

Zelha Altinkaya

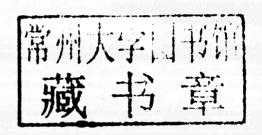
INTERNATIONAL TRADE AND COMPETITION IN INTEGRATED MARKETS

Home Appliance Industry in Turkey



INTERNATIONAL TRADE AND COMPETITION IN INTEGRATED MARKETS

Home Appliance Industry in Turkey



LAP LAMBERT Academic Publishing

Impressum/Imprint (nur für Deutschland/only for Germany)

Bibliografische Information der Deutschen Nationalbibliothek: Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über http://dnb.d-nb.de abrufbar.

Alle in diesem Buch genannten Marken und Produktnamen unterliegen warenzeichen-, marken- oder patentrechtlichem Schutz bzw. sind Warenzeichen oder eingetragene Warenzeichen der jeweiligen Inhaber. Die Wiedergabe von Marken, Produktnamen, Gebrauchsnamen, Handelsnamen, Warenbezeichnungen u.s.w. in diesem Werk berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, dass solche Namen im Sinne der Warenzeichen- und Markenschutzgesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Coverbild: www.ingimage.com

Verlag: LAP LAMBERT Academic Publishing GmbH & Co. KG Dudweiler Landstr. 99, 66123 Saarbrücken, Deutschland Telefon +49 681 3720-310, Telefax +49 681 3720-3109

Email: info@lap-publishing.com

Approved by: Istanbul, University of Marmara, Diss., 2008

Herstellung in Deutschland: Schaltungsdienst Lange o.H.G., Berlin Books on Demand GmbH, Norderstedt Reha GmbH, Saarbrücken Amazon Distribution GmbH, Leipzig ISBN: 978-3-8443-8915-9

Imprint (only for USA, GB)

Bibliographic information published by the Deutsche Nationalbibliothek: The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.d-nb.de.

Any brand names and product names mentioned in this book are subject to trademark, brand or patent protection and are trademarks or registered trademarks of their respective holders. The use of brand names, product names, common names, trade names, product descriptions etc. even without a particular marking in this works is in no way to be construed to mean that such names may be regarded as unrestricted in respect of trademark and brand protection legislation and could thus be used by anyone.

Cover image: www.ingimage.com

Publisher: LAP LAMBERT Academic Publishing GmbH & Co. KG Dudweiler Landstr. 99, 66123 Saarbrücken, Germany Phone +49 681 3720-310, Fax +49 681 3720-3109 Email: info@lap-publishing.com

Printed in the U.S.A.
Printed in the U.K. by (see last page)
ISBN: 978-3-8443-8915-9

Copyright © 2011 by the author and LAP LAMBERT Academic Publishing GmbH & Co. KG and licensors
All rights reserved. Saarbrücken 2011

I would like to thank to Prof.Dr.Erol Katircioglu for his kind support during this study.

I would like to dedicate this book to my lovely mother and to my family.

TABLE OF CONTENTS

TABLE OF CONTENTS	3
LIST OF FIGURES	5
LIST OF TABLES	6
LIST OF GRAPHS	8
LIST OF ABBREVIATIONS	9
INTRODUCTION	10
CHAPTER I	
THE TRADITIONAL TRADE THEORY	
1.1. ABSOLUTE ADVANTAGE	14
1.2. COMPARATIVE ADVANTAGE : RICARDIAN MODEL	15
1.3. THE HECKSCHER- OHLIN MODEL	20
CHAPTER II	
THE NEW TRADE THEORY	
1. BASIC ASSUMPTIONS OF NEW TRADE THEORY	
2.1.1. Product Differentiation	38
2.1.2. Economies of Scale	
2.1.3. Entry Barriers	44
2.1.4. Strategic Action.	45
2. POLICIES OF THE NEW TRADE THEORY	48
2.2.1. Supporting External Economies	52
2.2.2. Profit Shifting Strategic Trade Policy	59
2.3. TRADE LIBERALIZATION	82
2.3.1. Removal of Tariff	82
2.3.2. Global Tariff Reduction and Removal of Tariff Barriers	85
2.3.3. Import Discipline Hypothesis	88

