint", *Small business Economics*, **8**, 17-25.
- Binks M., Ennew C. and Reed G., (1990), "Information Asymmetries and the Provision of Finance to Small Firms," in *Towards the Twenty-First Century: The Challenge for Small Business*, Chell E., Robertson M. and Mason C., (ed). Manchester: Nadamal Books.
- Bird R., (2000), *The Hashemite Kingdom Of Jordan, Cooperative Sector; Access to Financing.* USA: World Bank.
- Black J. and de Meza D., (1994), "The Nature of Credit - Market Failure", *Economics Letters*, **46**, 243-49.
- Bolton J. E., (1971), *Small Firms; Report of the Committee of Inquiry on Small Firms.* London: Her Majesty's Stationery Office.
- Boocock G., Woods M. and Caley K., (1995), "The Equity Gap in the East Midlands: An Initial Assessment of the Operation of a New Venture Capital Fund," in *Small Firms: Partnership for Growth*, Robertson M., Chittenden F. and Marshall I., (ed) London: Paul Chapman Publishing Ltd.
- Boot A. and Thakor A., (1994), "Moral Hazard and Secured Lending in an Infinitely Repeated Credit Market Game", *International Economic Review*, **35** (4), 899-920.
- Boswell J., (1973), *The Rise and Decline of Small Firms.* London: George Allen and Unwin Ltd.
- Bridge S., O'Neill K. and Cromie S., (1998), *Understanding Enterprises; Entrepreneurship and Small Business.* England: Macmillan.
- Brito P. and Mello A., (1995), "Financial Constraints and Firm Post-Entry Performance", *International Journal of Industrial Organization*, **13**, 543-65.
- Brodribb L., (1991), "Finance for Small Business", *Small Industry Bulletin for Asia and the Pacific*, 25.
- Broll U. and Gilroy M., (1984), "Collateral in Banking Policy and Adverse Selection", *The Manchester School*, 357-66.

- Bruch M. and Hiemenze U., (1984), *Small-and Medium-Scale Industries in ASEAN Countries Agents or Victims of Economic Development*. USA: Westview.
- Buckle and Thompson (1995), *the UK Financial System Theory and Practice*. England: Manchester University.
- Burns P. and Dewhurst J., (ed), (1996), *Small Business and Entrepreneurship*, Second Edition, London: Macmillan Business.
- Burns P., (1996), "Introduction: The Significance of Small Firms," in *Small Business and Entrepreneurship*, Dewhurst J. and Burns P., (ed). Second Edition. London: Macmillan Business.
- Camion D. and Cardone C., (1999), "The Valuation and Cost of Credit Insurance Schemes for SMEs: The Role of the Loan Guarantee Associations", *International Small Business Journal*, 17 (4), 13-31.
- Castellanos J., (1997), "The Financial Supervision of Loan Guarantee", *The Financier*, 4, 1&2, 12-21.
- Central Bank of Jordan, *Annual Reports, Various Issues*, Amman: Department of Research and Studies, Central Bank of Jordan.
- Central Bank of Jordan, *Monthly Statistical Bulletin, Various Issues*, Amman: Department of Research and Studies, Central Bank of Jordan.
- , (1999), *Thirty Six Annual Report*, Amman: Department of Research and Studies, Central Bank of Jordan.
- , (2000), *Thirty Seven Annual Report*, Amman: Department of Research and Studies, Central Bank of Jordan.
- Chan Y. and Thakor A., (1987), "Collateral and Competitive Equilibria with Moral Hazard and Private Information", *The Journal of Finance*, 42 (2), 345-63.
- Chen M. and Snodgrass D., (1999), *An Assessment of the Impact of SEWA Banking in India: Baseline Findings*. Washington D.C.: Assessing the Impact of Microenterprises Services (AIMS).
- Chetty S., (1996), "The Case Study Method for Research in Smaller-and Medium-Sized Firms", *International Small Business Journal*, 15 (1), 73-85.
- Chitale S., (1988), "The Role of Small and Medium-Scale Enterprises in Jordan," in *the International Conference on the Industrialization of Jordan Achievements and Obstacles*. Amman.
- Chittenden F. and Bragg R., (1997), "Trade Credit, Cash- Flow and SMEs in the UK, Germany and France", *International Small Business Journal*, 16 (1), 22-35.

