



University of Macau

Faculty of Social Sciences and Humanities

Department of Economics

**Import Price Uncertainty, Production
Decisions and Relative Factor
Shares in Korea**

By

LIDA

Supervisor: Dr. WONG, Ka Kei Gary

A thesis submitted in partial fulfillment of the requirements for the Degree of

Master of Economics at the University of Macau

July, 2007

CONTENTS

CONTENTS.....	I
LIST OF TABLES.....	V
LIST OF FIGURES.....	VI
DECLARATION.....	VII
ACKNOWLEDGEMENTS.....	VIII
ABSTRACT.....	IX
NOTATION.....	X
CHAPTER 1.....	1
1. INTRODUCTION.....	1
1.1 Background.....	1
1.2 Significance of Research.....	3
1.3 Outline of the Thesis	4
CHAPTER 2.....	7
2. THE DUAL REPRESENTATION OF	
TECHNOLOGIES.....	7
2.1 Introduction.....	7
2.2 Production Technologies.....	9
2.2.1 Production Technologies.....	9

2.2.2	The Transformation and Production Functions.....	10
2.3	The Cost Function.....	11
2.3.1	Introduction.....	11
2.3.2	Cost Minimization and the Derived Demand for Imports.....	13
2.4	Import price uncertainty.....	15
2.4.1	Introduction.....	15
2.4.2	The Expected Utility Function.....	17
2.5	Concluding Remarks.....	19
 CHAPTER 3.....		20
3. THE TRANSLOG COST FUNCTION AND THE KOREA DEMAND FOR IMPORTS		20
3.1	Introduction.....	20
3.2	The Translog Cost Function and Demand for Imports in Korea.....	22
3.2.1	Flexible Function Forms and The Translog Cost Function	22
3.2.2	Demand for Imports in Korea.....	26
3.2.2.1	The Cost Share Equations.....	26

3.2.2.2	The Relationship between Domestic Inputs and Imports.....	28
3.3	The Empirical Implementation and Results.....	30
3.3.1	Brief Remarks on the Database.....	30
3.3.2	Estimation Technique.....	31
3.3.3	Empirical Results and their Interpretation.....	32
3.4	Concluding Remarks.....	38
 CHAPTER 4.....		40
4. IMPORT-PRICE UNCERTAINTY AND PRODUCTION DECISIONS IN KOREA.....		40
4.1	Introduction.....	40
4.2	Import-Price Uncertainty and Production Decisions..	42
4.2.1	Inverse Input Demand Functions.....	42
4.2.2	The Relationship between Domestic Inputs and Imports.....	44
4.3	Expected Utility.....	44
4.4	Distribution of Import Price (q).....	46
4.5	Data and Empirical Result.....	47
4.5.1	Brief Remarks on the Database.....	47
4.5.2	Empirical Results and their Interpretation.....	48
4.6	Concluding Remarks.....	52

CHAPTER 5.....	54
5. SUMMARY AND DIRECTIONS FOR FUTURE	
RESEARCH.....	54
5.1 Introduction.....	54
5.2 Summary and Discussion of Findings.....	55
5.3 Directions for Future Research.....	56
REFERENCES.....	59