CHAPTER III

TRADE LIBERALIZATION IN TURKEY

3.1. TURKISH ECONOMY AND POLICIES BE 3.2. THE FIRST STAGE of TRADE LIBERALIZ	
3.3. THE SECOND STAGE of TRADE LIBERAL	LIZATION : THE CUSTOMS
UNION	107
CHAPTER	IV
THE EFFECTS OF THE CUSTOMS UNION	ON TURKISH MANUFACTURING
INDUSTRIES_TEST OF IMPORT DISCIPLINE	HYPOTHESIS THE CASE OF HOM
APPLIANCE S	SECTOR
4.1. HOME APPLIANCE SECTOR	
4.1.1. Export of Four Major Products	127
4.1.2. Import of Four Major Products4.2. DATA FOR EMPIRICAL STUDY	130
4.3. THE TEST OF IMPORT DISCIPLINE	HYPOTHESIS in TURKISH HOME
APPLIANCE SECTOR	
4.3.1. The Hypothesis and the Model	136
4.3.2. Data	137
4.3.3. The Model	137
4.3.4. Concluding RemarksCONCLUSION	
DIDLIOCD ADILY	100

LIST OF FIGURES

		Page
Figure 1.1	Production Possibility Curve in Ricardian Model	16
Figure 1.2	Production Possibility Curve in H-O Model	21
Figure 1.3	Choice For use of factor production	27
Figure 1.4.a	Equilibrium Under Autarky	28
Figure 1.4.b	Equilibrium Under Free Trade	28
Figure 1.5	Real Factor combination	30
Figure 2.1	Prisoners Dillema	47
Figure 2.2	Quantitative Restrictions	64
Figure 2.3	Quotas under increasing cost conditions	65
Figure 2.4.a	Tariff in monopoly case	69
Figure 2.4.b	Tariff in monopoly case	70
Figure 2.5	Tariffs in presence of Economies of Scale	72
Figure 2.6	Tariffs and rent shifting under Cournot Behaviour	74
Figure 2.8	Tariffs Shifting under Stackelberg Behaviour	77
Figure 2.9	Brander and Spencer	80
Figure 2.10	Partial analysis on reduction of tariff	83

LIST OF TABLES

		Page
Table 1.1	Capital and Labour Requirements per Million Dollars of the US Export	35
	and Import Substitutes in Leontief Input Output Study	
Table 2.1	Indicators of Import Liberalization in Korea, 1983-1995	91
Table 3.1.	Turkey's Foreign Trade Statistics and the Share of the EU in Turkey's	109
	Foreign Trade	
Table 3.2	Export of Turkey to EU (Classified According to its type)	111
Table 3.3	Import of Turkey to EU (Classified)	113
Table 3.4	Shares of Taxes in Official Budget of Turkish Economy	115
Table 3.5	Shares of Taxes in GNP	115
Table 4.1.	Refrigerator Production Capacity in 1970s	122
Table 4.2.	Production Capacity of Four Major Home Appliance Products in Turkey	123
Table 4.3.	Production and Domestic Sales of Four Major Products of Home	125
	Appliance Industry in Turkey	
Table 4.4.	Turkey's Export in Home Appliances Industry	127
Table 4.5.	Turkey's Exports of Domestic Appliances By Destination	128
Table 4.6	Export Volume of Four Major Home Appliance Products in Turkey	129
Table 4.7	Import of Four Major Home Appliance Industry Products	131
Table 4.8	Turkey's Imports of Home Appliance By Country of Origin	132
Table 4.9	Import Volume of Four Major Home Appliance Products in Turkey	133
Table 4.10	The Customs Duties and Import Tax for Home Appliance Products in	135
	Turkey	
Table 4.11.	Turkish Home Appliance Industry Refrigerator Market Figures	138
Table 4.12	Refrigerator Production of Producer Companies in Turkey	140
Table 4.13	Refrigerator Prices in Turkey (USD \$)	143
Table 4.14	Data Used in Econometric Model for Refrigerator	145-
		148
Table 4.15	Washing Machine in Market Figures in Turkey	151

Table 4.16	Washing Machine Production of Producer Companies in Turkey	153
Table 4.17	Washing Machine Figures Including Member of TÜRKBESD in Turkey	155
Table 4.18	Washing Machine Prices in Turkey	157
Table 4.19	Data Used in Econometric Model for Washing Machine	158-
		161
Table 4.20	Dish Washer Market Figures	165
Table 4.21	Dish Washer Prices	167
Table 4.22	Dish Washer Figures Including Member of TÜRKBESD	168
Table 4.23	Data Used in Econometric Model for Dishwasher	170
Table 4.24	Vacuum Cleaner Market Figures in Turkey	171
Table 4.25	Vacuum Cleaner Average Prices in Turkey	175
Table 4.26	Data Used in Econometric Model for Vacuum Cleaner	177
Table 4.27	Relationship Between Domestic Price and Quantity Domestic Price and	184
Table 4.28	Leading Companies Sales in Home Appliance Industry All Over the World in 2004	188
Table 4.29	Sales Of Leading Home Appliance Producer Companies in Europe	189
Table 4.30	Import Penetration Ratio	189
Table 4.31	4 Firm Concentration Ratio in Manufacturing for te Home Appliance Sector	191
Table 4.32	Net Profit Margin	193