- Chittenden F., Poutziouris P. and Mukhtar S., (1998), "Small Firms and the ISO9000 Approach to quality Management", *International Small Business Journal*, 17 (1), 73-88.
- Chittenden F., Robertson M. and Marshall I., (ed.) (1995), *Small Firms Partnerships for Growth*. London: Paul Chapman Publishing Ltd.
- Clay N. and Cowling M., (1996), "Small Firms and Bank Relationships; A Study of Cultural Differences between English and Scottish Banks", *Omega International Management Journal*, 24 (1), 115-20.
- Clemenz G., (1986), *Credit Markets with Asymmetric Information*. New York: Springer Verlag.
- Coleman B., (1999), "The Impact of Group Lending in Northeast Thailand", *Journal of Development Economics*, 60, 105-41.
- Cook L., (1999), "Trade Credit and Bank Finance: Financing Small Firms in Russia", *Journal of Business Venturing*, 14, 493-518.
- Cowling M., (1997), *"The Determination of Bank Small Business Loan Premia in the UK."* Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- , (1997), *"The Incidence of Loan Collateralisation in Small Business Lending Contracts."* Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- , (1996), *"Initial Tests on the Sensitivity of the Parameters of the UK Loan Guarantee Scheme"*. Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- , (1998), "Regional Determinants of Small Firms Loan under the UK Loan Guarantee Scheme", *Small Business Economics*, 11, 155-67.
- Cowling M. and Clay., (1995), "factors Influencing Take-up Rates on the Loan Guarantee Scheme," *Small Business Economics*, 7, 141-52.
- Cowling M. and Sugden R., (1995), "Small Firm Lending Contract: Do Banks Differentiate Between Firms?", *Journal of Small Business Finance*, 14 (1), 87-98.
- Cowling M. and Clay., (1994), "An Assessment of the Loan Guarantee Scheme", *Journal of Small Business Enterprises and Development*, 7 (2), 7-13.
- Coyne M. and Tyte S., (1994), *"The Economics of Information and SME Policy in the European Union."* Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.

- Cramer J. S., (1991), *An Introduction the Logit Model for Economists*, First Edition. Amsterdam: Edward Arnold.
- Cressy R., (2000), "Credit Rationing or Entrepreneurial Risk Aversion? An alternative Explanation for the Evans and Jovanovic Finding", *Economic Letters*, **66**, 235-40.
- , (2000), "Government Guarantee Schemes in Europe: Who has them? Who Pays? Who Gains?," in *Risk Behavior and Risk Management in Business Life*, Green B., (ed). London: Kluwer Academic publisher.
- , (1993), *"Loan Commitments and Business Starts: An empirical Investigation on UK data."* Coventry: Warwick Business School, Small and Medium-sized Enterprises Centre, Warwick University.
- , (2000), "Loan Guarantee Scheme in Risk Management," in *Risk Behavior and Risk Management in Business Life*, Green B., (ed). London: Kluwer Academic Publisher.
- , (1992), *"Small Firm Debt Rescheduling Versus Insolvency: The Bank's Decision Problem."* Coventry: the Warwick Business School, Small and Medium-sized Enterprises Centre, Warwick University.
- Cressy R. and Toivanen O., (1997), *"Is There Adverse Selection in The Credit Market?"* Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- , (1996), *"Small Firm Failure: Failure to Fund or Failure to Learn by Doing?"* Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- Cressy R. and Cowling M., (1995), *"Credit Rationing or Monetary Illusion? Evidence From Defaults Under the Loan Guarantee Scheme."* Coventry: The Centre for Small and Medium Sized Enterprises, Warwick Business School, University of Warwick.
- Cressy R. and Olofsson C., (1997), "European SME Financing; an Overview", *Small Business Economics*, **9**, 87-96.
- Cross T., (1996), *"Best Practices of Section 7(a) Lenders."* Washington: Office of Inspector General U.S. Small Business Administration.
- Cross M., (1983), "The United Kingdom," in *the Small Firms*, David Storey, (ed). Australia: Croom Helm.
- Crowley T. V., (2000), *"Microfinance for business start-up how Do the Public-Private Partnerships that Support Microenterprise Programmes Structure and Sustain their Cooperation?"* Geneva: International Labour Organisation.
- Curran J., (1986), *Bolton Fifteen Years on; A Review and Analysis in Britain 1971-1986.* London.

- (2000), "What is Small Business Policy in The UK For? Evaluation and Assessing Small Business Policies", *International Small Business Journal*, **18** (3), 36-50.
- Curran J. and Storey D., (2000), *Small Business Policy: Past Experience and Future Directions*. London: DTI Conference Centre.
- Curran J., Blackburn R., Kitching J. and North J., (1996), *"Establishing Small Firms Training Practices, Needs, Difficulties and use of Industry Training Organisations."* London: Department of Education and Employment.
- Curran J., Stanworth J. and Watkins D., (ed.) (1986), *The Survival of the Small Firm: The Economics of Survival and Entrepreneurship*. England: Gower.
- De Meza D. and Webb D., (1990), "Risk, Adverse Selection and Capital Market Failure", *The Economic Journal*, **100**, 206-14.
- De Meza D. and Webb D., (1987), "Too Much Investment: A problem of Asymmetric Information", *Quarterly Journal of Economics*, **102**, 281-92.
- De Meza D. and Southey C., (1996), "The Borrower's Cures: Optimism, Finance and Entrepreneurship", *The Economic Journal*, **106**, 375-86.
- Department of Statistics, (1996), *Industrial Survey*, Amman.
- , (1999), *Employment and Unemployment Survey*, Amman
- , (1999), *Jordan in Figures*, Amman.
- Department of Trade and Industry, (2000), *Small Firms Loan Guarantee Scheme*, London.
- Dickinson D. and Mullineux A., (1996), *A Report on Banking Competition in Jordan* Amman: United States Agency for International Development.
- Dietsch M. and Peteyn J., (2002), "The Credit Risk in SME Loans Portfolios: Modeling Issues, Pricing, and Capital Requirements," *Journal of Banking and Finance*, **26**, 303-22.
- Drake L. and Holmes M., (1995), "Adverse Selection and the Market for consumer credit," *Applied Financial Economics*, **5**, 161-67.
- Dunne P. and Hughes A., (1981), *Age, Size, Growth and Survival Revisited*. Working Paper No 23. Small Business Research Centre. University of Cambridge.
- Elhiraika A., (1996), "Risk-Sharing and the Supply of agricultural Credit: A Case Study of Islamic Finance in Sudan", *Journal of Agricultural Economics*, **47** (3), 390-402.
- Estrin S. and Laidler D., (1995), *Introduction to Microeconomics*, Fourth Edition, Hertfordshire: Harvester Wheatsheaf.

- Fahmi B., (1997), *Advanced Techniques in Credit Risk Assessment*. Amman: The Arab Academy for Banking and Financial Sciences. (in Arabic)
- Fee R., Erridge A, and Hennigan S., (2001), "SMEs and Government Purchasing in Northern Ireland: Problems and Opportunities," in *The 10th International Annual IPSERA Conference*.
- Fisher J., (1996), *Credit Market Imperfections and the Heterogeneous Response of Firms to Monetary Shocks*. Chicago: Federal Reserve Bank of Chicago.
- Frank M. and Maksimovic V., (1998), "Trade Credit, Collateral, and Adverse Selection", *Journal of Economic Literature*.
- Freel M., (1999), "The Financing of Small Firm Product Innovation within the UK", *Technovation*, **19**, 707-19.
- Freixas X. and Rochet J., (1998), *Microeconomics of Banking*. London: The MIT Press.
- Fried J., (1983), "Government Loan and Guarantee Programs," *Federal Reserve Bank of ST Louis Review*, **65** (10), 22-30.
- Gale W., (1991), "Economic Effects of Federal Credit Programs", *The American Economic Review*, **81** (1), 133-52.
- Gopinath C., (1995), "Bank Strategies Towards Firms in Decline", *Journal of Business Venturing*, **10**, 75-92.
- Goussous R. and Arafat A., (2001), *Industry*, Amman: Export and Finance Bank.
- Gracia J. and Arias C., (2000), "An Empirical Approach to the Financial Behavior of Small and Medium-Sized Companies", *Small Business Economics*, **14**, 55-63.
- Green Wald B., Stiglitz J. and Weiss A., (1984), "Information and Macroeconomics, Informational Imperfections in the Capital market and Macroeconomic Fluctuations", *American Economic Review*, **74** (2), 194-99.
- Green B., (ed). (2000), *Risk Behavior and Management in Business Life*. London: Kluwer Academic Publishers.
- Guder M., (1997), "Sustainability of Credit Guarantee System", *The Financier*, **4**, 1&2, 30-33.
- Gueyie J. and Lai V., (2002), "Bank Moral Hazard and the Introduction of Official Deposit Insurance in Canada", *International Review of Economics and Finance*, **11**, 1-28.
- Gujarati D., (1995), *Basic Econometrics*, Third Edition. Singapore: McGraw-Hill.
- Hallberg K., (2000), *A Market-Oriented Strategy for Small and medium-Scale Enterprises*. Washington: The World Bank, International Finance Corporation.

- Halpern P J., (ed). (1997), *Financing Growth in Canada*. Toronto: Ministry of Supply and Services.
- Hamilton S., (1990), *Financial for Small Business*. USA: Small Business Administration.
- Hammoud S., (1993), *Credit Analysis*, First Edition. Beirut: Al-Wehda. (in Arabic)
- Hancock D. and Wilcox J., (1998), "The "Credit Crunch" and the Availability of Credit to Small Business", *Journal of Banking and Finance*, **22**, 983-1014.
- Haque S., (1999), "On Sustainable Micro-Finance Institutions," in *Kick-Starting Micro-Finance: A Challenge for the Indian Banks*. India.
- Harper M., (1998), "Why Don't Banks Finance SMEs?," Vol. 2001: <http://www.alternative-finance.org.uk/html/doc0006.html/>.
- Harper M. and Ramachandram K., (1984), *Small Business Formation; Case Studies From Developing Countries*. Great Britain: Intermediate Technology Development Group.
- Harrison R. and Mason C., (1986), "The Regional Impact of the Small Firms Loan Guarantee Scheme In The United Kingdom," *Regional Studies*, **20** (6), 535-50.
- Haynes G., (1996), "Credit Access for High-Risk Borrowers in Financially Concentrated Markets: Do SBA Loan Guarantee Help?", *Small Business Economics*, **8**, 449-61.
- Heffernan S., (1996), *Modern Banking in Theory and Practice*. England: John Wiley and Sons.
- Hellmann T. and Stiglitz J., (2000), "Credit and Equity Rationing in Markets with Adverse Selection", *European Economic Review*, **44**, 281-304.
- Hendry C., Jones A., Arthur M. and Pettigrew C., (1991), *Human Resource Development in Small to Medium Sized Enterprises*", London: Employment Department Group.
- Hillier B., (1997), *The Economics of Asymmetric Information*. London: Macmillan Press.
- Hillier B. and Ibrahim M., (1992), "The Performance of Credit Markets under Asymmetric Information about Project Means and Variances", *Journal of Economic Studies*, **19** (3), 3-17.
- Hobohm S., (2001), "Small and Medium-Sized Enterprises in Economic Development: The UNIDO Experience", *Journal of Economic Cooperation*, **22** (1), 1-42.
- Holden P., (1997), "Collateral without Consequences: Some Causes and Effects of Underdevelopment in Latin America", *The Financier*, **4**, 1&2, 12-21.
- Huang X. and Brown A., (2000), "An Analysis and Classification of Problems in Small Business", *International Small Business Journal*, **18** (1), 73-85.

- Huberman G., (1997), "Corporate Risk Management to Reduce Borrowing Costs", *Economics Letters*, **54**, 265-69.
- Hughes A. and Storey D., (ed). (1994), *Finance and the Small Firm*. London: Routledge.
- Hulme D., (2000), "Impact Assessment Methodologies for Microfinance: Theory, Experience and Better Practice", *World Development*, **28** (1), 79-98.
- Hutchinson R. and Mckillop D., (1992), "Banks and Small to Medium Sized Business Financing in The United Kingdom: Some General Issues," *National Westminster Bank Quarterly Review*, 84-95.
- Hyvarinen L., (1995), "SME Financiers' Qualitative Evaluation Criteria in Development Project", *International Journal of Production Economics*, **41**, 167-78.
- Ibrahim M., (1992), *The Economics of Credit Market: Theory and Evidence*, PhD, University of York, York.
- Ifram G., (1997), *Economic Growth, Financial Development and Causality Issue A case Study of Jordan*, PhD, University of Alabama.
- Industry Canada, (1998), *"Financing Growth."* Ottawa: Industry Canada.
- Jabarin A., (1997), "Some Expected Impacts of the Peace Treaty on the Horticultural Production in the Jordan Valley", *Journal of Economic Cooperation among Islamic Countries*, **18** (4), 143-53.
- Jackson A., (2001), "An Evaluation of Evaluation: Problems with Performance Measurement in Small Business Loan and Grant Schemes", *Progress in Planning*, **55** (1), 1-64.
- Jacobson T. and Roszbach K., (2002), "Bank Lending Policy, Credit Scoring and Value-at-Risk", *Journal of Banking and Finance*, **26** (11).
- Jaffee M. and Russell T., (1976), "Imperfect Information, Uncertainty, and Credit Rationing", *Quarterly Journal of Economics*, 651-66.
- Jardaneh D., (2000), *"Jordan Country Report."* Amman: Atlas Investment Group.
- Jayaratne J. and Wolken J., (1999), "How Important is Small Banks to Small Business Lending? New Evidence from A Survey of Small Firms", *Journal of Banking and Finance*, **23**, 427-58.
- Jennings P. and Beaver G., (1997), "The Performance and Competitive Advantage of Small Firms: A Management Perspective", *International Small Business Journal*, **15** (2), 63-75.
- Johns B., (1983), "Australia," in *the Small Firms*, David Storey, (ed). Australia: Croom Helm.

- Jones E. and Mason S., (1980), "Valuation of Loan Guarantees", *Journal of Banking and Finance*, 4, 89-107.
- Jordan Loan Guarantee Corporation, (1994), *Amman Agreement*. Amman: Jordan Loan Guarantee Corporation. (in Arabic)
- (1996), *Procedures and Policies to Guaranteed Loans*. Amman: Jordan Loan Guarantee Corporation. (in Arabic)
- (1994), *First Annual Report*. Amman: Jordan Loan Guarantee Corporation.
- (1995), *Second Annual Report*. Amman: Jordan Loan Guarantee Corporation.
- (1996), *Third Annual Report*. Amman: Jordan Loan Guarantee Corporation.
- (1997), *Fourth Annual Report*. Amman: Jordan Loan Guarantee Corporation.
- (1998), *Fifth Annual Report*. Amman: Jordan Loan Guarantee Corporation.
- (1999), *Sixth Annual Report*. Amman: Jordan Loan Guarantee Corporation.
- (2000), *Seventh annual Report*. Amman: Jordan Loan Guarantee Corporation.
- Jordanian Embassy at Ankara, (1999), "Jordan industrial Estates Corporation (JIEC)", *Journal of Economic Cooperation*, 20 (4), 107-10.
- Jordanian Government, (1995), *Encouragement of Investment Law No 15*. Amman: Parliament.
- Kanbur M., Boocock G. and Haw Y., (1994), "The Determinants of the Utilisation of Government-Backed Loan Schemes for Small and Medium-Sized Enterprises: A Case Study of Malaysia", *The Singapore Economic Review*, 38 (2), 161-76.
- Kanemoto Y., (1987), "Asymmetric Information in the Credit Market and Discount Rates for Public Investment", *Journal of Public Economics*, 34, 291-309.
- Karwowska M. and Mrozinska E., (1993), "Policy Support for SMEs in Poland", *International Small Business Journal*, 12 (1), 61-69.
- Keasy K. and Watson R., (1994), "The Bank Financing of Small Firms in UK: Issues And Evidence", *Small Business Economics*, 6, 349-62.
- Kerr S. and Newell R., (2001), *Policy-Induced Technology Adoption: Evidence from the US Lead Phasedown*. Washington, D.C: Resources for the Future.
- Khan M., (1997), *The Market for Loan Capital for Small Firms in Bangladesh: Loan Evaluation, Monitoring and Contracting Practices*, University of Manchester.

- Kon Y. and Storey D., (2000), *A Theory of Discouraged Borrowers*. Coventry, The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- Kotey B., (1999), "Debt Financing and Factors Internal to the Business", *International Small Business Journal*, 17 (3), 11-29.
- KPMG, (1999), *An Evaluation of the Small Firms Loan Guarantee Scheme*. London: Department of Trade and Industry.
- Kreps D., (1990), *A Course in Microeconomic Theory*, Harvester Wheatsheaf, New York.
- Kundra J., (1991), "Financing of Small-Scale Industries in India", *Small Industry Bulletin for Asia and the Pacific*, 25.
- Lee Y. and Stowe J., (1993), "Product Risk, Asymmetric Information, and Trade Credit", *Journal of Financial and Quantitative Analysis*, 28 (2), 285-300.
- Levenson A. and Willard K., (2000), "Do Firms Get Financing They Want? Measuring Credit Rationing Experienced by Small Businesses in U.S", *Small Business Economics*, 14, 83-94.
- Levitsky J., (1999), Innovation in the Financing of Small and Micro Enterprises in Developing Countries. Geneva: *International Labour Organisation*.
- (ed.) (1989), *Microenterprises in Developing Countries: Intermediate Technology Publications*.
- , *Private Sector Support for Small Enterprises - Some Conclusions*, University of Gottingen.
- (1996), *Support System for SMEs in Developing Countries - A Review*, United Nation Industrial Development Organisation.
- Levitsky J. and Prasad R., (1989), *Credit Guarantee Schemes for Small and Medium Enterprises*. Washington: World Bank.
- Li Wenli., (1998), "Government Loan, Guarantee, and Grant Programs: An Evaluation", *Federal Reserve Bank of Richmond Economic Quarterly*, 84 (4), 25-51.
- Lopez J. and Saidenberg M., (2000), "Evaluating Credit Risk Models", *Journal of Banking and Finance*, 24, 151-65.
- Lund M. and Wright J., (1999), "The Financing of Small Firms in the United Kingdom", *Bank of England Quarterly Bulletin*, 195-201.
- Machauer A. and Weber M., (1998), "Bank Behavior Based on Internal Credit Rating of Borrowers", *Journal of Banking and Finance*, 22, 1355-83.

- Malallah M. and Dahhan O., (1976), *The Small Scale and Handicraft Industries in Jordan*. Amman: Industrial Development Bank. (in Arabic)
- Mandel A., (1992), "Small Business, Banks and SBA Loan Guarantee: Comment", *Small Business Economics*, 4, 169-70.
- Martin R., (1986), *Small Factories and Economic Development*. England: Gower.
- Martinelli C., (1997), "Small Firms, Borrowing Constraints, and Reputation", *Journal of Economic Behavior and Organization*, 33, 91-105.
- Mason C. and Harrison R., (1994), "Informal Venture Capital in the UK," in *Finance and the Small Firm*, Storey D. and Hughes A., (ed.) London: Routledge.
- McCall J., (1982), *The Economics of Information and Uncertainty*. Chicago and London: The University of Chicago Press.
- McKechnie S., Ennew C. and Read L., (1998), "The Nature of the Banking Relationship: A Comparison of the Experiences of Male and Female Small Business Owners", *International Small Business Journal*, 16 (3), 39-55.
- Mead D. and Liedholm C., (1998), "The Dynamics of Micro and Small Enterprises in Developing Countries", *World Development*, 26 (1), 61-74.
- Merton R., (1977), "An Analytic Derivation of the Cost of Deposit Insurance and Loan Guarantee", *Journal of Banking and Finance*, 1, 3-11.
- Meyer L., (1998), "The Present and Future Roles of Banks in Small Business Finance", *Journal of Banking and Finance*, 22 (8), 1109-16.
- Miles R., (2002), "Employment and Unemployment in Jordan: The Impact of the Gender System", *World Development*, 30 (3), 413-27.
- Ministry of Education, (1998), *Education Statistics in Jordan*, [www.moe.gov.jo](http://www.moe.gov.jo).
- Ministry of Planning, (1999), *Jordanian Economy*, [www.mop.gov.jo](http://www.mop.gov.jo).
- , (2000), *The Economic and Social Development Plan for 1999-2003*. Amman: Ministry of Planning.
- Ministry of Trade and Industry, (1999), *Industrial sector in Jordan*, [www.mti.gov.jo](http://www.mti.gov.jo).
- Ministry of Finance, (1999), "Government Finance Bulletin." Amman: Ministry of Finance.
- Mishkin F., (1997), *The Economics of Money, Banking and Financial Markets*. New York: Addison-Wesley.
- Molho I., (1997), *The Economics of Information Lying and Cheating in Markets and Organizations*. Oxford: Blackwell.

- Moyers R., (1998), *Policy Environmental for Financial Services to Micro and Small Enterprises in Jordan*. Amman: Access to Microfinance & Improved Implementation of Policy Reform (AMIR).
- Mukhtar S., (1998), *Characteristics of Small and Medium Enterprises in the United Kingdom: A Comparative Analysis by Gender*, PhD, University of Manchester.
- Myers S. and Majluf N., (1984), "Corporate Financing and Investment Decisions When Firms have Information that Investors Do Not Have", *Journal of Financial Economics*, **13**, 187-221.
- Nadiminti R., Mukhopadhyay T and Kriebel C., (1996), "Risk Aversion and the Value of Information", *Decision Support System*, **16**, 241-54.
- Najar F., (1997), *Credit Analysis; Introduction to Decision-Making*, First Edition. Amman: The Housing Bank. (in Arabic)
- National Economic Research Associates (NERA), (1990), *An Evaluation of the Loan Guarantee Scheme*. London: The Department of Employment.
- OECD, (1997), *Government Venture Capital for Technology-Based Firms*. Paris: Organisation for Economic Co-operation and Development.
- (2000), *OECD Small and Medium Enterprise Outlook*. OECD.
- Otero M., (1989), "Benefits, Costs and sustainability of Microenterprise Assistance Programmes," in *Microenterprises in Developing Countries*, Levitsky. J, (ed.): Intermediate Technology Publications.
- Palley T., (2002), "Financial Institutions and the Cambridge Theory of Distribution," *Cambridge Journal of Economics*, **26**, 275- 77.
- Parker S., (2002), "Do Banks Ration Credit to New Enterprises? And Should Governments Intervene", *Scottish Journal of Political Economy*, **49**, 2, 162-195.
- Peel M., Wilson N. and Howorth C., (2000), "Late Payment and Credit Management in Small Firm Sector: Some Empirical Evidence", *International Small Business Journal*, **18** (2), 17-37.
- Pennacchi G. and Lewis C., (1994), "The Value of Pension Benefit Guaranty Corporation Insurance", *Journal of Money, Credit and Banking*, **26** (3), 735-53.
- Petersen M. and Rajan R., (1994), "The Benefits of Lending Relationships: Evidence From Small Business Data", *The Journal of Finance*, **XLIX** (1), 3-37.
- Piro T., (1998), *The Political Economy of Market Reform in Jordan*. Maryland: Rowman & Littlefield.

- Planning Economic and Development Consultants (PIEDA), (1992), *"Evaluation of the Loan Guarantee Scheme."* London: Employment Department.
- Pratten C., (1991), *The Competitiveness of Small Firms.* London: Cambridge University Press.
- Quiggin J. and Chambers R., (2001), "The Firm Under Uncertainty with General Risk-Averse Performance: A State-Contingent Approach", *Journal of Risk and Uncertainty*, **22** (1), 5-20.
- Rappaport A. and Wyatt R., (1993), "An Overview of the Securitization of SBA Guaranteed Loans Originated by Commercial Banks", *Small Business Economics*, **5**, 215-20.
- Rayan C. and Lukdrke K., (1995), *Small Business Association (SBA) Lending Made Easy.* USA: American Bankers Association.
- Reid G. and Jacobsen L., (1988), *The Small Entrepreneurial Firm.* Aberdeen: Aberdeen University Press.
- Rhodes R., (1983), *An Analysis of Some Early Claims Under The Small Business Loan Guarantee Scheme.* London: Department of Industry.
- (1984), *Commentary on a Telephone Survey of Borrowers Financed Under the Small Business Loan Guarantee Scheme.* London: Department of Trade and Industry.
- (1984), *A Study of Businesses Financed Under the Small Business Loan Guarantee Scheme"* London: Department of Trade and Industry.
- Rhyne E., (1985), *An Evaluation of the Small Business Administration's Business Loan Guarantee Program*, PhD, Harvard.
- Riding A L., (1997), "On the Care and Nature of Loan Guarantee Programs," in *Financing Growth in Canada*, Paul J. N. Halpern, (ed.) Canada: Ministry of Supply and Services.
- Riding A L. and JR G H., (2001), "Loan Guarantees: Costs and Default and Benefits to Small Firms", *Journal of Business Venturing*, **16**, 595-612.
- Robertson M., Chell E. and Mason C., (ed.), (1990), *Towards the Twenty-First Century: The Challenge for Small Business.* Manchester: Nadamal Books.
- Robson G., (1993), *The Problems Facing Small Firms in Poland.* Newcastle: Department of Economics, WP 93-4.
- Robson P. and Bennett R., (2000), "The Use and Impact of Business Advice by SMEs in Britain: An Empirical Assessment Using Logit and Ordered Logit Models", *Applied Economics*, **32** (13), 1675-98.

- Roper S. and Dundas N., (2001), "Grants Assistance and Small Firm Development in Northern Ireland and the Republic of Ireland", *Scottish Journal of Political Economy*, **48** (1), 99-117.
- Ross S., Westerfield R. and Jaffe F., (1999), *Corporate Finance*. Boston: McGraw-Hill.
- Ryan M. C. and Ludtke K. A., (1995), *SBA Lending Made Easy*. USA: American Bankers Association.
- Sadeq M., (1997), "The Financial Problems Facing SMEs In Jordan," in *The SMEs and Their Role in the Jordanian Economy*. Amman: Banking Studies Institute. (in Arabic)
- Salah J. et al., (1997), *Small and Medium Enterprise Development Programme*. Amman: Ministry of Planning. (in Arabic)
- Salah. J. et al. (1994), *Financing Small Firms in Jordan*. Amman: Central Bank of Jordan. (in Arabic)
- Salah J., (1998), *Jordan Loan Guarantee Corporation*, in Financing Small Firms, Work Shop. Amman: Banking Studies Institute. (in Arabic)
- Saunders A., (1999), *Credit Risk Measurement New Approaches to Value at Risk and other Paradigms*. New York: John Wiley and Sons.
- Schmitz H., (1993), *Small Shoemakers and Fardist Gaints: Tale of a Super Cluster*. England: Institute of Development Studies.
- Secretaries of State for Industry, Scotland and Wales, (Different Issues), "*Industry Act 1972*." London: Her Majesty's Stationery Office.
- Seibel H., (1995), "Credit Guarantee Scheme in Small and Microenterprise Finance: Do they Really Do More Good than Harm? - the Case of Philippines", *Zeitschrift Fur Anslandish Landwirtschaft*, **34** (2), 171-79.
- Sekaran U., (1992), *Research Methods for Business A Skill Building Approach Second Edition*. New York: John Wiley and Sons.
- Selby M., Franks J. and Karki J., (1988), "Loan Guarantees, Wealth Transfers and Incentives to Invest", *The Journal of Industrial Economics*, **XXXVII** (1), 47-65.
- Shameah A., (1989), "Credit facilities and its Impact on the Productivity of the Jordanian Economy", *Abhath Al-Yarmuk*, **5** (1), 177-207. (in Arabic)
- Shana'ah I., (2000), *The Foreign Investment in Jordan*. Amman: Ministry of Planning. (in Arabic)
- Sharpe S., (1990), "Asymmetric Information, Bank Lending, and Implicit Contracts: A Stulized Model of Customer Relationships", *The Journal of Finance*, **XLV** (4), 69-87.

- Slater M., (1980), *The Theory of the Growth of the Firm*. London: Basil Blackwell.
- Slovin M. and Sushka M., (1983), "A Model of the Commercial Loan Rate", *The Journal of Finance*, **38** (5), 1583-96.
- Smadi M., (1988), *Problems in Identifying Small and Medium Scale Enterprises In Jordan*, in The International Conference on the Industrialisation of Jordan Achievements and Obstacles. Amman. (in Arabic)
- Small Industries Development Enterprises, (SIDO) (1987), "Institutional Support for Small and Medium Sized Manufacturing Enterprises in Turkey", *Journal of Economic Cooperation Among Islamic Countries*, **8**, 115-24.
- Smallbone D. and North D., (1995), "Targeting Established SMEs: Does Their Age Matter?", *International Small Business Journal*, **13** (3), 47-64.
- Sosin H., (1980), "On the Valuation of Federal Loan Guarantees to Corporations", *The Journal of Finance*, **XXXV** (5), 1209-21.
- Sougt M., (1999), "Financial and Non-Financial Services for SMEs in Turkey," in UNCTAD Meeting, Expert Meeting on Sustainable Financial and Non-Financial Services for SMEs Development. Geneva.
- Stadler I. and David Perez-Castrillo J., (1997), *An Introduction to the Economics of Information* (Richard Watt, Trans.). New York: Oxford University Press.
- Staley E., (1961), *The Future of Under Developing Countries*. New York: Harper and Brothers.
- Stame N., (1999), "Small and Medium Enterprise Aid Programs: Intangible effects and Evaluation Practice", *Evaluation and program Planning*, **22**, 105-11.
- Stanworth J. and Gary C., (1991), *Bolton 20 Years on the Small Firm in 1990's*. London: Pual Chapman.
- Statistical Economic and Social Research and Training Centre for Islamic Countries. (SESRTCIC), (1987), "Small and Medium Sized Manufacturing Enterprises in Turkey", *Journal of Economic Cooperation Among Islamic Countries*, **8**, 55-114.
- Stiglitz J., (1993), *Economics*, First Edition. United States of America: W.W. Norton & Company.Inc.
- Stiglitz J. and Weiss A., (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review*, **71**, 393-410.
- Storey D., (1994a), *Understanding the Small Business Sector*. London: Routledge.

- Storey D. and Cressy R., (1996), *"Small Business Risk: A Firm Bank Perspective."* Coventry: The Centre for Small and Medium-Sized Enterprises, Warwick Business School, University of Warwick.
- Storey D., (1982), *Entrepreneurship and the New Firm*. London: Croom Helm.
- (1986), "Entrepreneurship and the New Firm," in *The Survival of the Small Firm: The Economics of Survival and Entrepreneurship*, Stanworth.J Curran.J, and Watkins.D., Ed. England: Gower.
- (1994b), "New Firm Growth and Bank Financing", *Small Business Economics*, 6, 349-362.
- "Six Steps to Heaven: Evaluating the Impact of Public Policies to Support Small Businesses in Developed Economic.", *mimeo*.
- (ed.), (1983), *The Small Firm an International Survey*. London: Croom Helm.
- Storey D. and Sykes N., (1996), "Uncertainty, Innovation and Management," in *Small Business and Entrepreneurship*, Dewhurst J. and Burns P., (ed). Second edition London: Macmillan Business.
- Storey D., Watson R. and Wyncarczyk P., *"Fast Growth small Businesses; Case Study at 40 Small Firms in North East England."* UK: Department of Unemployment.
- Suhardi T., (1991), "Financing Small and Medium-Scale Industries in Indonesia", *Small Industry Bulletin for Asia and the Pacific*, 25.
- Suzuki K., (1996), SME Financing in Central European Countries Based on Experiences in Hungary, The Czech Republic and Poland, in OECD Proceedings system for financing Newly Emerging Private Enterprises in Transition Economics: OECD.
- Szego G., (2002), "Measures of Risk", *Journal of Banking and Finance*, 26, 1253-72.
- Tambunan T., (2000), *Development of Small Scale Industries During the New Order Government in Indonesia*. Sydney: Ashgate.
- Taymaz E., (2001), "Small and Medium Sized Enterprises in Turkish Manufacturing Industries", *Journal of Economic Cooperation*, 22 (1), 43-72.
- The Small Business Administration, (1997), *"SBA's Five-Year Strategic Plan FY 1998-FY 2002."* Washington: The Small Business Administration.
- The State of Small Business, (1995), *A Report of the President*. Washington: The State of Small Business.
- Thompson H. and Leyden R., (1983), "The United States of America," in *The Small Firms*, David Storey, (ed.) Australia: Croom Hell.

- Togo K., (2002), "Productivity Convergence in Japan's Manufacturing Industries", *Economic Letters*, **75**, 61-67.
- Tomz M., (1999), *Do Creditors Ignore History? Reputation in International Capital Markets*, Harvard University.
- Trau F., (1997), "Recent Trends in the Size Structure of Italian Manufacturing Firms", *Small Business Economics*, **9**, 273-85.
- UNIDO, (1987), "The Role of Small and Medium Scale Industries in OIC Member States", *Journal of Economic Cooperation Among Islamic Countries*, **8**, 1-54.
- United Nation, (1997), *Financial Policies for Strengthening SMEs Through Micro Credit and Credit Guarantee Schemes*. Geneva.
- United States Agency for International Development (USAID), (1997), "USAID Economic Growth Strategic Objective for Jordan." Amman: United States Agency for International Development.
- United States Agency for International Development (USAID), (1988), *Loan Guarantee for Small Enterprises Development Project (Jordan)*. Amman: United States Agency for International Development.
- Venetoklis T., (2001), *Business Subsidies and Bureaucratic Behavior*. Helsinki: Government Institute for Economic Research.
- (1998), *Evaluation and Monitoring of Business Aid in Finland Applicant Enterprises Projects and Distributors of Aid in Industrially Declining Regions A quantitative Approach*. Helsinki: Government Institute for Economic Research.
- (2000a), *Methods Applied in Evaluating Business Subsidy Programs: A Survey*. Helsinki: Government Institute for Economic Research.
- (2000b), *Impact of Business Subsidies on Growth of Firms - Preliminary Evidence from Finnish Panel Data*. Helsinki: Government Institute for Economic Research.
- (1999), *Process Evaluation of Business Subsidies in Finland A Quantitative Approach*. Helsinki: Government Institute for Economic Research.
- Vogel R. and Adams D., (1997), "Costs and Benefits of Loan Guarantee Programmes", *The Financier*, **4**, 1&2, 22-29.
- Watson J. and Everett J., (1992), "Defining Small Business Failure", *International Small Business Journal*, **11** (3), 35-48.
- (1999), "Small Business Failure Rates: Choice of Definition and Industry Effect", *International Small Business Journal*, **17** (2), 31-47.

- White L., (1990), "Credit Analysis: Two More "C's" of Credit", *The Journal of Commercial Bank Lending*.
- Wren C., (1989), *The Direct Investment and Employment Effects of Financial Assistance to Industry*, PhD, University of Newcastle upon Tyne.
- (1994), "The Build-up and Duration of Subsidy-Induced Employment: Evidence from U.K. Regional Policy", *Journal of Regional Science*, **34** (3), 387-410.
- (1996), *Industrial Subsidies*, Macmillan, London.
- (1998), "Subsidies for Job Creation: Is Small Best?", *Small Business Economics*, **10**, 273-81.
- (1999), *Methodologies of Evaluating the New Business Support*, London: Department of Trade and Industry.
- Wren C. and Storey D., (2002), "Evaluating the Effect of Soft Business Support upon Small Firm Performance", *Oxford Economic Papers*, **54**, 334-65.
- Wright R. and Etemad H., (2001), "SMEs and Global Economy", *Journal of International Management*, **7**, 151-54.
- Wynarczyk P., Watson R., Storey D., Short H. and Keasey K., (1993), *Managerial Labour Markets in Small and Medium-Sized Enterprises*. London: Routledge.
- You J., (1995), "Small Firms in Economic Theory", *Cambridge Journal of Economics*, **19**, 441-62.
- Zahran A., (1997), *Default Loans*. Amman: Arab Academy for Banking and Financial Sciences. (in Arabic)
- Zioud A., (1997), *World Trade Organisation and Its Impact on the Jordanian Economy*, M.A, Arab Institution for Studies and Research. (in Arabic)