LIST OF GRAPHS

		Page
Graph 3.1.	Foreign Trade and GNP	110
Graph 3.2.	Export to EU According to type of Goods	112
Graph 3.3.	Import of Turkey from EU(Classified According to its Type)	114
Graph 4.1	Export Destination for Home Appliance	128
Graph 4.2	Export of Four Major Home Appliance Products	130
Graph 4.3	Import of Major Products of Home Appliance Industry	134
Graph 4.4	Refrigerator Market Figures	139
Graph 4.5	Share of Three Leading Company for Refrigerator	141
Graph 4.6	Import Penetration in Refrigerator Market	142
Graph 4.7	Refrigerator Average Prices	144
Graph 4.8	Test of Import Discipline Hypothesis on Refrigerator Market	149
Graph 4.9	Washing Machine Market Figures	152
Graph 4.10	Share of three leading firms in Washing Machine Products	154
Graph 4.11	Washing Machine yearly Average Prices	156
Graph 4.12	Test of Import Discipline Hypothesis on Washing Machine Market	162
Graph 4.13	Dish Washer Market Figures	166
Graph 4.14	Dish Washer Prices	166
Graph 4.15	Share of TURKBESD on Total Import	169
Graph 4.16	Vacuum Cleaner Market Figures	176
Graph 4.17	Vacuum Cleaner Average Prices	178
Graph 4.18	Test of Import Discipline Hypothesis On Vacuum Cleaner	178

LIST OF ABBREVIATIONS

BEYSAD	Beyaz Eşya Yan Sanayicileri Derneği (White Good Suppliers Association: WGSA)
CU	Customs Union
DTM	Dış Ticaret Müsteşarlığı(Under-secretariat of Foreign Trade)
EFTA	European Free Trade Area
EC	European Community
EEC	European Economic Community
EU	European Union
EU25	European Union with 25 Member States
GATT	General Agreement on Tariffs and Trade
IGEME	Türkiye İhracatı Geliştirme Merkezi (Export Promotion Center of Turkey)
IMF	International Monetary Fund
IRS	Increasing Rate of Return
Н-О	Heckscher Ohlin
Н	Herfindall
IMKB	Istanbul Menkul Kıymetler Borsası (Istanbul Stock Exchange (ISE))
ISO	Istanbul Sanayi Odası (Istanbul Chamber of Industry (ICI))
MC	Marginal Cost
MR	Marginal Revenue
N.A.	Not Available
PCM	Price Cost Margin
R&D	Research and Development
US	United States
USA	United States of America
UK	United Kingdom
TL	Türk Lirası
TCMB	Türkiye Cumhuriyeti Merkez Bankası (The Central Bank of the Republic of Turkey)
TÜİK	Türkiye İstatistik Kurumu (Turkish Statistical Institute (TSI))
TÜRKBESD	Türkiye Beyaz Eşya Sanayicileri Derneği (White Goods Industrialist Association) (WGIAT)
YTL	Yeni Türk Lirası

INTRODUCTION

The scope of study is to analyse the impact of the Customs Union on Turkish Manufacturing Industry. In 1996, Turkey became member of the Customs Union as a result of long process starting with Ankara Agreement. Although, the European Union had been already removed all tariffs in earlier period than 1996, Turkey was just removing all tariffs and quantitative restrictions on the commodities imported from the European Union in 1996. The Customs Union is the final stage of liberalization process starting on January 24, 1980. Turkey was also following global wave of trade liberalization. The basic idea behind both the Ankara Agreement and trade liberalization was to raise wealth of both Turkey and the European Union. This idea was based on the argument of traditional trade theory. According to traditional trade theory, if nations export the commodities that they have comparative advantage, both of the nations would benefit from trade. This is the Ricardian trade model. Although this idea goes back to Adam Smith, later, it was developed by Heckscher-Ohlin. Heckscher-Ohlin states that the comparative advantage is determined by the nation's factor endowment.

All models within the framework of traditional trade theory are based on the assumption of perfectly competitive markets. Nevertheless, the perfectly competitive markets are rare in real life. Most of the traded goods are produced in imperfectly competitive markets. Especially, the recent studies in international trade demonstrated the largest part of international trade have been among the similar countries. So, intra industry trade gained importance as well as the concepts of industrial economies were introduced to the international trade. The trade among imperfectly markets were explained by the new trade theory. This was especially the inclusion of concepts of increasing returns to scale to the theory. This did not replace the concept of comparative advantage, but it is the fundamental change and it has equal role with comparative advantage in explaining the source of trade in new trade theory. The challenges in trade theory also bring challenges in policies. When the theory includes imperfectly competitive markets, the analysis and policy suggestion becomes more complex since the imperfectly competitive markets are more dynamic and interaction among the parties makes the markets more sensitive to policy changes.

The new trade theory provides firms in the industry have market power by the selective

use of trade barriers and industry subsidies to provide opportunity to capture more of profits of foreign firms. On the other hand, Levinsohn argued that import discipline the imperfect markets and provide more efficiency in those markets by removing excess profits. Starting Ann Krueger and Baran Tuncer, many analysts studied the effect of trade liberalization process in Turkey. Following Krueger and Tuncer, Foroutan and Levinsohn analyzed the Turkish case in early 1990s. Most of them agreed on that liberalization process was successful. Especially, on their study, Katırcıoğlu, Engin and Akçay found out that the price cost margin decreased in most of the manufacturing industries that were imperfect markets after trade liberalization policies in early 1980s.

Then, Cihan Yalçın (2000) measured the impact of liberalization for the period between 1980 and 1996. Yalçın found only in the paper and paper products industry, the concentration ratio decreased in this period. On the other hand, the study made by Özcan, Voyvoda and Yeldan for the same period also states that the speed of adjustment of concentration was revealed to be very slow in spite of the import discipline and export penetration and the technological and institutional barriers to entry. So, although, persistent and active liberalization policies have been followed since 1980s, there were still highly concentrated industries in Turkish economy at the beginning of the Customs Union. Although, their concentration level decreased, this could not avoid them to be highly concentrated industries. Home appliance industry is also one of them. Due to technological innovation, large initial investment cost and well-organized after sales organization, home appliance sector is the highly concentrated industry. While, most of the products in the industry have been only produced by only one producer in Turkey for long time, the remaining part would be produced by two or maximum three producers. Before 1996, the market share of two leading producers in refrigerator market was around 90 %. Actually, the home appliance industry has the same industry structure all over the world. Most of the products are produced by only few producers. However, depending on removal of tariffs and similar trade barriers through the Customs Union, it was expected that as one of the most highly concentrated industry, home appliance industry should be more competitive. Based on Levinsohn import discipline hypothesis, the case of home appliance industry will be analysed within the thesis.

After reviewing theoretical background of the trade theory within the first two chapters, firstly traditional trade theory then, the new trade theory and liberalization policies in Turkey will be overviewed in detail. The case studies on both Turkish economy in general and Turkish

Manufacturing industry are analysed in detail, here also. Finally, the impact of the Customs Union on Turkish Economy and especially on manufacturing industry will be analysed by sampling four basic products of home appliance industry. The Price Cost Margin model of Levinsohn will be used in the model.

CHAPTER I

THE TRADITIONAL TRADE THEORY

1.1. ABSOLUTE ADVANTAGE

Adam Smith says "Never to attempt to make at home what it will cost him more to make than to buy" (Smith,1776:1936 p:200). The international trade provides the opportunity for an international division of labour that leads to better allocation of resources and greater productive efficiency in every country as well as the other advantageous of wider markets. Even if we consider an international trade is simply an extension of domestic trade; the international market is much larger than a single one country's domestic market. Traditionally, the international trade is explained by the comparative advantage which constitutes a base for free markets. The free trade theory is an extension of the competitive economic theory as one of the most important themes in the literature of economics. This is known as the first theorem explaining the welfare of societies which emphasizes the non-intervention to economic transactions. The first theorem goes back to Adam Smith who argues that each Country ought to specialize in the product in which it has an absolute cost advantage over its trade partners. In this theorem labour was the only factor of production. So, Adam Smith also argued the concept of specialization for the first time, as he did on the "laissez faire" policy.2

If Country A has higher productivity than Country B in producing commodity x while Country B produces commodity y in less time than country A, each one should concentrate in producing commodities in which they have an absolute cost advantage. Both countries obtain advantage of trade both of the goods in large quantities in the presence of free trade as compare to the absence of free trade.3 It was argued that trade enables countries to import, in exchange for their own products, those commodities which can be produced at home only at a greater cost than that prevailing abroad. As a consequence, all products would tend to be produced in those countries where the costs of producing them would be lower.

Labour Productivity: production/labour input Labour Cost: labour input/production

Country A 10 Country B 8 (Gerber:2007;40)

2"Laissez faire" argues non government intervention to the economy

³ This is called "Absolute Cost Advantage"

Formula used by Adam Smith to calculate Labour productivity as follows: