THE POLITICAL ECONOMY OF RENT-SEEKING IN TURKEY

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THE POLITICAL ECONOMY OF RENT-SEEKING IN TURKEY

Thesis submitted for Degree of Doctor of Philosophy

at

the University of Leicester

by

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ProQuest LLC 789 East Eisenhower Parkway P.O. Box 1346 Ann Arbor, MI 48106-1346 To my parents, Gonul and Yavuz Yondemli

To my husband, Safa and our son, Emre Demirbas

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THE POLITICAL ECONOMY OF RENT-SEEKING IN TURKEY

By Dilek Demirbas

Abstract

This thesis explores, both theoretically and empirically, the political economy of rentseeking in Turkey.

Previously there have been few attempts to measure the extent of rent-seeking activities in Turkey, and they have often followed a rather narrow approach to handle such a large issue and have looked at only the normative side. In this study, our purpose is to apply a more comprehensive approach by including both normative and positive elements to examine the social and economic costs of rent-seeking, its main causes and its impact especially upon economic growth. In this way our contributions are to: i) look at rent-seeking descriptively and empirically from both normative and positive sides, ii) combine a state centred public choice approach to rent-seeking with recent time series econometric techniques, iii) offer a new approach, monism, for the analysis of the state-interest group relationship, and iv) test whether rent-seeking has an effect on economic growth in the long term.

The thesis is divided into three sections. Normative rent-seeking is analysed in section I, positive rent-seeking is discussed in section II and the impact of rent-seeking on economic growth is considered in section III. Each section contains a literature review and an empirical investigation. In chapter 4, following a method suggested by Katz and Rosenberg, we analyse rent-seeking waste arising from government budgetary allocations and extend their cross section study for the same 20 countries from fifteen years to twenty five years. We found that Katz and Rosenberg's distinction between developed/developing countries still exists and rent-seeking in developing countries (like Turkey) is much greater than in developed countries. Then, in chapter 6, we look at the causes of rent-seeking by building a model that includes both demand for and supply of trade legislation for the period 1960-1990 in Turkey. We found that the reason for high rent-seeking in Turkey is hidden in the lobbying activities between legislators and business groups. In that equilibrium, whilst legislators are brokers to maximise their salaries and their budget size, business groups demand legislation to maximise their profit. Finally, in chapter 8, we investigate whether rent-seeking has a negative impact on economic growth. We found that, rent-seeking activities in Turkey reduced economic growth and lower income levels between 1960 and 1990.

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Abbreviations

AIC	= Akaike's Information Criterion
ADF	= Augmented Dickey-Fuller
ARDL	= Autoregressive Distributed Lag
BWS	= The ratio of Bureaucrats' Wages and Salaries
DP	= The Democratic Party
Dum8 0	= Dummy Variable for 1980 Military Intervention
Dum74	= Dummy Variable for 1974 Cyprus Conflict
Dum71	= Dummy Variable for 1971 Military Intervention
DUP	= Directly Unproductive Profit-Seeking
EPP	= Export Promotion Policy
EBF	= Extra Budgetary Funds
ECM	= Error Correction Mechanism
EG	= Engle-Granger
FTC	= The Foreign Trade Companies
GNP	= Gross National Product
GNPC	= Gross National Product Per Capita
I	= Imports
ISI	= Import Substitution Policy
Ln R _{ci}	= The Logarithm of Budgetary Rent-Seeking
LnGY	= The Logarithm of Ratio of Government Expenditure to GNP
LnGDP	= The Logarithm of GNP
LnIINVY	= The Logarithm of Ratio of Investment to GNP
LnLEIY	= The Logarithm of Ratio of Lobbying Expenditure to GNP
Ln(a+g)	= The Logarithm of Population Growth
MEYAK	= The Civil Servant Mutual Assistance Association
N	= The Number of Manufacturing Companies in Turkey
OLS	= Ordinary Less Square
OYAK	= The Army Mutual Assistance Association
POP	= Turkish Population
R	= The Amount of Trade Legislation Passed Per Year as a Proxy for Rent- Seeking
RPP	= The Republican Public Party
SEE	= The State Economic Enterprises
SCB	= Schwarz Bayesian Criteria
SPO	= The State Planning Organisations
TUB	= The Head of Incentives and Implementation
UCT	= Union of Chambers, Industry and Commodity Exchange of Turkey
VOTP	= The Number of Votes for Legislators
S _K	= The fraction of output devoted to physical capital accumulation
S _R	= The fraction of output devoted to legislation activities
g	= The rate of population growth
а	= Exogenous rate of technological progress (constant)
E _t	= Error term
t	= Trend
- VAR	= Vector Auto Regressive
T A BEN	

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CHAPTER 1

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INTRODUCTION

1.1 AIM OF THE STUDY

Many studies have claimed that rent-seeking is high in Turkey. We wish to test these claims rigorously by looking at both normative and positive dimensions of rent-seeking. What is the social and economic cost of rent-seeking to Turkish society, if any? What are the main reasons for the existence of rent-seeking? How can we measure it? And what is the actual effect of rent-seeking upon economic growth? The aim of this study is to answer these questions in the Turkish case using some modern econometric techniques.

Previous studies of rent-seeking in Turkey lacked sufficient comprehensiveness to answer these questions. In most cases, these studies followed a very narrow approach to handle such a major issue and looked at only the normative side neglecting the positive one. For example, Krueger (1974) considered the case of import licences and estimated the losses to society as 15 % of GNP for the year 1968. In their study, Katz and Rosenberg (1989) also estimated maximum rent-seeking as a percentage of the consolidated budget for Turkey as 18.55 %, whilst for Switzerland it was 2.68 %. Their results supported the idea that well-established, developed countries with fixed power structures generate less waste than developing countries, in which the relative power of pressure groups shifts from time to time in order to find political and social identity. They also claimed that Turkey, like many other developing countries, should not only attempt drastic action to reduce its rent-seeking waste, but also re-examine the institutional settings that are the source of rent-seeking waste.

The purpose of this study is to use a more comprehensive approach by including both normative and positive elements of rent-seeking and by looking at Turkish trade policy as a case study. In this way our contributions will be to: i) look at rent-seeking descriptively and empirically from both normative and positive sides, ii) combine a state centred public choice approach to rent-seeking with recent time series econometric techniques, iii) offer a new approach, monism, for the analysis of the state-interest group relationship, and iv) test whether rent-seeking has an effect on economic growth in the long term.

1.2. BACKGROUND

In traditional political economy, politics used to be regarded as exogenous in the study of economics, and, similarly, economic conditions have typically been regarded as exogenous in the study of politics. In the new political economy, which is defined as the unification of political science and economics, the economy and polity have come to be regarded as endogenous to one another.

Over the last four decades, new advances in political economy have had a strong influence upon politics and public policy in both developed and developing countries. By the late fifties and early sixties economists had begun to analyse the behaviour of voters, government and political representation. This brought an alternative view to previous beliefs in the virtues of the welfare state and government planning. This led to a much more critical view of government for it is now considered that government creates and protects favoured groups at the expense of less fortunate groups.

Because of the richness of the subject, much research in the new political economy has diverged in several directions: such as collective choice, rational choice, public choice, In particular, *public choice*, is defined as the application of the principles of etc. economic methodology to political behaviour and institutions. Arrow 1962; Buchanan and Tullock 1962; Downs 1957; Olson 1965, 1982; Niskanen 1971, Mueller 1976 etc. have contributed much to the new political economy. Theories of the state, voting rules, party politics, bureaucracy, rent-seeking, directly unproductive profit-seeking activities, constitutional economy and new institutional economics are viewed as the subject matters of public choice. According to the assumptions of public choice studies, not only should public responsibilities be reduced and public policies be adjusted to the pressure of economic markets, but government itself should be remodelled and transformed according to market concepts of competition and efficiency, in particular, in Western democracies. During the 1970s and 1980s the study of public choice was extended to consider efforts to slim the size and functions of the state, to privatise the provision and delivery of welfare services, and to restructure government in accordance with market concepts of competition and efficiency as exemplified in particular in Western democracies.

Within the public choice framework theorists have constructed highly abstract models based on strategic choices, policy outcomes and their economic consequences. *Rent-Seeking* theory is one of these highly abstract models, which is based on the role of the state and the interest group politics. Rent-seeking adds a very important dimension to the analysis of monopoly power.

The crucial public choice aspect is the notion that the mere possibility of transfers

attracts rent-seeking. The particular rents made available by government are determined by, and do not determine, the level and composition of, rent-seeking outlays. The political process is itself endogenous to the rent-seeking process.

In the literature, rent-seeking is defined as the expenditure of scarce resources to capture artificially created transfers (Tollison, 1982). That is why it is assumed that resources should be considered as 'wasted' since they are used by economic agents to obtain monopoly power and not in productivity enhancing activities (Tullock, 1967a, 1967b, 1993a). Moreover the essence of rent-seeking theory stems from the idea that, although the welfare economics literature has assumed that transfers are costless, these transfers actually involve both economic and social costs to the whole society. These social costs can be grouped as monopoly-seeking, tariff-seeking, quota-seeking, licence-seeking, voluntary export restrained, and export-incentive seeking, etc. (Bhagwati, 1981).

Indeed, public choice scholars consider that government is a major source of rentseeking and that rent-seeking normally arises in the context of artificial government market interference. However, this is not the only setting in which rent-seeking may occur (Faith, 1980). Tollison claimed that the applicability of rent-seeking theory does not depend only on a government-based monopoly right, but also includes organisational setting in the private sector (Tollison, 1982). Organisational structure in the private sector can help to create rent-seeking if some groups in the organisation have more power than others to have some changes. From the same perspective, Mueller (1990) stressed that rents are omnipresent and exist wherever information and mobility asymmetries impede the flow of resources; such as in private goods markets,

factor markets, asset markets, and political markets.

Although modern, society-centred public choice theories which were first developed for Western pluralistic societies, may highlight some hidden subjects in developing countries such as rent-seeking, corruption, strong state tradition, undemocratic decision mechanisms, etc., they still cannot explain all of the dynamics of these countries. Political-economic structures in developing countries require a more statecentred explanation.

Rent-Seeking, Property Rights and the Development Issue

In the 1970s, the choice of trade strategy in order to explain foreign trade intervention and domestic economic regulation became one of the most important areas in developing countries' agendas.

The development of the international trade/rent-seeking literature focused on groups lobbying for tariffs and quotas in those countries. In that context, tariffs, quotas, subsidies, incentives and other trade protections are counted as government-imposed-monopoly rights.

Even though both public choice and DUP scholars look at the international trade issues from different points of view, these two sides agree that society's welfare is maximised when free trade exists. In reality, as a result of trade protection policy, special interest groups create rent-seeking interventions and free trade is sacrificed by government in order to protect domestic industry from international competition.

Many developing countries adopted protectionist policies under the umbrella of import-substituting industrialisation (ISI). For some other developing countries, export promotion policy (EP) was chosen as a result of institutional and organisational

changes after the first stage of industrial import substitution policy (Ranis, 1991)¹. Srinivasan (1991) and Bhagwati (1980, 1982) analysed the protectionist foreign trade policies and rent-seeking in developing countries. They claimed that empirically estimating the cost of resources diverted to rent-seeking activities and the benefit of removing incentives to rent-seeking is difficult, but very beneficial to the whole of society.

Many other scholars studied developing countries from the DUP perspective, since governments respond to the political demands of various interest groups in developing countries very differently from those in developed-democracies (see Meier 1991; Wellisz and Findlay 1984; Magee 1984; Findlay and Wellisz 1984; Krueger 1990, 1992, 1985, 1984; and Rama 1993a, 1993b).

Rent-Seeking and Interest Group-State Relationships

Understanding the relationship between the state and society has been one of the main concerns of both political scientists and economists and, recently, of public choice scholars. The study of interest groups appears to highlight this relationship from a number of new perspectives. In particular, the role and nature of interest groups and their relationship to state have been taken much more seriously.

According to Rousseau (1959), if each citizen represented his own opinion, there

¹ From the same perspective, Bhagwati (1988) provided a critical evaluation of the general case for export promotion (EP) and outlined the case for outward orientation. He observed that many developing countries have chosen EP policy instead of ISI as a consequence of learning by others' doing. From the Findlay (1991) point of view, a government adopts EP policies when the costs to the government of not doing so become excessive. According to him, the most important reason to shift to EP policy lies in the perception by the Leviathan state that its organic interest in autonomy is better served by the outward-orientation policy.

would be no need for subsidiary groups within the State. Because of that, he considered that even if interest groups cannot be prevented from being established, their numbers and powers should be limited as much as possible. Even today, Rousseau's view on interest groups has some support among political scientists. In contrast, after examining the possibility of 'a tyranny of the majority', Tocqueville claimed (1835) that interest groups are useful because they provide 'a superior form of participation' and with these organisations minorities can raise their interests. In particular, interest groups are necessary organisations in society in order to establish better democracy.

Many classical theorists used to consider that interest groups stood between the state and the citizens in order to settle their differences and to protect citizens from the interventionist power of the state. They believed that, since the state is powerful and the individual is powerless, individuals acting in interest groups create an opportunity to defend themselves from the destructive power of the state. Consequently, democratic values can be protected by participating in interest groups. In terms of *political systems*, while pluralists believe that interest groups make demands upon the state, neo-corporatists stress the degree to which the state uses interest groups not only as a channel of communication but as a means of shaping responsibility for public policy and its implementation with interest groups. In a pluralist system, the state is seen as the helpless victim of interest groups. In neocorporatist systems, the state manipulates its interest group environment by taking some interest groups into particularly close partnership.

In practice, the state has both pluralistic and neocorporatistic characteristics and so

becomes not only a battleground for contending interests, but also for the structures which shape those interests. In other words, both interest groups and the state influence each other in different degrees. For instance, whereas the state may influence interest group existence with its constitutional and legal environment, political cultures also have a substantial impact on interest-group formation.

In terms of economic systems, Olson's interest group approach should also be mentioned here. There are two main reasons to focus on Olson's study. First, it is the first application of economic reasoning to group formation. Second, it is the most comprehensive critique of the pluralist idea that was the traditional political science view of interest groups. The main outcome of the traditional political science view was that the existence of interest groups was natural, that their formation was not interesting, and that individuals with common goals form organisations to further their common interests or/and values. Olson argued that the basic reasons for mobilisation was to engage in pressure group activity in order to seek rents (Olson, 1982).

The Political Economy of Rent-Seeking, Interest Groups-State in the Turkish Case

Although many developing countries have constitutions, parliamentary parties and elections, their traditionally strong bureaucracies and their strong militaries never consider losing power even for the sake of democracy. However, this very important distinction has not been examined in the public choice literature. To fill this gap, in this research, we intend to analyse interest group politics with reference to Turkey. According to Heper (1991a), both pluralist and corporatist studies omit one very important element from their equation: *the state*. In fact, since the state itself has a

significant impact upon politics and society, any study of interest group politics must be carried out with a reference to the type of the state.

The concept of *monism*, as Cox (1988: 46) defined it, is very different from state corporatism and pluralism. Monism means that "there is a one-to-one relationship between state and the interest-group and lies between state corporatism and pluralism". Since the degree of stateness has always been greater in Turkey than in many other democratic countries, the concept of monism can explain Turkish interest group politics.

According to Heper (1985, 1991a, 1991b, 1992a, 1992b), in the history of both the Ottoman Empire and the Turkish Republic, interest group associations have had little influence on economic decision-making, since the Turkish state has placed emphasis on rule from above. Therefore, democracy in Turkey is understood as the conscious decision of the state-elite rather than as a consequence of a rising social need.

On the same line, Esmer (1991), a political scientist, also stressed that interest group politics in Turkey cannot be fully understood without a careful consideration of the long tradition of a strong and dominant state. Surprisingly, in Turkey, unlike many democratic countries, even the representatives of the private industrial sector are part of this strong tradition. In particular, if we consider that the Turkish industrial sector is organised into a limited number of singular, compulsory, non-competitive, hierarchically ordered and functionally differentiated phases, this structure can be understood better.

For Esmer, since it is still expected that the state must intervene directly and solve a wide variety of problems in the society, personal connections between the private

sector with the government officials are still very important and effective channels. Although interest group activity in the industrial sector bears a resemblance to both the corporatist and pluralist models, the strong state tradition in Turkey still leads us to think that the situation is distinct from either of these forms (Esmer, 1991).

If we go back to Cox's and Heper's definitions of monism, it will be appropriate to analyse the period of the 1980s from the monistic perspective. This period was the period of export promotion policy (EP). This meant less protection and more free trade to mix with the world economy. In contrast, the state came to have more autonomy vis-a-vis interest groups. Prime Minister Turgut Ozal, along with the inner circle of ministers and technocrat-planners, made all the critical short-term economic policy decisions virtually without consulting the traditional civil bureaucracy, the Parliament and the political parties and interest groups. These short-term policy decisions were constantly revised, not in response to pressures coming from outside, but when the inner group thought that new policies were necessary. There was a great communication gap between the state and interest groups because of further centralisation of the economic decision-making process. In addition, this gap was not narrowed even when, for a while, the government seemed to have a close affinity with one interest group, the foreign trade companies. "In Turkey, foreign trade companies remained dependent upon the state; they were always in a precarious position vis-a vis the state; and they easily fell from favour" (Heper, 1991b: 173-174).

The 1980s were particularly important because on the economic side, the strategy of import substitution was replaced by that of export-orientation with the intention of economic integration with the world economy (Rustow, 1985). On the political side,

the strong state tradition deepened protectionism by adopting export incentives, tax rebates, etc. In these circumstances, it is difficult to establish pluralistic interest group politics.

Rent-Seeking and Economic Performance: Institutional Changes and Economic Growth in Turkey

Many distinguished scholars have come to believe that analysing rent-seeking as an institutional arrangement plays a key role in explaining economic growth. They argued that considering growth issues, without considering institutional arrangements, will be incomplete and misleading. In particular, North (1984: 54) asserted that "the inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in the Third World...", because the absence of secure property and contractual rights discourages investment and specialisation.

Traditional approaches stressed the importance of demography and thrift in explaining economic growth, but failed to include institutional arrangements in their analysis. Whilst recent scholars have included them in their analysis, most studies are theoretically suggestive and empirically descriptive rather than formal empirical analyses. Few scholars have examined the connection between institutions and the growth rate of output in a dynamic framework. Only a few have included rentseeking, political instability and poorly enforced property rights into their research with the intention of understanding the growth issue better.

Such studies to be taken account of are: Barro (1991) who examined coups, revolutions and political assassination; Gastil (1985) who examined political freedom

and civil liberties, Grier and Tullock (1989) who measured institutional effects on growth, Rama (1993a, 1993b), Murphy, Schleifer and Vishny (1991) who combined rent-seeking and growth, Knack and Keefer (1995) and Braconier (1996) who studied property rights.

Rama (1993a, 1993b) claimed that the rent-seeking theory provided interesting insights into the incidence of institutions on resource allocation and welfare. Therefore, he modelled the relationship between rent-seeking and economic growth in a dynamic equilibrium framework. To test his model he used annual data from Uruguay and concluded that there was an association between rent-seeking and low growth. According to him, foreign trade barriers that benefit a single firm or industry are more likely to increase with discretionary trade policies and under dictatorships. He claimed that, even if these barriers produce short-run benefits, in the long-run they have a negative effect on the growth rates of output and exports.

1.4. OUTLINE OF THE STUDY

This thesis is divided into three sections: normative rent-seeking, positive rent-seeking and the impact of rent-seeking on economic growth. The main reason for this division is to analyse the rent-seeking phenomenon from three different perspectives in order to achieve a better understanding of its nature. As mentioned above, previous studies have concentrated on the normative side of rent-seeking. They did not look at the positive side of rent-seeking and neglected to answer the question of why there is high rent-seeking and what its impact on economic growth is. Before these three sections, in chapter 2, we first define the concept of rent-seeking taking into consideration the

historical background of the concept of rent and types of rent-seeking in both normative and positive rent-seeking. The main idea of chapter 2 is to establish a base for the next three sections. In section I, in chapters 3 and 4, we look at the property rights and development issue, theoretically and empirically, from the normative rentseeking perspective to answer the question of what is the rent-seeking cost in Turkey. In section II, in chapters 5 and 6, we examine the positive rent-seeking by emphasising the state and interest group relation both empirically and theoretically. From the perspective of the interest group theory of government, we answer the question why there is a high rent-seeking in Turkey. In section III, in chapters 7 and 8, we deal with institutional changes and economic growth. We now explain each section in more detail.

In section I, in chapters 3 and 4, we look at the property rights issue in the development process. In chapter 3, we examine the theory of rent-seeking phenomena in both developed and developing countries from the normative rent-seeking point of view. We argue that rent-seeking activities differ significantly between these two groups of countries as a result of major differences in their institutional settings and deweloping countries that rent-seeking we claim that rent-seeking is more prevalent in developing countries than in their developed counterparts, we do not apply any measurement techniques either to test this hypothesis or to explain why it might be so. In chapter 4, we apply measurement techniques in order to examine the implication that rent-seeking activities differ between developed and developing countries. According to Katz and Rosenberg, "developed economies with established hierarchies tend to be less wasteful than less developed economies, which are typically still trying

to find their political and social identity by shifts in the relative power of pressure groups" (1989: 140). Since harmony among military servants, bureaucrats and politicians in developing countries is much higher than in developed countries, these interest groups capture the freedom to spend heavily on staff, use the scarce resources on their behalves, violate the property rights. We examine rent-seeking by analysing changes in budgetary allocations first in a cross-section study of twenty developed and developing countries for the period 1970-1994, and then in a time series of Turkey during the period of 1960-1990.

In section II, chapters 5 and 6, we elaborate on positive rent-seeking. Once the state's political and economic structures differ, developed and developing countries rent-seeking activities also vary significantly. In chapter 5 the theory of the state (monism) and interest group formation is examined descriptively in democratic countries and a semi-democratic country, Turkey. In chapter 6, we build an empirical framework for Turkey in order to combine both rent-seeking activities and the state interest groups' interactions following The Interest Group Theory of Legislation literature.

In order to develop a testable economic model of the lobbying behaviour of interest groups in the pursuit of wealth transfers, we consider the demand and supply factors which help to generate the volume of legislation. Our contribution is to apply the interest group theory of legislation to a semi democratic country. In order to do that, we first examine the interest group theory of legislation in representative democracies and review the literature very briefly.

Then, we elucidate a supply and demand model of legislation which draws upon the

interest group theory of government in representative democracies. The interest group theory of legislation is our base to start our analysis.

In section III, in chapters 7 and 8, we concentrate on institutional changes and their impact upon economic growth. We suggest that the rent-seeking literature also provides an interesting insight into economic growth. In chapter 7, we concentrate on the economics of institutions and their effects on economic performance. By doing this, we prepare a base for chapter 8 to consider the growth issue, together with institutions in Turkey, in a dynamic equilibrium framework. In chapter 8, we analyse the impact of rent-seeking on economic growth empirically, applying modern time series techniques to find out whether there is a long-run relationship between variables. The connection between rent-seeking and economic growth in a time series framework has been almost ignored. In this literature, only a few studies have combined both rent-seeking and growth in a time series framework. Rama (1993a, 1993b) is one of few. The main intention of chapter 8 is to start to fill this gap and examine the impact of rent-seeking on economic growth by introducing: i) an augmented Solow-type growth model and ii) a simple endogenous growth model for Turkey in a time series framework². In the first model, the augmented Solow-type growth model, the number of pieces of restrictive trade legislation and physical capital, are treated as state variables in a production function. The empirical counterparts of these variables are taken as legislation expenditures and investment, and it is hypothesised that the growth rate increases with investment and decreases with legislation expenditure. In the first

² Many studies combined both growth models and time series such as King et al. (1991), Easterly et al.(1993), Kinght et al.(1993), Bernard and Durlauf (1995), Den Haan, (1995), Jones, (1995).

model we intend to analyse augmented Solow-type growth, showing that the rates of capital accumulation, legislation expenditures and the growth of population are stochastic variables with unit roots rather than constant parameters. Consequently, the equilibrium level of labour productivity in efficiency units will also contain a unit root. In this chapter, Solow's model should be interpreted as an error correction model, consistent with the variables' stochastic nature. In order to reach this conclusion, after testing for the existence of a cointegrating relationship between the dependent and independent variables, we examine the error correction mechanism, using annual data from Turkey.

The second model is based on the endogenous growth theory in which capital is taken as a state variable and restrictive trade legislation is treated as a control variable. This second model is a replication and modification of Rama's (1993a, 1993b) model using data for Turkey. Rama assumed that the amount of restrictive trade legislation is endogenously determined by government policy and interest groups' activities. He found that restrictive trade legislation had a negative impact on the aggregate level of output in Uruguay.

In our study, the empirical evidence is drawn from Turkey, where protectionist policies have continued unabated since 1960. Tax rebates, tariffs, export subsidies, special exchange rates, import licences and export credits were all used as a strategy by governments to intervene in the economic life of Turkey. Of course, these policies enabled the government sector to establish basic industries and create a safe area for the private sector to trade (see Amelung 1988, 1989; Barkey 1990; Boratav, Turel and Yeldan 1995; Brown 1989; Onis 1991; Rodrik 1990a, 1990b). In this chapter, we

examine the hypothesis that the number of items of restrictive trade legislation enacted each year has a negative effect on economic growth.

Finally, in chapter 9, we will summarise our findings and draw some tentative conclusions, as well as briefly discuss avenues for future research.

CHAPTER 2

A CRITICAL REVIEW OF THE LITERATURE OF

RENT-SEEKING

2.1. INTRODUCTION

- 2.1.1. Definition of Rent-Seeking
- 2.1.2. Differences Between Rent-Seeking and Profit Seeking

2.2. RENT-SEEKING IN GENERAL

- 2.2.1. Normative Theory of Rent-Seeking
 - 2.2.1.1. Early Applications of the Normative Theory of Rent-Seeking
 - 2.2.1.2. The Public Choice Approach in Normative Theory
 - 2.2.1.3. Directly Unproductive Profit-Seeking (DUP) in Normative Theory
 - 2.2.1.4. Rent-Seeking and International Trade
 - 2.2.1.5. Main Differences and Common Grounds Between Public Choice and DUP Theories
- 2.2.2. Positive Theory of Rent-Seeking
 - 2.2.2.1. The Theory of Regulation, Interest Groups and The Chicago School
- 2.2.3. New Advances in Rent-Seeking
- 2.2.4. Other Important Theoretical and Empirical Studies of Rent Seeking

2.3. CRITIQUE OF RENT-SEEKING

- 2.4. LIMITS TO RENT-SEEKING
- 2.5. CONCLUSION

"The first man, who having fenced in a piece of land, said 'This is mine', and found people naive enough to believe him, that man was the founder of civil society".

Jean Jacques Rousseau (1959: 17)

2.1 INTRODUCTION

The concept of rent has wide usage in the economic literature. Early economists defined rent as a payment made for the use of land. According to the Physiocrats, land was the natural productive power of the earth, and this productive power was fixed in supply and provided by 'nature' at zero cost. Because it costs nothing to produce, it may be employed at any positive price, and the entire return to land is seen as unearned. As a result, from the Pysiocrats' point of view, the physical productivity of land was a well-established fact and rent was the earned income as a result of this physical productivity.

In the middle of the nineteenth century, classical political economists used the term economic rent to indicate the amount paid for the use of land or any other factor of production of fixed supply. The idea of economic rent, with respect to land, was first put forward by David Ricardo and it was only later applied to other factors. In developing the idea Ricardo made two assumptions: the supply of land was fixed, and land has only one use (Ricardo, 1962). At the beginning of the twentieth century, Alfred Marshall expanded the concept of rent to include temporary inelasticities of supply, calling these quasi-rents¹ or temporary rents (Marshall, 1920). With this

¹ Economic rent as a conceptual category is to be distinguished from the actual rent payments that distribute economic rent and that are derivative in part from varying land tenure and other rights

definition the concept of economic rent extended far beyond 'land rent' and was applied to nonreproducible assets such as the unique talents of individuals. Around the middle of the twentieth century, the concept of economic rent was broadened, so that economists began referring to monopoly profits as monopoly rents.

In the last twenty years, the new political economy has further extended the general concept of economic rent to rent-seeking activities. The essence of rent-seeking theory is that economic rent, which has traditionally been defined as a receipt in excess of the opportunity cost of a resource, now tends to bring about social costs by attracting rational agents into competing for such rents created by activities such as trade legislation. For this reason, the types of rent-seeking are grouped as monopoly seeking, tariff seeking, quota seeking, license seeking, voluntary export restraint and export incentive seeking.

2.1.1. Definition of Rent-Seeking

According to Tollison, "the theory of rent-seeking involves the study of how individuals compete for artificially contrived transfers and how that competition affects the welfare of society" (Tollison, 1982:576). Mueller defined rent-seeking as, "the monopoly rents that the government can help to provide as a prize worth lobbying for and the pursuit of these rents has been given the name of rent-seeking" (Mueller, 1990:229). Buchanan points out that rent-seeking "refers to behaviour in institutional settings where individual efforts to maximise value generate social waste rather than social surplus" (Buchanan et al., 1980:3-4). For public choice scholars, there are two central ideas: first, that rent-seeking occurs through the political process and, second,

structure (see Marshall 1920:10).
that the best way to limit rent-seeking is to limit government.

The essence of rent-seeking theory stems from the idea that although the welfare economics literature considers these transfers to be costless they do indeed involve economic costs i.e., tariffs, quotas or support for agricultural prices. In the public choice literature, it is widely accepted that, rent-seeking resources should be considered as 'wasted', since they are used by economic agents to obtain monopoly power and they are not used in productivity increasing activities (Tullock, 1993a). In particular, economists are concerned about the long run economic rent, created by barriers to entry into an industry. Since the most persistent entry barriers are those created by a government that excludes or restricts competition, it is claimed that government is a major source of economic rent. Those who attempt to use government to obtain such rents are called rent-seekers. Such people or organisations use government legislation and regulation to attempt to transfer wealth (rent) to themselves. In other words, rent-seeking arises as a result of government intervention within markets to promote monopoly and economic regulation. The most effective way to promote monopoly rents in an industry is to pass a law to restrict output and to license entry (Buchanan, 1980a).

Rent-seeking can arise in a range of different ways: First, where output is given and fixed, as in the case of monopoly rents, and expenditure to capture monopoly rents does not yield additional products for the economy. Second, as a result of the institutional setting. According to Buchanan (1980a), rent seeking has become more important because institutional changes have opened up opportunities that did not exist in the nineteenth and early twentieth centuries. Buchanan (1980a: 3) argues that

"these institutional changes are a result of moving away from the ordered market towards the near chaos of direct partial allocation". He also adds that, under the restriction of these institutions, once government intervenes in the economy to create rents, it is very difficult to escape from the implications of rent-seeking behaviour. As a result, in this institutional setting, individual efforts to maximise value generate social waste rather than social surplus. Third, government is a major source of rent-seeking. However, it has to be stressed that, although rent-seeking will normally arise in the context of artificial interference with markets by the government, this is not the only setting in which rent-seeking may occur. Tollison (1982: 587) claimed that "the applicability of rent-seeking theory does not depend only on government supported monopoly rights, but also includes institutional processes in the private sector". Profit decisions can be given as an example. From the same perspective, Mueller (1990: 229) stressed that "rents are omnipresent. They exist wherever information and mobility asymmetries impede the flow of resources. They exist in private goods, factor, asset and political markets".

2.1.2. Differences Between Rent-Seeking and Profit-Seeking

In the literature rent-seeking is considered as 'bad' and profit seeking as 'good'. Rentseeking is distinguished from profit seeking in that rent-seeking arises from artificially imposed monopoly power, while profit-seeking arises from the competitive process. In the case of rent-seeking, governments blocked the competition to protect some interest groups and violate the property rights. For instance, import quotas benefit certain industries and protect them from international competition. In addition to this,

profit seeking is 'good' because entry is possible. In contrast, rents artificially contrived by government are 'bad', because entry is not possible. When governments decide about which industries are going to benefit from tariffs or quotas, other industries can not entry the market easily. Furthermore, although profit-seeking tends to be a relatively short-run phenomenon, rent-seeking from artificially imposed sanctions is a long-term phenomenon. Finally, while profit-seeking motivates economic behaviour which allocates resources to their most highly valued uses, rentseeking has a negative impact on economic output since these rents are created artificially. Tullock (1989) gives an example in order to distinguish bad rent-seeking from good rent-seeking;

Suppose that a steel manufacturing company in difficulty [h]as a choice between two different operations, both of which will cost the same and, according to experts, have equal prospects of success and have equal effects on its profit. The first proposal is to invest a large amount of money in getting the government to ban the import of Korean steel on the purported grounds that it is environmentally dangerous. The result of this would be a rise in the price of steel, and most people in the US would be at least slightly worse off than they were before. The alternative proposal is to introduce some new machinery in its plant which will increase its efficiency enough so that it will make the same amount of additional profits. Indeed, in this case, it may acquire a little bit of semi-monopoly power because its costs would be lower than that of its competitors. Clearly, the net effect on society is that the cost of steel is somewhat lower and most people are somewhat better off I use 'rent-seeking' for the first and not for the second (Tullock, 1989:55-56).

Concentrating on bad rent-seeking, Buchanan (1980a) claimed that rent-seeking occurs at three levels. The first type of social waste is the effort and expenditure of the potential recipients of the monopoly (their lobbying effort). The second is the efforts of government officials to obtain monopoly rents that show up in the civil

servant's wages (competition to be civil servants).² Finally, the third is that rentseeking may emerge as individuals seek to become members of the group favoured by the tax/expenditure programme, since the government disperses resources through the state budget in terms of expenditure increases and/or tax reduction. Consequently, rent-seeking occurs at each level.

2.2. RENT-SEEKING IN GENERAL

The theory of rent-seeking can be grouped into two categories: normative and positive rent-seeking theory. Briefly, it can be said that while normative rent-seeking theory considers the measurement of the costs of rent-seeking, positive rent-seeking theory considers the sources of rents in the society (Tollison, 1982; Higgins and Tollison 1984; Rowley et al. 1988).

2.2.1. Normative Theory of Rent-Seeking

The normative theory of rent-seeking examines rent-seeking from a welfare economics point of view. In other words, "normative theory concerns the issue of how costly such activities are to the economy" (Tollison, 1982: 579).

In fact, whether the natural propensity of individuals to seek rents is socially useful or socially wasteful depends upon the moral, legal and social constraints in society. For example, if the power of government is constrained by the constitution, custom and morality to protect individual rights, bad rent-seeking, even if it is not entirely absent, can be controlled (Rowley, 1988b).

² As Tullock stated individuals will compete to be civil servants in order to capture rents by excessive expenditures on education (Tullock, 1980a)

One of the most important concepts of the normative theory of rent-seeking is the concept of efficiency. In terms of the theory of rent-seeking, the concept of efficiency can be analysed as either under, above or exact dissipation of resources. The exact dissipation outcome, which means that the total amount of the rent-seeking outlay exactly equals the available rent, was illustrated by Posner (1975) but later became known as the efficient rent-seeking outcome (Tullock, 1980b). In Tullock's paper many rent-seeking models have been outlined and these models have been examined in the competitive process that leads either to under-or over-dissipation of the available rents. While under-dissipation can be defined as less wasteful (Tullock 1980b, 1985), exact dissipation is best described as the long-run tendency of wasting of resources where the price is fixed and there is free entry/exit of agents. Hence, exact dissipation appears to be a good general conjecture about equilibrium in rent-seeking contexts and helps us to understand the real world. However, according to Tullock (1993a), if the rent-seeking costs are zero and rent-seeking results in wealth transfers rather than in the dissipation of wealth, this case represents the most desirable rent-seeking outcome. Another important concept in the normative theory of rent-seeking is *rent-avoidance*. In this context, individuals not only use real resources to seek transfers, but they are sometimes also required to use real resources to protect their rents from other rentseekers. The basis of such behaviour is that not all 'suppliers' of wealth transfers find it economically rational to allow their wealth to be taken away. Some will find it cost effective to fight back.

In addition, the *durability of monopoly rights* poses some interesting issues for the theory of rent-seeking. In the case where a monopoly right is granted forever, and all

Tullock-type expenditures to capture the right are made ex-ante by rent-seekers, the "Tullock costs" are sunk. In this situation, if the monopoly is deregulated permanently the ongoing Tullock expenditures can be returned to the economy.

In the context of the *distribution of income*, pre-Tullock, the effect of monopoly on the distribution of income was clear, i.e. the monopolist became richer and consumers became poorer.

2.2.1.1. Early Applications of the Normative Theory of Rent-Seeking

Prior to the rent-seeking insight, the new welfare economists had devoted their attention to private monopoly power, regarding government as a corrective agent rather than as an active participant in the process of monopoly creation and monopoly protection. According to this approach, the main effects of monopoly were to misallocate resources, to reduce aggregate welfare, and to redistribute income away from consumers in favour of the monopolists. In addition, efficient pricing policy for publicly provided output was determined by the neo-classical Pareto optimal benchmark (Rowley, 1988a). By reference to this 'optimum' position, neo-classical economists have estimated the dead-weight losses of monopoly.

In 1954, Harberger attempted to estimate the welfare effects of monopoly for the US economy, using statistics on the rate of return on capital for 73 manufacturing industries for the years 1924-1928. He concluded that the loss of economic welfare caused by monopoly is very small, perhaps of the order of one-tenth of one percent of gross national product (Harberger, 1954).

Using Harberger's approach, many estimates of welfare losses from monopoly were

published. These estimates generally confirmed the Harberger result that monopoly was not a social problem. This approach to explaining the social costs of monopoly remained the conventional wisdom of mainstream neo-classical economics until the mid-1970s, despite challenges by Leibenstein (1966) and Tullock (1967a).

The first major challenge to the Harberger triangle came in 1966 with Leibenstein's concept of 'X-inefficiency'. According to Leibenstein, the typical welfare effects reallocation must be relatively small since allocative inefficiency involves only the marginal effects. He concluded that "micro-economic theory focuses on allocative efficiency to the exclusion of other types of efficiencies that, in fact, are much more significant in many instances" (Leibenstein, 1966: 392).

Tullock (1967a) was the first economist to look at the monopoly paradox from the perspective of the public choice approach. In addition, he was the first economist, without using the rent-seeking concept, to demonstrate that transfers from consumers to monopolists impose resource costs on society. Tullock also pointed out that Harberger ignored some of the social cost of monopoly. Using theft as an example, Tullock argued that real resources are used in both preventing and conducting thefts. Hence, there is a loss to society from theft, and that loss can be measured by the opportunity cost of the resources³. After his initial paper, rent-seeking theory had an impact not only on public choice, but also on the related disciplines of political science and law. Furthermore, Tullock claimed that rent-seeking is universal, and not only arises in democratic societies, but also in all forms of autocracy.

³ For example, a successful bank robbery will inspire potential thieves to greater efforts, lead to installation of improved productive equipment in other banks, and perhaps result in the hiring of additional policeman. Those are its social costs, and they can be very sizeable (Tullock, 1967:48).

A graphical analysis from his later book can be used to demonstrate Tullock's (1993a) point. Figure 2.1 represents a 'snapshot' of the economy at a point in time. The competitive industry is assumed to produce output OQ_0 at price OP_0 which is equal to marginal cost, thus generating a total (consumers') surplus shown by the triangle AP_0C However, monopoly leads to a higher price, OP_1 and a lower quantity OQ_1 , reducing consumers' surplus to AP_1B Thus results with a loss to society. According to Harberger, this welfare loss is equal to triangle BDC, commonly referred to as the dead-weight loss triangle (also referred to in the rent-seeking literature as the Harberger triangle), and the rectangle P_1BDP_0 can be analysed as a transfer of surplus from consumers to monopolists.

According to Tullock, the cost to the economy of monopoly and regulation is greater than the simple Harberger triangle indicates, because any expenditures made to capture an artificially created transfer represent a social waste. 'The Tullock Rectangle' (P₁BDP₀) must be added, in whole or in part, to the 'Harberger Triangle' (BDC) in order to calculate the potential loss of welfare associated with monopoly' (Tullock, 1993a: 10).



FIGURE 2.1. Tullock's Model of the Welfare Loss from Monopoly

Tullock states that "the rectangular area P_1BDP_0 represents the return for which the monopolist is willing to expend productive resources. Therefore, the waste to society should include the rectangular area, so that the total resource cost to the society from monopolisation is represented by the trapezoid, P_1BCP_0 " (Tullock, 1993a: 11).

After Tullock's contribution, economists began to analyse rent-seeking behaviour. Krueger (1974) made the next significant contribution to the theory of rent-seeking and coined the term in the process. Since one of the countries that Krueger studied was Turkey, her model and results are of particular relevance to this study. Therefore, we will examine Krueger's findings in more detail in section 2.2.1.4. under the heading of Rent-seeking and International Trade.

An influential contribution to the rent-seeking literature was Posner's (1975: 807)

attempt to estimate "the social costs of monopoly and monopoly-inducing regulation In his model, he emphasised rent-seeking in regulated in the United States". industries, analysing a situation in which ten firms vie for a government monopoly. Posner assumed that each firm has an equal probability of obtaining the rent, that each firm is risk neutral and that constant costs hold universally. Under these assumptions, the cost to society of rent-seeking activity exactly equals the rent that the monopolist acquires (the Tullock rectangle). Posner showed that the social cost of monopoly will usually be higher, the larger the industry's sales revenues at the competitive price and output and the greater the percentage price increase over the competitive level. In addition, they will always be higher, the less elastic the demand for the product at the competitive price, the cost of monopoly being greatest when demand is totally inelastic at the competitive price. Posner argued that when the market price increases consumers who continue to purchase the seller's product at the new, higher price, suffer a loss exactly offset by the additional revenue that the sellers obtain at the higher price. Those who stop buying the product suffer a loss, not offset by any gain to the This is called the dead-weight loss. Posner concluded that Harberger's sellers. estimate of monopoly power was undervalued by 3 percent of GNP (Posner, 1975: 815-816).

2.2.1.2. The Public Choice Approach in Normative Theory

Many of the normative and positive theories in the rent-seeking literature have been developed by public choice scholars, focusing on political market institutions, which are endogenous and not exogenous, and are biased predictably to the advantage of the

better organised special interests.

With his paper, Tullock (1967a) opened a new area, which was to be called the public choice approach to rent-seeking analysis.

The linkage between theories of rent-seeking and public choice, later, was established in Tullock's article 'The Cost of Transfers' (Tullock, 1971). His discussion of theft, rather than of tariffs and monopoly, directed attention to the cost of contested transfers. Much more clearly than in 1967, his 1971 paper focused on the resource cost of competitive lobbying of politicians, who seek to extract government transfers, and of bureaucrats, who seek to prevent them. As a result of competition between them resources will be wasted. For example, transfers as farm subsidies and import protection for domestic steel producers and motor car manufacturers clearly fall into this category. The originality of his idea stems from the observation that although the welfare economics literature assumes that transfers are costless these transfers in fact involve economic costs. Tullock extended his analysis of transfers to demonstrate that wasteful competition over transfers is not restricted to individuals but also occurs among the various levels of government (Tullock, 1975).

Tullock's (1980b) study of the exact dissipation outcome (efficiency) generated considerable attention since it established the basic linkage between theory of public choice and theory of rent-seeking. Assuming an upward sloping factor supply curve, Tullock employed a game-theoretic approach to determine bids for a monopoly by identical players. These players both recognise a correct strategy, if it exists, and assume everyone else recognises that strategy. Tullock identified a model for bidding based on the probability of winning, which was a function of the nature of the marginal

cost curve and the number of players. In a simulation of the game, he showed how underbidding and overbidding are more likely to occur than perfect dissipation. Furthermore, he showed that, in imperfectly discriminating contests, rent-dissipation varies positively with the number of contestants. According to Tullock (1993a), several authors had tried to solve the exact dissipation problem (Carcoran 1984, Carcoran and Karels 1985, Higgins, Shughart and Tollison 1985 and Hillman and Katz 1984), yet none has succeeded in resolving the problem he posed, which questioned the likelihood of the exact dissipation outcome in the real world.

During the same period, Higgins and Tollison (1988) stated that the presence of high rates of rent dissipation in a particular society may result in few monopolies, since the returns to rent-seeking are low. In contrast, where the rate of rent dissipation is low, monopolies may abound. Clearly the former society (with high Tullock costs per monopoly, but few monopolies) would suffer more social waste than the latter, despite low Tullock costs, since Harberger dead-weight losses abound in the later stage.

Rogerson (1982) considered that comparative advantage among monopolising inputs also causes under-dissipation and developed a model to show that differences in these advantages lead to less than complete dissipation. However, he did not explore the dynamics of this phenomenon for the process of investing in efficient rent-seeking.

Carcoron (1984) explored long-run equilibrium and total expenditures in rent-seeking. In particular, he specified a long-run version of this model with players who compared rates of return from rent-seeking with alternatives. Carcoran and Karels (1985) suggested a minimum bet be imposed on the model for the case of decreasing or constant costs where there is a potential for the number of rent-seekers to be negative.

In the case of increasing costs, they considered two types of pre-emptive bidding: hitand-run competition and hardball competition. Higgins, Shughart and Tollison (1985) also attempted to solve the problem Tullock posed. By making the number of rentseekers in the Tullock model endogenous, requiring a non-refundable entry free, they concentrated on a mixed bidding strategy.

Hillman and Katz (1984) also extended Tullock's model of efficient rent-seeking and tried to solve the problem from the risk-aversion perspective. They argued that riskaversion among rent-seekers would generate under-dissipation where rent-seekers spend less than the total value of the rent available. They also attempted to build a strategic bidding game and found that more rent was dissipated under the competitive game than under the strategic game. As the number of bidders increased, the two games coincided. However, their model did not allow for organisational adjustment to reduce the behavioural impact of risk aversion. Milner and Pratt (1991) extended Hillman and Katz's work to provide a Cournot-Nash solution for the two-person case. They found that, depending on the structure of the individuals' risk attitudes, there can be rent dissipation in excess of the risk-neutral outcome. Hillmar/(1989) also demonstrated how asymmetric valuations of the contested prize lead to under dissipation. Likewise, Ursprung (1990) showed how under-dissipation is associated with the public good nature of contested rents, and how they also endogenized the value of the price by placing the rent-seeking contest in a setting of candidate competition.

Appelbaum and Katz (1986) considered the rent-dissipation issue by looking at the Tullock model from an industrial organisation standpoint. Their comparative static

analysis showed that under certainty rent dissipation decreases as the number of rentseekers decreases and as the degree of collusion increases.

2.2.1.3. Directly Unproductive Profit-Seeking (DUP) in Normative Theory

Krueger's paper stimulated a separate research programme labelled by Bhagwati and Srinivasan (1980, 1982) and Bhagwati (1980, 1982) as 'Directly Unproductive Profit-Seeking (DUP)'. In particular, Krueger's approach has been very popular among scholars in the area of international trade. From the critical perspective, Bhagwati (1980) pointed out that even if Krueger's model was limited to the rents resulting from quotas, tariff-seeking, revenue-seeking, and other restriction-seeking activities could be classified under the general heading of directly unproductive profit-seeking (DUP) activities. Most DUP activities deal with trade issues.

2.2.1.4. Rent-Seeking and International Trade

The international trade-rent-seeking literature developed in reference to international trade policies focused on groups lobbying for tariffs and quotas. Even though public choice and DUP scholars looked at the international trade issue from a different point of view, both sides agreed that society's welfare is maximised when trade is free (Krueger, 1992, 1990, 1985, 1984; Bhagwati and Hansen 1973; Bhagwati and Ramaswami 1963; Bhagwati 1988, etc).

However, in reality, as a result of trade protection policies, still practised in many developing countries special interest groups create rent-seeking interventions and free trade is sacrificed in order to protect domestic industry from international competition by government. In that context, tariffs, quotas, subsidies, incentives and other trade

protections can be accounted as rent-seeking activities.

After Tullock's and Krueger's contributions to rent-seeking, there was considerable attention in this area, mostly by DUP scholars such as Bhagwati (1980, 1982), Bhagwati and Srinivasan (1980, 1982). Since almost all DUP activities are further broken down into types of policies (quantity and price constraints), the DUP theory so far has only been applied to the area of international trade.

The Public Choice, International Trade and Rent-Seeking

In the field of trade protection, the public choice studies look at why governments maintain and, indeed, extend trade protection policy. In particular, these studies concentrate on distortions in the trade liberalisation issue together with vote-maximisation motives. For them, although the median voter cast his vote in favour of free-trade, government choose trade protection.

According to Rowley (1988a), rent-seeking literature takes the trade protection instruments as endogenous. Rowley added that although most DUP theorists treat the instruments of trade protection as exogenous, in some cases, such as Bhagwati et. al (1984) stated, the endogenization of policy is necessary and inevitable.

Rowley and Tollison (1986) examined rent-seeking behaviour from the public choice rent-seeking insight in advanced Western democracies. Unlike DUP, Rowley and Tollison (1986) examined the implications of rent-seeking/rent-protection outlays for the choice of protective instrument as well as for the magnitude of social welfare loss. Using the Stigler/Peltzman regulation model, Rowley and Tollison predicted the dominance of quota over tariff protection instruments in the regulated market and

concluded that efforts to reinforce free trade on a multilateral basis are most effectively targeted at high-rather than low-level decision making and should be conducted with maximum possible transparency.

Looking at international trade policy from the public choice perspective, Brock and Magee 1975, 1978, 1980 and Magee et. al 1989 have shown that tariffs are endogenous. In addition, they developed a special interest theory with lobbies and political parties displaying maximising behaviour in which tariffs are an equilibrating variable in political markets. As Bhagwati (1982) stated, Brock and Magee (1978) modelled rent-seeking in a general equilibrium model under the name of tariff seeking, where lobbies seek protectionist trade policy. Their model includes both economic and political markets as well as processes for resolving conflicting goals. They used a non-cooperative game-theoretic approach in order to analyse the interaction between political and economic markets. Later, Bhagwati (1980), Feenstra and Bhagwati (1982) and Findlay and Wellisz (1982) also used a non-cooperative game-theoretic approach to analyse the interaction between political and economic markets.

In 1994, Lopez and Pagoultos estimated the potential cost of trade barriers using the Harberger and the Tullock/Posner approaches for a sample of US food and tobacco manufacturing industries, In addition, they tested the relationship between the computed welfare losses and special interest political activity. The results showed that the allocative efficiency loss from trade barriers, as measured by the Harberger triangles, was quite small relative to domestic consumption (2.6 %) and somewhat larger than the efficiency losses found for monopoly in the US manufacturing sector. However, the dead-weight loss indicated a lower band of efficiency loss brought about

by trade barriers because they do not account for administrative costs and directly unproductive activities.

Weede (1994) looked at the economic policy and international security from the rentseeking, free trade and democratic peace perspectives. He argued that special interest groups are not concerned with international security issues but with domestic advantage and redistribution, i.e. with rent-seeking. Although they are very influential in democracies, they also opposed to free trade for their benefits. Their effect on trading weapons can be given as an example.

The DUP, International Trade and Rent-Seeking

Krueger (1974) considered government restrictions upon economic activity to be a fact of life. These restrictions cause an increase in rents as, which show themselves in a variety of forms as a result of competition. Krueger (1974: 291) claimed that "sometimes such competition is perfectly legal. In other instances, rent-seeking takes other forms, such as bribery, corruption, smuggling, and black markets". In order to examine this phenomenon she first modelled rent-seeking in the form of import quotas in a small economy by assuming that exogenously determined restrictions give rise to rents. In other words, Krueger argued that since "the welfare loss associated with quantitative restrictions is unequivocally greater than the loss from the tariff equivalent of those restrictions, competitive rent-seeking results in a divergence between the private and social costs of certain activities" (Krueger, 1974: 291).

In this paper, Krueger compared the welfare implications of three scenarios: freetrade, import restriction without rent-seeking and import restriction with rent-seeking.

To measure the welfare loss from rent-seeking, she estimated the production cost of rent-seeking by setting that cost equal to the value of the rents in the case of import licences. Krueger found out that the losses to society were 7 per cent of GNP for India, and 15 per cent of GNP for Turkey.

Krueger shown that for any given level of import restriction, a tariff is Pareto-superior to competitive rent-seeking, and the properties of rent-seeking equilibrium have been contrasted with those of the tariff-equivalent case in the absence of competition for the rents. Krueger concluded that "the number persons engaged in distribution declines from free trade to import restriction without rent-seeking, and increases as one goes from that situation to competition for import licenses" (1974: 21). For instance, "agricultural output increases between free trade and the tariff-equivalent case, and declines between that and rent-seeking" (1974: 21).

The tariff-equivalent and rent-seeking equilibrium are shown in Figure 2.2. Import restrictions are shown on the vertical axis and the production-consumption of the good is shown on the horizontal axis. Equilibrium under rent-seeking will be at L, with the same consumption of imports, but smaller production and consumption than occurs under a tariff. The point K is the tariff equivalent and the point C is the free-trade equilibria. The line D'D' corresponds to the domestic price of imports and the steeper line D'D' corresponds to the lower domestic price of imports under competitive rent-seeking. The point L gives us less consumption and production than the point C, which represents no tariff barriers and no restriction on consumption-production



FIGURE 2.2. The Effect of Import Quotas in a Two-Commodity Trade Model

However, her analysis has been criticised by many scholars since it ignored political considerations. In reality, it is unlikely that import licences will be auctioned in a competitive market with the resulting revenues distributed to consumers. Rather, import licences will be administratively allocated so that the quota rent will accrue to the recipient of the allocation.

Krueger's insight was that resources used this way will not be available for the production of goods and services. As a result this imposes a welfare loss over and above the primary welfare loss due to the quota that was identified by purely economic analysis. Thus the cost of this welfare loss may equal the value of quota rents (Srinivasan, 1991).

Bhagwati and Srinivasan (1980) extended Krueger's model and considered the tariff

counterpart of Krueger's rent-seeking, which they called revenue seeking. Here, individuals perceive that the revenues generated by an import tariff are "up for grabs" and spend resources to obtain part of it for themselves. They claimed that revenue-seeking may be welfare-improving in the case of second-best conditions.

They distinguished revenue seeking activities as; (i) tariff (quota) seeking for protective reasons, (ii) tariff (quota) evasion or smuggling, and (iii) revenue seeking or lobbying for getting an allocation of the import quota to earn the rents generated. According to them, although the first and second areas have been addressed by many studies, the third needs to be highlighted.

Thus, Bhagwati and Srinivasan focused on revenue seeking activities, considering that revenue seeking might be welfare improving as well. Assuming a second-best world, Bhagwati and Srinivasan (1980) stated that the shadow prices for resources used in revenue seeking activities might lead to welfare increases, not decreases. They claimed that tariff is endogenously determined but that revenues were not divided according to an initially specified rule. They further suggested that resource using revenue-seeking activity occurred in the distribution of the revenue. In conclusion, they developed the model with a formal structure and showed that tariffs and quota equivalence can still exist when including a DUP approach into the analysis.

Bhagwati and Srinivasan (1982) pointed out that unproductive activities can be output-enhancing when rent-seeking is considered in a second-best context. It means that where some trade restrictions exist, the addition of others can actually improve society's welfare.

Bhagwati (1982: 889) extended the model and showed that "tariff-seeking, revenue-

seeking, monopoly-seeking and other type of activities could be classified under the name of Directly Unproductive Profit Seeking activities (DUP)". He added that while all these activities are privately profitable activities, from society's point of view, since their direct output is zero, they are unproductive. Rent-seeking activities, where lobbies chase rents attached to import licences and other quantitative restrictions, are an important subset of such DUP activities. Thus, Bhagwati criticised Krueger's (1974) analysis, since "her focus is exclusively on licensing and quantity restrictions and her rent-seeking activities exclude from their scope other DUP activities" (Bhagwati, 1982:990).

Then he presented a taxonomy of DUP activities, as can be seen from Table 2.1, that is organised around the fact that all DUP activities involve either distorted or distortion-free situation before and after the undertaking of such an activity. "Thus, a DUP activity which uses up resources in the context of a distortion may be paradoxically welfare improving, whereas a similar DUP activity which destroys a distortion and achieves a first-best, optimal, outcome may be paradoxically welfare worsening" (Bhagwati, 1982: 991).

TABLE 2.1. The Taxonomy of DUP activities: Examples and Their Consequences

<u>Category I.</u> The initial and final situations are both distorted.

Legal

(1) Premium seeking: Krueger (1974), Bhagwati and Srinivasan (1980)

(2) Revenue seeking: Bhagwati and Srinivasan (1980)

Illegal

(1) Tariff evasion or smuggling: Bhagwati and Hansen (1973), Bhagwati and Srinivasan (1973).

The consequences of these activities are beneficial except in excess where there are quantity distortions (second-best analysis applies).

<u>Category II</u> Initially distorted but final distortions-free situation.

Legal

(1) Tariff-destroying lobbying: Findlay and Wellitsz (1982)

Illegal

(1) Tariff-destroying lobbying with the aid of the bribes to politicians:

In this case second-best analysis applies so that beneficial outcomes are possible.

<u>Category III</u> Initially distortion-free but finally distorted situations:

Legal

(1) Monopoly seeking: Posner (1975)

(2) Tariff seeking: Brock and Magee (1978), Bhagwati (1980), Feenstra and Bhagwati (1982), Findlay and Wellisz (1982)

Illegal

(1) Tariff evasion from an optimal tariff situation.

The total outcome is described as necessarily immiserizing. However, a paradox results: distortions imposed without DUP activity may result in lower than when imposed with it.

<u>Category IV</u> Initially distortion-free and finally distortion-free situations.

Legal

(1) Zero-tariff outcome lobbying: Tullock (1967) and Findlay and Wellitsz (1982)

Illegal

(1) Theft: Tullock (1967)

Total outcome necessarily immiserizing. No paradoxes obtain.

According to Bhagwati (1982), DUP activities in Category I and II may increase in

welfare, while those in Category III and IV may be immiserizing.

In contrast to public choice scholars, DUP scholars argued that endogenous tariff

policy be studied under the head of DUP activities and categorised DUP activities as either exogenous or endogenous. Endogenous tariff policy in which economic agents attempt to influence policy in their favour, has been also emphasized in Dinipolous 1984; Mayer 1983 and Bhagwati, Brecher and Srinivasan 1984.

Recent Contributions to the International Trade-Rent-Seeking

The new literature links the prospect of protection to endogenous changes in firm behaviour designed to influence likely trade policy developments.

Much of the current work in international trade is concerned with lobbying, voting and the politics of trade policy formation. However, in order to measure the social cost of protection and protectionism a new literature examines the incentives on firms to influence indirectly political and administrative commercial policy decisions (indirect rent-seeking). This literature can be unified under a common theme: The prospect of protection can induce real changes in economic activity independent of whether actual barriers have been imposed.

From this perspective, international trade policy examines why government selects the trade policies it does. Two principal approaches to the political economy of trade policy formation are commonly recognised (Baldwin, 1989; Hillman, 1989). These are: i) the economic approach (on the demand side) and ii) the social-concern approach. (dominated by the supply side). These approaches to the political economy of trade policy fall along the same divide that separates the theory of domestic regulation, pre-and-post- Stigler/Peltzman. However, according to Leidy (1993, 1994), what is missing from both the social-concern approach and the economic

approach to policy formation is a full appreciation of the incentive effects of institutional structure. In other words, the institutional framework of each society should also be taken into account.

2.2.1.5. Differences and Similarities Between Public Choice and DUP Theories

Tullock (1967) claimed that the mere possibility of transfers, through the government, will encourage lobbying. Individuals and groups will invest resources to obtain a transfer to, or to resist a transfer away from themselves. In contrast, Krueger (1974) analysed the nature of competition over predetermined transfers, with the government either essentially exogenous to the competition or only partially endogenized. Tullock (1993a) emphasised that DUP analyses rent-seeking in terms of exogenously determined rents, and does not deal with the public nature of that market.

According to many public choice scholars (Brooks and Heijdra 1988; Rowley, 1988a), the DUP school imposes a more rigid structure on the theory of rent-seeking than does the public choice school. Furthermore, from the public choice perspective, the methodology of DUP is far more formal and less intuitive than the public choice literature. The approach is one of general equilibrium, and the institutions treated as given. In addition, the ideology of DUP is also different from the public choice literature, although this difference is relevant only in normative analysis. On the public choice side, it is believed that rent-seeking occurs through the political process and the best way to limit rent-seeking is to limit government. In particular, in the view of Buchanan (1980c), Rowley (1988b) and Wagner (1987) constitutional rather than legislative constraints are required. However, there is no such ideological approach to be found with in the DUP literature, and there is no such reference to constitutional economics as a framework for institutional reform.

The DUP scholars also believe that the most important difference between DUP and public choice approaches stands on methodology, but they claim that DUP scholars are formalists and that public choice theorists are non-formalists. Another very important difference between them stems from the basic question of what to call the subject. While public choice scholars are willing to continue to use the term rent-seeking, DUP scholars prefer to use the term directly unproductive profit-seeking (DUP) activity.

Magee (1984) and Rowley (1988a) argued that both the rent-seeking and DUP approaches have strengths and weaknesses. If the public choice approach would incorporate a little more of the formal modelling of DUP, while DUP would pay more attention to the institutional perspective of public choice, the overall quality of rent-seeking contributions should rise.

In the context of political influence and rent-seeking, Pedersen (1992a) developed a simple model allowing an analysis of the interaction between economic policy decisions and rent-seeking by private agents competing for political influence. He stated that rent-seeking may be of either the directly unproductive type or an income transfer to political decision makers. In the political economic equilibrium of the model the extent of rent-seeking, economic policy decisions, income inequality, etc. are exogeneously determined. Pedersen (1992b) sought to analyse the endogenization of public influence and economic policy. According to him, in the simultaneous, political economic equilibrium of the model, private agents' engagement in rent-seeking and the structure of public sectors' taxation and expenditures are

endogenously determined. In 1993, Pedersen considered a simple two-period model (productive investment in period 1 gives return/benefits in period 2) in order to analyse the relationship between rent-seeking, political influence and productive investment.

2.2.2. Positive Theory of Rent-Seeking

While normative public choice deals with desirable characteristics of the rules, procedures and institutions through which collective choices are made, positive public choice attempts to devise explanations for these rules, choice processes and their consequences. Thus, while normative public choice poses questions about how we might organise political life so that outcomes best express private self-interest, positive public choice goes further. It assumes that citizens act on the basis of self-interest, so that actual political outcomes can be explained on that basis (Caporaso and Levine, 1992).

In its positive dimension, rent-seeking contributions attempt to explain the sources and the forms of contrived rents in the politico-economic system. It also provides an important analytical perspective from which to understand and predict the behaviour of interest groups, politicians, bureaucrats, the media etc. within the political market place.

Much of the research on the positive theory of rent-seeking has been inspired by Olson's *Logic of Collective Action* (1965). Olson brought the problem of collective action directly to the attention of political scientists. He considered organisations the mechanism through which individuals can obtain collective goods. He suggested that large organisations are, in general, less efficient in obtaining collective goods than

small organisations. He also suggested that organisations with heterogeneous members will be more successful at obtaining public goods.

Later, Appelbaum and Katz (1987) extended the Tullock (1980b) model to examine rent-seeking with three sets of participants; voters (or consumers), rent-seeking firms and regulators. In their model they considered short-run equilibrium, long-run equilibrium, and sophisticated equilibrium. The last situation is characterised by cooperative behaviour on the part of the rent-seeking firms. Wise and Sandler (1994) provided a test of the Appelbaum and Katz (1987) model in which rents are endogenous. Their empirical results supported the rent-seeking determinants identified in the model.

In the rent-seeking and rent-protection model, McChesney (1987) focused on the role of politicians in the economic theory of regulation, not as brokers in the sense of Peltzman (1974), but as independent actors in the regulation market. His model of rent extraction supplements rather than undermines the basic rent-seeking approach. Michaels (1988) attempted to address the indeterminacy of the Tullock game by introducing a political process. In his model, politicians are introduced as rent-seeking competitors. This model allowed incorporation of the institutional structure and the establishment of a theoretical structure for the analysis of the derived demand for political inputs and their properties.

2.2.2.1. The Theory of Regulation, Interest Groups and The Chicago School

Building on Olson's contribution, many articles have analysed the interest group theory of government and legislation, it has two dimensions: the theory of economic

regulation and the economic theory of legislation (see Stigler 1971, 1974, 1975, 1976, Peltzman 1975, 1976, Landes and Posner 1975, Niskanen 1971, 1975, Crain 1977, McCormick and Tollison 1978, 1981 and Becker 1983, 1985).

In the Chicago tradition, Stigler and others sought to question whether regulation makes a difference to the industry, and whether, in fact, regulation actually serves the public interest. After reaching negative empirical findings, they developed a theory rejecting the notion that regulation grew out of the public interest concerns, and dealt with the question of how to design institutions to arrest or at least control the tendency of regulation to grow solely for the mutual benefits of regulator and regulated.

According to the Chicago school, regulation is supplied by government that offers price fixing, restriction of entry, subsidies, suppression of substitute goods and promotion of complementary goods. For instance, Stigler's (1971) analysis of economic regulation claims that interest groups will use state regulation in order to increase their wealth.

Stigler hypothesised that groups seek to obtain cartel powers from the government. Prohibitive information costs reduce the incentive for many individuals to be informed and attempt to influence policy. This allows access of the group seeking regulation to the provider (the political party). By providing resources to the party, the group can influence its policies. Stigler acknowledged the free-rider problem in forming groups and speculated that more concentrated industries would provide more resources. Later, Stigler (1974) addressed the free-rider problem more specifically.

A second theory was the 'capture theory' that postulated that the regulators' interests

were coincident with the regulated (Posner, 1975). Posner pointed out that government regulatory agencies are normally not captured by the people they regulate. Such regulatory agencies are usually driven by special interest groups and are by no means as profitable to the companies that they regulate as some of the literature suggests.

Generalising Stigler's theory, Peltzman (1976) attempted to solve the efficient regulation problem that became a major political problem for the rational regulator. In order to do this he developed a formal model of the supply and demand for regulation. Then, he presented a model of equilibrium political prices in which a vote maximising regulator trades-off the rents he gives to producers relative to the costs imposed on consumers in the process of the setting regulated prices. Peltzman's work has been directly connected with income transfers and he claims that the middle classes have used the government structure to transfer funds to themselves from the wealthy to the poor.

However, although both Stigler and Peltzman addressed the whole process in terms of its welfare transfer outcomes, they did not discuss the rent-seeking cost of the process. From the public choice perspective, interest groups provide a methodological departure as well as substantive perspectives on not only rent-seeking but the crucial activities of politicians, bureaucrats and citizens.

2.2.3. New Advances in Rent-Seeking

In the public choice research programme, in the era of the interest group theory of legislation, politicians are modelled as providing a brokering function in the political

market for wealth transfers. In particular, Tollison (1982) provided most of the current literature in which the behaviour of politicians, bureaucrats and citizens derives from the strong Stiglerian version of interest group theory of regulation. Although not all political scientists and economists have found Tollison's perspective persuasive, his approach highlighted many areas such as the compensation of state officials and their outside earnings. In this field, McCormick and Tollison 1981, Rowley, Shughart and Tollison, 1987, Shughart and Tollison 1986, Tullock 1993a, Austin-Smith 1987 and Congleton 1989, Becker 1983, 1985 have contributed a lot to the literature.

2.2.4. Other Important Theoretical and Empirical Studies of Rent-Seeking

Many distinguished scholars have studied rent-seeking from different angles. For instance, McCormick, Shughart and Tollison (1984, 1986), Cherkes, Freidman and Spivak (1986), Crew and Rowley (1988) have studied deregulation; Buchanan (1980b), Katz and Smith (1988), Anderson and Hill (1983) studied rent-seeking and property rights. Katz, Nitzan and Rosenberg (1990) studied in the case of rent-seeking and the provision of public goods. Abbott and Brody (1990) concentrated on welfare enhancing policy and rent-seeking. Misiolek (1988) considered pollution and rent-seeking costs together. Lee (1985) studied the impact of rent-seeking costs on pollution taxes. In the area of taxation, Goetz (1980) and Lee and Tollison (1988) considered the tax issue from the rent-seeking perspective. Cowlin and Mueller (1978) concentrated on rent-seeking in a private setting. In order to measure the macroeconomic effects of rent-seeking, and more specifically to measure the changes in budget spending, Katz and Rosenberg (1989) estimated rent-seeking waste generated within the government budget in an analysis of 20 countries. In cross

section analysis of state budgets, Wyrick and Arnold (1989) found that earmarking specific revenues to a specific activity resulted in less rent-seeking activity (although rent-seeking when the earmarking polices were developed was not considered in the analysis). Shughart and Tollison (1985) applied the rent-seeking insight to the process of legal innovation. Tullock (1993b) also considered legal rent-seeking. Faith, Higgins and Tollison (1984) investigated the nature of rents and the opportunities for rent-seeking within the internal organisation of the Coasian firm.

2.3. CRITIQUE OF RENT-SEEKING

North (1987) criticised rent-seeking from the New Institutional Economics perspective. For him, the major insight of the rent-seeking literature was to extend economic analysis into unknown political structures and institutions. The first important problem with the rent-seeking literature is that the term 'rent-seeking' implies something about human behaviour rather than the institutional framework. Because of that, the emphasis should be on the institutional structure rather than on human behaviour. The second problem is that it does not make clear exactly what the measure of efficiency is. Thus, he concluded there is a long way to go to understand the interaction between interest groups' behaviour. But this has to be done with political economy rather than only rent-seeking models. In other words, to understand these issues much better we have to look at political economy as a whole, not only rent-seeking.

According to Samuels and Mercuro (1992), a critique of the literature was begun in the 1980s, focusing on the purported unambiguous waste associated with rent-seeking activities. The central point of these critics was that resource diversion into rentseeking, in a second best legal economic setting, may not represent a social loss, but may well result in an increase in welfare directed by Bhagwati 1980, Bhagwati and Srinivasan (1980). Samuels and Mercuro (1992) criticised rent-seeking since it has very selective concepts with regard to output, waste, legal change and the state and very specific assumptions. For instance, rent-seeking theorists accepted the concept of waste in reference to productive output (social assets in the physical sense). However, this concept has four problems: Firstly, it ignores the rights pertaining to and defining the commodity. Secondly, it rejects the market tests of productiveness, thirdly, it does not take account of distribution but of production, and, finally, it accepts law-related activities as wasteful, since they do not lead to the creation of real assets. Narrow conceptions of waste and productiveness are not the only limits to the theory of rent-seeking as usually understood, for theorists of rent-seeking also assume the existence of those transfers that were granted by government.

From their point of view, Samuels and Mercuro (1992) claim that the theory of rentseeking places business and non-business government interrelations in the social decision making process. As a result, rent-seeking misleads positive analysis and thereby provides no real basis for activities to be either permissible or impermissible. Finally, rent-seeking theorists offer legal changes in order to avoid the resourcewasting activities of individuals in seeking transfers, but do not propose any principle. In other words, the theory of rent-seeking examines rent-seeking but does not explore how the process of legal change will occur obtained when governments have the power to determine change.

2.4. LIMITS TO RENT-SEEKING

In order to limit rent-seeking, liberal solutions based on new political economy are recommended. These solutions are minimisation of state involvement and, constitutional constraint (constrained taxation power, a balanced budget, reduced public provision of commodities.

In *Calculus of Consent*, Buchanan and Tullock (1962) suggested constitutional constraints to limit rent-seeking. According to Buchanan and Tullock, although the control of rent-seeking is not the only objective of the state, this is really a problem of constitutional economy since rent-seeking takes place within a given political order (Buchanan, 1980c, 1986).

Buchanan (1980c) first offered the major application of the rent-seeking concept to the constitutional level of collective decision making. In his 1980 paper, Buchanan (1986) considered the shift in ideas and the changes in institutions within the U.S. over the period 1962 to 1986. This period contributed to the growth of the rent-seeking society and to the increasing disenchantment of individuals with the U.S. model of constitutional democracy.

Public choice scholars considered developed democracies and their constitutional solution and ignored the question of the application of the their theories to developing countries. In their studies, they applied the rent-seeking insight to their observations on constitutional economics.

In contrast, Bennett and DiLorenzo (1984) argued that appropriate constitutional constraints are not the best remedy to limit rent-seeking activities. For them, the rent-seeking society has continued to burgeon, but off-budget rather than on-budget. They

concluded that, unless we recognise the limitation of constitutional provisions for reforming the rent-seeking society, there will be no prospect of reform by instituting fiscal restraints on politicians

In the context of reducing the success of such rent-seeking activities, Koford and Colender (1984) considered that the problem of rent-seekers can alternatively be expressed as a problem of devising institutions that can change rent-seeking into profit-seeking. Thus Koford and Colender (1984: 77) suggested the following policies: "the provision of information on the existence of rent-seeking activity, the creation of a climate of moral attitude or an ideology opposed to rent-seeking improved process for adjusting property rights, the creation of sunset provisions so that undesirable institutional restrictions created by rent-seeking naturally erode, the buying out of monopoly positions, changes to the institutional framework so that all rent-seeking is more difficult, and the taxation of specific rent-seeking activities and subsidies for rent-destroying and anti-rent-seeking activities". Koford and Colender then concluded that the primary way to reduce rent-seeking is to establish collective rules either socially or governmentally. But government-type of remedies to limit rentseeking can create new possibilities for rent-seeking. That is why, as a society we need new policies which centre on institutional reforms.

In both developing and developed countries, there is no specific remedy to control rent-seeking. To understand the causes of differences in development performance and how to institute policy reform has proved very difficult. It can be said that in developing countries a Hobbesian state perspective is a more likely consequence from rule by military junta or one party dictatorship (Findlay, 1991). Most of the

developing countries are defined as 'society' in the pre-constitutional situation characterised by the Hobbesian idea. In that circumstance, the gains-from-trade from 'minimal government' are high and constitutional settlement, designed to establish and to enforce property rights with the government acting as the referee is highly predictable. For example, Wellisz and Findlay (1984) concluded that high-levels of protection in developing countries that are totally irrational in terms of theory of trade and welfare, are perfectly explicable in terms of the 'rational' self-interest of the relevant pressure groups in the economy.

According to Mbaku (1992), the most effective way to minimise bureaucratic corruption is first to agree on what it is. If it is a moral issue, than rectification must start with the determination of a common standard of morality. If, however, bureaucratic corruption is primarily a rent-seeking behaviour that is associated with the government intervention in the economy, then the opportunities should be eliminated. If no rents are created by government regulation, then there would be no opportunities to demand and receive bribes since there would be no suppliers. Maybe the best strategy is to eliminate politics from resource allocation. Following deregulation, markets should be allowed to operate without state interference. If artificial scarcities are created and bureaucrats are allowed to allocate them, corruption will inevitably be part of the resource allocation system. If institutional and constitutional improvements are carried on, these changes will lower the level of bureaucratic corruption and rent-seeking. It is true that the total elimination of state controls on economic activity in many developing countries is not realistic even if in theory, total exclusion takes away the incentive for rent-seeking and subsequently

induces bureaucratic efficiency. However, it is realistic to consider that the role of the state should be brought to a minimum in order to provide as few opportunities as possible for bureaucratic rent-seeking.

2.5. CONCLUSION

In this chapter we critically examined the political economy of rent-seeking from different perspectives. First we defined the concept of rent-seeking in both normative and positive senses. Then, we examined rent-seeking in international trade. The main reason for this examination is to provide a basis for the following chapters.

In market oriented economies government places restrictions upon economic activity which give rise to rents in a variety of forms and people often compete for these rents. If the competition is perfectly legal, there will be no rent-seeking activities. In the case of imperfect competition, rent-seeking takes illegal forms such as bribery, corruption, smuggling and black markets. As a result, rent-seeking becomes the reason and the result of, political, economical and moral degeneration throughout society. From the economic perspective, rent-seeking creates inefficiencies, externalities, misallocation of resources and market failure. In political terms, it results in lobbying, bribery, nepotism, interest group monopolisation, smuggling. For the moralistic point of view, the values expected in society as good and true are debased and destroyed and, as a consequence, the valueless becomes the dominant idea.

Tullock (1967a) states that governments do not introduce tariffs in the absence of interest group lobbying. In this game, the principal actors such as the voters, the bureaucrats, the media, the interest groups, and the legislators assume the role of rent
creators. For example, in the political market for wealth transfers legislators become brokers. While special interest groups demand such transfers, more general groups, including individual voters, supply such transfers. Finally, the bureaucrats play a significant role in political markets not just to implement brokerage policies but also to influence the demand side of the market. It can be said that all these groups make big contributions to increase rent-seeking and the dissipation of wealth in society.

It has been argued that the cost of rent-seeking to society, particularly, in developing countries, can become very high and, in the long-run, may even produce irreparable damage from the moralistic, economic and political perspective. Unfortunately, if we consider that many rent-seeking activities may be concealed and take the form of failed bids, aborted enterprises, waste and threatened but never activated public policies, their consequences assume a major dimension.

In order to cure the problem, the first remedy is to measure the cost of rent-seeking. However, measurement is very difficult, even in the Western economies since we do not have good measures of rent-seeking cost at the present time for theoretical and empirical reasons. Yet despite all these difficulties, there are still numerous ongoing attempts at devising appropriate technique to measure rent-seeking.

SECTION I

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NORMATIVE RENT-SEEKING

CHAPTER 3

RENT-SEEKING AND PROPERTY RIGHTS

- 3.1. INTRODUCTION
- 3.2. RENT-SEEKING AND PROPERTY RIGHTS IN THE DEVELOPMENT PROCESS
- 3.3 RENT-SEEKING COMPARISONS IN DEVELOPED AND DEVELOPING COUNTRIES
 - 3.3.1. The New Political Economy in Developing Countries
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- 3.4 RENT-SEEKING IN TURKEY
 - 3.4.1. Political Phenomena
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 - 3.4.4. Rent-Seeking Studies in Turkey
- 3.5. CONCLUSION

"When we interpret rent-seeking activity as an abridgement of property rights, then traditional rentseeking is undesirable if the individual or society is inadequately compensated for the transfer of resources that takes place"

Patric McNutt (1996:164)

3.1. INTRODUCTION

Many developing countries are in a vicious circle of low living standards (low per capita national income, unequal distribution of national income); poverty (poor health and education opportunities); low levels of productivity; high population growth rates; high unemployment; high foreign debts; underdeveloped industries and high dependency on agriculture (Thirwall, 1991). In addition to these common characteristics, developing countries also have weak economic and political institutions such as unprotected property rights, absence of a constitutional framework and an undeveloped government that cannot function properly.

In this chapter, we examine property rights issues in the development process in order to examine some normative aspects of rent-seeking in the Turkish case. The normative theory of rent-seeking examines rent-seeking from a welfare economics point of view. Issues such as monopoly, externalities, public goods, trade protection, moral/legal and social customs in society etc. play a very important role. In other words, "normative theory concerns the issue of how costly such activities are to the economy" (Tollison, 1982:579). Our main purpose is to examine the normative rent-seeking in the context of property rights in order to analyse whether the natural propensity of individuals to seek rents is socially useful or socially wasteful and depends upon the moral, legal and social constraints in Turkish society.

3.2. RENT-SEEKING AND PROPERTY RIGHTS IN THE DEVELOPMENT PROCESS

In the Keynesian view of the economy it was accepted that governments generally play an important role in stimulating economic activity by operating their functions appropriately and effectively. In particular, the main functions of government in both developed and developing countries are expected to be maintaining public services, influencing attitudes, shaping economic institutions, influencing the distribution of income, influencing the use of resources, controlling the quantity of money, controlling economic fluctuations, ensuring full employment and influencing the level of investment.

There is no doubt that we all need government to protect us, to secure our rights from violation and to provide public goods that cannot easily be provided through ordinary market processes. The ability of governments to use their monopoly of legitimate forces is central to the fulfilment of those tasks. However, this monopoly power may be used for other purposes. Governments may do things for reasons that are essentially corrupt, such as giving favours to their supporters. Therefore, governments may fail either because they do too little, or because they do too much. In many developing countries, the degree of economic power of governments dominates their political power, since they find it difficult to isolate the economic role of the state from the political, social and military.

If governments act wisely economic growth and political stability may be achieved. Nevertheless, if they do too little or too much growth and stability may be delayed. For instance, protectionism in trade in many developing countries is still seen as one of

the main functions of a dominant state¹. This point led Hayek (1944) and many other liberal economists to argue that an extension of state ownership or of the forms of the state involvement in the economy, necessarily gave rise to a totalitarian, repressive political system.

Indeed, in many developing countries, governments fail to maintain equality, promote the exploitation of one class by another and neglect public services. At the same time, they may put in place excessive regulatory controls and end up with over spending. More importantly, as much of the literature on rent-seeking notes, rather than protecting rights from violation, governments use their power as an instrument of violation of property rights. As is well known, if capital formation is one of the conditions of economic growth, the existence of a law of property is one of the conditions of capital formation. With the concept of property we mean the legal right to exclude other people from using a particular resource. In order to secure property rights it is necessary for governments to protect public property from private abuse and to protect private property from both public and private abuses. Nevertheless, governments in developing countries often use their authority and their confiscatory power to provide privileges desired by particular politically influential people at public expense (Tullock, 1993a). In other words, if governments cannot or do not want to protect the property rights of the public in order to favour some privileged groups, rent-seeking increases. According to Tullock (1967a), undesirable rent-seeking occurs in the case of involuntary, uncompensated transfers. On the same lines, McNutt

¹ Economically, politically and socially dominant state.

(1996:164) emphasised that "when we interpret rent-seeking activity as an abridgement of property rights, then traditional rent-seeking is undesirable if the individual or society is inadequately compensated for the transfer of resources that takes place". If these uncompensated groups are investors whose property rights are not protected and whose welfare losses are uncovered, capital formation is discouraged and this deepens the vicious circle of poverty of developing countries.

Although these unprotected property rights issues seem to be mainly a problem in developing countries, the problem affects both undeveloped and developed countries but to a different degree. It is certainly true that rent-seeking is everywhere, but at different levels. In the public choice approach, it is considered that a theory of property rights is a very important issue and requires a complete theory of 'the state' (see Congleton 1980, 1984, 1991). As an extension of this idea it is also considered that property rights, the state structure and rent-seeking activities are closely interrelated with each other. For this reason, in order to reduce rent-seeking, Tullock (1993a) suggests the following political reforms that might improve violated property rights: qualified majority voting, greater use of referenda, a balanced budget, limits on the size and the extent of government, and better constitutional enforcement.

3.3 RENT-SEEKING COMPARISON IN DEVELOPED AND DEVELOPING COUNTRIES

3.3.1. The New Political Economy in Developing Countries

After World War II many colonised countries began to achieve their independence and chose statism as their development path. This approach to economic development emphasised the role of state control. However, economic planning became highly

politicised and, therefore, rent-seeking intensified. Unfortunately, many of the new constitutions in these newly independent countries were not designed to respond effectively to demand by the people for greater levels of economic and political participation and for structures which reflected domestic realities, needs, customs etc.. In addition, since their institutional frameworks were also developed on the basis on state coercion and not on the institutions of popular participation, the choice of statism put significant amounts of resources into the hands of the bureaucrats and the military, allowing them to manipulate policy outcomes to benefit themselves. On many occasions such as trade protection, control of the economy by the state has encouraged and facilitated bureaucratic corruption, nepotism, political violence and increased the level and the extent of rent-seeking in these countries (Mbaku, 1992).

Increasing political violence and high rent-seeking in many developing countries took the attention of some public choice scholars to understand their political structure and to seek solutions to stop such extreme rent-seeking activities. For that reason, in the mid-1970s, a new political economy started to be applied to politics in developing countries. Public policy is examined from the new political economy perspective with particular reference to the state's role in resource allocation in those countries, on the basis of the behaviour of state regulators and interest groups seeking government favours. Such favours include access to import and other licences, commodities sold at government-controlled prices, subsidised housing, government scholarships for advanced training abroad, etc. As is known, the type of behaviour most often associated with interest groups in these heavily regulated economies is rent-seeking (Mbaku, 1994).

Initial applications of rent-seeking to the developing countries were carried out by Krueger (1974) and Bhagwati (1981)². According to Meier (1991), in applying the new political economy to developing countries, the economic role of the state has to be specified very carefully to know whether the state is autonomous (having its own objectives), or merely passive (responding to the demands of various interests or classes in society).

Findlay (1991) grouped the types of states in the developing countries as traditional monarchies (Saudi Arabia, Morocco, Jordan etc.), traditional dictatorships (Cuba, Paraguay, Haiti etc.), authoritarian states with on the right wing: (Turkey, Egypt, Brazil, Argentina etc.), and on the left: (China, Vietnam, North Korea etc.); the democratic states of Sri Lanka, Venezuela, Costa Rica, Jamaica etc. Findlay stated that most under developed countries today are ruled by military juntas or are one-party dictatorships, and the state tends to dominate civil society. He believes that if the new political economy is applied to developing countries, we can highlight some of the most important problems such as corruption, trade restrictions, import substitution policies, resource allocation, and dependence on foreign capital.

Tullock also stated that the majority of the world's population is ruled by autocracies. Moreover, he predicted that "since 1914, on the whole, democracy has become a less significant form of government and dictatorship more important" (Tullock, 1987:1). Since most autocratic systems are in developing countries, the property rights issue in those countries gain in importance.

² Although some of the early rent-seeking studies were considered without political content the quantitative restriction or tariff was simply imposed exogenously.

Grindle (1991: 42) researched "the applicability of new political economy to conditions in developing countries". He suggested that "new political economy is not applicable to the dynamics of policy making in developing countries when it takes a societycentred approach"³. However, "it might be more applicable when this society-centred approach is replaced with a more state-centred perspective"⁴. In this way, Grindle analysed lobbying by interest groups, the actions of policy makers and the activities of bureaucrats. He considered that although the interaction of individualistic rent-seeking bureaucrats and individualistic rent-seeking citizens does not explain the most critical aspects of the politics of policy implementation in developing countries, it still provides crucial information on corruption, nepotism, bribery between bureaucrats and private businessmen.

On the applicability of the new political economy to conditions in developing countries, Ranis (1991) also analysed and concluded that he is quite sceptical of the relevance of the new political economy to developing countries on the existence of autonomous states. For him, the new political economy will not be enough to explain the whole structure in developing countries since it also consists of customs, traditional institutions, religion etc.

Bagchi (1993: 1729) claimed that "we have to redefine the concept of rent-seeking and its application in order to denigrate all government intervention and virtually to abolish the domain of politics in the developing countries". According to him, in most

³ It is based on assumptions about interest mobilisation and government response to lobbying activities.

⁴ It is based on political elites who are actively engaged in maximising their political power or on rent-seeking bureaucrats.

developing countries, the biggest groups of rent-earners are still landlords and rich farmers. The effect of landlordism has to be taken into account, and incentives under this system in developing countries have to be examined.

Brough and Kimenyi 1986, Kimenyi 1989, 1987, Mbaku 1991a, 1991b, 1992, 1994, Mbaku and Paul 1989, Anderson 1988 and others have concentrated mainly on African countries, in which dictatorships and military coups are both the most common types of rent-seeking. By examining these non-democratic countries either historically or analytically, these writers intended to analyse interest groups and their rent-seeking creation from the public choice perspective. They concluded that the civil and military bureaucrats are the most dominant rent-seeking interest groups in those countries, and bureaucratic corruption and political violence are also the most common rent-seeking activities.

3.3.2. Rent-Seeking and Corruption in Developing Countries

Traditionally, political agents and governmental officials were accepted as guardians of the public interest and when they took office were assumed to cast aside their private interests in order to serve the public. Therefore, rent-seeking activities initially were examined outside the public sector. After this view had been critically questioned in the public choice literature by scholars such as Buchanan and Tullock (1962), political actors were no longer viewed differently from any other actors, since they were also accepted as rational economic agents pursuing their self-interest. It has been considered that compensation to bureaucrats consists of the salary paid by the state and income (legal or illegal income) earned from outside activities. If bureaucrats are able to earn more income from external sources (i.e. from interest groups seeking government transfers or relief from government regulation) than from their regular employment, they will provide some privileges to interest groups and not to society as a whole. Mbaku (1992: 247) claimed that "if the economy suffers from significant levels of regulation, civil servants, whose jobs are to ensure the proper functioning of the regulatory system, may devote a significant part of their time to helping economic agents avoid these laws. In exchange for helping entrepreneurs minimise the burden of government regulation on their enterprises, bureaucrats are provided additional (albeit, illegal) compensation".

However, the degree to which successful rent-seeking takes place within governments depends on the constraints imposed on the leaders by the political system. In other words, politicians, bureaucrats and the military in democratic, developed countries face different constraints from those faced by politicians in non-democratic, developing countries. Therefore, successful rent-seeking by interest groups also differs and should be explained by the institutional constraints imposed by the political system institutions (Kimenyi, 1987).

According to Kimenyi (1987), harmony between politicians (who authorise budgets to bureau), military servants and bureaucrats in developing countries (having nondemocratic institutions) is much higher than in developed countries (having democratic institutions), since bureaucrats in the former are subject to less constraint in their use of inputs and to a greater chance to increase their share of the total budget that goes to bureaucrats. Senior bureaucrats in developing countries are also members of ruling coalitions and are fed by the ruler in order not to lose their continued support.

Furthermore, since in those countries there is no review committee to control bureaucrats or it is too weak to do so, the most important way to transfer rents to the bureaucracy is to capture the freedom to spend heavily on staff.

On the other hand, the utility maximisation motive of bureaucrats in developed countries runs contrary to the desire of the committees that appropriate the bureau's budget. Because the oversight committee's main desire is also to maximise its own utility and to be re-elected, thereby allowing for some degree of discretion by the senior bureaucrats, it will use information from the electorate and special interest groups regarding bureaucratic activities. If these committees find out that bureaucrats' activities are becoming heavily corrupted, action may be taken on constitutional grounds.

Unlike democratic developed countries, in which elected officials are concerned with transferring benefits to constituent interest groups, and therefore monitor the input usage by the bureaucracy, governments in developing countries encourage transfers of income to the members of the bureaucracy by letting them increase the size of their staff and salaries. In particular, many developing countries chose the path of state control and economic planning to confront the problems of poverty and deprivation putting enormous resources at the control of government bureaucrats. This contributed to poor economic growth as resources were squandered by interest groups seeking transfers from the government (Mbaku, 1991a). As a result of such state policies in most of the developing countries, there is significant government regulation which widely supports the activities of bureaucrats %%% regulators at the expense of others.

It is obvious that interest groups in both developed and developing countries attempt to maximise rent-flows to themselves. Concerning the methods to capture political power, however, there are significant differences among developed and developing countries. In developed, democratic countries, regime changes take place according to rules described by the constitution. In developing countries, regime changes usually involve political violence. Because of this pattern the type of rent-seeking behaviour in developing countries differs from that in developed ones. Whilst the most important behaviours in developed democratic countries are lobbying, bribery and contributions to the campaigns of legislators, in developing countries political violence and high levels of bureaucratic corruption usually represent the two most important aspects of rent seeking behaviour. Military coups are counted as the most successful rent-seeking activities. As frequently occurs, high level bureaucratic corruption involves bribery. Many different forms of activities are designed to influence bureaucrats in order to gain access to a closed economic sector, and, as a result, some interest groups (businessmen) receive a state subsidy, or a transfer from the government. Nevertheless these bribes do not spring from the interest groups, as happens in developed countries, but from the rulers to secure the system.

In advanced countries, groups invest in lobbying in order to have laws passed which will create rents which they hope will accrue to them. However, the existence of freerider problems constrains investment in the process of rent creation. The amount individuals are willing to invest in the rent-creation process will be influenced significantly by what proportion of the rents these individuals expect to receive. Rent-

will have to expend additional resources to compete for these rents once they are created (Mbaku, 1992). In contrast, many developing countries have governments in which legislatures do not exist or do not function properly. For example, many African countries are ruled by decree, with legislators serving at the pleasure of the ruler, who is usually either a military or a civilian dictator. In particular, the military participates in the political resource allocation system either by capturing the apparatus of government together with civilian bureaucrats or by protecting civilian dictators who rule the country. These rulers have a monopoly on the creation of legislation and by degree, on rents and have significant inputs into their allocation. In addition, unlike the situation in politically open/developed societies, the free-rider problem is less of an issue in rent-seeking dictatorial systems.

According to Mohammed and Whalley's (1984) taxonomy the most common forms of rent-seeking behaviours are: i) external sector control, ii) goods market control, and iii) controls of the credit markets.

On the basis of Mohammed and Whalley's taxonomy, regarding government regulation of *goods markets*, low-income countries have a propensity to undervalue agricultural commodities. This policy represents a direct manipulation of the domestic goods market and results in a transfer of wealth away from the agricultural sector. Mbaku (1991b) also stated that the agricultural sector in developing countries is the source of a large part of the resources used by the government to subsidise politically active groups. The government extracts a significant surplus from the agricultural sector and uses the funds to purchase security for itself. "Rent extraction from this sector is undertaken by the government: i) establishing price control regimes which force foodstuff prices below their equilibrium (market) levels and thereby allow urban dwellers to receive significant benefits; ii) placing restrictions on the ability of farmers to export their commodities. Commodities must be sold to government marketing boards, which have a monopoly on their export. The state agencies purchase crops from farmers at below world market prices and sell them competitively abroad. The surplus so extracted becomes part of the pool of resources available to the military and civil bureaucrats for the purpose of providing transfers to their supporters such as business groups and politicians" (Mbaku, 1991a: 188). For the most part, therefore, agricultural producers are the losers in this transfer.

External sector controls involve restrictions on the foreign trade sector of the economy. These restrictions can be in the form of import licences, tariffs, quotas foreign exchange rationing combined with export promotion. Governments increase the number of regulations in order to achieve lower trade deficits (Kimenyi, 1991). Developing countries, in particular, experience more stringent controls on the external sector in order to achieve lower trade deficits than their counterparts. If, for example, the state restricts the import of certain commodities, then those entrepreneurs who have been granted permission by the government to produce the product or service at the supernormal price will earn above normal profits. The government, in its regulatory activities, can also impose additional restrictions on export, which cause artificially created rights and, therefore, lead to rent-seeking.

The third market in which rent-seeking behaviour occurs *is* in *capital markets*. Governments in developing countries control and protect their emerging capital markets to a greater degree than many governments in developed countries. It is

considered that such markets in developing economies need to be protected until they mature. As a result of the activities of business groups seeking government transfers, capital markets, in heavily regulated economies, too, may not be competitive. When their profits go down they expect governments to save them and protect their shares in the market.

The rents created in these countries are channelled by bureaucrats, the majority of whom are members of the politically dominant group, to group members. Therefore, competitive interest groups in developing countries do not invest directly in rent creation. Rents are created by the ruler in order to provide the resources needed to purchase regime security. Thus it can be said that the military and the bureaucrats in developing countries are the dominant interest groups because of the unique relationship that exists between them. In other words, they help each other by restructuring property rights to redirect the benefits (rents) toward themselves. Since a very powerful constitutional web is either non-existent or very weak, state control results mostly in corruption, nepotism, exploitation and a high level of rent-seeking (Mbuku, 1991b).

In the democratisation process, main similarities and differences between developed and developing countries can be summarised as follows:

i) In both democratic and non-democratic systems, interest groups are utility maximisers. In both systems, public servants (the military and the bureaucracy) engage in rent-seeking activities to maximise their utility. However, in each system, there are significant differences in the behaviour of the various interest groups, rent-seeker bureaucrats, military officers, legislators, etc. While bureaucrats and military servants

can be controlled by constitutions under the democratic system, this does not happen in non-democratic countries since they are the dominant interest groups.

ii) In a non-democratic system, bureaucrats and military officers are members of the government and so can easily transfer rents to their group members. In democratic systems, rents are created by legislators and allocated according to rules designed by legislators. If bureaucrats do not perform according to the wishes of electorates, legislators who need to seek re-election will take action to correct matters.

iii) Similarly, in a democratic system, the rents created become public goods, and even groups which did not invest in their creation can compete for them. In non-democratic systems, the rents are not available for individuals outside the dominant groups to compete for. In that case, violence by the military may exclude others from their share. iv) Another very important difference is that, in democratic systems, when change of regime takes place, it happens according to rules prescribed by the constitution. In non-democratic systems, the regime change ends up in political violence and people who want regime change may lose not only their investments but also their lives if the coup attempt fails. However, the cost to those who invest in regime change in democratic countries is limited to their actual investment in the election campaign, that is to say their rents.

v) Furthermore, "in democratic systems, once rents are created they become a type of collective consumption good to be competed for by all groups including those who did not invest in their creation" (Browning, 1974:378-381). Such rents, therefore, will be allocated by legislators or legislatively determined rules. However, in a non-democratic system, once rents have been created, the government will have significant

input into their allocation in order to distribute them to its supporters to secure its place. Since he will have a monopoly power on these rents, he will distribute most of them to bureaucrats or military servants. For these reasons, in non-democratic countries, people do not invest in lobbying legislators or the dictator. In democratic countries they do (Mbaku, 1991a).

3.4 RENT-SEEKING IN TURKEY

There is a great deal of casual evidence on pervasive rent-seeking in Turkey in such different areas as trade, mass media, the bureaucracy, the military etc. Although there have been some attempts to measure the extent of such rent-seeking activities, at present there is little evidence of comprehensive analysis. To analyse rent-seeking economies in Turkey, we should also look at the nature and role of the Turkish state (Demirbas, 1998a, 1998b, 1999a, 1999b). Without understanding its authoritarian structure it is not possible to measure rent-seeking costs properly.

According to Findlay's (1991) specification types of state, Turkey is one of the rightwing authoritarian states. If rent-seeking analysis is applied to Turkey, this applicability can highlight some of the most important problems of Turkey such as the traditionally dominant state structure, interest groups' politics, corruption, trade restrictions and import substitution policy, resource allocation, monopolistic restriction and dependence on foreign capital. In particular, it might be much more meaningful, as Grindle (1991) stated, when the conventional society-centred approach is replaced with a more state-centred perspective⁵.

⁵ It bases on political elites who are actively engaged in maximising their political power or on rentseeking bureaucrats.

Although the interaction of individual rent-seeking bureaucrats and rent-seeking citizens does not explain the many critical aspects of the politics of policy implementation in Turkey, an analysis of interest-group lobbying, the actions of policy makers and the activities of bureaucrats is an important aspect of political participation which redefines the concept of rent-seeking and government intervention in Turkey. What are the main reasons for rent-seeking in Turkey? To answer this question we should first examine the reasons for rent-seeking in Turkey.

They fall into three categories, political, economic and sociological. Although they are interrelated with each other very closely, we will examine them separately.

3.4.1. Political Phenomena

From the public choice rent-seeking literature, we recall that rent-seeking occurs through the political process and that, the best way to limit it is by limiting the activities of government. Because rent-seeking arises as a result of state intervention within markets to promote monopoly and economic regulation, the most effective way to promote monopoly rents in an industry is to pass a law to restrict output and to license entry (Buchanan, 1980a).

In Turkey, the state is traditionally very dominant (Heper, 1992a). When the state has that much power, passing legislation favourable to one industry or one firm, or restricting output or licensing entry is easy. Rent-seeking occurs without opposition. Despite having democratic institutions and processes it is still expected that the Turkish state, as a consequence of its strong tradition, must intervene directly to solve a wide variety of problems. In this sense, even the representatives of the private

industrial sector are an extension of this strong tradition. Naturally, to maximise their own benefits, all interest groups in Turkey seek government favour that always reflects the state ideology. Accordingly, this process encourages political corruption, bribery, lobbying, nepotism, interest group monopolisation, smuggling and bureaucratic disfunctions.

For example, in Turkish politic life there are many activities that increase rent-seeking economies. These are; *secrecy* in public sector accounts and in regulatory and budgetary process that deter the public from auditing public sector organisations. *Inefficiency and monopolisation* in State Economic Enterprises, whose management is corrupted as a result of nepotism and some privileges. Whenever they end up with big deficits as a consequence of all these inefficiencies, they are compensated for in the budget. For example, the budgetary share of the State Economic Enterprises increased after 1983 to 2.6 per cent. In 1991, however, it was 2.1 per cent. Total losses of the state Economic Enterprises in 1992 were 24 trillion 896 billion TL of which 8 trillion 170 billion was subsidised from the budget; *financing* political parties from the public purse and *favouring* bureaucrats to allow them to maximise their own benefits, and finally *keeping inflation* very high (for political business cycle reasons) to increase politicians' popularity by taking very short term decisions (Altan, 1994).

3.4.2. Economic Phenomena

In many developing countries, the state plays a very important role in economic development and growth and in influencing market mechanisms. In Turkey, the state subsidises many areas. For example, the state transfers a huge amount of resources to

investment and trade. By practising an import substitution policy during the years 1960s and 1970s, and an export promotion policy after 1980, protectionist policy has been pursued 30 or more years. Tax rebates, tariff setting, export subsidies, special exchange rates, import licences, export credits are some of them that show the state's firm commitment to economic protection and preservation of the status quo in Turkey. In addition to the protectionist character of the state, few pressure groups opposed the implementation of ISI (Import substitution Policy) in the 1960s and the 1970s. In contrast, there was competitive rent-seeking between interest groups, particularly among business interest groups. From the rent-seeking perspective there were three main trade policy measures: the quota and licensing system, guaranteed deposits as well as tariffs, taxes and import subsidies. The quotas and licences were of central interest to bureaucrats like the State Economic Enterprises (SEEs), the State Planning Organisations (SPOs) and Central Bank. This kind of protection provided numerous opportunities to business groups for the exploitation of insider information, favouritism and bribery. Far from being a transitory phenomenon, rent-seeking categories either persisted or were replaced by new ones in post-1980 Turkey. For example, the major area of rent-seeking and creation under the liberal model was the abuse of export subsidies through fictitious export, which is also known as ghost export. The fictitious export issue came out in the shape of over-invoicing or false export in order to benefit from export incentives or tax rebates. Later, this application raised serious questions about both the short-term success and the long term viability of the export-led growth strategy (Esmer, 1991).

Similar cases occurred in investment before and after 1980. Unplanned subsidies and

incentives to investments created further *fictitious investment*. That means that although there was no actual investment, all subsidies borrowed from Turkish Development Bank were distributed to enterprises. These subsidies were called investment credits.

Another economic reason which provided a base for the rent-seeking economy in Turkey was *Extra Budgetary Funds* which were first established to finance public sector projects and which later gave the government extraordinary freedom to increase its spending. Naturally, so much freedom to spend public resources for government brought another dimension to the rent-seeking economy in Turkey. For example, Extra Budgetary Funds (EBF) increased every year until 1990, and constituted an alternative invisible public sector budget. These funds were financed principally by levies on transactions and were subject to misallocation since the authorities showed a preference for shifting charges on from central government resources to special funds. After 1990, as a result of widespread criticism it was decided to bring these funds under control. While the number of funds was 150 in 1984, by 1993 they had fallen to 63 in 1993 and later they were included the budget.

3.4.3 Sociological Phenomena

The moral, legal and social attitudes in society are very important and enable us to evaluate rent-seeking either as socially wasteful or as socially useful. If there is political and economic corruption in a country, it will definitely affect its moral and legal structures. On the other hand if the power of government is constrained by the constitution, custom and morality can protect the individual's rights and 'bad' rent-

seeking can be controlled, even if it cannot entirely be eliminated (Rowley, 1988b). In the Turkish case, the power of the state comes from tradition and cannot be constrained only by the constitution. For this reason, it has always had a comparative advantage in deciding and applying any rule or any policy. In the absence of any control mechanism, governments in Turkey have also been largely responsible for this process. For example, *bribery, lobbying* and *smuggling* after 1980 have become very obvious. So that, democratic institutions, competitive mass media, decentralisation in government, higher per capita incomes, a more equal distribution of income, urbanisation and education have all been affected very badly by the overall corruption level of the government. These changes have proved that how moral values can change as a result of this politic and economic corruption.

3.4.4 Rent-Seeking Studies in Turkey

In order to measure the macroeconomic effects of rent-seeking Katz and Rosenberg (1989) estimated the proportion of government spending and the proportion of GNP wasted in rent-seeking within the government budgetary allocation, including transfers, in 20 countries, during the period 1970-1985. Turkey was among these countries. Katz and Rosenberg found that rent-seeking as a percentage of the budget was at its lowest rate in Switzerland with 1.28 % as an average and 2.68 % as a maximum. On the other hand, in Egypt the respective rates were 10.19 % and 24.08 %. In the Turkish case, average rent-seeking as a percentage of the budget was 7.70 % and maximum rent-seeking as a percentage of budget was 18.55 %. According to Katz and Rosenberg, these results show that well established developed countries with fixed

power structures have less waste than developing countries, in which the relative power of pressure groups shifts over time as they strive to find their political and social identity. For Katz and Rosenberg countries such as Egypt, Mexico, Turkey, Italy, Israel should attempt drastic action to reduce their budgetary rent-seeking waste.

In the tax rebate scheme for exports, Yeldan and Roe (1991) argued that, in the 1980s, the nature of rent-seeking shifted from protection instruments towards subsidy instruments. They also hypothesised that rent-seekers target the subsidy promotion scheme and claimed that, even in a liberalised open economy regime, there might still exist incentives for private agents to undertake activities. In addition, beside being a source of high income losses for the central government budget, the tax rebate system was held responsible for the emergence of the 'fictitious' exports. Milanovic (1986) argued that the value of such fictitious exports stood at about \$1 billion in 1984, or 14 per cent of the total export revenues of that year.

In their studies, Altay (1994a, 1994b), Devrim and Altay (1994), Aktan (1994) have discussed rent-seeking phenomena in Turkey. Although they have not applied any empirical techniques to measure rent-seeking activities, they elaborated the main reasons and suggested some policies such as institutional and constitutional changes. In order to measure rent-seeking activities in Turkey, Onculer and Crosan (1998/99) extended Tullock's (1980b) rent-seeking model to the case of a risky rent and analysed an experimental rent-seeking game of the same type for Turkey and the USA. They found that rent-seeking expenditures are significantly higher than Tullock's predictions, creating more inefficiency than predicted. They also suggested institutional arrangements to reduce these rent-seeking inefficiencies.

3.5. CONCLUSION

In this chapter, we have examined property rights in both developed and developing countries from the rent-seeking perspective. Our main intention has been to show that the new political economy can be used with some modifications, to highlight some very important issues such as corruption, bribery and trade protection in developing countries. Based on Findlay's (1991) study and Katz and Rosenberg's (1989) empirical findings, we classified Turkey in the group of developing countries in which the state is traditionally very strong but there are also some democratic institutions that appear in charge.

In chapter 4 we will expand these findings in more detail and apply some measurement techniques in order to study rent-seeking in both developed and developing countries much more closely. Our main intention is to find out whether rent-seeking in developing countries is significantly higher than developed countries or not, and why if it is higher.

CHAPTER 4

RENT-SEEKING IN DEVELOPED AND DEVELOPING COUNTRIES:

CROSS SECTION AND TIME SERIES STUDIES

4.1. INTRODUCTION

4.2 DEVELOPMENT ISSUES AND BUDGETARY ALLOCATIONS

- 4.2.1. Katz and Rosenberg's Model and 20 Countries
- 4.2.2. Cross-Section Results, 1970-1994
 - 4.2.2.1. Spearman's Coefficient of Correlation by Ranks
 - 4.2.2.2. Two Cross Section Studies for 20 Countries

4.3. A TIME SERIES STUDY FOR TURKEY

- 4.3.1. Cointegration Tests and Unit Root Test for Order of Integration
- 4.3.2 A Time Series Study for Turkey, 1960-1994.
 - 4.3.2.1. The Engle-Granger First Stage Estimation for Turkey
 - 4.3.2.2. Error Correction Mechanism (ECM)

4.4. CONCLUSION

"Developed economies with established hierarchies tend to be less wasteful than less developed economies, which are typically still trying to find their political and social identity by shifts in the relative power of pressure groups"

E. Katz and J. Rosenberg (1989:140)

4.1. INTRODUCTION

In chapter 2, we examined the political economy of rent-seeking from different perspectives. First, we defined the concept of rent-seeking starting from the Physiocrats. Second, we discussed rent-seeking as normative and positive rent-seeking. Then, we reviewed rent-seeking types, its critiques and some empirical studies to reach an overall perspective about it. In order to examine rent-seeking from the normative side, in chapter 3, we looked at rent-seeking phenomena in both developed and developing countries from the property rights perspective. By doing that, we argued that rent-seeking activities differ significantly between these two groups of countries as a result of major differences in their institutional settings and democratic traditions.

Although we claimed that rent-seeking is more extensive in developing countries than developed countries, we did not apply any measurement techniques to see if the extent of rent-seeking differed significantly between these two groups of countries and, if it does, what the reasons are.

In this chapter we look at the normative rent-seeking issue empirically and apply Katz and Rosenberg's measurement technique for a longer period (1970-1994 instead of 1970-1985) in order to test whether rent-seeking activities differ between developed

and developing countries.

In their study, Katz and Rosenberg presented quantitative measures of rent-seeking for 20 countries. By extending Katz and Rosenberg's time period, which was for the period 1970-1985, we shall examine a cross section of the same 20 countries during the period 1970-1994 to see if the Katz and Rosenberg's conclusion (which is that budgetary waste as percentage of GNP in Turkey is 1.78, whilst this ratio is only 0.19 for Switzerland) is robust. In addition, we shall conduct a time series study for Turkey during the period 1960-1994. In both studies, we shall use Katz and Rosenberg's measure of rent-seeking, since it captures waste as a proportion of government spending for the government's budgetary allocation.

Katz and Rosenberg (1989: 140) stated that, "strong property rights reduce rentseeking activities". The property rights issue, as we discussed in chapter 3, is one of the most important subjects in many developing economies. We consider that these empirical studies related with property rights may help us to understand rent-seeking in many developing countries and especially in Turkey (see also Demirbas, 1999b).

4.2. DEVELOPMENT ISSUES AND BUDGETARY ALLOCATIONS

Katz and Rosenberg (1989) considered that government transfers generate waste and lower actual national income¹, whilst not necessarily changing the accounting of national income². Thus, they offered a method for measuring the waste due to rent-seeking which results from the government's budget. Their measure of rent-seeking was related to changes in government *spending* rather than only changes in

¹ It is considered that scarce resources are wasted, since they are used by economic acents to obtain monopoly power and not used in productivity increasing activities.

² Indeed, even the composition of accounting national income might remain unchanged.

government transfers alone. Katz and Rosenberg (1989:138) claimed that "to the extent government spending uses up some real resources, any rent-seeking in that category is unlikely to be equal to 100 percent of spending. Yet that is what we are forced to assume by the data available" Therefore, Katz and Rosenberg stressed that they may have overestimated rent-seeking when the changes in government spending are considered. In order to capture the total change in the proportional allocation of government spending for different purposes, they use a measure, R_{ij} , which is the measure of total budget related rent-seeking and equals the sum of marginal changes in property rights. To do that, Katz and Rosenberg divided the budget into nine categories including; Health, Defence, Education, Social Security and Welfare, Housing, Other Community and Services, Economic Services, Other Purposes. In addition, they took the changes in each of the nine categories between period (t-1) and (t) as a proxy for rent-seeking. With this study they intended to fill a gap in the literature by examining the macroeconomic effects of rent-seeking, since many studies have dealt mostly with rent-seeking effects of microeconomic government intervention such as government's microeconomic policy or regulation.

Katz and Rosenberg's estimates of rent-seeking induced by the government budget, were based on two assumptions. *First*, it is assumed that every inter-period change in government budget shares arose from rent-seeking activities by special interest groups. This assumption stems from the idea that interest groups lobby government officials. Since government officials would like to stay in the office, they increase their budget to transfer more to interest groups in order to satisfy their demands. Rent-seeking battles take place at the margin in order to alter the structure of property rights over the budget and governments are lobbied in return of benefits. Hence, any change in the proportional composition of total government spending was assumed to be indicative of a waste of resources resulting from rent-seeking. In other words it is assumed that these changes occur from transfers for special interest groups to maximum their benefits. This assumption views government spending as self-serving by the government rather than as an altruistic response to the needs of the public.

Katz and Rosenberg's second assumption was that the aggregate net benefit from this special rent-seeking is zero; that is resources are expended until the marginal benefit from budgetary allocations is equal to marginal cost. Thus, the activities of special interest groups in pursuit of rents are a pure waste of national resources. This point can be explained better by an example. Katz and Rosenberg considered an economy consisting of three sectors: an agricultural, an industrial and a service sector. Initially it was assumed that there was no government intervention in this economy. Later, they considered the case where the government intervened in the economy by taxing people who are employed in the service sector and announcing that this collected tax will be given either to agriculture or to industry. On the assumption that there are no income and substitution effects from these taxes and transfers, it can be speculated that either the agriculture sector or the industrial sector, but not both sectors will obtain these benefits which, in effect, are the tax receipts from the service sector. From the rent-seeking perspective, it is obvious to expect that the agricultural and the industrial sectors will have an incentive to lobby the government in the attempt to divert these funds through themselves. Katz and Rosenberg commented that the amount to be given to either group is equal to the rent-seeking activity and uses up resources but does not increase the size of the national pie. In particular, since these government transfers generate waste, they lower national income productivity but not reduce the national income account, i.e., export incentives or tax rebates. Therefore, this rent-seeking activity is considered as a social cost to the whole society. Another example can be given from Turkey. In the 1980s, when government announced that tax incentives would be provided for the companies that increase their exports, many companies were established in order to benefit from these tax incentives (tax rebated, export credits etc.). While their tax incentives were provided from the budget, these nations' resources were not used in productive areas but wasted for something that did not occur national accounts did not change but its productivity level lowered.

In the next section, in the light of these assumptions, we explain Katz and Rosenberg's technique and show how they estimated the extend of rent-seeking waste due to certain types of government transfers and spending.

4.2.1. Katz and Rosenberg's Model and 20 Countries

Katz and Rosenberg intended to capture the total change in the proportional allocation of government spending for different purposes. Since they assumed that i) rentseeking activity by pressure groups use up real resources, and ii) the total rent-seeking is equal to the total change in the budget's proportional allocation for different purposes, they define a variable R_{ij} as rent-seeking for budgetary allocation as a proportional of overall government spending. R_{ij} is based upon absolute changes in the proportion allocated to different budgetary categories in year (t) over year (t-1) as follows:

$$R_{ij} = \frac{1}{2} \sum_{i=1}^{n} \left| S(t)_{ij} - S(t-1)_{ij} \right|$$
(4.1)

where $S(t)_{ij}$ and $S(t-1)_{ij}$ are the proportions of the budget going to purpose *i* in year (t) and (t-1) respectively, n is equal to the number of categories in the budget, and the division by 2 is done to avoid double counting, j is the number of countries, j = 1,2,3...,20. In Katz and Rosenberg's paper the value³ of R_{ij} is calculated for each year for the period of 1970-1985 for 20 countries by dividing the budget into nine purposes including; Defence, Health, Education etc. The mean values of R_{ij} over time for these 20 countries were calculated as follows:

$$R_{cj} = \sum_{t=1}^{T} R_{tj} / T$$
(4.2)

where T is the number of years and R_{cj} can be viewed as representing the mean rentseeking in country j.

Another measure of the waste induced by rent-seeking is denoted by W_{cj} , which depends on R_{cj} and government expenditure as a percentage of GNP, (G/GNP) that the government expropriates by its spending. Whilst R_{cj} tells of the inefficiency in government spending it may be of little consequence if the government sector is small. Thus, the measurement of W_{cj} is important if a judgement is to be made of the social cost of rent-seeking. This calculation of waste is:

³ Actually, they assumed that most rent-seeking takes place between sub-departments or purposes. So that these aggregated data are likely to lead to underestimates of the amount of rent-seeking taking place.

$$W_{cj} = R_{cj} \cdot \left(\frac{G_{cj}}{GNP_{cj}}\right) \tag{4.3}$$

where G_{cj} is the mean of government expenditure and GNP_{cj} is the mean of national income in each country. Again it is assumed that $0 \le W_{cj} \le 1$.

Our aim is to repeat Katz and Rosenberg's study for the longer period 1970-1994 for the same 20 countries using the same technique. Then we completed our data for additional years from the IMF's Governmental Financial Statistics.

4.2.2. Cross-Section Results, 1970-1994

In Table 4.1, Katz and Rosenberg's results are given in the third and fourth columns, whilst our findings are presented in the fifth and sixth columns in order to facilitate comparisons. Both R_{cj} and W_{cj} , are multiplied by 100 in order to measure rent-seeking in cents per dollar spent by the government, i.e. as a percentage of government spending.
		KATZ & ROSENBERG: 1970-1985		DEM 1970	IRBAS:)-1994
No	Countries	R_{cj} .100	W _{cj} .100	<i>R_{cj}</i> 100	<i>W_{cj}</i> .100
1	Australia	2.87	0.81	4.03	1.24
2	Belgium	2.13	0.73	2.91	1.48
3	Canada	2.61	0.59	3.26	0.74
4	France	1.28	0.51	2.61	1.10
5	Germany	1.38	0.20	2.02	0.61
6	Greece	5.28	1.25	6.58	1.15
7	Italy	7.31	2.65	5.55	2.26
8	Spain	2.92	0.66	5.23	1.76
9	Sweden	2.59	0.92	3.26	1.49
10	Switzerland	2.10		1.77	0.17
11	UK	2.55	0.89	3.12	1.21
12	USA	2.80	0.62	2.40	0.57
13	Chile	5.32	1.99	10.22	2.33
14	Egypt	10.19	5.19	8.22	3.49
15	Indonesia	7.85	1.80	6.47	1.72
16	Israel	7.58	5.43	9.51	4.63
17	Kenya	3.97	0.99	5.48	4.48
18	Korea	6.08	0.99	4.51	0.66
19	Mexico	10.16	1.75	11.10	2.55
20	Turkey	7.70	1.78	9.73	1.86

 TABLE 4.1
 Estimates of Rent-Seeking in a Cross-Section of Countries

where;

 R_{cj} : The mean value of R_t over time (x100 to find the rent-seeking waste, in cents per dollar spent by the government).

 W_{cj} : A measure of the waste induced by rent-seeking for budgetary allocation as a percentage of GNP (x100 to find the rent-seeking waste, in cents, per dollar spent by the government).

As can be seen from Table 4.2, after we altered the period and extended it from 15 years to 25 years, we compared both Demirbas results and Katz and Rosenberg results to see if there were significant differences. Despite few major changes we discovered that many countries moved only one or two positions, but stayed in their developing/developed economy groups. For example, Korea was in the 12th place in ranking by W_q in Katz and Rosenberg's study, but climbed to 4th place in Demirbas's. It means that in Korea, rent-seeking was subject to a reduction that is achieved either by reducing the rent-seeking waste as a proportion of GNP or by reducing the government share in GNP. On the other hand, as a developed economy, Spain dropped from 6th to 13th place indicating that rent-seeking activities increased substantially after 1985 up to 1994.

The Turkish budgetary rent-seeking showed a small reduction in the Demirbas study. It was on the 15th place in ranking by W_{cj} in Katz and Rosenberg's but climbed to 14th place in the Demirbas's result.

Before we showed Rank Correlation in Table 4.2 we calculated the rank correlation coefficients of R_{cj} and W_{cj} between Katz and Rosenberg and Demirbas studies. For that, we used Spearman's Coefficient of Correlation by Ranks statistic. Results are as follows:

4.2.2.1. Spearman's Coefficient of Correlation by Ranks

The basic idea to calculate the Spearman's coefficient is the ranking of the variables, i.e. R_{q} and W_{q} between Katz and Rosenberg's study and Demirbas's study. After we assigned appropriate ranks to each set of data, the lowest rent-seeking value being placed first and given a rank of 1, the second lowest value being placed second, and so on, then we applied Spearman's formula, which is as follows:

$$r = 1 - \frac{6*\sum d^2}{n*(n^2 - 1)}$$
(4.4)

So, for R_{cj} , we have $\sum d^2 = 58.73$ and n=20, then in substituting in Spearman's formula, we have:

$$r = 1 - \frac{6*58.73}{20*(20^2 - 1)} = +0.96$$
(4.5)

and, for W_{cj} , we have $\sum d^2 = 19.70$ and n=20, then in substituting in Spearman's formula, we have:

$$r = 1 - \frac{6*19.70}{20*(20^2 - 1)} = +0.98$$
(4.6)

These results show that the coefficient of rank correlation between Katz-Rosenberg's R_{cj} and Demirbas's R_{cj} is +0.96, and the coefficient of rank correlation between Katz-Rosenberg's W_{cj} and Demirbas's W_{cj} is +0.98. In short, there is a good correlation between these two studies' results.

We can also see the distinction between developed and developing countries in the Demirbas's study in Figure 4.1.

DEM	IIRBAS and	l KR	DEMIRBAS and KR			
Countries	Demirbas Rank by R_{cj}	$\frac{\mathbf{KR}}{\mathbf{R}_{ank}}$ by R_{q}	Countries	Demirbas Rank by W _{cj}	KR Rank by W _{cj}	
France	2.61 (4)	1.28 (1)	Switzerland	0.17(1)		
Germany	2.02 (2)	1.38 (2)	Germany	0.61(3)	0.20 (2)	
Switzerland	1.77 (1)	2.10 (3)	France	1.10(6)	0.51(3)	
Belgium	2.91 (5)	2.13 (4)	Canada	0.74(5)	0.59 (4)	
UK	3.12 (6)	2.55 (5)	USA	0.57(2)	0.62 (5)	
Sweden	3.26 (8)	2.59 (6)	Spain	1.76(11)	0.66 (6)	
Canada	3.26 (7)	2.61 (7)	Belgium	1.48(10)	0.73 (70	
USA	2.40 (3)	2.80 (8)	Australia	1.24(2)	0.81 (8)	
Australia	4.03 (9)	2.87 (9)	UK	1.21(9)	0.89 (9)	
Spain	5.23 (11)	2.92 (10)	Sweden	1.49(13)	0.92 (10)	
Kenya	5.48 (12)	3.97 (11)	Kenya	4.48(19)	0.99 (11)	
Greece	6.58 (15)	5.28 (12)	Korea	0.66(4)	0.99 (12)	
Chile	10.22(19)	5.32 (13)	Greece	1.15(7)	1.25 (13)	
Korea	4.51 (10)	6.08 (14)	Mexico	2.55(16)	1.75 (14)	
Italy	5.55 (13)	7.31 (15)	Turkey	1.86(14)	1.78 (15)	
Israel	9.51 (17)	7.58 (16)	Indonesia	1.72(12)	1.80 (16)	
Turkey	9.73 (18)	7.70 (17)	Chile	2.33(15)	1.99 (17)	
Indonesia	6.47 (14)	7.85 (18)	Italy	2.26(17)	2.65 (18)	
Mexico	11.10(20)	10.16 (19)	Egypt	3.49(18)	5.19 (19)	
Egypt	8.22 (16)	10.19 (20)	Israel	4.63(20)	5.43 (20)	

TABLE 4.2Rank Correlation Between Demirbas and Katz and RosenbergResults



FIGURE 4.1. Relation Between Rent-Seeking and GNP per capita for the Period 1970-1994.

The relation of R_{cj} to the level of development proxies by GNPC is illustrated by the scatter diagram in Figure 4.1. It can be seen that the difference between developing and developed countries still exists among countries with high GNP per capita and relatively low rent-seeking for developed countries, and with low GNP per capita and high rent-seeking for developing countries. It is clear that developed countries, like the UK, show less evidence of waste than many developing countries, like Turkey. As can also be seen, there is a tendency for developing countries to congregate in the

upper left hand side of the scatter diagram and for developed countries on the lower right.

In order to emphasise this difference better we have carried out a simple analysis. By taking average rent-seeking and standard deviations of Demirbas's study, we show how waste is comparatively higher in developing countries. If we compare developed countries such as Australia, Canada, Belgium, France, Germany, Spain, Italy, Sweden, Switzerland, UK and USA, with developing countries such as Chile, Egypt, Indonesia, Israel, Kenya, Korea, Mexico, Greece and Turkey, we find that:

 TABLE. 4.3. Average Rent-Seeking and Standard Deviation of Demirbas's

 Study

	Average Rent-seeking		Standard Deviation	
Countries	R_{cj}	W _{cj}	R_{cj}	W _{cj}
Developed Countries	2.73	0.89	0.84	0.48
Developing Countries	7.71	2.46	2.34	1.34

We can test the null hypothesis that the population mean of developing countries is equal to the population mean of developed countries. To conduct the test, we selected a sample of 12 developed countries and 8 developing countries. When sample sizes are small, less than 30, and we assume both populations are normally distributed, the test statistic has approximately a t distribution.

The test statistic value can be calculated as -6.82 using mean and standard values as shown in Table 4.3. This value is a realisation of a random variable approximately following a t-distribution with degrees of freedom of 18.

The critical point in a one-tailed test with $\alpha = 0.05$ for a t-distribution with df = 18 is -1.73. Then, we rejected the null hypothesis that the mean values of two populations are equal to each other. In other words the mean value for developing countries is greater than that for developed countries.

4.2.2.2. Two Cross Section Studies for 20 Countries

Following the Katz and Rosenberg argument, we may examine rent-seeking in both developed and developing countries. Our intention is to see if there is any relationship between quantitative measures of the 'proneness' of different countries to respond to pressure groups in determining the composition of their spending and their GNP per capita. The hypothesis is that the higher the national per capita income, as a proxy for level of development, the less rent-seeking will occur. It means that optimal government transfers, better institutional development and well-protected property rights reduce rent-seeking activities. To test the hypothesis we have used Katz and Rosenberg's method for 20 countries, but this time for the period 1970-1994. To do that, we estimated the following regression:

$$R_{ci} = \alpha + \beta GNPC_{ci} + \varepsilon_{ci} \tag{4.7}$$

Katz and Rosenberg estimated this linear regression of waste as a percentage of the budget (R_{ci}) on GNP per capita $(GNPC_{ci})$ for 20 countries with the following results:

$$\hat{R}_{cj} = 7.65 - 0.44 \, GNPC_{cj} \qquad \qquad R^2 = 0.61 \tag{4.8}$$

The values in parentheses are t-values. They found that a one unit increase in $GNPC_{qj}$

leads to a 0.44 unit decrease in rent-seeking. The sign is as expected and coefficients are statistically significant.

Repeating this approach for the period 1970-94 yields:

$$\hat{R}_{cj} = \underset{(12.48)}{8.72} - \underset{(-3.76)}{0.31} GNPC_{cj} \qquad R^2 = 0.44 \qquad (4.9)$$

Again, the values in parentheses are t-values. We find that one unit increase in $GNPC_{eq}$ leads to a 0.31 unit decrease in rent-seeking waste as a percentage of the budget. We can see this relation in equation (4.9) for both developed and developing countries in Figure 4.2. Diamond dots are for actual values, square dots are for predicted values.

FIGURE 4.2 Relationship Between R_{cj} and $GNPC_{cj}$ for 20 countries in DEMIRBAS's study



As can be seen from this graph the relationship between variables is negative. In other words any increase in GNPC leads a decrease in R (rent-seeking) activities.

We now carry out a significance test on the slope parameters for the equation (4.8), and (4.9). Our null hypothesis is that slope values for both equations are not significantly different from each other. Since the sample size is smaller than 30 (n = 20), when we carry out a significance test we will obtain -5.21 as t-value..

Since the computed value of the test statistic is t = -5.21, which is bigger (in absolute terms) than the critical value -2.02, and standard error is calculated as 0.08 for both equations, therefore, we reject the null hypothesis that slope values for equation (4.8) and for equation (4.9) are significantly different.

When we estimate the same regression equation for developed and developing countries separately, we obtain:

For developed countries (1970-1994).

$$\hat{R}_{cj} = 929 - 0.42 GNPC_{cj}$$

$$R^{2} = 0.62, \ \overline{R}^{2} = 0.55$$
(4.10)

Values in parenthesis are t-values. At 5 % significance level the critical t-value is -/+ 2.23. We conclude that we cannot reject the null hypothesis that there is no significant relationship between the variables at 5 % significance level, but claim that there is a significant relation at 10 % significance level. The sign of coefficient is as expected.

For developing countries (1970-1994).;

$$\hat{R}_{cj} = 7.10 + 0.69 \, GNPC_{cj}$$

$$R^2 = 0.61, \ \overline{R}^2 = 0.58$$
(4.11)

The values in parenthesis are t-values. At the 5% significance level the critical t- value is -2.09. So we could not reject a null hypothesis that there was no relationship between the variables. There was no significant relation even at 10 % significance level.

As can be seen from our analysis, although we found that there was a significant relationship between rent-seeking and GNP per capita for 20 countries, the same regression equation does not hold when countries are separated into developed and those which are developing.

We now carry out a significance test on the slope parameters in equation (4.10) (which is -0.42), and equation (4.11) (which is 0.69) in order to see if they are significantly different. Our null hypothesis is that there is no significant relationship between slope values. For these hypothesis, since the sample size is small (n = 20) the test statistic value will be -6.9 with 18 degrees of freedom. Since the slope values of equations (4.10) and (4.11) are -0.42 and 0.69, and standard errors are calculated as 0.19 and 0.54, respectively, the computed value of the test statistic is t = -6.9 which is smaller than the critical value -1.73 in a two-tailed test with $\alpha = 0.05$ for a t-distribution. Therefore, we reject the null hypothesis that is the slope values for equation (4.10) and for equation (4.11) are significantly different.

We only applied Katz and Rosenberg's linear regression of waste as a percentage of the budget on GNP per capita to be consistent with their result for the cross section study. In addition to their variables, as presented in their paper (pp. 143), more variables can be added. For example, the number of interest groups (agricultural and industrial organisations, the number of bureaucrats, measurements related with political stability and democratisation process, etc.).

As an extension to this study, we also take into account that cross section studies might not be the best method for measuring rent-seeking when the differences between developed and developing countries are considered. In order to eliminate these shortcomings of the cross section study, we will apply a time series study for Turkey with more explanatory variables. In order to apply a time series technique we need to explain very briefly the methodology of this study.

4.3. A TIME SERIES STUDY FOR TURKEY

In the previous section, we applied a cross-section analysis to examine the relationship between rent-seeking and GNP for 20 countries and concluded that rent-seeking decreases with an increase in the level of development as proxies by GNP per capita. We consider that although cross section analysis gives some interesting results, it is still far from being very comprehensive and analytical. In cross section analysis, all 20 countries were assumed to have similar political system whether or not they are developed or undeveloped economies. In fact, each country has a different institutional background and structure. Since different institutional settings lead to different levels of rent-seeking, the actual consequences of changes in the discretionary power of political agents can be examined in a time-series approach. In order to examine the institutional issue in Turkey in the context of rent-seeking, we undertook a time series study. When we carry out a time series study we should consider cointegration analysis to deal with the long term relationships between variables. Cointegration analysis confronts spurious regression, attempting to identify conditions under which the regression relationship is not spurious. The problem of spurious regression occurs because most economic time series are non-stationary. A stochastic process is said to be stationary, if the mean, variance and covariance of a series remain constant over time. If one or more of the conditions are not satisfied, the process is non-stationary (Charemza and Deadman, 1997).

4.3.1. Cointegration Test and Unit Root Test for Order of Integration

The concept of cointegration was first used by Granger in 1981. Cointegration is the statistical implication of the existence of a long-run relationship between economic variables (Thomas, 1993). The main idea behind cointegration is that if, in the long-run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant. It is possible to regard these series as defining a long-run equilibrium relationship, for the difference between them is stationary (Hall and Henry, 1989).

Charemza and Deadman (1997: 144) defined cointegration as:

Time series x_t and y_t are said to be cointegrated of order d, b where $d \ge b \ge 0$, written as;

 $x_t, y_t \sim CI(d,b),$

If:

1. both series are integrated ⁴ of order d,

2. There exists a linear combination of these variables, say $\alpha_1 x_t + \alpha_2 y_t$, which is integrated of order d-b

⁴ Integration is the representation of a process as a sum of past shocks. A process is said to be integrated of order d ((I(d)) if after differencing d times the resulting process is stationary (denoted I(0))

According to this definition, $[\alpha_1, \alpha_2]$ is called a cointegrating vector. Cointegrating coefficients, which constitute the cointegrating vector, can be identified with parameters in the long-run relationship between the variables. In the case of cointegration, if these variables are cointegrated, they cannot move too far away from each other. In contrast, a lack of cointegration suggests that such variables have no long-run relationship (Dickey et al., 1991).

The order of integration of the variables is one very important topic related to cointegration. In the literature, much of the theory of cointegration has been developed for the case where all series are integrated of order one, that is are I(1). It must be stressed that if variables in a long run relationship are of different orders of integration and the order of integration of a dependent variable is lower than the highest order of integration of the explanatory variables, there must be at least two explanatory variables integrated of this highest order if the necessary conditions for stationary of the error term are to be met.

There are three notions behind cointegration to be mentioned here: spurious correlation, stationary ⁵ time series and error correction modelling (ECM). According to Granger and Newbold (1974), spurious regressions are typically characterised by a very low Durbin-Watson statistic.⁶ If there is a high degree of correlation between two variables, it does not automatically imply the existence of a casual relationship between

⁵ Stationarity of a series implies that graphs of a realisation of a time series over two equal-length time intervals should exhibit similar statistical characteristics. Stationary series have a tendency to return to their original value after a random shock; the mean and the variance of such a series do not change with the passage of time.

⁶ "Spurious regression problems may exist when the adjusted R^2 is higher than the DW statistic; under such circumstances the coefficient estimates are problematic" (Miller, 1988: 31-32)

the variables concerned (Holden and Thomson, 1992). For example, a high R^2 may only indicate correlated trends and a not true economic relationship (Miller, 1991). To remedy this problem, the cointegration technique and error correction modelling are recommended (Bahmani-Oskooee and Alse, 1993).

The most commonly used cointegration technique is the Engle-Granger's cointegration and error correction modelling which involves two stages. *The first stage* determines the orders of integration for each of the variables; that is, differences each series successively until stationary series emerge, then attempts to estimate cointegrating regressions by ordinary least squares, by using variables with the same order of integration. *The second stage* if there is a cointegrating relationship between the variables, constructs the error correction representation of the model.

Since standard regression analysis requires that data series be stationary, the first step is to identify the order of integration of each of the variables. Therefore, we apply the unit root test. Although there are several tests for the presence of unit roots in time series data, the standard testing procedure for determining the order of integration of a time series is the Augmented Dickey-Fuller (ADF) test (Dickey and Fuller, 1979, 1981). The general form of ADF test in levels and in first differences can be written as follows;

$$\Delta y_T = \alpha + \delta y_{T-1} + \sum_{i=1}^m \beta_i \Delta y_{T-i} + \varphi \ T + \varepsilon_T \qquad (\text{for levels}) \qquad (4.12)$$

$$\Delta \Delta y_T = \alpha + \delta \Delta y_{T-1} + \sum_{i=1}^m \beta_i \Delta \Delta y_{T-i} + \varphi \ T + \varepsilon_T \quad \text{(for first differences)} \quad (4.13)$$

where, Δy_i are the first differences of the series, m is the number of lags and t is time. Then the t-statistic on the estimated coefficient of δ is used to test the following null and alternative hypothesis. In the ADF test, "the null hypothesis is that the variable under investigation has a unit root, against the alternative that has not. The substantially negative values of the reported test statistic lead to rejection of the null hypothesis" (Dickey et al., 1991: 72).

 H_{α} : $\delta = 0$ (that is the presence of a unit root in the series levels)

 $H_1: \delta < 0$

Our aim is to test the null hypothesis of the presence of a unit root in the series levels against the alternative hypothesis. If the hypothesis of the presence of a unit root were not rejected one would then test the differences for the presence of a second unit root. If the unit root is set out as above cannot be rejected then y_1 cannot be stationary and it may be I(1) or I(2), or have an even higher order of integration [see for more details, Engle and Yoo (1987), Cheramza and Deadman (1997)].

Since we do not know the true order of d, the model selection criteria such as the Akaike Information Criteria (AIC) or the Schwarz Bayesian Criteria (SCB) can be used to select the order of the ADF regression. To do that we select three lags, then choose the highest AIC to decide which one to apply.

After we test our null hypothesis that the variable under investigation has a unit root, against the alternative that has not and we find out that they are stationary, we apply cointegration analysis to find out if there is a long term relationship between variables. As a first step in establishing a cointegrated relationship between variables, we first test our null hypothesis that there is no cointegration. The rejection of the noncointegration hypothesis shows that the proposed relationship is a valid cointegrating vector which makes the regression of budgetary rent-seeking on the variables nonspurious. Existence of cointegration means that budgetary rent-seeking and the other variables tend to move together. Following recent literature the link between cointegration and the error correction is explored by the two step procedure (Engle and Granger 1987). The first stage is simply to estimate the static cointegrating (OLS) regression, the second is to estimate the error correction model. The equation to be estimated is set out below.

4.3.2. Time Series Study Results, 1960-1994

In order to analyse Turkey's case in more detail, we carried out a time series analysis in which government size and a few dummy variables are added to the equation. Our hypothesis is that the smaller the government size and the higher GNP per capita are (it means that resources are directed to productive areas rather than employing more staff or interest group activities), then the less rent-seeking there will be in the economy, since smaller government will waste of resources less and invest resources for welfare enhancing activities. Turkey is a very interesting country from the viewpoint of an institutional economy. The Turkish state can be classified as a 'strong state', which is "simultaneously capable of resisting pressures and generating public policy initiatives on their own" (Caporaso and Levine, 1993: 183). On the other hand, the interest groups are weak unorganised and seek for protection. The government budget will represent the policy initiatives of the state (the civil and military bureaucrats).

The size of government and its relationship with rent-seeking has been explored by Tullock (1965), Downs (1957) and Niskanen (1971). In the mainstream public choice literature, while Buchanan and Tullock (1962) advanced the central idea that strong interest groups determine the size of the government. Niskanen (1971), using an oversupply hypothesis, has argued that the bureaucracy contributes to the size of government. When rent-seeking costs arise from politico-economic models based on the size and the growth of government, we can employ the size of government variable as an explanatory variable to explain rent-seeking activities. It is true that both "bureaucracy growth and rent-seeking reflect government failure; while bureaucrats as agent provocateurs may induce rent-seeking politicians aware of their re-election constraint" (McNutt, 1996:136). Therefore we expect a positive relationship between rent-seeking (R_i) and government size (GY_i).

On the other hand, the higher the per capita income the lower the emphasis on the need for government transfers. Simply at higher income levels, the margin of interest group competition is likely to be exercised in the market place. However, when the income is low, political allocation yields higher income benefits through transfers relative to the income derived from the market. In other words, it is more profitable for interest groups to invest their scarce resources to influence government policy than it is for them to invest in the market where the returns are low. The competition to control the instruments of wealth transfer is therefore likely to be more vigorous in low income than in high income countries. In sum, the lower the per capita income (GNPC) the higher the political instability and the lower degree of political competition because the ruling coalition always seeks to monopolise the supply of legislation and to dissipate its transfers to the members of the supporting coalition. We therefore expect a negative relationship between the level of per capita income and rent-seeking. In order to capture this relationship we estimate two models. In the first model we excluded dummy variables and in the second we added dummies, and Ln stands for natural logarithm. Dummy variables are added to model to capture Turkey's special times.

Model 1

$$LnR_{t} = \alpha + \beta LnGNPC_{t} + \varphi LnGY_{t} + \varepsilon_{t}$$
(4.15)

Model 2

$$LnR_{t} = \alpha + \beta LnGNPC_{t} + \varphi LnGY_{t} + \chi Dum80 + \delta Dum71 + \gamma Dum74 + \varepsilon_{t}$$
(4.16)

In where;

LnR _t	:The Logarithm of Budgetary Rent-Seeking (Data related with budget					
	1960-1994 in constant prices (1986=100)) from the Government					
	Finance Statistic Yearbook, 1960-1994)					
LnGNPC _t	:The Logarithm of GNP per capita (1960-1994 in constant prices, from					
	the Government Finance Statistic Yearbook, 1960-1994)					
LnGY _t	:The Logarithm of The Government Size (G/GNP) in where G stands					
	for Government Expenditure and GNP stands for Gross National					
	Product from the Government Finance Statistic Yearbook, 1960-1994)					
Dum80	Dummy variable for the 1980 Military Intervention					

Dum74 Dummy variable for the 1974 Cyprus Conflict

Dum71 Dummy variable for the 1971 Military Intervention

The ADF test for order of Integration is shown in Table 4.4.

TABLE 4.4The ADF Test for Order of Integration¹

	Levels		1st D	ifferences		
Variables.	ADF	CV	ADF	CV	Order of Integration	
LnR _t	-0.60(0)	-2.95	-7.32(0)	-2.95	I(1)	
LnGNPC _t	-0.68(0)	-2.95	-6.66(0)	-2.95	I(1)	
LnGY,	-0.10(1)	-3.56	-6.73(0)	-3.56	I(1)	

CV stands for critical value, the number of lags which were chosen according to the AIC are shown in parenthesis².

The results in Table 4.4 suggest that all the variables appear to be stationary in their first differences and are integrated of the same order, the series may be tested for the existence of a long-run relationship between them, i.e. a cointegrating relationship... On the basis of this information, we can now estimate the Engle-Granger cointegration test first stage estimation.

4.3.2.1. The Engle-Granger First Stage Estimation for Turkey

In this section we estimated two Models in order to find out the long-run relationship between variables. Table 4.5 presents these results.

¹ Applying the same tests to first differences to determine the order of integration, the critical value is (are) less (in absolute terms) than the calculated values of the test statistic for all series in all cases. This shows that all of the series are integrated of order one [I(1)], and become stationary after differencing once.

² Table 4.4 presents the calculated t-values from DF/ADF tests on each variable in levels and in first differences. In the case of the levels of the series, the null hypothesis of non-stationarity cannot be rejected for any of the series. Therefore the levels of all series are non-stationary.

TABLE 4.5. Cointegration Regressions

Regress	Model 1	Model 2
α	-1.60	-0.76
	(-2.50)	(-1.86)
LnGNPC,	-1.29	-0.47
	(-2.02)	(-2.19)
LnGY _t	0.88	0.77
	(10.01)	(8.67)
Dum80		1.22
		(1.74)
Dum74		1.21
		(1.72)
Dum71		1.95
		(2.91)
R^2	0.91	0.94
\overline{R}^{2}	0.90	0.93
DW	1.43	1.72
<i>F</i>	162.82	92.08
SC	1.68	0.04
FF	2.96	2.19
Ν	1.01	0.27
Н	0.00	0.16
ADF	-4.83	-5.59
ADF C.V. 95%	-4.00	-5.22

Dependent Variable is LnR_{t}

Notes: t-statistics are in parentheses. Asterisks donate significant at 5%. \overline{R}^2 is the adjusted coefficient of multiple determination. DW is the Durbin-Watson statistic, F is the F statistic-ratio, SC is the serial correlation, FF is the functional form, N is the normality and H is the heteroskadasticity. *ADF c.v. has been taken from Charemza and Deadman (1997) at 5% significance level.

As can be seen from Table 4.5, Model 2 with dummy variables have more explanatory

power than Model 1, and R^2 and \overline{R}^2 are much higher and the signs of all variables are as expected. In Model 2, DW statistic is also much higher.

Since the calculated ADF values are more negative than the critical values we can now

claim that a cointegrating relationship exists between variables, by which mean that

there is a long-run relationship between budgetary rent-seeking (R_t) , GNP per capita $(GNPC_t)$ and Government Size (GY_t) . Now we proceed to its second stage of the Engle-Granger estimation, that is the ECM model.

4.3.2.2 Error Correction Mechanism (ECM)

According to Engle and Granger (1987), if there is a cointegrating relationship between variables, there is a long-run relationship between them. Furthermore, the short-run dynamics can be described by the (ECM). This is known as the Granger representation theorem.

"If:

 $x_t \sim I(1)$, $y_t \sim I(1)$, and the Error Correction Term, $ECM = y_t - \beta x_t$ is I(0), then x and y are said to be cointegrated" (Maddala, 1992: 597). The Granger representation theorem implies that under these circumstances x_t and y_t may be considered to be generated by an ECM of the form:

$$\Delta y_t = \beta \ ECM_{t-1} + \delta \ \Delta x_t + \varepsilon_t \tag{4.17}$$

where β is non-zero and ε_t is white-noise. Having found that our set of variables is cointegrated, we can apply error-correction modelling to describe the short run dynamics. Engle and Granger argue that a simple way to estimate Error Correction Mechanism (ECM) for the dependent variable and to test the statistical significance of the error-correction term is to use a traditional t-test. A negative sign and a significant value for β ($|\beta| < 1$) shows that adjustment is made towards restoring the long-run relationship. Below we present an equation in order to estimate whether short run adjustments are guided by, and consistent with, the long-run equilibrium or not. We

consider the case where rent-seeking, is related to government size, income per capita, and some dummy variables to measure the effects of 1980 and 1971 Military Interventions and 1974 Cyprus Conflict.

This model is as follows:

Model 1

$$\Delta LnR_{t} = \beta \ ECM_{t-1} + \delta \ Ln\Delta GNPC_{t} + \varphi \ Ln\Delta GY_{t} + \varepsilon_{t}$$
(4.18)

Model 2

$$\Delta LnR_{t} = \beta \ ECM_{t-1} + \delta \ Ln\Delta GNPC_{t} + \varphi \ Ln\Delta GY_{t} + \chi\Delta Dum80 + \delta\Delta Dum74 + \gamma\Delta Dum71 + \varepsilon_{t}$$

(4.19)

The ECM results can be seen from Table 4.6 and Table 4.7:

 TABLE 4.6
 ECM (Error Correction Mechanism) for Model 1

Dependent Variable is ΔLnR_i							
34 observations used for estimation from 1961 to 1990							
Regressor		Coef	ficient	t-Ratio			
$\Delta LnGNPC_t$		-1	.16	-1.79			
$\Delta LnGY_t$		0	.28	1.87			
ECM(-1)		-0	.80	-4.02			
$R^2 = 0.36$	\overline{R}^2	= 0.30	DW= 1.	71 F -Stat. = 5.60			
SC= 3.92	FF=	1.32	N= 0.76	H= 0.08			

As it was mentioned above, for Engle and Granger (1987), by using a traditional t-test we can estimate Error Correction Mechanism (ECM) for the dependent variable and test the statistical significance of the error-correction term. A negative sign and a significant value for β ($|\beta| < 1$) shows that adjustment is made towards restoring the long-run relationship. Our results show that ECT (error correction term) is less than one, minus and statistically significant. It means that adjustment is made towards restoring the long-run relationship.

Not only is the error correction term statistically significant but also government size and GNP per capita also statistically significant. In that case only intercept has insignificant value. It shows that one unit increase in the change of GNP per capita causes 1.16 unit decreases and one unit increase the change in government size results with 0.28 unit increase in the change of budgetary rent-seeking in Turkey

Dependent Variable is ΔLnR_t							
34 observations used for estimation from 1961 to 1990							
Regressor	Coefficient			t-Ratio			
$\Delta LnGNPC_{t}$		-	1.02		-1.95		
$\Delta LnGY_t$			0.16		1.79		
ECM(-1)		-0.91			-4.25		
Δ <i>Dum</i> 80			0.75		1.79		
∆Dum74			1.52		3.68		
Δ <i>Dum</i> 71			1.33		3.05		
$R^2 = 0.60$	$\overline{R}^2 =$	0.50	DW= 1.	60	F - Stat. = 6.57		
SC= 3.76	FF=	0.69	N=0.67		H=0.65		

 TABLE 4.7
 ECM (Error Correction Mechanism) for Model 2

In their first differences, all variables are statistically significant and their signs are as expected. Table 4.7 shows the ECM results for Model $2.^3$.

³ In this model, we added three dummy variables to capture the effects of two military interventions and Cyprus conflict on rent-seeking variable. After we add these three dummy variables, we still obtained a negative sign and a significant value for the error correction term. This means that adjustment is made towards restoring the long-run relationship through rent-seeking process.

The coefficient on the ECM for the second model is also negative and significant. This means that adjustment is made towards the long-run relationship. In addition, all variables are statistically significant. In this model, one unit increase in GNP per capita income causes 1.02 unit fall in rent-seeking. Moreover, one unit increase in the change of government size results 0.16 increase in the change of rent-seeking.

4.4. CONCLUSION

In this chapter we have analysed rent-seeking waste arising from government budgetary allocations, following a method suggested by Katz and Rosenberg. We also examined Turkey in a time series framework in order to understand a developing country's rent-seeking structures better.

First our findings confirm Katz and Rosenberg's result of a difference between developed and developing countries. Whilst governments in both developed and developing countries stimulate rent-seeking, and transfer resources from society to a few privileged interest groups rent-seeking in developing countries is much greater than in developed countries. Some scholars like Scully (1991) criticised Katz and Rosenberg's measure as a conceptually incorrect evaluation of rent-seeking associated with government expenditure. Schenytzer (1994) criticised Katz and Rosenberg's measure as their measure of rent-seeking for budget allocation results is incorrect as applied in the different institutional setting of 20 countries. However, we claimed that even if they did not find the best proxy for rent-seeking, Katz and Rosenberg's study still provides a good base for further studies in order to understand rent-seeking issues better.

Secondly, in our additional work on Turkey, we found that there is a cointegrating relationship between rent-seeking as a percentage of the budget R_t and government size (GY_t) , and GNP per capita income $(GNPC_t)$ in our Model 1 and with dummies in Model 2. We found that independent variables help to explain rent-seeking waste in Turkey during the period 1960-1994. In addition to these cointegrated relationships, we showed that adjustments are made towards restoring the long-run relationship between rent-seeking and other variables.

SECTION II

POSITIVE RENT-SEEKING

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CHAPTER 5

THE STATE AND INTEREST GROUP THEORIES AND TURKEY

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5.1 INTRODUCTION

5.2 ECONOMIC APPROACHES TO THE THEORY OF THE STATE

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"The positive evils and dangers of the representative, as of every other form of government, may be reduced to two heads; first, general ignorance and incapacity, or to speak more moderately, insufficient mental qualifications, in the controlling body; secondly, the danger of its being under the influence of interests not identical with the general welfare of the community".

John Stuart Mill (1962:21)

5.1. INTRODUCTION

The understanding of the relationship between the state and society has been one of the main concerns of both political scientists and economists. The study of interest groups highlights this relationship with a number of new approaches. In contrast to the traditional political economists, such as Weber, who analysed the state in a very narrow framework, in the new perspectives the state is seen as an agent that does not act passively in response to the influence of the pressure groups. Indeed, the state can influence the tastes and constraints of the pressure groups. The policies of the state may be endogenously determined by the interest groups that are in competition. As a result, the state may be now viewed more than a provider of basic functions.

In addition, the state structure also differs according to whether the country is developed and underdeveloped. In developed countries, while the state consists of a multitude of agents and politicians who seek political support from i.e., bureaucrats and technocrats, in developing countries, the state has an authoritarian role. As we discussed in chapters 3 and 4, once the state's political and economic structures differ developed and developing countries' rent-seeking activities, therefore, vary significantly. If we go one step further, we will see that semi-democratic countries like

Turkey stand in the mid point of this range and exhibit very interesting case of the state and interest group relation in terms of rent-seeking.

To highlight this point, in this chapter, monism and interest group formation will be examined in semi-democratic Turkey. In particular, Turkish trade policy will be our case study. This examination will help us to build an empirical framework for Turkey, which will be discussed in chapter 6. Before considering Turkish trade policy from the monistic state-interest group relation perspective, we will first examine the state interest groups interactions and related theories in politics and economics.

5.2. ECONOMIC APPROACHES TO THE THEORY OF THE STATE

5.2.1 Traditional Political Economy and the State

In classical economic theory, the basic functions of the state are to supply law and order, to defend the country as well as to protect property rights. In that sense, the state provides a framework of order on which the rest of the economy is built and due to incomplete markets, imperfect information, transaction costs and imperfect competition, the state can potentially play a role in facilitating economic developments (see Weber 1947 and Hayek 1944). According to Weber (1947: 75), "the state has a monopoly power over the legitimate use of coercion in a given region. It can therefore impede a desirable institutional innovation".

New political economists consider that even if the main role for the state is to facilitate development and to promote institutional changes, the state, in reality, extend its spheres of influence well beyond those of a minimal state and be very interventionist. For example, in the 1950s, there was an acceptance of government intervention in the

economy. Of course, Keynesian revolution was one of the main reasons for this acceptance. Then, a wide variety forms of state intervention such as fiscal policies, the extension of public ownership became very popular. However, in the 1970s, the inflationary pressure, the slowdown in the growth of the world economy, the apparent inefficiencies and loss-making of some state enterprises are all seen as a result of government failure. In the 1980s, liberalism in economics and the idea of minimal state became in fashion and the limits of the State's action was discussed again (see Gray 1989).

5.2.2 Economic Approaches and the State

There are several economic approaches to explain the state's decision-making process. Few of them are from: Helm 1989; Grindle 1991 and Grindle and Thomas 1991. According to Grindle and Thomas (1991), these are as follows:

The *first* approach views the state as a *personalised organic entity* with its own values, motivations, and objectives that are independent of the individuals of which the state is composed. As an integrated cell of the state, an individual loses his own identity and the state acts to maximise its own welfare or utility.

According to the *second* approach, the state composes of *a multitude of agents*. Politicians seek political support from various interest groups such as bureaucrats and technocrats as well as business groups. Each agent has his/her own interests, and the state is viewed as an instrument of achieving collective action. It is considered a set of processes, like a machine through which individuals can satisfy some of their interests. The policies of the state are endogenously determined by the competing powers of the

various interest groups.

The *third* approach, as advocated by a wide range of social scientists including Marxists, and similar to the second approach the state is *the agency of a particular group or class*. For Marxists the function of the state is to impose the legal, institutional, and ideological power over the public. By doing that, the state will institute property rights that maximise the revenue of the state

The *fourth* approach, as suggested by Downs (1957), is the state is governed by *a* single political party (or a set of political elite). The party is a multi-person team seeking to control the governing power by legal means. Since its members are assumed to agree on all their goals, the party can be viewed as a single person with a consistent preference ordering.

Although there were many discussions for the favour of and against for these approaches, they stayed on the main stream in order to define the state's decision making process.

5.2.3 Main State Theories in Developing Countries

Showing a very interesting mixture of the first and the third approaches mentioned above, the structure of the state in developing countries displays greater variation in its institutional arrangements than in developed countries. According to Findlay's (1991) classification, the states in developing countries in Asian, Africa and Latin America, range from *traditional monarchies*, through *traditional dictatorships*, to *right-wing* and *left-wing authoritarian states* and, finally, to *democratic states*. Each type has its unique ideology and political organisation. However, the states in all developing countries tend to dominate civil society and have a substantial degree of autonomy in policy making.

For Findlay (1991), the behaviour of the state in developing countries should be examined in multi-level, principal-agent framework. This framework consists of two levels. At the *first level*, the ruler can be treated as the agent of either the people, as mentioned in Locke or Rousseau, or the ruling class, as mentioned in Marxisian ideology. The ruler (a king, a dictator, a president, a prime minister) is assumed as a rational person. Within such a framework, the main problem is monitoring of the ruler's activities to see whether or not the ruler is adhering to the implicit social contract. The conventional principal-agent problem is compounded by the fact that the ruler has a substantial degree of autonomy in pursuing his/her own legitimacy, the legal tradition of the society and manipulating other cultural endowments.

At the *second level* of the principal-agent problem, the ruler employs bureaucrats as agents to assist him/her in implementing laws and rules, collecting taxes, inflicting punishment, securing national sovereignty and providing other services. To do that the ruler implements a reward system that promotes loyalty to the ruler and encourages an ideology that encourages honest and unselfish commitment to himself. Because bureaucrats are also rational individuals and their interests need not to coincide with those of the ruler, they benefit the authority that was given to them by the ruler. Once they collaborate, they begin to concentrate on rent-seeking activities together.

Apart from the collaboration between the ruler and the bureaucrats in the sense of rent-seeking, for Lin and Nugent (1995: 2339), "there is collusion between bureaucrats and others i.e. business groups so as to divide up the revenue of the state by bribe-

taking and rent-seeking". For example, although the least costly way to encourage domestic production is to introduce direct production subsidies, in practice governments often choose tariffs and quotas on imports. The main reasons for this are that subsidies are likely to give rise to conflicts among various producers and bureaucrats find tariffs and quotas easier to implement. It is also possible to think that these tariffs and quotas may generate for government officers some opportunities for bribe-taking.

Of course, the constraints on the ruler's decision-making and the bureaucrat's discretion vary with the nature of the state. These constraints often become more restrictive as the nature of the state shifts from traditional monarchy, to traditional dictatorship, to authoritarian state and finally, to democratic state. If these pressure force the state to reduce its power of intervention, the authoritarian state may gradually transformed into a democratic state, as seen in Korea, Taiwan and Chile.

5.3. INTEREST GROUPS IN POLITICAL ECONOMY

5.3.1 Definitions of Interest Groups

Modern political scientists have emphasised the critical role of interest groups in shaping policies. Economists studying interest groups within the new political economy framework constructed highly abstract models based on strategic choices, policy outcomes and their economic consequences during the 1970s and 1980s.

In order to understand interest group approaches better, we shall first examine the political scientists' perspectives. Second, within the rational choice framework, we shall discuss Olson's contribution. However, before reviewing interest group

approaches from both political science and economic perspectives, the concept of interest groups needs to be defined.

The most basic problem for interest groups studies is the problem of definition. In order to identify the term interest groups, Richardson (1993:1) claims that there are more than twenty terms for what is essentially the same phenomenon: " political group, lobbying group, political interest group, special interest group, organised group, voluntary association, pressure group, protective group, defensive group, economic group, institutional group, associational group, non-associational group, formal-role group, exclusive group, and political group".

Wilson (1990:1) defines interest groups as "organisations separated from government but often in close relationship with government who attempt to influence its public policy". According to Wilson, "interest groups provide the institutional linkage between government and the state and major sectors of society".

Richardson (1993:1) claims that "a pressure group may be regarded as any group that articulates which system or sub-system should make an authoritative allocation". As can be understood from Richardson's definition interest groups are those whose activities have a great influence on the national decision-making process" considered as an extension of authoritative allocation.

Rational Choice theorists concentrate on the study of the formation, maintenance and impact of interest groups. As a one of the well-known rational choice theorists, Olson (1965:74) defines an interest group as "a group of individuals with common interests who are acting on behalf of their common interests much as single individual as a result of their self-interested, rational behaviour".

5.3.2 Interest Groups in Pluralism, Coporatism and Monism

The study of interest groups is enriched by a variety of issues raised in political theory. In the tradition of Rousseau, it has been assumed that interest groups exist to block the interests or opinions of the majority in order to affect public policy by asserting minority rights. According to this tradition, if each citizen represented his own opinion, there would be no need for subsidiary groups within the State. Even if these interest groups cannot be prevented from being established, their number and power should be limited as much as possible. Even today, this view about interest groups has many supporters amongst political scientists.

On the other hand, after examining the possibility of a 'tyranny of the majority', Tocqueville claims that interest groups are necessary in order to establish democracy, because they provide a superior form of participation. With these organisations, minorities can raise their interests. In the tradition of Tocqueville, the classical theorists argued that interest groups stand between the state and the citizens in order to settle their differences and to protect citizens from the interventionist power of the state. They believed that since the state is powerful and the individual is powerless and this inequality can destroy freedom, individuals organised in interest groups may be able to defend themselves from the destructive power of the state. Consequently, democratic values can be protected by participation of interest groups.

5.3.2.1 Pluralism and Interest Groups

In the tradition of Tocqueville, many modern pluralists such as Dahl, Key, Lowl, Truman and Wilson also emphasised the critical role of interest groups in shaping
policies in modern democracies. On the basis of this ideology, in the 1950s and the 1960s, pluralism developed an open, competitive, disaggregated and essentially democratic nature of the policy process.

In general, pluralists claim that all sections of society should be represented with the interest group system, and power should be distributed equally between groups.

Pluralists believe that since the most dominant role of the government is to supply law and order, citizen's freedom can only be protected against state's monopoly power by the existence of a multitude of interest groups, which build a bridge between their individual members and the state. In other words, pluralists see making a policy as the outcome of the interaction of many political interests among the state and interest groups (Coxal, 1980).

5.3.2.2. Corporatism -Neocorporatism and Interest Groups

By stressing the importance of economic interests, corporatist system of interest group representation is considered as a sort of paradigmatic revolution against the conventional pluralist political science. For corporatists, economic policy cannot be successfully implemented unless it is accepted by the major economic interests, since those who control production on both sides of industry have the greatest power.

Schmitter (1970: 13) defined corporatism as "the constituents' units...organised into a limited number of singular, compulsory, non competitive and hierarchically ordered categories...". It means that "corporatism is a system in which single interest groups licensed, recognised or encouraged by the state, enjoy the right to represent their sector of society and work in partnership with government in both the formulation and

implementation of policy sometimes" (Wilson 1990: 22).

For government to secure this consensus, the economic interests need to be organised by means of a well-defined hierarchical network so that government can bargain with representatives of the major labour and management organisations.

Besides pluralist and corporatist diversification, some scholars consider that both pluralist and non-pluralist approaches can coexist at the same time. According to Jardon (1993: 63), "It has not been profitable to spend a decade ignoring the existing literature on corporatism, which deserves attention but not as the foundations of the study of contemporary society".

Consequently, it can be said that there are many approaches to the analysis of the interest groups in political science. Pluralism and corporatism are the most well known approaches in this context. Although there have been major debates between conventional neocorporatists and pluralists, many contemporary political scientists believe that we should not ignore the coexistence of the neocorporatist and pluralist approaches. Instead, every approach should be analysed in its context with the intention to find common ground.

In addition to corparatism and pluralism we introduce the concept of monism.

5.3.2.3 Monism and Interest Groups

According to some scholars, although interest group studies in Western societies establish a critical link between the state and civil society, both the pluralist and corporatist studies miss the notion of the State and remain society-centred. In other words, they fail to include the State into the equation. While pluralists pay little attention to the theory of the State and mostly concentrate on the theory of representative government, in corporatism, the general interest-State theory on the whole remains a crucial missing link. If the pattern of interest group politics is encountered in a polity dominated by a strong State, monism might be the concept to respond Turkish case.

According to Cox (1988: 46), "monism is very different from state corporatism, neocorporatism and pluralism. Actually, it vacillates between state corporatism and pluralism. In monism, there is a one-to-one relationship between the degrees of stateness and the patterns of interest-group politics".

For Heper (1992a,:17), "since the degree of stateness has been greater in Turkey than in many other European countries, for example, France, interest group politics in Turkey can be placed in the monist group".

On the bases of Cox's and Heper's definitions, in this chapter, we will examine Turkish interest group politics from the perspective of monism. Besides pluralism, corporatism and monism, Olson's ideology shall also be mentioned since Olson contributed so much to the interest group formation process. Furthermore, Olson's theory determines the basic reasons to mobilise the rational and self-interested individuals.

5.3.3. Interest Groups in Economic Theory: Rational Choice Theory and Olson

During the 1970s, economists working within a public choice framework paid attention to the political role of interest groups in policy processes. They claimed to show the importance of combining the study of both politics and economics under the name of new political economy (see Mitchell and Munger 1991, Moe 1986). One of the most

important theories in the new political economy and public choice was *rational choice* theory and the most well-known leader of the rational choice theory was *Mancur* Olson.

Rational choice theory examines some key questions to see how political interests affect economic policy-making, such as, whose interests are reflected in pressure group activity? Are some interests articulated more forcefully than others to have a greater influence on policy-making? As was emphasized, the main outcome of the traditional political science view was that the existence of interest groups was natural and their formation was not interesting. However, the interest group theory in rational choice attempts to explain industry protection by the lobbying activities of respective interest groups. Politicians serve the interests of such groups, as long as these groups can offer political support and/or financial rewards. Interest groups may either propose or oppose protectionism depending on the preferences of their members.

Olson's Contributions

Building on his work in *The Logic of Collective Action*, Olson (1965) developed an explanation that is based on the rational choice paradigm in which individuals are assumed to undertake rational self-interested action. Thus, the emphasis was not only on the actions taken by actors, but also on the motivation behind those actions. Olson (1965: 2) argued that, "unless there is coercion or some other special device to make individuals act in their common interest, rational self interested individuals will not act to achieve their common or group interests". Olson explained *selective incentives* as benefits which can be provided for members and effectively withheld from non

members, and which provide a particular gain to offset the cost of belonging. For instance, for Olson, trade unions do not gain by preaching their advantages to the working class as a whole, or even to all the workers in a particular industry, but by providing selective incentives as a part of collective action.

However, the individuals in large groups do not contribute substantial amounts of money or time to their organisation without any obligations, the *free rider* problem emerge, i.e. once the benefit is obtained by a group from the collective goods, the benefits automatically go to every firm or individual in the group. If the individuals in a large group have no incentive to organise into a lobby to obtain a collective benefit, the reason for joining can be explained by altruism.

However, in smaller groups, individuals are easily well organised relative to larger groups as a result of provided selective incentives and eliminates free rider problem. Any number of organisations such as clubs provide selective incentives in the form of insurance policies, group air fares and other private goods at special discounts only to their members, access to statistical and technical publications, legal advice, social clubs, educational conferences and other gatherings. In small groups, individuals can avoid the free-riding prisoners' dilemma by behaving strategically, that is in ways that take account of the effect of their own choices on the behaviour of others. For instance, to eliminate free riders, such organisations put pressure on legislators which enables them to exclude non-members from collective choice. Olson refers to such groups as *privileged groups*. Privileged groups predictably will be disproportionately successful in political markets and will shift political outcomes away from median voters in favour of decisive minorities characterised by high preferences for specific policies.

Criticism of Olson's Interest Group Theory

Olson has been subjected too many criticisms.

Stigler (1974) questioned Olson's by-product theory of selective incentives¹. According to Stigler, if an interest group seeks to add a charge for the provision of collective action, a rival supplier of those services, that undertakes no collective action, can undersell it. A rival group in a contestable market can still bid away the numbers of the interest group with a lower price.

Kimber (1993) also argued against Olson's position and claimed that his basic argument is mistaken. For Kimber, it was wrong to assume that the collective good is provided only if the interest group membership be accounted for and not the rational, self-interested choices of individuals, and by being compelled to belong a group. Another important critique of Olson's model came from North (1981). For North, Olson failed to include the state in his analysis of interest groups. He looked at the pure demand phenomenon and left out the powerful role of the government. North tried to develop a theory of the state in which it is given a pre-eminent role in terms of property rules and rights.From the rent-seeking perspective, especially Tullock (1993a) claimed that "Olson developed a theory of interest group behaviour but he did not focus attention on the potentially high resource losses associated with lobbying competition"(p. 50) and he did not discuss rent-seeking. According to Tullock rentseeking is also subject to free-rider problem and "rent-seekers typically exert

¹ An interest group would be able to charge more than the cost of the services supplied in the case of services that are appropriable as private goods

disproportionate political influence because, if larger, they can coerce their members into collective action by the provision of selective incentives. If they are small and socially cohesive, they overcome the free-rider problem by strategic bargaining"(Tullock, 1993a:51).

Public Choice scholars argue that the self-regarding activities of special groups generally cannot be balanced by encouraging greater members. One group which seeks a protective tariff will not be balanced by another that opposes the tariff. Instead, the opposition group will most likely receive some protection of its own, worsening rather than improving the situation.

Interest Groups, Lobbying and Rent-Seeking

Olson (1982) identifies three circumstances in which a public good such as lobbying can be provided. *First*, the group may be sufficiently small in size that the free-rider problem can be at least partially overcome. Thus the government can redistribute income in favour of a small group: for example, a tariff to protect the firms in a concentrated industry may often be considered as a result of lobbying efforts. In the small group case, however, the amount of lobbying will tend to be less than the amount that maximises profits for the entire group. In any event, the bulk of government redistribution is probably not of the small group variety.

Second, an organisation may be able to coerce individuals into supporting a lobby. Coercion presumably accounts for Tullock's example of the citizens of Tulsa lobbying to have the federal government dredge the river to make Tulsa a deep water port. The citizens would not voluntarily contribute to this effort, but the local government

authority of Tulsa may use its power to levy taxes to finance a lobby. Even so, the lobbying effort would be constrained by the existence of a large number of local governments, by differences of opinions within the locality and by the mobility of people among local governments.

Third, an organisation is financed by selling an essentially private good to people and using some of the proceeds to finance the lobby. This is Olson's 'by product' theory of pressure groups, with the lobbying activity a by-product of an organisation that provides some other non lobbying service. Labour unions and the American Medical Association are examples of lobbies organised in this way.

Most important actors in the political market for rents are politicians and voters. In particular, in the public choice research studies, legislators are modelled as providing a brokering function in the political market for wealth transfers. Voters are very badly informed and casually ignorant.

In the previous section, it has been claimed that the study of interest groups highlights the relationship between the state and the society. In order to develop this argument interest groups-the state phenomenon was examined in both politics and economics taking into consideration the state structure of developing countries. In particular, the pattern of interest group politics that was encountered in a polity dominated by a strong state notion, was matched with the concept of monism for Turkey. By doing so, interest group formation and lobbying activities in Turkey were targeted to be understood from the public choice perspective and rent-seeking. In the next section, Turkish trade policy will be viewed and the discretionary behaviour of interest groups will be analysed.

5.4. MONISTIC STATE-INTEREST GROUP RELATION IN TURKISH TRADE POLICY

One of the ironies of modern public choice theory is that although democratic and autocratic (dictatorships) states have been examined from the public choice perspective, little attention has been given to semi-democratic states, in which the bureaucracy and the military are very strong, but the main democratic institutions, such as parliament, appear to be in charge. Public choice theorists have failed to take into account the state itself as an endogenous agent and the political process for the creation and distribution of rents from the state-centred public choice perspective.

We claim that the public choice approach is not applicable to the dynamics of policy making in semi-democratic systems when it takes a society-centred approach. It will not be appropriate unless the society-centred framework is replaced with a statecentred approach. Only by doing so, will studying rent-seeking, interest groups, bureaucracy, voters, regulations in semi-democratic and non-democratic societies have some meaning. Since political and economic systems of those countries are effected by customs, culture,... etc., the state and interest groups interactions also differ significantly.

In addition, we consider that the society-centred public choice approach for developed/democratic countries may be modified for developing semi democratic countries with the name of the state-centred public choice approach. This modification may be done with the help of Olson's interest group formation hypothesis and Cox's monistic state-interest group approach. Olson's basic assumption of that individuals act as rational individuals in both their economic and political lives, may be combined

with the state-centred approach in order to highlight semi-democratic countries' interest group formation.

To establish democracy in one country, a harmonious relationship between the state and the civil society must be obtained successfully. In the case of a strong state, this harmonious relationship cannot be obtained very easily because there are many obstacles. Lobbying, bribery, bureaucratic corruption and financial contributions become the most common cases because public officers have to compete for contrived transfers for themselves (see Fischer, 1992). That is why the degree of state power in a country has a significant effect on the type of rent-seeking behaviours that develop and flourish in that society. Belonging to the strong state tradition, Turkey had, and still has problems in consolidating democracy. Unless developed in relation to economic and social groups, the monistic approach of the state in Turkey will delay the and deepen the problem.

Our intention is to apply the state-centred public choice approach to the case of Turkey in order to understand the dynamics of its monistic state structure and trade policy from the rent-seeking perspective. After taking a closer look at the strong state-weak business group relation, we may consider the constitutional limitation solution of Brennan and Buchanan (1980), who assumed that each government acts like a monopolist. According to them, political competition cannot limit the government's desire to expand, but constitutional limitations (say on debt, sources of tax revenue etc.,) can do this very successfully. They also state that even if the military and the bureaucracy are much more powerful than the legislative group, constitutions still can limit the state power.

5.4.1 Monistic State and Interest Group Politics in Turkey

While pluralists believe that interest groups make demands upon the state, corporatists stress the degree to which the state uses interest groups not only as a channel of communication but as a means of shaping responsibility for public policy and its implementation with interest groups. In practice, in many democratic countries, the state has both pluralistic and corporatistic characteristics which provide not only a battleground for contending interests but the structure which shapes those interests. In other words, both interest groups and state influence each other in different degrees. As a result, monism gains some legitimacy even for developed-democratic countries not only for semi-democratic country.

When we analyse both democratic and non-democratic systems, we can see that Turkey belongs to neither the democratic nor the non-democratic classification. In many cases, therefore, although Turkey shows many similarities with both, it stands in the middle Since there has been a long tradition from the Ottoman period onward of having a one-to-one relationship between interest groups and a strong powerful state, such an analysis of interest group politics and the rent-seeking process may be more easily understood from the monistic perspective. After this tradition was inherited from the Ottomans, the Republic era also contributed significantly to this strong state tradition. In this section, we will examine the Turkish state tradition proceeding from the Ottomans, through the Republican period. In particular, Turkish Trade companies will be a good example of rent-seeking activities from the 1980s. In the next section we will look at the Turkish trade policy from the perspective of monism.

Monistic Strong State-Weak Business Group Tradition in Turkey from the Ottoman State to the Turkish Republic and an Example

In the history of both the Ottoman Empire and the Turkish Republic, interest group associations had little influence on economic decision-making since the state in Turkey was, and still is, traditionally very strong. While, during the end of the Ottoman period, democracy was considered as the freedom of the bureaucratic elite from the Sultan, during the Republican era it was seen as the freedom of the intellectual-bureaucratic elite from the absolutism of majority, so that these elites could decide what was best for the country (Heper, 1991a).

During the period of 1299-1918, the military leaders of the Ottomans gained more authority and developed a very powerful bureaucratic central system. Since the military played a key role in the establishment of the Ottoman State, the strong-state tradition has been planted in those years (Heper, 1992a; Keyder 1987)). Later, both military and civil bureaucrats continued to play dominant role during the Republican period (Heper, 1992b, 1990a, 199b, 1980, 1977, 1976). For Brown (1989: 399), "the military and the civil bureaucrats charged themselves with guardianship for the political system and the state, even though they represented a minority of the population".

Even after 1918, the *Military*, with the guardianship tradition always stands behind the curtain for an immediate intervention at the same time permitting civilian rule to be in power as well (Heper, 1989). The Bureaucratic elite is the one who followed the military's directions rather than the rule of law. *Politicians*, in turn, stayed very impotent in all matters. It is very interesting to discover that for a great majority of the Liberal and Democratic Elite the state remained a dogma or taboo even to discuss.

Although many of them opposed authoritarianism in their writing, they ended up defending monistic state by saying 'but Turkish case is different' in discussions. As can be expected, *Business Groups* also followed this tradition and, in their relationship with the State, they remained 'outsider' rather than 'insider groups (Heper, 1991b). Under these circumstances, in Turkish case, it can be claimed that not only the military and the bureaucracy, but the political elite and business groups, too, composed with rational individuals who pursue their private interests.

Following the adoption of etatist policies in the 1930s, members of business and the professions emerged as a new group in politics. Later, this new elite group showed themselves in the political office, a significant hostility developed into the civil bureaucracy since they did not want to give up their power easily. As a result of clashes between the underdeveloped business group and the traditionally strong bureaucratic elite, this struggle ended up with the 1960 military coup. During the 1960s, however, a dialogue between these two groups seemed to be developed and the bureaucracy accepted the legitimacy of the new political elite. Although this was a development, in 1971, the military again intervened in the political process. The latest intervention was indirect; and the military did not actually take over the government but closely manipulated the formation of the cabinets and their policies (Heper, 1976). In the economic life, since the military-civil bureaucrats designed a significant role for the business group in the industrialisation process, an import substitution policy was accepted during the 1960s and 1970s. The military-civil bureaucrats provided an explicit influence of the subsidies and incentives from the state. However, the militarycivil bureaucrats continued to perform a central role in the industrialisation drive by

either its direct participation in capital formation or by its indirect interference in the operation of the market mechanism. For example, as direct intervention, the public sector accounted for more than a half of fixed capital formation during the period and most importantly the state economic enterprises have been a major contributor to industrial production. As indirect intervention, "heavy tariff protection, quantitative controls on trade, a fixed exchange rate in the presence of accelerating inflation, price ceilings on the products of the state economic enterprises as well as price support schemes for agricultural products" (Onis, 1992: 87)

Since this state regulated economy, the private sector could not grow up and reach their maturity by themselves to lead economic development as should be. In particular, businessmen and their representatives often by-passed their interest groups to establish direct relations with governments high ranking bureaucrats to develop smooth relations (Bugra, 1991). They knew that the particular policies chosen by both military and bureaucrats would have a significant, positive impact on their profits such as reducing risk, strikes etc.

In the 1980s, even though the central role of the state seemed to shift gradually from the bureaucrats-military to politicians and business groups, for the period of Export Promotion Policy, the attitudes of the military and the bureaucrats were very soon awakened the old tradition. The main reasons for these attitudes were, firstly, the political stability among the bureaucracy and the military based on power and prestige. For them, giving up these privileges was irrational, even if in the name of democracy. Secondly, personal connections in the private sector with the government officials were still very important so that, the term 'interest group' was not understood well.

Rent-Seeking Creation in Turkey

In Turkey, since the industrial-business group is organised into a limited number of singular, non-competitive, compulsory, hierarchically ordered and functionally differentiated categories, it can be claimed that even the representatives of the private industrial sector are a part of this strong state tradition, it is not difficult to understand why the system works like that (see also Demirbas 1998a, 1998b).

As private business developed in Turkey under strong state protection and has been heavily dependent on state subsidies for its long-term viability, this dependency, later created addiction for private business. As a result, two outcomes emerged: "*first*, the presence of an extensive regulatory framework and of direct controls on the operation of markets which encouraged pervasive 'rent-seeking'. *Second*, in the absence of an adequate long-term perspective concerning the future course of the country's economic development private business was encouraged to adopt a progressively myopic approach and to concentrate on investment with an explicit short term bias" (Onis, 1992: 88).

Naturally, as an extension of this historical tradition, business groups developed a more perceptive attitude toward the state. They were aware of the state's dominating presence and when they were asked for their opinions the Turkish Businessmen's and Industrialists' Association expressed the idea that the state, if it chooses to, may crush businessmen even if they have not done anything illegal.

Therefore, when we go to our interest group formation discussion back, even if interest group activity in the industrial sector in Turkey bears a resemblance to both the

corporatist and pluralist models, the strong state tradition in Turkey still leads us to think that the Turkish situation is distinct from both these forms. claimed, but monism. The 1980s are particularly important because there was an attempt to switch from etatism to liberal economy. The strategy of import substitution has been replaced by that of export-orientation and the consequent increase in the internationalisation of the economy (Rustow, 1985). In reality, during the 1980s, the state interest group relations in Turkey continued to manifest monism in the absence of both pluralism and corporatism and the government seemed to have a close affinity with one interest group that of the foreign trade companies.

Foreign Trade Companies (FTCs) are an example of how the interest group phenomenon in Turkey was understood and what their connection with the bureaucracy and the military was. In particular, they are a good example of the Turkish version of monism.

An Example: The Foreign Trade Companies (FTCs) in the 1980s

We claim that the rent-seeking activities in Turkey are mostly concentrated on trade and since trade policies can be used as a tool to protect some special interest groups. In the 1980s, in Turkey, the strategy of import substitution was intended to be replaced by an export-orientation policy as a consequence of a broad series of liberal policy reforms designed by the state elite to achieve social and political integration. During the 1980s, the state-interest group relations continued to follow the tradition of monism and the state came to have more autonomy vis-a-vis interest groups. For example, in 1983, although Prime Minister Turgut Ozal and his team intended to follow a liberal ideology in the economy, most critical economic decisions were taken without consulting the civil bureaucracy, the parliament, the political parties and especially to other interest groups. In one particular case, the government in power helped the creation of one interest group, the Foreign Trade Companies (FTCs), with the intention to start a liberal era:

In fact, the formation of the FTCs was proof of the strong state tradition and its monistic relation with interest groups. The explicit intention of the new legislation was to create a highly concentrated export sector based on a limited number of large-scale companies which would be in a position to exploit economies of scale, especially in marketing, and therefore be able to compete successfully in international markets (Ilkin, 1991). The Turkish Government's Act on FTCs stated that these companies would become eligible for export incentives, such as the payment of export tax rebates and benefit from, continuous depreciation of the exchange rate, access to subsidised export credits and duty-free imports of necessary inputs for exports (Milanovic, 1986). Although the legislation concerning the formation of these companies was very much influenced by the East Asian experiences, in Turkey's case, these foreign trade companies remained dependent upon the state. The share of the FTCs in total exports between 1980-1988 can be seen from Table 5.1

Years	FTC Share(%)	
1981	13.6	-
1982	18.4	
1983	28.6	
1984	45.7	
1985	49.7	
1986	44.1	
1987	26.3	<u> </u>

TABLE 5.1Share of FTCs in Total Exports, 1981-1987

Source: Turkish Foreign Trade Association

As a consequence of the special incentives, about twenty-five to thirty companies maintained organic links with large holding companies directed primarily towards the domestic market. Furthermore, these companies steadily increased their share of Turkish exports and accounted for almost 50% of Turkish exports by the second half of the 1980s (see Arslan et al 1990; Akder 1987; Harrison et al 1993).

Overinvoicing as Rent-Seeking

However, a model of export-oriented industrialisation based on foreign trade companies is clearly in contradiction to the alleged aims of the creation of a liberal economy. Since these companies competed to obtain an additional share of tax rebates, the creation of the FTCs stimulated the so-called 'fictitious exports'² that constituted the most obvious form of rent-seeking (Onis, 1991). In particular, by the late 1980s 'over invoicing' or 'fictitious exports' emerged as an acute problem and raised serious questions about both the short-term success and the long term viability

 $^{^2}$ Fictitious exports means that campanies claime tax rebates for exports on the documents that it did not occur in reality

of the export-led growth strategy. This remarkable degree of over-invoicing mostly appeared in 1987, a year distinguished by the reinstitution of export tax rebates. It is also interesting that the Turkish state, in spite of its strong regulatory and interventionist character, has made little attempt to discipline the companies concerned. The findings concerning the degree of over-invoicing are presented in the next Table. 5.2.

TABLE 5.2.Turkish Exports to OECD Countries and Dimensions of OverInvoicing, 1980-1987 Billion TL and (%)

Years	Turkish Data	OECD Data	Degree of Over
	(TL, Bill)	(TL, Bill)	Invoicing (%)
1980	1,634	1,789	-8.0
1981	2,282	2.239	1.9
1982	2,576	2.328	10.7
1983	2,771	2,461	12.6
1984	3,172	2,903	27.9
1985	4,084	3,773	8.3
1986	4,311	4,578	-5.8
1987	2,349	1,535	53.0

Source: Rodrik (1988) based on the OECD Monthly Bulletin of Foreign Trade Statistics and Devlet Istatistik Enstitusu Aylik Dis Ticaret Istatistikleri Bulteni (Cesitli Sayilar)

In sum, the presence of rent-seeking under both policy regimes, ISI (Import Substitution Industrialisation) (1960-1979) and EPP (Export Promotion Policy) (1980-afterwards) illustrates the paradox of the Turkish state, namely its relative incapacity to exercise discipline over private business in return for the subsidies provided. Between 1960 and 1990, the Turkish state provided considerable incentives to the private sector under both import substitution and export oriented regimes (Onis, 1991). It can even

be argued that the magnitude of the 'spoils' involved during the liberal phase may have been larger than those under the pre-1980 regime.

5.4.2 A Brief History of Turkish Trade Policy

In the context of trade policy, Turkey has experienced three major structural adjustment programs in the last 40 years, namely in 1960, 1970 and 1980. These programs are the turning points in the country's economic and political history. In the early 1950s, there was a strong bias towards export orientation based on agricultural products. At the beginning of the 1960s, export-oriented policy switched to the primary import substitution policy. However, this policy lasted only until the 1970s. It is also interesting to stress that, since the military, the bureaucracy and business groups opted for import substitution, inward-oriented policies became even more intense in the next decade. During the 1970-1980 period, secondary import substitution was implemented. Again, this policy was given up in 1980, when the government decided to implement a trade liberalisation program. Since then, trade policy has been more outward oriented, but rent-seeking activities have never stopped.

The structural adjustment programs of 1960, 1970 and 1980 were also accompanied by major changes in the political regime, and the implementation of these programs coincided with military coups. Moreover, E'tatist policies, together with an importsubstitution strategy between 1960-1980, have deepened the state's protectionist tradition. Thus, the structure of protection measures in Turkey can be explained by establishing a relationship between the state's protection and the economic characteristics of the highly privileged firms/industries that can be regarded as rent-

seekers. This outcome also verifies Olson's hypothesis that highly concentrated industries that are expected to have great organisational and political powers are better protected than industries with lower concentration (Amelung, 1991).

In this section we will examine mainly two periods; a) 1960-1980 Import Substitution Policy with three interest groups and, b) Post 1980 Export Liberalisation Policy from the state-centred public choice perspective. Although the structure of the state in Turkey is traditionally very strong and monistic, we still think that the liberalisation attempts after 1980 and the export promotion policy can be examined from the public choice perspective in a more modified state-centred approach.

Interest groups provide a methodological departure as well as substantive perspectives on, not only rent-seeking but the crucial activities of politicians, the military, the business class, bureaucrats and citizens. When we apply the rent-seeking, statecentred public choice approach to Turkish pressure groups concerned with the implementation of trade policy and the transition from import substitution to trade liberalisation, we will see that interest groups such as the military, the bureaucracy, politicians, the business groups and foreign creditors have some power and responsibility in creating rent-seeking in Turkey.

1960-1980: Import Substitution Policy and The Main Rent-Seeking Interest Groups

In this section, we review three very important interest groups and their effects on the creation of rent-seeking in Turkey. These are the bureaucracy and the military, which are accepted as strong interest groups, and the business groups, which are recognised as weak interest groups.

The Bureaucracy

In Turkey, the bureaucracy consists of three divisions. These are the central bureaucracy, the local administration and the managers of The State Economic Enterprises (SEEs). Pre-1950, the bureaucracy was overwhelmingly dominant by the Republican Public Party (RPP) and the military. During the 1950s, the Democrat Party (DP) tried to apply a more liberal policy which resulted in a decline in public sector salaries (in real terms). Of course, this decline in power was not appreciated by the bureaucracy and the military. With the military coup of 1960, the old coalition between the RPP, the military and the bureaucracy restored the old autonomy once More importantly, the bureaucracy's dominant role was fixed by the more. constitution. In addition, the State Planning Organisation (SPO) was founded and given a large degree of autonomy to determine investment. In sum, the central bureaucracy was in a position to influence decisions on allocation, income distribution. In particular, the bureaucracy favoured import substitution policies since these policies emphasised the bureaucrats' importance in policy planning. In addition, this policy also created new opportunities for the establishment of state-owned enterprises managed by bureaucrats. The bureaucracy was in favour of Import Substitution Industrialisation (ISI) for three reasons; i) allocation of more financial capital for SEEs, ii) increased salaries for the bureaucrats and iii) the guaranteed political autonomy of the central bureaucracy in planning and decision making. For example, after the 1971 military intervention, the military instituted a provisional government encompassing technocrats, managers and bureaucrats. As a result, the bureaucracy took an active

part in the formulation of the development strategy. Since priority was given to heavy industry and because this was an area reserved for the state sector, the extension of ISI was meant to expand the responsibilities of the SEEs and the respective planning bureaucracies. Thus, the bureaucracy lobbied for secondary import substitution.

The Military

The military in Turkey intervened in the political and economic systems in 1960, 1971, and 1980 for two reasons; in order to protect their autonomy in the political process and to protect the economic well being of its staff. The military and the bureaucracy were in a strong coalition during the étatist period. However, when the Democrat Party (DP) came to power in the 1950s, this coalition began to lose its power as a result of a more liberal capitalist environment. When the Democrat Party gave preferential treatment to businessmen (and traders) but not to increase the welfare of the higher-ranking officers, the military intervened in 1960. Since the military coup strengthened small groups like the business groups and the bureaucracy, there was a strong domestic inclination towards inward-oriented policies.

In 1961, the Army Mutual Assistance Association (OYAK) was founded. OYAK's one of the main intentions was to secure its economic position. This organisation was initially planned as a pension fund providing housing credits, recreation facilities and pensions for officers. Funds were obtained from a ten percent charge upon the officers' salaries. Later, this institution and its functions were transformed to large scale industries that were protected under the umbrella of the ISI and featured production of machinery, transport equipment, chemicals and tourism. As a

consequence the military was indirectly involved in the promotion of ISI.

Towards to the end of the 1960s, the broad coalition for import substitution policies in Turkey continued its manifesto. However, the country experienced a slow-down of economic growth due to a foreign exchange gap and severe strike activities. In 1971, in order to cure some economic problems such as to reduce the number of strikes and the foreign exchange gap, the military again assumed power even if this time the existing party system and the parliament were left untouched. As a result, large groups, especially trade unions, were not severely affected by this coup, while important government functions were taken over by high-ranking bureaucrats.

On the other hand, OYAK expended and became a large holding company with a preference for import substitution over export-oriented industries. Having a strong power in both the economy and politics, the coup of 1971 can be partly explained by the military's attempt to preserve its standing and maintain import substitution policies.

Business Groups

Between 1950 and 1970, the main spokesman of private business in Turkey was the Union of Chambers, Industry and Commodity Exchanges of Turkey (UCT). Its budget was 50% financed by subscription dues with the rest being derived from the different government resources. Actually, this institution, a highly centralised organisation had its origins in the Ottoman period.

During the Second World War, as a result of over-regulation and black market operations, the private sector began to gain economic power. At the end of 1950s import substitution policy was employed with the intention to develop domestic

business group. Even though the business groups were not happy at the beginning, there was no sizeable opposition to inward oriented policies (Amelung, 1991). After the implementation of planned import substitution, import quotas became increasingly restrictive. In addition, business groups, which were interested in the availability of foreign exchange in order to import capital and input goods, supported movements towards secondary import substitution. In this, they were supported by the military with the 1971 intervention. These companies realised their opportunities in the production of capital and input goods and successfully lobbied for the reduction of respective imports through trade barriers. As a result, small businesses, trade unions and the bureaucracy successfully continued for lobbying activities for a policy of secondary import substitution which was implemented after 1971. Once, in 1973, economic crises was accompanied by political instability, both the government and the bureaucracy lost control of the economy. As a result, stagflation, bankruptcies and unemployment became the main issues in the economy. Some large industries gradually turned away from import substitution and proposed measures of economic liberalisation. However, this changed when the military assumed power in 1980 after the democratic government had been unable to implement a trade liberalisation program that had been proposed by the foreign creditors. So that, both the large groups to trade unions and the small business groups, lost the power which they derived from their representation in parliament. As a consequence, the supporters of trade liberalisation became relatively stronger. The implementation of such a trade liberalisation program was also due to a new strategy adopted by the foreign creditors (Amelung, 1991).

Post-1980: Export Promotion Policy

Relations between the political and bureaucratic elite and their linkages with business have always injected some instability into the system in terms of policy decisions. The liberalisation policy did not eliminate rent-creating and rent-seeking behaviour altogether. These three interest groups continued their unique monistic relationship even after 1980 liberalisation policies.

The Bureaucracy

A central feature of the 1980s is the decline in the economic strength of the bureaucracy, at a time when a significant process of restructuring in the economic system was in progress.

Although the majority of bureaucrats have favoured ISI, a very small number of technocrats favoured an export-oriented strategy. Actually, most of the technocrats were coming to government from bureaucracy. In other words, there were politically promising career opportunities for them in politics. In addition, their fortunes were determined by the foreign creditors who favoured trade liberalisation. Furthermore, most of the technocrats were appointed directly by Prime Minister Mr Turgut Ozal. Finally, towards the end of the 1970s, the bureaucracy became directly involved in the economic system. High-ranking bureaucrats had already organised a pension fund called MEYAK, which gave credits to large holding companies. As a result, the technocrats directed the initial movements towards trade liberalisation.

In the 1980s, a set of export incentives were introduced by technocrats in the government. The foreign exchange retention scheme, under which exporters could

keep 50 per cent of their net export earnings, and export tax rebates, which compensated for indirect taxes, were to be expanded in order to increase exports returns (Milanovic, 1986).

The Head of Incentives and Implementation (TUB) helped the implementation and the monitoring of the incentive policy. The only area of incentives about which data were not collected in TUB relates to tax rebates for exporters which were paid by the Central Bank, although the right to tax rebates was conferred by the certificate issued by the TUB. Granting of any incentives was linked with the issue of the Export Incentive Certificate (Ihracat Tesvik Belgesi). Exporters are told to apply to the TUB for the certificate after they export, and on the basis of it, received preferential credit, foreign exchange allocation (for import inputs) and export tax rebates.

The Military

During the 1970s, relations between the military and the political parties were not very strong. However, in the 1980s, the military, acting as a self-interested group, began to lobby governments for import subsidies for two reasons. *First*, was the attempt to promote the development of a national arms industry, and *second* was the attempt to secure its economic position, through the existence of OYAK (The Army Mutual Assistance Association), which became the second biggest industrial holding company in Turkey.

Because of political instability in 1980 the military took over the control again. As in 1971, this 1980 military coup was associated not just with an attempt to restore law and order, but to preserve the military's economic and social standing. Apart from

self-determination, as far as economic policy is concerned, the military also banned strikes and stopped terrorism. It was clear that the military itself had only a very substantive interest in trade liberalisation, since the military-owned companies were heavily engaged in import substitution production (Amelung, 1991).

Business Groups

As mentioned earlier, a major institutional innovation in Turkey in the early 1980s was the formation of the Foreign Trade Companies (FTCs). The Act on Foreign Trade Companies stated that companies which surpassed a pre-specified export target would become eligible for export tax rebates. In fact, export tax rebates were established as a major instrument for export promotion, until they were eventually eliminated at the beginning of 1989 (see Togan 1993; Somersan 1989; Uysal 1989; Onis 1992).

According to Onis (1992), trade policy in Turkey was formulated and implemented by a bureaucratic elite by frequent changes in decrees related with subsidies, tax rebates and other export incentives. The business sector also displayed a highly fragmented structure. Furthermore, the relationship between private business and the bureaucracy blocked the possibilities for formulating and implementing a coherent long-term strategy.

5.5. CONCLUSION

In this chapter, Turkish interest group politics and the associated rent-seeking process were examined from the perspective of monism³. By identifying monism, we suggest

³ There are some criticisms on this subject. For example, Bianchi (1984), a political scientist, argues that Turkey's institutional structure provides a base for corporatism.

Turkey might be a very good example for developing countries to develop the statecentred public choice version. We have claimed that a society-centred public choice is different from a state-centred one. As a result, rent-seeking in both groups will vary as well. While the former can only be applied to countries which have the democratic state-strong interest groups, the latter can be used in semi- or non-democratic countries in which the state is dominant and its role continuous in organising both economic and politic lives.

In the Brennan-Buchanan model of the state, the citizens have lost almost all control over government since the state acts like a monopolist and voters are "rationally ignorant". In many developing countries, it is also the case that the state has power and citizens have little opportunity to change it. In their Leviathan government model, Brennan and Buchanan (1980) claimed that, to limit the growth of government, the only solution is to impose constitutional constraints, because some policy instruments, such as money creation and debt, can be extremely dangerous in the hands of the government. To control such abuse of power, the constitution can offer safeguards to citizens in developing countries. In other words, it may be possible to limit governments in developed pluralist societies by constitutional means even if voters are rationally ignorant. But how will this be possible if the society is not based on the pluralistic interest group-state tradition, but rather on a very strong state tradition in a semi-democratic country. Or, if the state controls the constitutional system, how will analyse these issues.

CHAPTER 6

THE INTEREST GROUP THEORY OF LEGISLATION AND TURKISH TRADE POLICY

6.1 INTRODUCTION

6.2 THE INTEREST GROUP THEORY OF LEGISLATION IN A REPRESENTATIVE DEMOCRACY

- 6.2.1 The Demand for and Supply of Legislation
- 6.2.2 Legislative Equilibrium
- 6.2.3 Some Empirical Evidence

6.3 THE INTEREST GROUP THEORY OF LEGISLATION IN DEVELOPING COUNTRIES

6.4 LOBBYING EQUILIBRIUM WITH PROTECTION IN TURKEY

- 6.4.1 Theoretical Background
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6.5 EMPIRICAL ANALYSIS

- 6.5.1 Data
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6.5.2.1 Engle-Granger Approach

6.5.2.2 ARDL (An Autoregressive Distributed Lag) Approach

6.6 CONCLUSION

"Those who 'supply' wealth transfers are individuals who do not find it cost effective to resist having their wealth taken away"

R. D. Tollison (1990: 18)

6.1 INTRODUCTION

In chapter 5, we dealt with the state and interest group theories in both democratic and semi-democratic societies in order to develop an explanation for Turkish trade legislation. In this chapter our intention is to concentrate on the positive side of the economic theory of legislation, rather than the normative side. In other words, the issues to be considered are not whether a given law is 'good' or 'bad', but rather why the law was passed. In order to develop a testable economic model of the lobbying behaviour of interest groups in the pursuit of wealth transfers, we consider the demand and supply factors which help to generate the volume of legislation.

The interest group theory of legislation is a growing literature. Almost everything that has been published in the interest group theory of legislation is based on the USA legislation system, which is completely different from either European or developing countries' legislation systems. As a semi-democratic country, the Turkish state has a monistic structure. Therefore, the supply and the demand functions of the Turkish legislation system will be different from both those of the USA and of non-democratic countries. According to Tullock (1993a), the approach can be applied to democratic countries world-wide with minor adjustments. He goes further and claims that those adjustments are sometimes necessary even for the USA. The United States is a particularly convenient place for empirical research in this area, because it can be

subdivided into the 50 states, 48 of which are contiguous to each other. Although the legislative institutions bear considerable resemblance, these states' legislative systems are not identical. Following Tullock, our aim will be to apply the interest group theory of legislation to a semi democratic country. In order to do that, we will first examine the interest group theory of legislation in representative democracies and review the literature very briefly. In so doing, we will elucidate a supply and demand model of legislation which is drawn from the interest group theory of legislation will be analysed in the context of developing countries and, specifically, for Turkey as a semi democratic country. We will argue that even if the Turkish democratic institutional case is significantly different from the USA, the interest group theory of legislation can still highlight a number of crucial issues in that country.

6.2 THE INTEREST GROUP THEORY OF LEGISLATION IN A REPRESENTATIVE DEMOCRACY

Although political scientists have long recognised that the legislature is an important institution in a democratic society, economists virtually neglected this issue until the beginning of the 1960s. It is now generally recognised that the interest group theory of legislation represents the awakening of economists to the importance of understanding the legislative process. In the public choice literature, Arrow's Social Choice and Individual Values (1962), Downs' An Economic Theory of Democracy (1957), Buchanan and Tullock's The Calculus of Consent (1962), Riker's The Theory of Political Coalitions (1962), and Niskanen's Bureaucracy and Representative Governments (1971) can be regarded as the basic contributions to the interest group

theory of legislation.

For public choice scholars, in heavily regulated economies, the outcomes of public policy are significantly influenced by the activities of interest groups, who are seeking government transfers. The behaviour of interest groups in the competition for wealth transfers generates a rich set of empirical predictions about government behaviour. Such competition mostly results in a kind of political 'equilibrium' and in that model while some groups within the polity benefit at the expense of others, the regulators or the legislators maximise their political support. Therefore, the interest group theory of legislation is concerned with the origin of legislation system and the role of legislators in promoting wealth-transfer programs (Tollison, 1982). The interest group theory of legislation produces many testable explanations of the behaviour of interest groups taking the economic rent as endegenously determined. In many studies, regulators, legislators and firms are considered to be rent-seekers and the determination of the rent itself is created as endogenous.

A large number of works have appeared dealing with the interest group theory of legislation. The most well known studies are; Stigler 1971, 1976; Peltzman 1976; Crain and Tollison 1976; Crain 1977; McCormick and Tollison 1978; Shughart et al. 1986; Appelbaum and Katz 1987.

In particular, Stigler (1976) considered participants in politics as utility-maximising agents faced by different institutional constraints and modelled the size of legislatures as responsive to desires of group interests. Crain (1977) analysed the turnover of politicians with a model which stressed the cartel-like aspects of representative government. McCormick and Tollison (1978) investigated the pay of legislators,

assuming that pay is a function of whether legislators are allowed to set their own pay or have it set by voters. McCormick and Tollison (1981) used Stigler's insight to develop a formal model of the demand for legislative services by interest groups. They defined rent-seeking as the transfer of resources from weak interest groups to the legislators or regulators. In addition they examined the theory of legislative activities based on the principle that legislation is equivalent to wealth transfers and politicians are brokers of transfers. They found that legislative size influences the ability of interest groups to capture rents and in the rest of their analysis they concentrated on the supply side of legislative services.

Rowley, Shughart and Tollison (1987) also claimed that special interest groups 'demand' transfers to themselves. Voters, incapable of such effective economic organisation, 'supply' such transfers. Politicians establish political market equilibrium, balancing their own benefits against their costs at the margin, maximising their individual utilities, variously weighted in terms of expected wealth and expected votes. In the context of the growth of government, Shughart and Tollison (1986) considered that governmental output and growth are driven by the benefits and costs that citizens confront in using the machinery of government to increase their wealth. In this model, each legislator searches over his constituency, identifies those groups that are net demanders of wealth transfers and those that are net suppliers, and develops a legislative agenda (a level and pattern of wealth transfers) that maximises his political majority. They emphasise that the size of the legislature is important because of its impact on decision costs; similar impacts may be produced by bicameral bodies. Institutional properties of legislatures are of critical significance in explaining legislative behaviour.

Austin-Smith (1987) and Congleton (1989) also modelled the extent to which the campaign contributions of special interest groups might allow them to influence electoral outcomes and thereby policy. They explained that where campaign messages are persuasive and the distribution of potential donors asymmetric, candidates have incentives to alter their political platforms as a means of generating campaign contributions.

Similarly Becker (1983, 1985) developed a model of pressure groups which compete for political influence. He assumed a budget equation such that the total amount raised in taxes equals the total amount available for subsidies, implying that the sum of all influences is zero. Each group maximises the income of its members via Cournot-Nash behaviour. Political equilibrium is found to be a function of the efficiency of each group in producing pressure, the size of the pressure group relative to the group taxed, and the dead-weight costs of taxes and subsidies. Policies that increase efficiency are likely to gain support. The common ground for all these studies is the 'market' phenomenon, where the supply and demand for wealth transfers (regulations, legislation and other transfers etc.) meet each other.

In the next section, we will analyse the market for legislation in representative democracies in more detail.

6.2.1. The Demand for and Supply of Legislation

According to Tollison (1990: 17), the *demand for legislation* is determined by a basic principle, which is that "groups who can organise for less than one dollar in order to
obtain one dollar of benefits from legislation will be the effective demanders of laws". This principle opens a new discussion about the dynamics of group formation and action, which is the by-product theory of group collective action. In Olson's (1965) *The Logic of Collective Action*, the selective incentives and free rider issues determine the dynamics of group formation. The interest group can raise money for lobbying by pricing the service in a monopolistic fashion. Stigler also suggested that "an asymmetry of firm sizes, products and interests in an 'industry' tends to promote more effective collective action by the industry" (Stigler 1974: 359). Indeed, whatever reason organisation is undertaken, lobbying for special legislation becomes a relatively low-cost by-product of being organised. A firm can be an example of an organisation that can be used for lobbying purposes. Therefore, the term 'interest group' refers to the use of any organisational form to lobby for or against legislation.

In contrast, in the interest group theory of government, *the supply of legislation* is an inverse demand curve. The supply of legislation is also based on a principle, which is that "those who 'supply' wealth transfers are individuals who do not find it cost effective to resist having their wealth taken away" (Tollison 1990: 18). In other words, it costs them more than one dollar to resist having one dollar taken away. This explanation for the supply of legislation suggests that the cost of political activity to some individuals exceeds the potential gains. The suppliers of legislation, therefore, represent the unorganised or relatively less-organised members of society.

Politicians, bureaucrats and other political actors are the ones who run the supplydemand process. These political actors can be seen as brokers of legislation who pair demanders and suppliers of legislation. That is, they seek to pair those who demand a law or a transfer the most with those who object the least. In particular, brokers concentrate on legal arrangements that benefit well-organised and concentrated groups for whom the pro rata benefits are high at the expense of diffuse interests, each of which is taxed a little bit to fund the transfer or legislation. In the equilibrium, the political brokers efficiently pair demanders and suppliers of legislation. If 'too much' legislation is passed, some parties will find it cost effective to organise and to remove inefficient brokers in the next election. If 'too little' legislation is passed, they will not be reelected since they will not get enough support or contribution from lobbying groups. Therefore, the political brokers are at the centre of the study of legislation. A legislative production function that is determined by the political brokers has a certain impact on the rate of passage of legislation. Because of that, this production function is itself an integral part of the study of the supply of legislation. On the other hand, the theory of legislation explains why laws persist over time by generalising the theory of the demand for legislation. It has to be emphasised here that these wealth transfers by brokers must be considered under the existence of certain information and transaction costs. Without the existence of such costs wealth would never be willingly given up by an individual. When positive information and transaction costs exist, some groups will be able to organise and acquire information more cheaply than others, and these differences among groups will give rise to demand for and supply of wealth redistribution. In this market, whereas winners are recognised very easily, the losers may lose on an issue only in an opportunity cost sense. For example they might find the benefits of deregulation hard to predict, so that they might not invest in procuring deregulation.

6.2.2. Legislative Equilibrium

In this section we will first discuss the 'market' in representative democracies in more detail in order to modify these arguments later for the Turkish case.

In McCormick and Tollison's (1981) model, the 'market' for wealth transfers is defined as follows:

In the representative democratic legislation market, the demand curve (D) represents the demand for legislation. The slope of demand curve can be negative for some groups since they cannot organise well because of high organisation costs. This demand curve is illustrated in FIGURE 6.1. Assuming that in a group of n individuals there are $(2^n - 1)$ possible coalitions, each of our $(2^n - 1)$ coalitions would pay one dollar for one dollar of transfers *before* we net out their costs of organising, becoming informed, and overcoming free riders. The horizontal line in FIGURE 6.1 at the level of \$1 represents these identical valuations by each of the groups in the economy-polity. From the \$1 line, we *subtract* each group's costs of engaging in collective action to derive its *net* demand price for transfers.

In this market, it is assumed that all the groups in the economy-polity are obliged to enter a brokerage house and engage in trades by the police force of the representatives (that is, paying tax is not optional). In addition, it is also assumed that the political broker imposes a fee equal to the marginal cost of the real resources used in transacting (this fee is constant over all ranges of transaction).





The supply curve of wealth transfers can be derived from the demand curve and from the brokerage fee, (f). The supply curve starts at point $(2^n - 1)$ in Figure 6.1, with a supply price equal to the *n*th group's demand price $(-P_1)$ plus the brokerage or trading fee, (f), that is, $(-P'_1)$. In other words, the cheapest unit available for transfer is available at $(-P'_1)$. This supply curve of wealth transfers is an inverse demand curve for wealth transfers plus the political brokerage fee.

In the market, there will be a single demand price, P^* , that equates quantity demanded with quantity supplied, $(Q_D = Q_S = Q^*)$. Groups with demand prices less than $(P^* - f)$ will be suppliers of wealth transfers at a rate of dollar per group (that is, $(2^n - 1) - \hat{Q} = 0Q^*$). Being forced by the brokers' police to organise or transfer, they

find it cheaper to let their wealth to be transferred. Groups with demand prices higher than P^* will receive a transfer of one dollar for per group, that is $0Q^*$. In other words, they will be demanders. However, groups whose marginal evaluation is below P^* but greater than $(P^* - f)$, will be undisturbed by the wealth transfer process due to the real resource costs of transacting. Real resources equal to $f(0Q^*)$ as shown in Figure 6.1 are consumed in reaching a market clearing level of wealth transfers.

It has to be emphasised here that the suppliers of wealth transfers do not receive the demand price (P^*) . The compensation goes to the legislator (political broker) and to the successful transfer seekers, since the political brokers are in charge of the scarce resources to compel wealth transfers for demanders. The net demanders, in return, support the political brokers to help them to stay in office. This support can be in cash or support to increase brokers' vote. In fact, the suppliers of transfers receive a return in opportunity cost terms. By allowing their wealth to be taken away, they avoid the cost of being organised. Their actual return is at (P^*-f) . Given that in the constitution, the government has power to tax, these suppliers are paid in resources they do not have to spend. They pay their taxes due to the government and receive a 'payment' from the state in excess of the value of those taxes. The marginal demander must pay the broker (P^*) and is therefore indifferent between receiving a transfer or paying the broker. Because of the assumption of a single price for brokering services, all other (net) demanders of transfers receive a transfer worth more to them than they pay for it. So that, the price (P^*) is the basic determinant of the transfer seekers that classify whether they are 'winners' and 'losers'. In addition this market clearing price will persist indefinitely. Politicians will not be elected in the next elections if they passed too many or too few regulations. Then equilibrium will be restored where the price of transfers equates the quantity demanded with the quantity supplied.

With this practice, McCormick and Tollison's main intention was to elaborate the 'market' phenomenon, where the supply and demand for wealth transfers (regulations, legislation and other transfers etc.) are paired with each other by legislators as a result of pressure that interest groups produce. Therefore, possible political equilibrium can be obtained. Following their idea, there were many attempts to obtain better evidences in order to examine the interest group theory of legislation.

6.2.3 Some Empirical Evidence

In the interest group theory of government literature, the production of legislation is examined in the reduced form approach. Several studies have used the 'reduced-form' in order to explain the issues surrounding the supply and demand of legislation. (see Crain 1977; McCormick and Tollison 1981; Shughart and Tollison 1986; Tollison 1990 etc.).

According to Tollison (1990: 22), reduced-form means that "aspects of the legislators' productive process, such as legislature size, should be considered concurrently with aspects of the political and economic environment, such as population and income, that reflects the facts underlying the supply of legislation, transfers and regulation". In addition, the slope of the supply curve of legislation is a function of the organisational cost facing voters, whereas the position of the supply curve of legislative process. Tollison (1990) has

modelled the USA legislation system. As it is known, the USA, which is governed by representative democratic system, has two administrative units; House and Senate. In Tollison's model, while aspects of legislature size (SIZE), majority of legislators in the house (MAJ) and ratio of number of legislators in House to Senate, h/s (RATIO) are considered with aspects of the politic and economic environment, such as population (POP) and income (INC), that reflects the facts underlying the supply of legislation, the number of trade associations (ASSOC) is associated with the demand side in order to define the number of legislation:

$$L = f(POP, INC, SIZE, ASSOC, RATIO, MAJ)$$
(6.1)

where L is the number of pieces of legislation passed per session; POP is population; INC is real income; ASSOC is the number of trade associations; SIZE is legislative size; RATIO is the ratio of the size of the House to the size of Senate in the USA, and MAJ is the size of the legislative majority in the USA. In fact, before Tollison, Crain (1977) has already presented a theory and estimated legislative production function for the RATIO effect.

In 1981, McCormick and Tollison examined the role of legislators in matching demanders and suppliers of wealth changes to explain the differences across states in the USA in regulation, transfers and legislation. They studied a number of legislative bills to shed some light on the relationship between the cost of lobbying and the legislative activity of interest groups. As a dependent variable they took the number of bills enacted by each state legislature during the 1973-1974 legislative sessions and concluded that some variables such as INCOME, POPULATION, RATIO and SIZE

(with a negative sign) give an explanation for the legislative outputs across states. McCormick and Tollison (1981) estimated several versions of the following model:

$$BE = f(h/s, MAJ, INC, h+s/COMM, h+s, RTEN, POP, YPOP) \quad (6.2)$$

where BE is the number of bills enacted; h/s is the ratio of the size of the House to the size of Senate; MAJ is the size of the legislative majority; INC is the State Income; h+s/COMM is the ratio of the sum of house and Senate to the sum of House, Senate and joint committees; RTEN is House term-length divided by senate term-length; POP is population and Y/POP is state's per capita income. They found a very powerful negative sign on h/s. They also supported their arguments that smaller legislatures favour the activities of interest groups in capturing and sustaining rents by means of the political process.

6.3 THE INTEREST GROUP THEORY OF LEGISLATION IN DEVELOPING COUNTRIES

Unfortunately, although many studies have focused on developed democratic western countries, the major effects of restrictive legislation in a semi democratic country have been left largely unexamined. Since legislation is a political-bureaucratic process, it is sensible to assume that producers or other interest groups can put some pressure on the regulators to increase their share in rent-seeking. In developing countries, as Kimenyi mentioned, "the degree to which successful rent-seeking takes place within governments is likely to be determined by the principal-agent relationships, which in turn depends on the constraints imposed on the leaders by the political system" (Kimenyi 1987: 189). The reason is that politicians in semi-or-non-democratic

societies are faced by different constraints. So that, the nature of rent-seeking associated with interest groups also differs significantly.

It has to be emphasised here that in extreme cases, especially in the bureaucraticauthoritarian cases, the pressure group approach is totally inapplicable. In these closed authoritarian systems, the bureaucratic central administration dominates, so that, the level of public goods is determined on the supply side by a bureaucratic regime rather than the welfare-oriented demand approach of citizens. The reason is that "in a pluralist democratic country, *a single bureau* maximises its budget, whilst in a bureaucratic-authoritarian case the *entire government acts like a single bureau with large budget*" (Findlay and Wellisz 1984: 97). If we assume that most of developing countries consists of mild authoritarian-semi democratic countries, it might be possible to apply the interest group theory of legislation with some modification to developing countries.

It is known that a common feature of economic policies in developing countries is the high degree of government intervention in the economy. "The politicians, planners and bureaucrats control economic policy substantially in developing countries" (Wellisz and Findlay 1984:142). By restructuring property rights these policies allow regulators to transfer benefits from one group to another. In particular, in developing countries, small groups such as civil servants, the military and politicians benefit from an extremely high standard of living although the majority of the population have not experienced any significant gains. It is claimed that the accepted formula for sharing rents among these well organised interest groups maintains institutional stability among these interest groups (Kimenyi and Mbaku, 1993). As a result, even if the effect of

government regulations in developing countries significantly differs from developed counterparts, there is still some common ground to analyse such as well organised bureaucrats, business groups and unorganised voters.

One of the most important examples of government intervention in those countries is the protectionists trade policies implemented.

Wellisz and Findlay (1984) developed a theory of trade protection for developing countries. The level of protection for manufacturing industries in most developing countries is very high. In order to answer the questions 'why protection is so high in most developing countries' and 'what the cost to the economy as a whole of the resources used in attempts to obtain protection is', they discussed the lobbying equilibrium in terms of costs and benefits of lobbying. The costs and benefits of lobbying in developing country's trade regime can be illustrated in Figure 6.2



FIGURE 6.2 Costs and Benefits of Lobbying in Developing Countries

Where R is for the number of restrictions (regulations, legislation etc.); q is lobbying expenditures; B is the benefit of lobbying expenditures; and C is the costs of lobbying expenditures.

Wellisz and Findlay (1984) assumed that in the absence of interest group pressure, free trade would prevail. On the other hand, business groups, who favour protection consider whether to form a lobby and what resources to devote to lobbying. The cost of lobbying C(q) is shown in the third quadrant to be of a function of q, lobbying expenditures. Because of organisation (and policing) costs C(q) > q, the marginal cost of lobbying is, $C_q > 0$. It is also assumed that $C_{qq} > 0$ -that is, that costs of raising money increase as the sum to be raised rises. The severity of restriction R is shown in the fourth quadrant to be an increasing function of q, the sum spent by

lobbyists for purposes of influencing the government. If government responds positively to pressure, lobbying is worthwhile $R_q > 0$. If government responds negatively if pushed further, then diminishing returns to lobbying occurs, so that $R_{qq} < 0$. Finally, there are also diminishing benefits B to restriction, barring direct subsidies, absolute import prohibition sets the limit to possible benefits. Thus. $B_r > 0$ while $B_{rr} < 0$. In quadrant II, the benefits, B, are plotted as function of the costs C. At optimal expenditure q^* equals to marginal benefit the marginal cost- $(\Delta B / \Delta q = \Delta C / \Delta q)$ that is, the B(C) curve has unit slope, provided $B(q^*) > C(q^*)$. If $B(q^*) \leq C(q^*)$, lobbying does not pay, hence the lobbying expenditures will be equal to zero, $q^* = 0$. While business groups consider whether to form a lobby, and what resources to devote to lobbying, legislation suppliers with free trade interests calculate, in turn, whether it is worthwhile to form a lobby, what resources to devote to lobbying like business groups. "[I]f organisational costs are sufficiently high, it will not be worthwhile to organise a lobby" (Wellisz and Findlay 1984: 144).

However, it is known that, in developing countries, protection is the main practice and interest group lobbying activities are very effective in the determination of trade policy. In particular, in many developing countries, although the civil and the military bureaucrats are strong, governments are 'soft', that is vulnerable to group pressures. For this reason, their trade systems are distorted and 'favour seeking' flourishes all the time.

Wellisz and Findlay (1984) showed in their theoretical practice that if a developing country's government imposes rules (r) on the permissible lobbying activities (q), the

recipient's valuation of the resulting 'gifts' (z) will be:

$$z = (1 - r)^* q \tag{6.3}$$

where $0 \le r \le 1$. The higher is r, the greater the gap between q and z. If r = 0 the recipient is indifferent between a gift in kind and one in cash. If r = 1/2, the recipients values the gift at half its cost to the lobby. If r = 1 then z = 0 for all q, in this case permitted gifts are valueless to the recipient regardless of their costs.

6.4 LOBBYING EQUILIBRIUM WITH PROTECTION IN TURKEY

Although Turkey is classified among developing countries, it does not belong either to the pure bureaucratic authoritarian state or to democratic pluralist system. Indeed, as we discussed in chapter 5, Turkey is a semi-democratic country. In Turkish history, a state dominated by a bureaucratic central administration has been established by revolutionary military interventions. However, over the years many democratic institutions began to flourish. In particular, even the stability in the political market in a semi-democratic Turkey is considered as the result of rent-seeking activities among well-organised and weakly-organised interest groups, the semi-democratic structure still somewhat prevents these interest groups to be dominant in the society. If there are some changes in the share between interest groups, once a new sharing formula is accepted, a new rent-seeking equilibrium is also achieved and stability is obtained again. As a result, legislation tends to be concentrated on sectors that generate most rents such as the foreign trade sector which provides rent-seeking opportunities for both domestic manufacturers and importers (Kimenyi and Mbaku, 1993). Consequently, economic legislation for the benefit of these selected sectors (even when

such legislation reduces economic efficiency) can be seen as an effective method of protecting the unique equilibrium between the civil/military bureaucrats and business groups in Turkey.

In the Turkish case there are three types of interest groups in the political market place. The aim of this section is to investigate the influence of political competition in Turkey, in terms of restrictive trade legislation that military-civil bureaucrats and politicians extract in the form of outside income and some other privileges; business groups (manufacturers and importers) extract in the form of benefits using lobbying for legislation. The trade regime is determined by the collaboration of the state, business groups and the politicians. The legislators' and bureaucrats' "production function" reflects their own 'preferences' which consists of ideology, the self-interests of the governing group, international obligations, etc. Because of that it is assumed that lobbying expenditures enter the production function as arguments and the voters' preferences are reflected in the production function.

Even if protectionism has been/is an important tool in the trade regime, we can still search the 'market' for trade legislation as a consequence of Turkey's semi-democratic structure. Based on the interest-group theory of legislation, enacting laws, decrees and administrative resolutions for the benefit of a single firm or sector for trade, over time, depend on factors influencing the demand for and supply of trade legislation. Business groups are the lobbying groups because they are the ones who benefit from restrictive trade legislation. Business groups lobby government and bureaucrats. They are the potential winners since they have more chance to increase their profit with wealth transfers that they obtain as a result of lobbying. Since they are more likely to

overcome the free rider problem, they demand protection by passing legislation. Business groups are well-protected by politicians and bureaucrats, who have traditionally held a powerful role (as a result of the monistic state tradition). Therefore, business groups enter the market as demanders for protection, whereas voters favour free trade. Like in many semi-democratic countries, in Turkey the costs of forming and of policing a free trade lobby are greater than the costs of forming and policing a lobby of protection seekers. As Olson (1965) claims, the cost of forming a lobby, other things being equal, is an increasing function of the number of members. The larger the group is, the more costly its communication. Moreover, as the size of the group increases, the free rider problem becomes more severe. In this case it is voters or legislation suppliers who are the ones who constitute large and unorganised groups. On the other hand, politicians and bureaucrats act as wealth-brokers, who transfer wealth from weak groups to well-organised groups.

In equilibrium, the outcome of individual choices made by voters, politiciansbureaucrats and business groups match with each other. In this setting, bureaucrats are interested in maximising their budget and put pressure on politicians to get more from the budget by persuading them that a large budget will secure more votes. On the other hand, voters are not well-informed about the issues on which they are voting unless those issues have an immediate and direct consequence for their income. Therefore, they vote for politicians to secure their welfare level. Business groups express their wishes through lobbying (campaign) for legislation on the demand side of the market. Since politicians-bureaucrats act as wealth brokers, who transfer wealth from weak groups to well-organised groups, rent-seeking equilibrium is established in

trade policy through restrictive trade legislation, which consists of rules administrated by an agency that is prepared by the government to regulate some particular industry. This relationship can be observed better in a model that has been inspired by Appelbaum and Katz (1986).

In their model, there are three groups; voters, business groups and brokers (the bureaucrat-legislator group).

6.4.1 Theoretical Background of the Model

Voters

Voters support for legislators is based on the change in their welfare, w, that these legislators' policies create for the voters. The voters' support of the legislators is represented by a probability of support function, β . In the Turkish case, it is assumed that while free trade increases voters' welfare, protectionist policies imposed by the politicians and bureaucrats increase business groups' benefits. Therefore, the protectionist policies come about as a result of lobbying activities and protectionist policies then lead to increase in welfare amongst business groups:

$$\beta = \beta(w), \quad \beta'(w) \ge 0 \tag{6.4}$$

where w is the money value change in voters' welfare as a consequence of politicians' policy. Politicians' decisions may end up with a transfer of wealth to (w>0), or, away from (w<0) voters. It is assumed that the voters' group is composed of a large number of individuals. As a result of high organisation costs or free rider problem they can not organised easily, and do not play an active role in order to affect the politicians.

Business Groups

We assume that politicians-bureaucrats' trade policy results in an indivisible rent, S, for which firms may compete. In order to simplify the analysis we assume that this rent is independent of the other activities of firms and does not affect other markets. In order to compete for this rent, each firm expends resources trying to increase its probability of winning the rent.

It is assumed that of each unit spent by firms on rent-seeking, a proportion $(1-\alpha)$, where $0 \le \alpha \le 1$, is socially wasted (for example, advertising, lobbying etc.). A certain portion of this expenditure, waste, α , will reach the politicians-bureaucrats in various forms (these may include political contributions, future employment in the benefiting company/industry, direct cash and non-cash payments, financial advice or information etc.).

Hence, if x_i is the amount spent by the firm, then $(1 - \alpha)x_i$ is socially wasted, whereas αx_i is the transfer to the legislator. It is only the actual amount transferred to the legislators rather than the total rent (which includes the wasted component) which influences the legislators' behaviour. Hence the probability of the firm *i* winning the rent P_i is taken to be an increasing function of the amount reaching the legislators from firm *i*, (αx_i) and a decreasing function of the amount reaching the legislators from all other firms, $(\alpha \overline{x})$, so that $P_i = P_i(\alpha x_1, \alpha x_2, ..., \alpha x_n)$, where *n* is the number of firms. Specifically following Tullock (1980a) the probability is given by:

$$P_i = \frac{\alpha \mathbf{x}_i}{\left[(n-1)\alpha \,\overline{\mathbf{x}} + \alpha \,\mathbf{x}_i\right]} = \frac{x_i}{(n-1)\overline{\mathbf{x}} + x_i} \tag{6.5}$$

Where \overline{x} is the mean rent-seeking done by all other firms. Here, it is assumed that firms take the rent to be awarded as given. Thus, given Cournot-Nash behaviour and expected profit maximisation, each firm will solve the problem:

$$Max \pi_{i} = P_{i}(S - x_{i}) + (1 - P_{i})(-x_{i}), \qquad (6.6)$$

Which using (6.5) can be written as:

$$Max \frac{Sx_i}{(n-1)\overline{x} + x_i} - x_i, \qquad (6.7)$$

This yields the first order condition:

$$\frac{\partial \pi_i}{\partial \mathbf{x}_i} = \frac{S(n-1)\overline{\mathbf{x}}}{\left[(n-1)\overline{\mathbf{x}} + \mathbf{x}_i\right]^2} - 1 = 0, \qquad (6.8)$$

Since by symmetry all firms behave in the same way, in equilibrium we have $x_i = \overline{x} = x$ for all *i*. Substituting this symmetry condition in (6.8) we can solve for x and get:

$$x = \frac{S(n-1)}{n^2}$$
 for all firms, (6.9)

Thus, for a given number of firms the total amount spent by firms on lobbying is:

$$R = nx = \frac{S(n-1)}{n},$$
 (6.10)

Of which $(1-\alpha)\frac{S(n-1)}{n}$ is wasted and $\alpha S(n-1)/n$ is the total transfer to the

legislators. In order to accomplish these total transfers business groups' number and the volume of import play very important functions. If the number of business groups increase the total transfer for each firm will decrease as a result of high competition among them. Similarly, if their import share increase they will be rewarded with more legislation to increase their benefit. As a result of this transfer, bureaucrats' and politicians' income will increase. In other words, $\alpha S(n-1)/n = f(I)$.

Brokers (Politicians and Bureaucrats)

The brokers' aim is to maximise their own income. Thus, their behaviour, like the behaviour of business groups, is taken to be motivated by self-interest rather than benevolence.

Let the brokers' wages and salaries be given by BWSB and their opportunity cost salary in alternative occupation by B. Then, assuming risk neutrality, their expected utility is

$$E(U) = \hat{\beta}(w) \left(\mathbf{BWSB} + \alpha \mathbf{R} \right) + \left[1 - \hat{\beta}(w) \right] \mathbf{B}$$
(6.11)

Where R is given by (6.10) and $\hat{\beta}(w)$ is the welfare function of voters, then the rent S is transferred from consumers to the winning firm; thus,

$$w=-S<0$$
 (6.12)

It shows that voters' behaviour affects the legislators and bureaucrats' expected utility through political support as captured by the probability function (6.5), firms' behaviour also affects E(U) directly through the transfers αR . We assume that $BWSB - B + \alpha R \ge 0$. Otherwise, E(U) < B, then the opportunity cost of being a legislator-bureaucrats is higher. As a result, being a legislator is preferred.

To maximise their expected utility, the broker chooses a policy given by the rent S, which maximises (6.11) subject to (6.4), (6.10) and (6.12). In other words, the broker

acts as a leader and takes the voters' and firms' reaction functions into account when choosing the optimal policy, S.

The maximisation of the brokers' expected utility yields the Kuhn-Tucker condition:

$$\frac{\partial E(U)}{\partial S} = \beta'(S) \left[BWSB - B + \alpha \frac{(n-1)}{n} S \right] + \beta(S) \alpha \frac{(n-1)}{n} \le 0 \le S \quad (6.13)$$

Where the notation

$$\frac{\partial E(U)}{\partial S} \le 0 \le S \tag{6.14}$$

Denotes

$$\frac{\partial E(U)}{\partial S} \le 0, \ S \ge 0, \alpha \frac{\partial E(U)}{\partial S}, \ S = 0$$
(6.15)

In addition we define,

.

$$\boldsymbol{\beta}(\mathbf{S}) = \hat{\boldsymbol{\beta}}(\mathbf{w}), \qquad (\hat{\boldsymbol{\beta}} < 0) \tag{6.16}$$

The first term in (6.13) represents the marginal cost of S and captures the decrease in the regulator's expected income due to decreased political support. The second term is the marginal benefit of S and captures the increase in the brokers' expected income due to increased rent-seeking by firms. The brokers' optimal policy balances these two effects:

If the elasticity of the probability function is defined as:

$$\delta = \frac{\partial \beta}{\partial S} \frac{S}{\beta} > 0 \qquad \text{if } S > 0 \qquad (6.17)$$

and we can write first order condition as

$$\frac{\alpha(n-1)}{n} - \delta \left[BWSB - B + \frac{\alpha(n-1)S}{n} \right] \le 0 \le S.$$
(6.18)

Given a variable elasticity of β the legislator may choose a policy S, on either the elastic or inelastic portions of the β function. From this model, we obtain that an increase in BWSB decreases the rent, whereas an increase in B increases it. If BWSB-B>0, the optimal solution must be on the inelastic part of the probability function, whereas if BWSB-B<0, it will be on the elastic portion. This implies that if the β function is everywhere elastic and BWSB>B, then the legislators'-bureaucrats' optimum position will be at S=0. The rationality for this that if the electorate is highly responsive to the imposition of a transfer away from it, then, if being a legislator carries a higher salary than being non-legislator, the legislator will do nothing to jeopardise his job.

6.4.2. Empirical Application of the Model

We now estimate a simpler model by applying a modified version of Appelbaum and Katz's (1986) reduced-form approach to the Turkish trade legislation system. In this model, it is considered that on the supply side voters and on the demand side business groups locate and legislators pair these suppliers and demanders. Therefore, it is assumed that the Turkish legislators' *productive process* (such as the size of government (GY) and the bureaucrats'-politicians' wages and salaries (BWSB)) highlights the *political and economic environment* (such as population (POP) and the number of voters (VOT/POP)) that reflects the facts underlying the *supply of legislation*, transfers and regulation (such as number of private firms in manufacturing

(N) and import (I)) in the Turkish trade legislation system. The slope of the supply curve of legislation is a function of the organisational cost facing voters, whereas the position of the supply curve of legislation is a function of the 'technical proficiency' of any given legislative process. A given supply curve will shift depending on the degree of technical proficiency. Some variables (such as Imports (I) and the number of private firms (N)) are the control variables for the demand for legislation.

Based on these supply and demand functions together with the brokers' expected utility we can now consider this simplest version and estimate them in a reduced form.

$$R = f(BWSB, GY, N, I, VOTP, POP)$$
(6.19)

where R is the number of restrictive trade legislation; BWSB is the bureaucrats' and legislators' wages and salaries' as a share in the government budget; GY is the size of government; N is the number of private firms in manufacturing industry; I is Imports that carried out by business groups; VOTP is the ratio of the number of voters to total population; POP is population.

6.5 EMPIRICAL ANALYSIS

6.5.1 Data

Testing the model requires endogenous information on legislation. Our data are the number of laws, decrees and administrative resolutions passed annually that create, maintain or modify a foreign-trade restriction for the benefit of a single firm or sector. The dependent variable corresponds to the period 1960-1990. The data were collected from *Official Papers*. The number of pieces of legislation included in the data set were

those which explicitly identified their promoters, generally firms. Legislation in favour of government's non-profit organisations and legislation promoted by foreign governments for the purpose of compliance with international agreements, was ignored. In addition to this, legislation which had no identified promoter but was concerned with a small number of products was added to the series. With these adjustments the number of pieces of restrictive legislation on foreign trade passed was approximately 3000 during the study period 1960-1990.

We considered that wages and salaries of the bureaucrats to budget (BWSB) are a very important variable in the sense of affecting the volume of legislation. We expect that if there is an increase in bureaucrats' wages and salaries, the volume of legislation will decrease, since the opportunity cost of obtaining outside income will be lower. On the other hand, if there is a decrease in their salaries the volume of legislation will increase, in order to protect their welfare level by passing legislation that benefits some interest groups. Therefore, a negative sign reveals this basic relationship.

The size of government (GY) is chosen as a control variable (see Murrell, 1987). We predict that greater government size allows senior bureaucrats to employ a larger staff. Since it will be difficult to monitor larger budgets, more income will be allocated to staffing the bureau. This will also yield more rent-seeking (nepotism, corruption, etc.). In addition, the size of government influences the ability of interest groups to capture rents. If the size of government is big enough interest groups increase their lobbying activities as the chance increase for them to pass their wishes.

The number of private firms (N) in manufacturing industry determines the demand for legislation, because if the number of firms increases there will be more rent-seekers.

So, if more rent-seekers appear it means that there will be less share for each firm in order to capture rents (see Becker 1983: 371). Therefore, we expect a negative sign between the number of legislation and the number of private firms in the manufacturing industry.

Here, Imports variable (I) is employed as an explanatory variable for rent-seeking activities, since it also reflects the state's protectionist trade regime approach. Government protected private manufacturing industries by quotas and tariffs. During the last forty years, Turkey experienced an Import Substitution Policy from 1960 to 1979 and showed a certain dependency on foreign intermediate and capital goods for use in domestic manufacturing industry. Therefore, except for a couple of years during the 1960-1990 period, Turkey experienced a very large trade deficit. Since many industries depend up on imported goods and most of the rent-seeking activities are created through controls, the higher the Imports, the higher the number of restrictive regulations required. For this reason, the sign of the coefficient is expected to be positive.

From the perspective of *the economic theory of legislation*, voters are both suppliers and demanders of legislation, regulation and transfers. They can be either organised or unorganised. If voters are unorganised they will be the main suppliers for legislation. If they are organised or semi-organised and if too much legislation are passed, voters will not elect politicians in the next election.

However, from the *public choice* perspective, voters are classified as a short sighted and very badly informed group (Olson 1982). As a result, they are the main suppliers of trade legislation. From this perspective the ratio of the VOTERS to

POPULATION, (VOTP) variable is expected to be positively related with the amount of restrictive trade legislation passed. More voters will help politicians to create more rent-seeking, because interest groups will invest in a supply of votes for politicians in exchange for a higher probability of getting a favourite bill passed.

We also include population (POP) in order to show that the larger population means the more suppliers around and the costs of transfers will be lower.

In this model we aim to provide a testable model of the connection between rentseeking and the main Turkish interest groups. In particular, we wish to examine if there is a causal evidence of pervasive rent-seeking or not in trade legislation. Our hypothesis is that rent-seeking creation continued even after the 1980 export promotion policy, but the import substitution period (1960-1979) witnessed more rentseeking activities than the post 1979 era. This rent-seeking creation was mostly in the form of restrictive trade legislation.

The model estimated was:

$$R_t = \alpha_0 + \alpha_1 BWSB_t + \alpha_2 GY_t + \alpha_{31-t} + \alpha_4 I_t + \alpha_5 VOTP_t + \alpha_{61-}OP_t + \varepsilon_t$$

(6.20)

Since the variables are numbers, population or votes, it is considered that there is no need to use their logarithmic forms.

Where;

$\alpha_{_0}$	Intercept
R	The amount of restrictive trade legislation passed per year, Official
	Papers, 1960-1990.
BWSB	The ratio of wages and salaries of bureaucrats-politicians to budget
	Government Finance Statistic Yearbook, 1960-1990.

GY	Government Size (Government Expenditure/GDP), Government
	Finance Statistic Yearbook, 1960-1990.
Ν	The number of Manufacturing Companies (1960-1990) from SPI (State
	Planning Institution), 1960-19990
Ι	Import with current process from International Financial Statistics,
	1960-1990.
VOTP	The number of votes for legislators during the period to POP from SPI
	(State Planning Institution), 1960-19990
POP	Population from International Financial Statistics, 1960-1990.
ε	Residual

6.5.2. The Methodology: Cointegration Analysis

In this section, we will test our hypothesis that trade legislation during the period 1960 and 1990 in Turkey can be explained by interest group activities. As we have already explained the time series methodology and its properties in chapter 4, we will not repeat that discussion here. Using time series data, our main intention is to apply interest group theory of legislation for Turkey to see if this theory works for a semi democratic Turkey by testing the null hypothesis of non-cointegration between the number of restrictive trade legislation and the response variables, against the alternative hypothesis. In order to test our hypothesis, we apply both the Engle-Granger two-stage approach and later, ARDL approach in order to verify our results that we obtained from E-G two stages.

6.5.2.1. Engle-Granger

Since standard regression analysis requires that data series are stationary, the first step is to identify the order of integration of each of the variables. Therefore, we apply the unit root test. Table 6.1 shows the Augmented Dickey Fuller test results:

	Levels		1st Differences		Order of	
Variable.	ADF	CV	ADF	CV	Integration	
R _t	-2.20(0)	-2.97	-6.12(0)	-2.97	I(1)	
BWSB _t	-2.68(0)	-2.97	-5.02(0)	-2.97	I(1)	
GY _t	-1.70(0)	-2.97	-9.77(0)	-2.97	I(1)	
N _t	-0.26(0)	-2.97	-5.68(0)	-2.97	I(1)	
I _t	-1.52(0)	-2.97	-9.37(0)	-2.97	I(1)	
VOTP _t	-0.51(0)	-2.97	-5.54(0)	-2.97	I(1)	
POPt	-0.30(1)	-3.56	-4.83(0)	-3.59	I(1)	

 TABLE 6.1
 The ADF Test for Order of Integration

CV stands for critical value, the number of lags which were chosen according to the AIC are shown in parenthesis.¹

As can be seen from Table 6.1, all of the variables are stationary in their first differences. Therefore, we conclude that all the variables appear to be integrated of order one and the series may be tested for the existence of a long-run relationship between them, i.e. a cointegrating relationship. On the basis of this information, we can now estimate the Engle-Granger cointegration test first stage estimation as shown in Table 6.3:

The Engle-Granger First Stage (Long Run) Estimation:

As all of the variables are I(1), we can now estimate the model and test for its existence of a long-run equilibrium relationship. This exists only if the variables are cointegrated.

¹ Table 6.1 presents the calculated t-values from DF/ADF tests on each variable in levels and in first differences. In the case of the levels of the series, the null hypothesis of non-stationarity cannot be rejected for any of the series. Therefore the levels of all series are non-stationary.

TABLE 6.2 Turkish Trade Legislation

Dependent Variable is R (The volume of restrictive trade legislation)

Regress	Coefficients
$\alpha_{_0}$	82.18
	(0.65)
BWSB _t	-204.30
	(-2.18)
GY _t	572.63
	(2.21)
N _t	-0.01
	(-2.14)
I _t	0.01
	(1.86)
VOTP _t	0.88
	(1.72)
POPt	3.18
· · · · · · · · · · · · · · · · · · ·	(0.84)
R^2	0.57
\overline{R}^{2}	0.45
DW	2.20
F	4.98
SC	0.39
FF	0.05
Ν	1.41
Н	0.70
ADF t-val.	-5.85
ADF c.v.	Lower Upper
	5.75 5.66

Notes: t-statistics are in parentheses. Asterisks donate significant at 5%. \overline{R}^2 is the adjusted coefficient of multiple determination. DW is the Durbin-Watson statistic, F is the F statistic-ratio, SC is the serial correlation, FF is the functional form, N is the normality and H is the heteroskadasticity. *ADF c.v. has been taken from Charemza and Deadman (1997) at 5% significance level.

As can be seen from Table 6.2, we found that the signs of all variables are as expected. The volume of trade legislation as a proxy for rent-seeking variable can be explained by bureaucrats' and politicians' wages and salaries, government size, the number of business groups, import, the number of voters to population and population. In this model, while politicians-bureaucrats are brokers, who maximise their salaries and budget size, business groups demand for legislation, who maximise their profit and, finally, voters supply of legislation, who try to maximise their welfare. From our test, we obtained negative signs for BWSB, N, and positive signs for GY, I VOTP and POP. These results support the interest group theory of legislation in Turkish case Table 6.2 also shows that we have cointegrated relationships for the legislation model, since the ADF test statistic is higher than ADF critical values at 5 % significance level. It means that the residual-based ADF test statistic for the error term ensures that we reject the null of no cointegration at 5% significance level, in favour of the alternative hypothesis that there is a cointegrating relationship between the variables.

The Engle-Granger Second Stage: ECM (Error Correction Mechanism)

If a set of variables is cointegrated, then there exists a valid error-correction mechanism in order to describe their short run relationship. So, we apply Error Correction Mechanism (ECM). A negative sign for the ECM term shows that adjustment is made towards restoring the long-run relationship. Short-run adjustments are therefore guided by, and consistent with the long-run equilibrium relationship. Equation (6.5) in ECM for is as follows and results are in Table 6.3:

$$\Delta R_t = a_1 ECM_{t-1} + a_2 \Delta BWSB_t + a_3 \Delta GY_t + a_4 \Delta N_t + a_5 \Delta I_t + a_6 \Delta VOTP_t + a_7 \Delta POP_t + e_t$$

(6.21)

Dependent Variable is ΔR_t					
30 observations used for estimation from 1961 to 1990					
Regress	Coefficient		T-Ratio		
ECM_{t-1}	-0.98		-4.62		
$\Delta BWSB_{t}$	-212.25		-2.96		
ΔGY_t	204.53		0.79		
ΔN_t	-0.01		-1.26		
ΔI_t	0.01		1.34		
$\Delta VOTP_t$	0.63		1.71		
ΔPOP_t	7.10		0.18		
$R^2 = 0.61$	$\overline{R}^2 = 0.48$	DW = 2.00	F - Stat = 4.65		
30 - 0.04	FF-0.11	IN- 2.34	n - 1.04		

 TABLE 6.3
 ECM Results for the Turkish Trade Legislation

As we expect the Error Correction Term has negative sign and is statistically significant and less than -1. This means that adjustments are made towards restoring the long-run relationship and can also explain short-run relationship between variables in order to determine dependent variable, R. However, the coefficients for GY, N and I are not statistically significant, therefore, not meaningful. In order to eliminate this we also applied the *An Autoregressive Distributed Lag* Approach.

6.5.2.2 ARDL (An Autoregressive Distributed Lag) Approach

In this section we employ ARDL modelling, advanced in Pesaran et al. (1996), and

Pesaran and Shin (1995) to examine the relationship between variables to see if using annual observations over the period 1960-1990 supports our previous results.

The most important reason for using this approach lies in the fact that it can be applied irrespective of whether the regressors are I(0) or I(1), so that estimation strategy avoids the problems associated with standard cointegration analysis which requires the classification of the variables into I(0) and I(1).

The ARDL procedure involves two stages;

Stage One

The existence of the long-run relation between the variables under investigation is tested by computing F-statistic for testing the significance of the lagged levels of the variables in the error correction form of the underlying ARDL model. However, the (asymptotic) distribution of this F-statistic is non-standard, irrespective of whether the regressors are I(0) or I(1). Pesaran et al. (1996) tabulated the appropriate critical values for different numbers of regressors (k), and whether the ARDL contains an intercept and/or trend. These are two sets of critical values. One set assumes that all the variables in the ARDL model are I(1), and the other set assumes all the variables are I(0). For each application this provides a band covering all the possible classifications of the variables into I(0) and I(1), or even fractionally integrated ones. If the computed F-statistic falls outside this band, a conclusive decision can be made without needing to know whether the underlying variables are I(0) or I(1), or fractionally integrated. If the computed statistic falls within the critical value band, the result of the interference is inconclusive and depends on whether the underlying

variables are I(0) or I(1). If the computed statistic is bigger than the critical value it can be said that there is a cointegrated relationship.

Stage Two

The second stage is to estimate the coefficients of the long-run relations and find their error correction mechanism. It is only appropriate to embark on this stage if one is satisfied that the long-run relationship is not spurious. To apply the above approach to the Turkish data, we first set out the equation in order to test it. The simplest errorcorrection version of the ARDL model in the variables, is given by:

$$\Delta R_{t} = \alpha_{0} + \sum_{t=1}^{N} \alpha_{1} \Delta BWSB_{t} + \sum_{t=1}^{N} \alpha_{2} \Delta GY_{t} + \sum_{t=1}^{N} \alpha_{3} \Delta N_{t} + \sum_{t=1}^{N} \alpha_{4} \Delta I_{t} + \sum_{t=1}^{N} \alpha_{5} \Delta VOTP_{t}$$
$$+ \sum_{t=1}^{N} \alpha_{6} \Delta POP_{t} + \varphi_{1} BWSB_{t-1} + \varphi_{2} GY_{t-1} + \varphi_{3} N_{t-1} + \varphi_{4} I_{t-1} + \varphi_{5} VOTP_{t-1}$$
$$+ \varphi_{6} POP_{t-1} + \varepsilon_{t}$$

(6.22)

In equation(6.22) the regressors with coefficients, α , are responsible for the short-run dynamics; ϕ , are for the long-run dynamics; where $\sum_{i=1}^{N} \alpha_i$ is an autogressive lag polynomial and ε_i is a stochastic term assumed to be white noise. The hypothesis that we will be testing is the null of non-existence of the long-run relationship defined by:

$$H_0: \phi_1 = \phi_2 = \phi_3 = \phi_4 = \phi_5 = \phi_6 = 0$$

against

(6.23)

$$H_1: \phi_1 \neq \phi_2 \neq \phi_3 \neq \phi_4 \neq \phi_5 \neq \phi_6 \neq 0$$

The relevant statistic is the F-statistic for the joint significance of $\phi_1, \phi_2, \phi_3, \phi_4, \phi_5, \phi_6$.

The F-statistic for testing the joint null hypothesis that the coefficients of these level variables are zero (that is there exists no long-run relationship between them). As we already noted under H_0 : $\phi_1 = \phi_2 = \phi_3 = \phi_4 = \phi_5 = \phi_6 = 0$ this statistic has a non-standard distribution irrespective of whether all variables are I(0) or I(1). The relevant critical value bounds at the 95 percent level are **2.48** and **3.65**. (Pesaran et al., 1996). However, since all variables are integrated of order one (as shown with ADF test in Table 6.1) in our calculations we will take only upper critical value **3.65** as the critical value.

Table 6.4 gives us the result of F-statistic results for ARDL analysis. As can be seen, all F-statistics accept for F(BWSB|R,GY,N,I,VOTP,POP) fall outside of **3.65**.

		Table F 95%		Table W 95%	V 95%
F-Statistic Variables	F-Statistic	I(0)	I(1)	I(0)	I(1)
F(R BWSB, GY, N, I, VOTP, POP)	4.84	2.48	3.65	17.33	25.52
F(BWSB R,GY,N,I,VOTP,POP)	3.11	2.48	3.65	17.33	25.52
F(GY R, BWSB, N, I, VOTP, POP)	4.26	2.48	3.65	17.33	25.52
F(N R, BWSB, GY, I, VOTP, POP)	6.33	2.48	3.65	17.33	25.52
F(I R, BWSB, GY, N, VOTP, POP)	421.81	2.48	3.65	17.33	25.52
F(VOTP R, BWSB, GY, N, I, POP)	292.82	2.48	3.65	17.33	25.52
F(POP R, BWSB, GY, N, VOTP, I)	229.74	2.48	3.65	17.33	25.52

TABLE 6.4 F-Statistic Results for ARDL

The critical value bounds for this test are computed by Pesaran et al. (1996a), and are reproduced as Tables F and Tables Win Working with Microfit 4.0 Appendix C. Table F-gives the critical value bounds for F-statistic version of the test. Table W gives the bounds for the W statistic for the three cases depending on whether the underliving regression contains on intercept or trend. Table W is obtained by using Wald statistic, which has a chi-squared distribution asymptotically and can be used instead of F-statistic.

We can reject null hypothesis that there is no long-run relationship between variables.

The above test results suggest that there is a long-run relationship between variables. The variables GY, N, I, POP, VOTP and R are the long-run forcing variables for each other. We can illustrate estimates of the long-run coefficients based on ARDL models selected by AIC and SBC. In the case of R is dependent variable, we continued our tests up to four lags. These results are in Table 6.5:

	SBC and AIC with Two		
Long-run AIC			
Regressor	ARDL(1,0,1,0,1,1,1)		
	Coefficients		
$lpha_{_0}$	-40.48		
	(-0.28)		
R_{t-1}	-0.25		
	(-1.34)		
BWSB _t	-231.88		
	(-2.63)		
GY_t	346.34		
	(1.28)		
GY_{t-1}	467.08		
	(1.51)		
N _t	-0.02		
	(-1.52)		
I_t	-0.03		
	(-1.79)		
I_{t-1}	0.06		
	(1.95)		
$VOIP_t$	-0.91		
	(-2.89)		
$VOTP_{t-1}$	0.13		
	(2.28)		
POP_t	-737.67		
DOD	(-2.43)		
POP_{t-1}	781.72		
· · · · · · · · · · · · · · · · · · ·	(2.46)		
\overline{R}	0.75		
\overline{R}^2	0.73		
DW	2.24		
F-St	4.52		
SC	1.03		
FF	1.26		
N	3.19		
Н	0.45		

TABLE 6.5 The Long-Run Coefficients Based on ARDL Models Selected by SBC and AIC with Two Lags

* T-values are shown in the parenthesis

The long-run coefficients based on ARDL model selected by AIC also support the

interest group theory of legislation in Turkey. In this model, the signs of BWSB, GY and N are as expected, but the signs of I, VOTP and POP are as expected only after their first lag. In their first levels, any increase in Import, VOTP and POP will decrease the volume of legislation this year. However, in their first differences, any increase in last year's Import, VOTP and POP will have rise in this year's rent-seeking (the volume of restrictive trade legislation).

TABLE 6.6Error Correction Representation for the Selected ARDL Model
ARDL (1,0,1,0,1,1,1) selected based on Schwartz Bayesiam Criteria
Dependent Variable is ΔR_t

Regressor	Coefficient	T-Ratio
ECM_{t-1}	-0.74	-6.74
$\Delta BWSB_t$	-231.88	-2.63
ΔGY_t	346.34	2.28
ΔN_t	-0.02	-1.53
ΔI_t	0.03	1.79
$\Delta VOTP_t$	0.90	2.89
ΔPOP_t	737.67	2.43
$R^2=0.75$ $\overline{R}^2=0$.60 DW=2.	23 F -Stat=7.56

As can be seen from Table 6.6, ECM is negative and statistically significant and less than -1. Since standard errors in SBC are much smaller than standard errors in AIC in Table 6.5, error correction representation for the selected ARDL(1,0,1,0,1,1,1) model would base on SBC.

After obtaining the estimates of the Error Correction Model associated with these long-run estimates, it can be seen that whether if it has the correct sign and suggests a moderate speed of convergence to equilibrium. The larger the EC coefficient (in
obsolete value) the faster is the economy's return to its equilibrium, following shock. In addition, the coefficients of GY, I, VOT and POP improved and obtained significant results.

6.6. CONCLUSION

Our approach based on the interest group theory of legislation offers an empirical explanation for Turkey by studying not only legislatures, but also legislature as an institution guided by private interests.

In that context, this chapter provided both theoretical analysis and empirical evidence about traditionally established institutional stability among civil and military bureaucrats, and business trade groups in a semi-democratic country, Turkey. Since bureaucrats in a semi-democratic state are less constrained in their use of inputs, they are able to employ inputs from which to derive utility. In a strong state, civil and military bureaucrats have not only a distinction power, but they also hold a monopoly in the supply of legislation. However, although the state is strong in Turkey, governments are soft to interest groups' lobbying. Business groups enjoy government protection from competition in the exchange of rents to government officials, bureaucrats also protect themselves by paying off supporters; legislators, business groups etc. This payoff takes the form of increased budgets using public resources in order to increase their benefits.

As we analysed there is a long run relationship between business groups, bureaucrats and politicians in trade policy in Turkey. This relationship also explains long term stability among these three interest groups in terms of rent-seeking. Politicians act not

only as brokers who pair demanders and suppliers, but they act also as rent-seekers who try to maximise their benefits. Therefore, while any increase in government size and their payment increased rent-seeking, an increase in the number of trade companies decreases rent-seeking as a result of high competition. On the other hand imports, VOTP and POP as explanatory variables higher rent-seeking.

One of the most important implications of this model is that a reduction in rent-seeking and social waste is obtained with an increase in the salary of the politiciansbureaucrats. This means that the greater opportunity cost of rent-seeking behaviour when the politicians'-bureaucrats' salary is large. Thus, a higher salary for the legislator is an effective substitute for consumer responsiveness. The Turkish case represents a very good example for semi-democratisation, wherein exit and entry by firms is determined by the strong state. Therefore, the small number of business groups benefits rent-seeking more when they are in collaboration with the state. When competition increases more firms enter the market and decrease the share of existing rent that is set by the legislators-bureaucrats. In empirical side, we obtained these results by applying Engle-Granger cointegration approach and Paseran's ARDL approach since they are the most well-known techniques in time series studies. Our intention was also to see long-run relationship between variables.

SECTION III

ECONOMIC GROWTH AND RENT-SEEKING

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CHAPTER 7

ECONOMIC PERFORMANCE, INSTITUTIONAL CHANGES

AND RENT-SEEKING

7.1. INTRODUCTION

7.2. ECONOMIC PERFORMANCE AND INSTITUTIONAL CHANGES

- 7.2.1 Olson's Interest Group Theory and Economic Growth
- 7.2.2 Other Institutional Explanations: Property Rights and The State

7.3. CONCLUSION

"Once one starts to think about [economic growth], it is hard to think about anything else"

R. E. Lucas (1988:3)

"Institutions affect the performance of the economy by their effect on the costs of exchange and production. Together with the technology employed, they determine the transaction and transformation (production) costs that make up total costs"

D. C. North (1995: 6),

7.1. INTRODUCTION

Economic growth has always been a very important subject and even today it is central to the study of macroeconomics. As income levels have differed across countries, many economists have begun to investigate possible economic causes of these differences in productivity growth.

According to the best available measures, per capita incomes in the richest countries are more than 20 times as high as those in the poorest and the gap in per capita incomes between the relatively poor and relatively rich countries has been increasing over time (Olson, 1996).

Until recently there was only one possible explanation of the great differences in per capita income across countries. According to this possible explanation, national borders mark differences in the scarcity of productive resources per capita. In other words, the poor countries are poor because they are short of resources: short of land and natural resources, of human capital, or of technological knowledge. The idea of relative scarcity of 'capital', of 'land', of 'labour' and of the 'level of technology' found some recognition in: i) the growth-accounting studies, ii) Solow-type growth

theory which assumed the same level of technological knowledge is given exogenously to all countries, and iii) endogenous growth theory which took into account *externalities* that increase with investment or with stocks of human capital.

As can be remembered, in the framework of the old growth theory, it is claimed that differences in endowments of land, labour and capital, and differential to technology explain much of the great variation in per capita income. Similarly, the new (or endogenous) growth theory explains why countries with high per capita incomes can grow as fast or faster than low-income countries as a result of externalities. Although many growth studies were published and their results were discussed widely, not all scholars are satisfied with the existing results to answer the question of why there are still huge differences in per capita income levels among countries. With the intention to bring an alternative explanation, a group of political economists claimed that diminishing returns to land, labour or capital in both old and new growth theories cannot explain much of the huge international differences in income, in the cases of when the knowledge is available at little cost to all other countries, and when the marginal productivity of labour might change with large migrations.

Since neither the old nor the new growth theories predict this relationship North (1984), Olson (1996) and others began to search for an alternative explanation to find out the main reason for the variation in per capita income across countries and they claimed that the *different government policies and institutional changes* might be the key issue that makes difference. It is a fact that low-income countries as a whole fail to grow any faster than any high-income countries do. The reason is that richer countries with best policies and efficient institutions achieve most of their potential,

while other countries achieve only a tiny fraction of their potential income. Consequently, because the poor countries on average have poorer economic policies and institutions than rich countries, in spite of their opportunity for rapid catch-up growth, they need not grow faster on average than the rich countries.

On the other hand, poorer countries that adopt better economic policies and institutions might enjoy rapid catch-up growth, e.g. South Korea or Thailand. In other words, since they are far short of their potential, their per capita incomes can increase not only because of the technological and other advances that simultaneously bring growth to the richest countries, but also by narrowing the huge gap between their actual and potential income (see Barro, 1991). However, countries with the highest per capita incomes do not have the same opportunity. As a result, what we tend to observe is the highest rates of growth in a *subset of low-income countries*, since they know how to adopt better economic policies and institutions. For instance, during the 1970s, South Korea grew seven times as fast as the USA since she had a chance to catch-up with better policies and efficient institutions.

Among richer and poorer countries, the quality of policies and institutions differ because individuals and firms in richer societies act rationally as a result of a structure of incentives. However, the poorer countries often do not have a structure of incentives that provide a better environment to develop.

Indeed, the structure of incentives depends not only on what economic policies are chosen in each period, but also on the institutional arrangements: on the legal system that enforces contracts and protects property rights, political structures, constitutional provisions, and the extent of special-interest lobbies and cartels. Therefore, it can be

re-emphasised that the most important explanation of the differences in income across countries is the difference in their economic policies and institutions.

Based on this assumption, many political-economic scientists in the 1980s have begun to conduct investigations to understand the growth phenomenon better (see Olson 1983, Mueller 1989, North 1984; Keefer et al 1995; Canning et al. 1995). In the 1990s, even many growth scholars have started to examine the connection between institutions and the growth rate of output in a dynamic general equilibrium framework (see Barro 1991; Murphy et al. 1991; Ram 1986; Grossman and Helpman 1991; Rama 1993a, 1993b). In particular, Mankiw et al. 1992, Torstensson 1994, Knack and Keefer 1995, Braconner 1996, Knight et al 1993 and Mauro 1995 have all presented econometric evidence from cross-section studies suggesting that institutions have an impact upon economic growth. Besides cross-section studies, a growing number of studies have begun to use time-series data to test growth models, but few have included variables to reflect the role of institutions in the process. Kings et al. 1991, Easterly et al. 1993, Bernard and Darlauf 1995, Den Haan 1995, Jones 1995, Gundlach 1993, Canning et al. 1995 and Cellini 1997 are among the few who have included institutions in time series studies. Despite the fact that institutions and government policies began to be considered in the growth literature, the connection between rent-seeking and economic growth has not been examined enough in a time series framework. Only a few studies have combined both rent-seeking and growth of which, Rama (1993a, 1993b, 1992) is one.

Given this development, we suggest that the rent-seeking might provide an interesting insight into economic growth. In this chapter, our aim will be to concentrate on the

economics of institutions and their effects on economic performance. By doing this, we will be preparing a base for chapter 8 to consider the growth issue together with institutions in Turkey.

7.2. ECONOMIC PERFORMANCE AND INSTITUTIONAL CHANGES

Over the last fifteen years the economics of institutions has become an important area in economics. The conclusion reached has been that: i) institutions do matter, and ii) the determinants of institutions can also be examined by economic theory.

Before we discuss these two propositions in the context of whether institutions affect economic performance, we will define what we mean by economic institutions.

North (1995: 3) defines institutions as "the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction". Therefore, institutions classify incentives in human exchange, whether they are based on political, social, or economic reasons. If they stem from economic reasons, institutions affect the performance of the economy by their effect on the costs of exchange and production. Together with the technology employed, they determine the transaction and transformation (production) costs that make up total costs. Therefore, North suggests that the theory of the costs of transacting can be combined with a theory of production in order to explain human behaviour. In fact, once we recognise that the costs of production are the sum of transformation and transaction costs, we require a new analytical framework of microeconomic theory.

Matthew (1986) underlines four key points of an economic institution. i) as a system of *property rights* laid down by the law; ii) as a norm *of economic behaviour*, regarded as

a supplement to law; iii) in the context of *types of contract* in use, and iv) in the sense of what kind of contracts in use about *authority* and about who decides what. According to him, the common feature of these four main issues (property rights, conventions, types of contract and authority) is the concept of institutions as sets of rights and obligations affecting people in their economic lives. Therefore, a system of institutions can be described as the set of rights and obligations in force either in the case of markets that exist, to include all voluntary exchanges, or in the case of where no markets exist, to define economic relations that are regulated. In an economy ruled mainly by governmental controls or customs which is the subject of the second explanation, unconditional rights and obligations may dominate, whereas a substantial part of economic transactions is voluntary in the market, which is the subject of the first explanation.

Institutions provide the framework for economic life by either contributing to or hindering economic growth. According to North (1995), institutions are the underlying determinant of the long-run performance of economies. Initially, they determine the transaction and transformation costs¹ that make up total costs and affect the performance of the economy by their influence on the cost of exchange and production. For North, the transaction costs reflect uncertainty by including a risk premium. This view is different from the neo-classical view. In neo-classical theory, transaction costs are assumed to be zero, since actors process and evaluate information correctly. In standard neo-classical economics, products are identical, the market is

¹ Transaction costs consist of the costs of arranging a contract *ex ante* and monitoring and enforcing it ex post, as opposed to production costs, which are the costs of executing the contract. To a large extent, transaction costs are costs of relations between people (Matthew, 1986: 906)

concentrated at a single point in space, and exchange is instantaneous. Furthermore, individuals are fully informed about the exchange commodity and the terms of trade are known to both parties.

With reference to the statement that economic performance is affected by the costs of transaction and production, the economics of institutions and the economics of transaction costs have already been applied to many disciplines: industrial organisation, corporate governance, labour economics, public choice and economic history. In these fields, it has been accepted that since actors are not well informed and incomplete markets exist, the costs of transacting rise. In that sense, the contribution of institutional change to economic growth can be analysed in two different ways. First, institutional change is a necessary part of economic growth but not an independent source of it. In that sense, it is similar to capital accumulation in a Solow-type growth model but it is not the only source of growth. Second, there are movements towards institutions not as something that is achieved almost at once, but as a long run, possibly permanent, process (as institutional innovations). Either way including institutions as explanatory factors may improve our understanding of the economic growth process. However, institutions and institutional changes might hinder economic growth in some The hypothesis of Olson (1982) is that a peaceful and stable circumstances. environment can reduce growth because cartels and restrictive practices become stronger. On the other hand, war promotes economic growth by overcoming inertia

and the power of interest groups such as cartels. Therefore, differences in rates of economic growth can be explained by accumulation of common interest groups. Olson claimed that interest groups accumulate better in democratic environment than

undemocratic ones. Many developing countries are poor because existing undemocratic institutions constraint their political and economic activities that also do not encourage productive activity. Many developed countries are rich since their democratic institutions do not constraint their economic activities. However, in the case of stable environment, according to Olson (1982), interest groups can be too strong and block the process of decision making by discouraging productive growth as happened in the UK. On the other hand, some social upheavals such as wars, as happened in Germany, the power of interest groups can be broken, then the economic decision process can be improved to promote economic growth.

In the next section we will explain Olson's *The Rise and Decline of Nations* hypothesis since it is the first attempt to explain the economic growth with institutional changes.

7.2.1. Olson's Interest Group Theory and Economic Growth

As we explained in chapter 5, Olson (1965) analysed interest group formation in his *The Logic of Collective Action*. According to him, special interest groups, such as trade unions or cartels, exist to promote collective goods for their members, even though individual members do not find it rational to contribute their share of the cost. For these individuals a collective good is available to every consumer once it has been supplied. Therefore, they hold back their payments in the expectation that they may be able to free-ride. These exploiting groups may overcome their own free-rider problem by establishing selective incentives.

How do collective interest groups influence growth? Olson began to think about the damage such organisations can do to an economy and he used his earlier analysis of

interest group formation to explain differences in growth rates across nations in *The Rise and Decline of Nations*. According to Olson, interest groups have distributional aims, and they seek a large share of the social output for the members by a distributional struggle. Since these kinds of activities encourage rent-seeking activities, it might cause social welfare loss.

In order to examine the institutional factors and the society's collective decision procedures, Olson examined the difference in the economic growth rates across countries. For him, in theory, the rate of capital accumulation has always a significant effect on the rate of economic growth, since innovations in production techniques lead to increases in production. However, in reality, societies with high numbers of interest groups have poorer economic performance since their political power (some lobbying activities in order to pass the legislation that benefits their group or to delay enacting any legislation that harms their group benefits) also increase by time pass in many democratic societies.

Later, Choi (1982) conducted a regression study to test Olson's hypothesis in *The Rise* and Decline of Nations using data from the United States in the 1960s. In this study, the growth of economic activity in different USA states since 1865 was found to vary directly with the date of the conferment of statehood, i.e. older states tended to have relatively low rates of economic growth.

Olson (1982) argued that although it a long time for interest groups to emerge, they do not easily disappear. In particular, as time goes on, more specialised interest groups appear in more stable societies. The longer interest groups stay without restrictions and disturbances, stronger they become and the greater their economic and

political influence. For Olson (1982), If the nation includes a multiplicity of small and exclusive interest groups, the state will be lobbied by free-riders, however it attempts to pursue growth. On the contrary, if the nations include only a few special-interest groups, they may find it worthwhile to bargain with one another for the gains that socially efficient policies could bring". According to Olson, the growth issue is a function both of the degree of inclusiveness of major interest group formation in a society and of the period during which the process of interest group formation.

Later, Olson extended his thesis to take into account major social disruptions such as wars. In peace times, the number of special interest organisations increases over time, distributional coalitions slow the decision-making process and restrict a nation-state's ability to respond and adopt growth promoting policies by introducing cartels and by introducing subsidies and import restrictions for competing products. This implies that economic growth and political stability will tend to be compatible only in the case that the state is strong enough to be able to over-ride the power of special interests. However, during wars, distributional coalitions cannot block the decision-making process and growth enhancing policies can be adopted.

It can be concluded that societies which have suffered institutional destruction, can eliminate the power of special interest groups and grow more rapidly than they would otherwise be expected to do. It is also possible to deduce that countries with totalitarian governments will grow more rapidly than others, as result of their destruction of economic and social institutional structures. Both Olson (1982) and Mueller (1983, 1989) produce evidence to support this theory. For example, the UK had the longest period of stability and immunity from innovation and institutional

destruction and also has the poorest growth performance of all the major industrialised democracies until the 1980s.

Further evidence to support the assertion can be found among the particular industrialised countries of Federal Germany, Japan and Italy. The economic recovery of Germany, Italy and Japan, immediately after the Second World War, can be explained by this theory. Therefore, these countries had the opportunity to develop without pressure from institutional or interest groups.

Later, Pryor (1983) brought another dimension to Olson's hypothesis from the rentseeking perspective. For Pryor, societies with unchanged boundaries tend to accumulate more collusive organisations attempting to collect and increase the available rents. In turn, unless such groups constitute a small portion of the economy, these rent-seeking behaviours have an adverse impact on the economic performance. According to Pryor, if these groups take into account the macroeconomic impact of their activities when they maximise the income of their members, the ill-effects of rentseeking may be considerably reduced. On the other hand, if these groups do not consider the effects of their rent-seeking activity on the economy, these groups not only lower the overall efficiency of the economy but also slow the economy's capacity to adopt new technologies. Even if Olson suggested that external shocks, such as a war, could periodically break the power of vested interests, however, it is not necessary to have external shocks for vested interests to be undermined. "As the possibility of learning by doing is exhausted in existing technologies, the potential gain from an innovation would be felt by some of the vested interests, the determination to resist change will be eroded, and eventually they will countenance a new innovation"

(Pryor, 1983:155-156).

In conclusion, Pryor claimed that rent-seeking would be lowest in nations that have experienced boundary changes and destruction of their organisational infrastructure, because their rent-seeking groups would be effectively destroyed. For instance, World War II provided such circumstances for some nations such as Germany, Japan and France, which grew faster than the UK.

Several attempts have been made to test Olson's theory empirically. While some of these attempts have found supporting evidence, others have failed to do so.

Choi (1983) tested the negative relationship between economic growth and institutional sclerosis implied by Olson's theory using various measures of the dependent and explanatory variables for 18 advanced OECD countries out of twenty-four countries since Iceland, Luxembourg, Greece, Portugal, Spain and Turkey² were excluded from the sample from 1950 to 1973. The dependent variable for cross-country analysis is the rates of growth, either in gross domestic product (GDP) or gross national product (GNP). Although it is very difficult to measure and the data are not readily available, the independent variables in Olson's theory are the power of common interest groups in a country and the strength of institutional sclerosis due to the accumulation of group interests. According to Choi, "since the longer the period a country has enjoyed political stability and freedom of organisation, the greater the extent to which common interest groups build up power or cause institutional sclerosis, the institutional age of a nation is, as a first proxy, employed to measure the

 $^{^2}$ These six countries were excluded from twenty-four countries. First two were excluded since they are too small and last four countries are excluded since they have not experienced political stability and freedom of organisation.

power of common-interest groups or institutional sclerosis" (Choi, 1983: 60). Therefore, the length of time since the consolidation of modernising leadership (CML) is chosen as independent variable. With these variables, Choi carried out several tests. In the first test, he found that the coefficients of determination, R^2 , and the statistical significance of the estimated coefficient are not impressive, but the signs of the coefficients are in the expected direction. In the second test, although he excluded Japan from the sample, Choi, similarly, found a negative relationship between economic growth and the length of time a country has had institutional stability remains in force, but poor results for R^2 and t-ratios. In his third test, Choi added a dummy variable in order to deal with social disruptions as upheaval, invasion, or occupation, and he obtained a much improved fit and a significant coefficient for the dummy variable at the 95 per cent confidence level. Later, in order to deal with differences in historical developments of different countries, he tend to deviate of a numerical index of institutional sclerosis taking into account the accumulation time of each country's interest groups, the list of major disruptions, the power of each disruption and a formula for the logistic curve along which the accumulation follows. The relationship between adjusted Index A^3 and Index B^4 as independent variables, and the growth rates of total and per capita income as dependent variables, Choi estimated his equations again and he found that the overall results of this cross-sectional study of advanced industrial countries seem to support strongly Olson's theory of the political economy of comparative growth.

³ It is based on the adjustments using average degree of disruption for the U.K

⁴ it makes allowance for the disruptions using each country's own average degree of disruption.

Murrell (1983) presented another test of the Olson hypothesis by closely examining the UK and the West German economies from 1953 to 1973. He used indexies of industrial production in order to calculate growth rates, and compared the growth rates of twenty-seven manufacturing industries in both countries. Murrell carried out tests for two different time periods to define industry age: 1953-1963 and 1963-1968. He considered that once age of industry has been defined using growth rates for these periods, the foregoing theory can be tested by examining the structure of growth rates during the interval 1969-1973 and 1964-1973. Murrell used two sets of data. First, aggregate growth rates for the twenty-seven industries are tested. Second, data on 235 commodities for the period 1969-1973 are used, where each of of the 235 commodoties is produced in one of the twenty-seven industries. In tests using the commodity data, age of industry is defined using the 1953-1968 growth rates of the industry in which the commodity is produced. Results of these initial tests showed that the number of comparisons supported the Olson's hypothesis. Then, he calculated the standard errors of the proportions of the number of comparisons made and number of supporting Olson hypothesis in order to conduct significance tests. After that, he used the standard errors to calculate 95 percent significance levels and found that the Olson's hypothesis is accepted at the 95 percent significance level. He concluded that interest group strength in the UK would be weakest in the newest industries, since in these industries interest groups have had the shortest time to develop. Thus, the performances of the UK industries should be the most comparable with those of West Germany's 'young' industries and least with its 'old' industries. With these tests, Murrell has been providing empirical support for the assumption that interest group

strength increases with the number of years over which a country experiences political stability.

Abramovitz (1983) offered some explanatory factors to be tested jointly with growth rates of productivity to give more support for the Olson hypothesis. In his paper, Abramovitz claimed that direct measures of size, strength, and character of commoninterest groups need to be devised and suggested that the proxy proposed by Olson (the number of years of peaceful political development) may make it difficult separate the effects of differences in growth potential from the impacts of common-interest Therefore, he strongly suggested that the influence of common-interest groups. groups in governing growth rates of productivity needs to be tested jointly with the catch-up hypothesis by calculating regressions in which measures of initial levels of productivity and the strength and breadth of common-interest groups both figures as These important factors are: facilities for the diffusion and explanatory variables. adoption of technological advances, conditions facilitating structural change, conditions encouraging and sustaining capital investment. According to Abramovitz, the best model should have usual criteria of overall goodness of fit as well as for signs. He also added that a proper test of Olson's hypothesis requires inclusion of initial levels of productivity as well as a measure of the influence of common interest groups. Otherwise, the relatively slow growth of early industrializers may simply be the result of catching up by the late comers, not of the political age of the early industrializers themselves.

Although Olson had very big impact on the new political economy and public choice literature with his interest group theory, he also became the target of many criticisms.

For example, Vedder and Gallaway(1986), Gray and Lowery (1986, 1989), Wallis and Oates (1988) and Nardinelli, Wallace and Warner (1987) tested Olson's hypothesis and failed to find any evidence to support this hypothesis.

Vedder and Gallaway (1986) tested the Olson theory using data for the 48 continental states in the USA, and allowing for 11 additional explanatory variables they criticised the Olson's theory from two perspectives. First, the state-age variable is an imperfect proxy for the existence of distributional coalitions. Second, while Olson offers several variations on his model, they all exhibit rather modest explanatory power. They concluded that Olson's hypothesis is not well supported.

Gray and Lowery (1986, 1988) tested Olson's hypothesis and they failed to find a relationship between the age of the state and the number of interest groups in the states. When they considered important endogenous determinants of state growth, they used business groups as progrowth and labor unions as antigrowth, and proceeded to assess the effects of both the absolute and relative power of these groups on the rate of economic growth (Gray and Lowery, 1988). They first measured the impact of the absolute power of unions and their power relative to business and to government-in 1975-on the rate of growth of the states for 1972-1983. Then, they measured the impact of the change in each of the independent variables for 1975-1980 on the rate ofgrowth for 1977-1982. Finally, Gray and Lowery repeated the whole exercise for business groups, that is they measured the effect of the absolute power of unions and government in 1975 and for 1975-1980 on the rate of state growth for 1977-1982. The results of the Gray and Lowery test were largely negative and their independent variable had almost no effect on the rate of

growth. and when they did have an effect, it was in the wrong direction.

Wallis and Oates (1988) also reexemined Olson's hypothesis and used a large panel data set for the 48 contiguous states in the USA from 1902 to 1982 in order to investigate the determinants of government size at the state and local level in the twentieth century. In their estimation, the size of government in state i, G_i measures as a percentage of income or as per capita expenditures is dependent variable. They had four explanatory variables; X_i is a vector of economic and democraphic characteristics (income, population size, land size, degree of industrialization, age compositions and urbanization); Z_{it} is the age of the state; s_i is a state-specific disturbance term; t_i is a time-specific disturbance term and e_{ii} is the normal disturbance term with zero expected mean. They estimated their equation for two alternative measures of the size of the state-local sector: revenues or expenditures as a percentage of income. Similarly, they used two measures of age: the number of years (AGE) and the confederate states a starting date of 1865 (AGE2). In both cases, the estimated coefficient on the state age variable is negative, suggesting that the effect of age is to reduce the size of the state-local public sector-the opposite of what the age hypothesis had led us to effect. In other words, they found that younger states had relatively large governments rather than the small governments, contrary to Olson findings. In addition, they failed to find convincing evidence to support Olson's claim that the older states have lower rates of economic growth.

Nardinelli, Wallace and Warner (1987) also tested various explanations for differences in rates of economic growth across US states. In the regression testing, they included

some other factors that might explain differences in per capita income over time in different states and they chose real per capita income growth in the state as a dependent variable. Then they included initial state income (1929-1954), state age, initial share federal government, initial share state and local government, initial share agriculture, initial share manufacturing, initial education, percentage change in manufacturing, percentage change in agriculture, percentage change in federal government, percentage change in state and local government and percentage change in education aas explanatory variables. They found no evidence consistent with Olson's hypothesis that differences in state age (a proxy for the strength of special interest groups) can explain differences in state growth. In particular, they found that the state-age can never be negative and significant. However, they did not altogether reject Olson's theory claiming that it is more appropriate for international comparisons. They considered that the institutional and political similarities of the USA states may swamp the differences and make the Olson hypothesis inaplicable.

7.2.2. Other Institutional Explanations: Property Rights and The State

Olson has been criticised because he treated interest groups and their impact on growth as a pure demand phenomenon leaving out the powerful role of the supplier, that is, government, in aiding the pursuits of the interest groups (Mitchell, 1990). From the institutional economy perspective, North (1984) claimed that the state plays a prominent role in the formation and administration of property rights and rules. Therefore, the state should be named as an active reflector of interest groups' demand, not a passive reflector. The state can choose among demands to be met and

bureaucrats and politicians have their own interests to advance. Since possessing the monopoly power to manipulate the basic rules of the game is the main idea, officials are the immediate suppliers of distributional gains.

In that sense, the inability of the state to promote development of 'good' economic institutions and the unexpected stability of 'bad' ones are of particular interest. While protected ones benefit rent-seeking activities, unprotected ones compete for property rights. Agents with no political power to appropriate the fruits of their efforts must devote substantial resources to the protection of their productive capital, and this reduces the attractiveness of production. In other words, the contestability of property rights diminishes incentives to invest and accumulate capital. Thus, economic growth is reduced.

In general, the process of public enforcement and regulation of property rights by the state are influenced by social demands. Agents reveal their preferences over government policy through usual political mechanisms. However, in developing countries since the quality of institutions is poor, special interest groups stand to be the main beneficiaries of poor protection of property rights, which allows them to gain from non-productive activities such as rent-seeking. In the absence of adequate public protection of property rights by the state, some privileged groups combine productive activity with an extensive struggle for rents. For example, interest groups might invest their resources at establishing corrupt relations with state authorities to obtain private protection of property rights in the expense of others' rights. If it is considered that for sufficiently high levels of rent-seeking, an increase in a number of rent-seekers reduces their income as the 'pie' of the same size is divided by an increased number of

participants, the need for having good relations with the state also emerge. Therefore, as we discussed in chapter 5, the state in many developing countries causes a negative effect on economic growth by not protecting the property rights of the public, (North, 1981), and letting rent-seeking activities rise.

The statement that rent-seeking is harmful for economic growth has also been examined by Tullock (1993a, 1993b) and North (1995). It is harmful because: i) it is an unproductive activity to protect wasted resources; ii) the threat of appropriation distorts the economic environment, and iii) extensive rent-seeking and improper public protection of property rights are usually associated with substantial income and wealth inequalities. Rama (1993a, 1993b) and Murphy, Shleifer and Vishny (1993) have found a negative impact of rent-seeking activities on economic growth.

7.3. CONCLUSION

In theory, it can be easily seen that improvements in the field of property rights protection and a reduction in the level of rent-seeking activity are unavoidable preconditions for economic growth. In the absence of property protection of the majority and the presence of high rent-seeking activities, economic growth is deteriorated, therefore, whole economy suffers. Moving from one country example to across countries, we should take institutions into account in order to provide a satisfactory answer for the question of why per capita incomes vary across countries in time series studies and cross section studies. We know that the old or the new growth theories without considering institutions mislead us to achieve a satisfactory answer to find out why there are income differences among countries. Therefore, we need to

develop better theories equipped with better empirical applications in order to capture the impact of institutions on economic growth.

Also we claim that as well as answering the question of why per capita income differs across countries, measuring the impact of institutions on economic growth in a time series framework for a single country is also very important. Since each country's institutional setting is significantly different from others, cross section studies are possibly not the best technique to measure the impact of institutions on per capita income growth where one country is concerned. Such studies can provide us with some information about which group of countries grew faster than others, but fail to consider the uniqueness of each country.

In that sense, we can claim that if existing growth theories do not provide us better explanations we can consider institutions together with growth issue to have more comprehensive view. In addition, each country's institutional settings should be analysed separately in a time series framework.

In the next chapter we attempt to provide a testable analytical model of the connection between rent-seeking and economic growth. At the theoretical level, this is done by introducing institutions in a simple exogenous growth model (Solow type of growth model) and in a simple endogenous growth model (Barro and Sala-i Martin 1992 and Romer 1996) to compare of which model explains institutional impact on economic growth better.

CHAPTER 8

RENT-SEEKING AND GROWTH IN TURKEY

8.1 INTRODUCTION

8.2 AN AUGMENTED SOLOW GROWTH MODEL

- 8.2.1 The Model
- 8.2.2 Data, Methodology and Empirical Findings
 - 8.2.2.1. Engle-Granger Approach
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8.3 MODELING FRAMEWORK OF ENDOGENOUS GROWTH MODEL

- 8.3.1 Rama's Model
- 8.3.2 The Empirical Results

8.4 CONCLUSION

APPENDIXES

"Rent-Seeking activities reduce economic growth and lower the level of incomes" Gordon Tullock (1980b:26)

8.1 INTRODUCTION

After the 1980s, economic growth became a very important subject in the study of macroeconomics. In particular, questions such as 'Why are some economies so much richer than others?' and 'What are the reasons for the huge increases in real income over time in some countries?' have troubled many scholars.

There is no doubt that the public choice literature provides interesting insights into the incidence of institutions on resource allocation and welfare. However, these results are mostly drawn from a static, partial equilibrium framework and the connection between institutional arrangements and economic growth is left almost untouched.

The intention of this chapter is to fill this gap and to examine the impact of rentseeking on economic growth by introducing two different models for Turkey in a time series framework to see in which model the effect of rent-seeking on economic growth can be explained much better. These are: i) an Augmented Solow-type growth model and (ii) a simple endogenous growth model. We examine trade distortions, which can be accounted as transfers of resources from one part of the economy to another, which are transferred from consumers to the government and from government to producers. The net cost of these transfers to society as a whole is not zero, contrary to neoclassical economics. In the first model, they are exogenously determined, but in the second model, it is assumed that they are endogenously determined. In other words,

legislators led to be lobbied by interest groups in order to transfer resources for them. In the augmented Solow-type growth model, the amount of restrictive trade legislation is treated as a control variable and physical capital is treated as state variable in a production function. The empirical counterparts of these variables are taken as legislation expenditures and investment and it is assumed that the growth rate increases with investment. In the first model we intend to analyse Augmented Solow-type growth in a time series framework, showing that the rates of capital accumulation, legislation expenditures and the population rate are stochastic variables with unit roots rather than constant parameters. Consequently, the equilibrium level of labour productivity in efficiency units will also contain a unit root. Therefore, Solow's model should be interpreted as an error correction model, consistent with the variables' stochastic nature. In order to reach this conclusion, after we test for the existence of a cointegrating relationship between the dependent and independent variables, we examine the error correction mechanism.

The second model is based on endogenous growth theory in which capital is again taken as a state variable and the amount of restrictive trade legislation is treated as a control variable. In this model the positive spillover effect of capital accumulation and negative spillover effect of rent-seeking are taken into account. In fact, this second model is a replication and modification of Rama's (1993b) model, but using data for Turkey. Rama assumed that the amount of restrictive trade legislation is endogenously determined by government policy and interest groups' activities. He found that restrictive trade legislation had a negative impact on the aggregate level of output in Uruguay. Our intention is also to find some evidence for endogenous growth theory for Turkey.

In this chapter, the empirical evidence is drawn from Turkey. During the 1960s and 1970s with an import substitution policy, and after 1980 with an export promotion policy, protectionist policy continued without interruption. Tax rebates, tariffs, export subsidies, special exchange rates, import licences and export credits were all used as weapons by governments to intervene in the economic life of Turkey. Of course, these forms of protection helped the government sector to establish basic industries at the beginning by creating a safe area for the private sector to trade (see Amelung 1988, 1989; Barkey 1990; Boratov and Yeldan 1995; Boratov and Turel 1988; Brown 1989; Onis 1991; Yavas 1993, Rodrik 1990a, 1990b; Celasun and Rodrik 1989). However, these trade instruments became the way of protection for private firms.

This chapter is organised as follows. In section 2, an augmented Solow type growth model will be derived and examined in order to provide a testable specification for the relationship between output, the investment and the amount of legislation for Turkey during the period 1960-1990. In that model, government decisions are also taken as exogenous like other parameters. Section 3 deals with the methodology and the analytical framework of Rama's endogenous growth model in which government decisions are taken as endogenous. Finally, in section 4, we will present our results and interpret our findings.

8.2 AN AUGMENTED SOLOW GROWTH MODEL

In the Solow model there are two inputs: capital and labour. By employing a production function with decreasing returns to capital, and taking the rate of saving

and population growth as exogenous and Solow (1956) showed that these two variables determine the steady-state level of income per capita. Later, Mankiw et al. (1992) augmented the Solow growth model by adding human capital in order to understand better the relation between saving, population growth, investment on human and income. In each model the investment rate in physical and human capital and the labour growth rates are assumed to be constants.

In an augmented Solow growth model the aggregate production function exhibits constant returns to scale with decreasing marginal returns to each factor, and the Inada conditions hold. Then, the income level in efficiency units, monotonically converges to a steady state. In cross section studies, it is considered that the economies of different countries share identical structural parameters (i.e., human and physical capital accumulations and population growth). "Since they converge to the same per capita income (or labour productivity), it is possible to interpret economies observed at different stages of per capita income levels as if they were the same economy observed at different points in time" (Cellini, 1997: 136). However, cross section studies omit to consider the fact that "the rates of human and physical capital accumulation, as well as the labour growth rates, vary over time and not only across countries" (Cellini, 1997:136). Thus, Cellini analysed time series data for four countries: the USA, the UK, Japan and Italy in order to analyse the Solow growth model. His data showed that the Dickey-Fuller tests cannot reject the hypothesis of a unit root in the time series of investment rates and population. Then, Cellini concluded that even the steady state level of output in efficiency units could be a stochastic process with a unit root.

8.2.1. The Model

Our model resembles the Solow model with a Cobb-Douglas production function. While total factor productivity is exogenous and determined as in the Solow model, the rate of capital accumulation, legislation expenditures and the rate of population are considered as, may be, stochastic variables with unit roots rather than constant parameters so that the stochastic nature of the determinants of the equilibrium level of productivity will also have a unit root. To apply time series technique the current and the steady state productivity levels should be cointegrated, so that the stationarity of their difference will be consistent with the observed stationarity of productivity growth rates. In other words, the error correction mechanism should satisfy the implications of the Solow model

Production Function

is of the form:

 $Y_t = F(K_t, R_t, A_t L_t)$

where Y_i is the output by the representative firm; K_i is physical capital, A_i is knowledge; L_i is Labour and R_i is the amount of restrictive trade legislation enacted yearly bases to protect some private firms during the period 1960-1990.

Assuming a Cobb-Douglas production function:

$$Y_t = K_t^{\alpha} R_t^{\beta} (A_t L_t)^{1-\alpha-\beta}$$
(8.1)

where $0 \le \alpha \le 1$, $0 \le \beta \le 1$, and $\alpha + \beta \le 1$.

The Cobb-Douglas function can be written in intensive form:

$$y_t = k_t^{\ \alpha} r_t^{\ \beta} \tag{8.2}$$

in where $k_t \equiv \frac{K_t}{A_t L_t}$, $r_t \equiv \frac{R_t}{A_t L_t}$, and $y_t \equiv \frac{Y_t}{A_t L_t}$

In addition to this, for all K>0, L>0 and R>0, f'(.) exhibits positive and diminishing marginal products with respect to each input:

$$f'(k) = \alpha k^{\alpha - 1} r^{\beta} > 0, \qquad f'(r) = \beta r^{\beta - 1} k^{\alpha} > 0$$

and $f''(k) = -\alpha(1-\alpha)k^{\alpha-2}r^{\beta} < 0$, $f''(r) = -\beta(1-\beta)r^{\beta-2}k^{\alpha} < 0$

Furthermore it is assumed that the marginal product of capital (or of the amount of trade legislation) approaches infinity as capital (or the amount of trade legislation) goes to zero and approaches zero as capital (or the amount of trade legislation) goes to infinity.

Dynamics of K and L:

$$L_t = L(0)e^{gt}$$

$$K_t = s_K Y_t$$

where s_{κ} is the fraction of output devoted to physical capital accumulation and it is assumed that there is no depreciation.

Since the model stems from the Solow model, we also assume that technological progress is constant and exogenous:

$$A_t = A(0) e^{nt}$$

Finally, the amount of trade legislation is modelled in the same way as physical capital

(8.3)

accumulation since it is considered as another input. It is accepted that each unit of investment that goes to trade legislation increases the legislation stock.

$$\dot{R}_t = s_R Y_t$$

where s_R is the fraction of resources devoted to legislation.

The Dynamics of the Economy:

The change in the capital stock over time is determined by \dot{k}_t and the change in the amount of legislation overtime is determined by \dot{r}_t^{-1} .

$$\dot{k}_t = s_K k_t^{\alpha} r_t^{\beta} - (a + g_t) k_t$$

and

$$\dot{r}_t = s_R k_t^{\ a} r_t^{\ \beta} - (a + g_t) r_t$$

Equations (8.3) imply that the economy converges to a steady state defined in natural logarithm (*Ln* stands for natural logarithm) by²:

$$Lnk^{*}_{t} = \frac{1-\beta}{1-\alpha-\beta}Lns_{K} + \frac{\beta}{1-\alpha-\beta}Lns_{R} - \frac{1}{1-\alpha-\beta}Ln(\alpha+g_{t})$$
(8.4)

and

$$Lnr^{*}_{t} = \frac{1-\alpha}{1-\alpha-\beta}Lns_{R} + \frac{\alpha}{1-\alpha-\beta}Lns_{K} - \frac{1}{1-\alpha-\beta}Ln(\alpha+g_{t})$$
(8.5)

Then, in equilibrium:

¹ Derivations are shown in more detailed in Appendix 8A

² Derivations are shown in more detailed in Appendix 8B

$$Lny_{t} = \alpha Lnk_{t} + \beta Lnr_{t}$$
(8.6)

If we substitute equations (8.4) and (8.5) into equation (8.6),³output in the steady state will be:

$$Lny_{t} = \frac{\alpha}{1-\alpha-\beta}Lns_{K} + \frac{\beta}{1-\alpha-\beta}Lns_{R} - \frac{\alpha+\beta}{1-\alpha-\beta}Ln(\alpha+g_{t}) \qquad (8.7)$$

Since $Ln y_i$ is effective output, in other words it is equal to $Ln\left(\frac{Y_i}{A_i L_i}\right)$, we can get

steady state per capita income as follows:

.

$$Ln\left(\frac{Y_{t}}{L_{t}}\right) = LnA_{t} + \frac{\alpha}{1-\alpha-\beta}Lns_{K} + \frac{\beta}{1-\alpha-\beta}Lns_{R} - \frac{\alpha+\beta}{1-\alpha-\beta}Ln(\alpha+g_{t})$$

Since $LnA_t = LnA(0) + at$ and since we assume that $LnA(0) = Intercept + \varepsilon$

$$Ln\left(\frac{Y_{t}}{L_{t}}\right) = Intercept + \frac{\alpha}{1 - \alpha - \beta}Lns_{K} + \frac{\beta}{1 - \alpha - \beta}Lns_{R} - \frac{\alpha + \beta}{1 - \alpha - \beta}Ln(\alpha + g_{t}) + at + \varepsilon$$

(8.8)

In equation (8.8), Lns_K , Lns_R and $Ln(a + g_t)$ have coefficients that are functions of the factor shares for α (physical capital's share of income) and for β (legislation expenditure's share of income). In this model, high population growth lowers income per capita. In addition, the coefficient on $Ln(a + g_t)$ is larger in absolute value than the coefficient on Lns_K .

To simplify the model, if we assume that:

³ Derivations are shown in more detailed in Appendix 8C.
$$b \equiv \frac{\alpha}{1-\alpha-\beta}, \ c \equiv \frac{\beta}{1-\alpha-\beta}, \ d \equiv \frac{\alpha+\beta}{1-\alpha-\beta}, \ \text{and} \ LnY_t \equiv Ln\left(\frac{Y_t}{L_t}\right), \ \text{then equation}$$

(8.8) can be written as follows:

$$LnY_{t} = Intercept + bLns_{K} + cLns_{R} - dLn(a + g_{t}) + at + \varepsilon_{t}$$
(8.9)

8.2.2 Data, Methodology and Empirical Findings

Data

The index of GNP per capita and investment expenditures come from SPI (State Planning Institution; 1950-1997). It is expected that investment increases per capita income.

This empirical analysis uses the amount of pieces of restrictive trade legislation in force for rent-seeking activities and takes into account the laws, decrees and administrative resolutions that create, maintain or modify a foreign-trade restriction for the benefit of a single firm or sector. The data, which explicitly identify their promoters, generally firms, were collected from *Official Papers*. The data set corresponds to the period 1960-1990. Export promotion policy started in 1980 and continued after. The amount of restrictive legislation on foreign trade reaches approximately 3000 items during the study period.

The wages and salaries of bureaucrats-politicians that are used as a proxy for legislation expenditures also come from SIS (State Institute of Statistic: Statistical Indicators; 1923-1990). In Turkey, although the real wages and salaries of bureaucrats-politicians have declined since 1960, the amount of restrictive trade legislation has increased during the same period. Therefore it is predicted that

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bureaucrats-politicians are getting some extra (illegal) income in order to compensate for the loss in their legal salary. We assume that any change in their yearly income plus 0.25 percent of their legal income comes from outside (firms lobby bureaucrats to pass the legislation that will benefit them) compose of legislation expenditures. We do not predict any sign for it priori. We also add three dummy variables Dum80, Dum74 and Dum71 in order to measure the effect of 1980 and 1971 Military Interventions and 1974 Cyprus Conflict. 1971 Military Intervention was a mild one and did not disturb the economy as 1980 Military Intervention did. So, per capita income did not decrease in 1971 but in 1980 it decreased. It is also expected that 1974 Cyprus Conflict might have a negative impact on per capita income.

Methodology

In their natural logarithmic form, time series for aggregate output per capita $Ln\hat{Y}_{t}$, aggregate investment $LnINVY_{t}$ and the legislation expenditures $LnLEIY_{t}$, so that it is possible to carry out a test in order to find out if there is a long run cointegrating relationship between them. As more will be explained later, a cointegration analysis will provide some information about output level, whilst error correction mechanism about output growth. In order to obtain cointegration and ECM results, we will apply Engle-Granger's (EG) two stage estimation procedure and Pesaran et al.'s Autoregressive Distributive Lag Approach (ARDL). Our main intention by applying ARDL techniques after EG test is to check our EG test results..

Empirical Findings

Where for the purpose of empirical analysis, we have used the following proxies for

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equation (8.9):

Ln	: stands for natural Log
LnY_t	: index of GNP per capita in constant prices (1968=100) in Log
Lns _K	: The fraction of output devoted to physical capital accumulation
	(INVY, real investment in real GNP) in Log
Lns _R	: The fraction of output devoted to legislation activities
	(LEIY ⁴ , legislation expenditures in GNP) in Log
g	: The rate of population growth
а	: Exogenous rate of technological progress, which is assumed to be
	constant
$Ln(a+g_t)$: Population growth in Log
Dum80	: Dummy Variable for the 1980 Military Intervention
Dum74	: Dummy Variable for the 1974 Cyprus Conflict
Dum71	: Dummy Variable for the 1971 Military Intervention
\mathcal{E}_t	: Error term
t	: trend

8.2.2.1 Engle-Granger Approach

Cointegration analysis confronts spurious regression, attempting to identify conditions under which the regression relationship is not spurious. The problem of spurious regression occurs because most economic time series are non-stationary. A stochastic process is said to be stationary, if the mean, variance and covariance of a series remain constant over time. If one or more of the conditions are not satisfied, the process is

⁴ LEI stands for legislation expenditure, and it is assumed that LEI=((dBWS+(BWS*0.25))/R)/Y in where dBWS stands for the first difference of the bureaucrats' wages and salaries, R is the amount of trade legislation, Y is the national income at 1968 prices. It is true that bureaucrats' wages and salaries decreasing over the years and the number of enacted trade legislation is increasing for the same period. Therefore it is considered that bureaucrats are getting some extra income (illegal) in order to compensate the loss in their legal salary. We proxy that the change in their yearly income + 0.25 percent of their legal income comes from outside (firms to pass the legislation).

non-stationary (Charemza and Deadman, 1997; Thomas, 1993). EG cointegration and error correction modelling involves two stages. *The first stage* determines the orders of integration for each of the variables; that is, differences each series successively until stationary series emerge, then attempts to estimate cointegrating regressions by ordinary least squares, by using variables with the same order of integration. *The second stage* if there is a cointegrating relationship between the variables, constructs the error correction representation of the model.

Stage One: Order of Integration and Cointegration

In the ADF test, " the null hypothesis is that the variable under investigation has unit root, against the alternative that it does not. The substantially negative values of the reported test statistic lead to rejection of the null hypothesis" (Dickey et al., 1971:72). A series is stationary if the coefficient on the lagged dependent variable is negative and significantly different from zero. So that, equation (8.9) is estimated adding as many terms of differenced variables as are necessary to achieve residuals that are nonautocorrelated. Table 8.1 presents the calculated t-values from DF/ADF tests on each variable in levels and in first differences. In the case of the levels of the series, the null hypothesis of non-stationarity cannot be rejected for any of the series. Therefore, the levels of all series are non-stationarity. Applying the same tests to first differences to determine the order of integration, the critical value is (are) less (in absolute terms) than the calculated values of the test statistic for all series in all cases. Table 8.1 shows that all of the series are integrated of order one [I(1)], and become stationary after differencing one.

	Levels		1st Differences		Order of Integration
Variable	ADF	CV(at 5%)	ADF	CV*(at 5%)	
LnY,	-0.92(0)	-2.96	-4.28(0)	-2.96	I(1)
	-1.10(0)	-2.96	-4.64(0)	-2.96	I(1)
LnLEIY,	-2.64(0)	-2.96	-4.96(0)	-2.96	I(1)
$Ln(a+g_t)$	-2.28(0)	-2.96	-4.32(0)	-2.96	I(1)

 TABLE 8.1
 The ADF Test for Integration Level

*Critical values (CV) are taken from MacKinnon (1991) reported by MFIT 4.0⁵.

As can be seen from Table 8.1, all of the variables are stationary in their first differences. Therefore, we conclude that all the variables appear to be integrated of order one and the series may be tested for the existence of a long-run relationship between them, i.e. a cointegrating relationship. On the basis of this information, we can now estimate the Engle-Granger cointegration test first stage estimation and test the null hypothesis that there is no cointegrating relationship between the variables.

The procedure used to establish the existence of a cointegrating relationship is; first, the hypothesised long-run relationship(s) is (are) estimated by OLS that is called the cointegrating regression, second, the residuals from this regression are retained and the DF/ADF test is applied to the residuals. In this practice we tested two equations: unrestricted and restricted ones. The first equation is the replication of equation (8.9). The only big difference is that equation (8.10) has three dummy variables to explain Turkey's special issues.

⁵ Table 8.1 presents the calculated t-values from DF/ADF tests on each variable in levels and in first differences. In the case of the levels of the series, the null hypothesis of non-stationarity cannot be rejected for any of the series. Therefore the levels of all series are non-stationary.

$$LnY_{t} = Intercept + bLnINVY_{t} + cLnLEIY_{t} - dLn(a + g_{t}) + at + eDum80$$
$$+ fDum74 + gDum71 + \varepsilon_{t}$$

(8.10)

The second set is to verify Solow's condition which is $\alpha + \beta < 1$. After a restriction is applied to equation (8.10)⁶ the new regression equation will be:.

*

$$Ln y_{t} = Intercept + \phi[LnINVY_{t} - Ln(a + g_{t})] + \mu[LnLEIY_{t} - Ln(a + g_{t})] + \lambda Dum80 + \eta Dum74 + \pi Dum71 + \varepsilon$$

(8.11)

In order to estimate the restricted regression equation (which is $\alpha + \beta < 1$ for Solow model) in time series framework, we need to apply cointegration analysis and to test the null hypothesis that there is no cointegrating relationship between the variables. In Solow growth model, the aggregate production function has constant returns to scale with decreasing marginal returns to each factor. In other words, these coefficients represent positive and diminishing marginal products with respect to each input, and $\alpha + \beta < 1$ is the restriction. Table 8.2 gives us Engle-Granger Test Results for restricted and unrestricted models when dependent variable is $Ln\hat{Y}_t$.

$$Lny_{t}^{*} = Intercept + \frac{\beta}{1 - \alpha - \beta} [Lns_{K} - Ln(a + g_{t})] + \frac{\alpha}{1 - \alpha - \beta} [Lns_{R} - Ln(a + g_{t})] + \varepsilon$$

 $^{^{6}}$ If we rewrite equation (8.10) , we will obtain:

TABLE 8.2 Engle-Granger Test Results

Dependent Variable $Ln\hat{Y}_{i}$

Regressor	Coefficient unrestricted	Regressor	Coefficient restricted
Intercept	0.80 [0.19]	Intercept	0.96 [12.45]
LnINVY,	0.14 [4.18]	$LnINVY_t - Ln(a + g_t)$	0.14 [4.27]
LnLEIY,	-0.01 [-1.93]	$LnLEIY_t - Ln(a + g_t)$	-0.01 [-2.41]
$Ln(a+g_t)$	-0.09 [-1.87]		
Time	0.02 [6.69]	Time	0.02 [8.23]
Dum80	-0.07[[-3.56]	Dum80	-0.08 [-3.85]
Dum74	0.04 [2.85]	Dum74	0.04 [2.93]
Dum71	0.04 [2.81]	Dum71	0.04 [2.98]
\overline{R}	0.99	\overline{R}	0.99
\overline{R}^2	0.99	\overline{R}^2	0.99
DW	2.09	DW	2.09
F	894.70	F	1091.2
SC	0.79	SC	0.80
FF	2.26	FF	2.27
N	0.65	Ν	0.65
Н	0.00	Н	0.00
ADF test value ADF C.V.95%	-6.02 -4.59 - 4.50	ADF test value ADF C.V.95%	6.03 -4.16 - 4.09

* t- values are in the parenthesis. Critical values are taken from the Charemza and Deadman (1997)'s DF/ADF Cointegration Tests; critical values (minus sign omitted), with intercept, 5% level of significance, m=1,....8 in Table 8.3

According to the regression results in Table 8.2 the null hypothesis that there is no cointegrating relation between variables can be rejected at 5 % significance level for both restricted and unrestricted models. This is because the ADF test for residuals for the unrestricted model from the regression reveals a value of -6.02, which is higher than the critical values of (lower -4.59 and higher 4.50) and because the ADF test for

residuals for the restricted model from the regression reveals a value of -6.03, which is higher than the critical values of (lower -4.16 and higher-4.09)⁷.

It is very important to mention here that it is expected that investment has a positive effect on the level of income and we obtained a positive sign from our estimation. Although we did assume that each input exhibits positive and diminishing marginal product in the production function (Solow's positive and diminishing marginal product), the sign of the rent-seeking variable is negative. This negative sign also justifies Tullock' s (1980b) statement that rent-seeking activities reduce economic growth and lower income levels.

In addition, as can be seen from Table 8.2, $\phi = 0.14$ and $\mu = -0.01$, since $\phi + \mu < 1$ condition hold, we can claim that this model is exogenous as in Solow model. Furthermore,, the signs of *LnINVY*, *Ln*($a + g_t$), Dum80 and Dum71 are as expected and the sign of *LnLEIY_t* is negative. Furthermore, they are all statistically significant except trend. Since the aim of this empirical investigation is to focus on the impact of rent-seeking on economic growth, the statistically significant and negative sign for *LnLEIY_t* mean that one unit an increase in legislation expenditure results 0.01 % decrease in per capita income levels.

Suprisingly, the sign of Dum74 is positive and different than what we expected. This positive sign means that the 1974 Cyprus conflict has a positive effect on per capita income level. The reason might be an increase in foreign money reserves in this year.

 $^{^7}$ These critical values represent the lower and the higher values for m, the number of variables. Since our observation number is 30 years and we have three variables for the first estimation, DF/ADF cointegration tests' critical values with intercept at 5% level of significance the critical values are 4.16 and 4.09. Similarly, since we have two variables for the second estimation, the critical values are 4.59 and 4.50.

In 1974, because of government policy, private financial transfers from abroad to Turkey increased; i.e., from Germany. Although there was a Cyprus Conflict in 1974, balance of payment gave surplus.

Stage Two: Error Correction Mechanism

According to Solow's model, if the current level of output is lower (greater) than the equilibrium level of output, the subsequent variation should be positive (negative). Because, if the current level of output is lower than its equilibrium level, current productivity will rise in the next period. It will decrease when the current level is above the equilibrium level of output. Indeed, this predicted movement of the level of output represents an error correction mechanism. In ECM, when we regress the growth rate of labour productivity on the lagged difference between actual and equilibrium productivity levels, a significant negative coefficient has to be found for the second stage for EG test. The value of the error correction parameter (i.e. the parameter linking the labour productivity level) must lie between -1 and 0, for monotonic convergence toward equilibrium to occur³. For this reason, this property on cointegration should be regarded as the crucial stochastic implication of the growth model (Cellini, 1997).

In the findings of a cointegrating long-run an error correction relationship can be estimated as follows and results can be seen in Table 8.3:

⁸ Of course, it is known that the speed of convergence is not constant since the population growth rate varies.

$$\Delta LnY_{t} = b\Delta LnINVY_{t} + c\Delta LnLEIY_{t} - d\Delta Ln(a + g_{t}) + eECM_{t-1} + f\Delta Dum80$$
$$+ g\Delta Dum74 + h\Delta Dum71 + at + \varepsilon_{t}$$

(8.12)

Dependent Variable is $\Delta Ln\hat{Y}$					
29 observations 1962	29 observations 1962-1990				
Regressor	Coefficient	t-Ratio			
ECM _{t-1}	-0.23	-5.69			
ΔLnINVY	0.15	5.74			
<u> </u>	-0.01	-2.67			
$\Delta Ln(a+g)$	-0.09	-5.74			
Δ <i>Dum</i> 80	-0.06	-4.05			
ΔDum74	0.05	3.21			
$R^2=0.78 \qquad \overline{R}^2=0$.74 $DW = 1$.93 $F = 16.75$			
SC = 0.43 FF = 0.	19 N = 0.3	H = .0.02			

 TABLE 8.3
 Error Correction Mechanism

In our model, the empirical evidence supports the idea of an error correction mechanism implicit in Solow's model. In other words, these results confirm the existence of cointegration emerging from the first step and error correction mechanism from the second step. Since the error correction term is negative and less than 1 in absolute terms and statistically significant, it explains that while investment increases per capita income, the legislation expenditures decrease per capita income even in the short-run. It has to be stressed here that the original Solow model does not consider the short run components of the data, but long-run components. At this stage, like Cellini, we assume that the movements of output productivity are the sum of 'long run'

components, according to Solow model, and 'short run' components for ECM.

In Table 8.3, trend and Dum71 are not shown since their t-ratios are less than one and statistically insignificant. In addition, the signs of other variables are as expected and statistically significant. Even in the short run one unit increase in $\Delta LnINVY$ growth increases per capita income growth 0.15 % On the other hand, one unit increase in legislation expenditure growth decreases per capita income growth 0.01 % and one unit increase in population decreases per capita income growth 0.09 %. The sign of dummy variable Dum80 is again as expected and significant but the sign of Dum74 is positive.

To give support our EG test results we also applied Johansen's VAR technique to check if there is more than one cointegrated relationships between variables or not.

8.2.2.2 Johansen's VAR Approach

The Johansen VAR method provides an opportunity to check if there is more than one cointegrating relationship between the variables. According to Charemza and Deadman, "[I]f the estimated cointegrating coefficients have, after normalisation, economically sensible signs and are roughly similar in size to those estimated by the Engle-Granger method, this could be regarded as some confirmation of the single equation model to which the Engle-Granger method was applied" (Charemza and Deadman, 1997:178).

The underlying VAR model (Johansen, 1988) will lead us to conclude that these series are cointegrated with rank equal to 1 because the null hypothesis that there is no cointegrated relationships between variables is rejected for the favour of alternative

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hypothesis. In the case of the cointegrating VAR option, we assume that the underlying VAR model contains unrestricted intercepts and restricted trends since our model includes trend. Respective of which sets of critical values one uses, there is no conflict between the test results based on the maximum eigenvalue statistic and the trace statistic, since both statistics select r=1.

It means that there is only one cointegrated relation between variables. Results are

shown in Table 8.4.

TABLE 8.4 Cointegration Rank Statistic

cointegratio	cointegration LR test based on maximal eigenvalue of the stochastic matrix			
29 observati	ions from 1962 to	o 1990. Order o	of VAR=2, chos	sen r=1
List of varia	bles included in t	he cointegrating	; vector;	
$Ln\hat{Y}$, $LnINVY$, $LnLEIY$, $Ln(a+g)$, Trend				
List of I(1) va	nriables included in t	the VAR:	• ·	
Dum80	Dum74	Dum71		
Null Hypothesis Maximal Eigenvalue of the Stochastic				
Null Hypot	hesis	Maximal E	igenvalue of	the Stochastic
Null Hypot	hesis	Maximal E Matrix	igenvalue of	the Stochastic
Null Hypoth	hesis	Maximal E Matrix Statistic	igenvalue of 95% CV	the Stochastic 90% CV
Null Hypoth	hesis H ₁ r=1	MaximalEMatrixStatistic43.14	igenvalue of 95% CV 40.98	<i>the Stochastic</i> 90% <i>CV</i> 38.04

Cointegration with unrestricted intercepts and restricted trends on the VAR

Cointegration with unrestricted intercepts and restricted trends on the VAR cointegration LR test based on trace of the stochastic matrix

29 observations from 1962 to 1990. Order of VAR=2, chosen r=1						
List of varia	bles included in t	he cointegrating	vector;			
$Ln\hat{Y}_{t}$	$LnINVY_t LnLEIY_t Ln(a+g_t) Trend$					
List of I(1) va	riables included in t	the VAR:				
Dum80	Dum74	Dum74 Dum71				
Null Hypot	Null Hypothesis Trace of the Stochastic Matrix					
H ₀	H ₁	Statistic	95% CV	90% CV		
r=0	r=1	108.84	90.02	85.59		
r<0	r=2	45 70	63 54	59 39		

**These results are automatically supplied by Microfit 4.

After testing E-G and Johansen's VAR techniques, the ARDL approach will be also examined here to give more support to our results.

8.2.2.3 ARDL (An Autoregressive Distributed Lag) Approach

In this section we employ ARDL modelling, advanced in Pesaran et al. (1996), and Pesaran and Shin (1995) to examine the relationship between $Ln\hat{Y}_t$, $LnINVY_t$, $LnLEIY_t$ and $Ln(a + g_t)$ for Turkey using annual observations over the period 1960-1990 to see whether ARDL modelling supports to our previous results.

The most important difference for this testing lies in the fact that it can be applied irrespectively of whether the regressors are I(0) or I(1). This means that this estimation strategy avoids the problems associated with standard cointegration analysis which requires the classification of the variables into I(0) and I(1).

The ARDL procedure involves two stages;

Stage One

The existence of the long-run relation between the variables under investigation is tested by computing an F-statistic for the significance of the lagged levels of the variables in the error correction form of the underlying ARDL model. However, the (asymptotic) distribution of this F-statistic is non-standard, irrespective of whether the regressors are I(0) or I(1). Pesaran et al. (1996) tabulated the appropriate critical values for different numbers of regressors (k), depending upon whether the ARDL contains an intercept and/or a trend. They provide two sets of critical values. One set assumes all the variables in the ARDL model are I(1), whilst the other set assumes all the variables are I(0). For each application this provides a band covering all the

possible classifications of the variables into I(0) and I(1). Here, equation (8.10) will be estimated again, this time according to the ARDL technique. In the ARDL technique, if the computed F-statistic falls outside this band, a conclusive decision can be made without needing to know whether the underlying variables are I(0) or I(1). If the computed statistic falls within the critical value band, the result is inconclusive and depends on whether the underlying variables are I(0) or I(1). If the computed statistic is bigger than the critical value it can be said that there is a cointegrating relationship.

Stage Two

The second stage is to estimate the coefficients of the long-run relations and to find the corresponding error correction mechanism. It is only appropriate to embark on this stage if one is satisfied that the long-run relationship is not spurious. To apply the above approach to the Turkish data, we, first, set the equations (8.10) and (8.12). The simplest error-correction version of the ARDL model in the variables $Ln\hat{Y}_t$, $LnINVY_t$, $LnLEIY_t$, $Ln(a + g_t)$ is given by:

$$\Delta LnY_t = \alpha_0 + \lambda (LnY_{t-1} - A_1LnINVY_{t-1} - A_2LnLEIY_{t-1} + A_3Ln(a + g_{t-1}) + A_4Dum80 + A_5Dum74 + A_6Dum71) + a_1\Delta LnINVY_t + \alpha_2\Delta LnLEIY_t - \alpha_3\Delta Ln(a + g_t) + a_4\Delta Dum80 + a_5\Delta Dum74 + a_6\Delta Dum71 + at + \varepsilon_t$$

(8.13)

According to Solow theory, the necessary and sufficient condition for the convergence to take place is $-1 < \lambda < 0$. In addition, $\phi_1 = -\lambda * -A_1$ should be positive (the change in investment increases the growth of per capita income), and $\phi_3 = -\lambda *$, should be negative (the change in population decreases the growth of per capita income). On the other hand, $\phi_2 = -\lambda * A_2$ is positive on the basis of Solow's model, but the expected sign of A can be either positive or negative. If it is positive it means that rent-seeking activities increase economic growth. However, if is negative, rent-seeking activities reduce economic growth. In equation (8.13) the regressors with coefficients α are responsible for the short-run dynamics and ϕ are for the long-run dynamics. ε_i is a stochastic term assumed to be white noise.

$$\Delta LnY_{t} = \alpha_{0} - \lambda LnY_{t-1} + \phi_{1}LnINVY_{t-1} + \phi_{2}LnLEIY_{t-1} - \phi_{3}Ln(a + g_{t-1}) + \phi_{4}Dum80 + \phi_{5}Dum74 + \phi_{6}Dum71 + \alpha_{1}\Delta LnINVY_{t} + \alpha_{2}\Delta LnLEIY_{t} - \alpha_{3}\Delta Ln(a + g_{t}) \\ \alpha_{4}Dum80 + \alpha_{5}\Delta Dum74 + \alpha_{6}\Delta Dum71 + at + \varepsilon_{t}$$

(8.14)

Without carrying out a stability test it is very difficult to know, a priori, whether $LnINVY_t$, $LnLEIY_t$ and $Ln(a + g_t)$, are the long run forcing variables for LnY_t or not. The hypothesis that we will be testing is the null of non-existence of the long-run relationship defined by:

$$H_0: \phi_1 = \phi_2 = \phi_3 = 0$$

against

(8.15)

 $H_1: \phi_1 \neq 0, \phi_2 \neq 0, \phi_3 \neq 0$

The relevant critical values at the 95 percent level are given by 2.95 to 4.09 (Pesaran, 1996). However, since all variables are integrated of order one (as shown in Table 8.1) will take only upper critical value (4.09) as the critical value to test the hypothesis that there is no cointegrating relationship between variables. Table 8.5 shows F-

statistic results.

		Table	F 95%	Table V	V 95%
F-Statistic Variables	F- Stat.	I(0)	I(1)	Î(0)	I(1)
$\mathbf{F}\begin{pmatrix} LnY_t \\ t \end{pmatrix} LnINVY_t, LnLEIY_t, Ln(a + g_t), \\ Dum80, Dum74, Dum71) \end{pmatrix}$	4.44	2.95	4.09	20.62	28.62
$F(\begin{array}{c c}LnINVY_t & LnY_t, LnLEIY_t, Ln(a + g_t);\\Dum80, Dum74, Dum71)\end{array}$	1.11	2.95	4.09	20.62	28.62
$\mathbf{F}(\begin{array}{c} LnLEIY_{t} \\ Dum80, Dum74, Dum71 \end{array}) LnY_{t}, LnINVY_{t}, Ln(a + g_{t}),$	2.02	2.95	4.09	20.62	28.62
$F(\begin{array}{c} Ln(a + g_t) LnY_t, LnINVY_t, LnLEIY_t, \\ Dum80, Dum74, Dum71 \end{array})$	1.31	2.95	4.09	20.62	28.62

 TABLE 8.5
 F-Statistic Results for ARDL

The critical value bounds for this test are computed by Pesaran et al. (1996a), and are reproduced as Tables F and Tables W. Win Working with Microfit 4.0 Appendix C. Table F-gives the critical value bounds for F-statistic version of the test. Table W gives the bounds for the W statistic for the three cases depending on whether the underliving regression contains on intercept or trend. Table W is obtained by using Wald statistic, which has a chi-squared distribution asymptotically and can be used instead of F-statistic.

These test results suggest that there exists a long run relationship between LnY_t , $LnINVY_t$, $LnLEIY_t$, $Ln(a + g_t)$ where LnY_t is the dependent variable. In particular, $LnINVY_t$, $LnLEIY_t$, $Ln(a + g_t)$, can be treated as the long-run forcing variables explaining LnY_t .

Since the $F(\Delta LnY_t | \Delta LnINVY_t, \Delta LnLEIY_t, \Delta Ln(a + g_t), Dum80, Dum74, Dum71)$ (F statistic value) is 4.44 and the critical value is 4.09, this 4.44 value exceeds the upper bound of the critical value band, so we can reject the null hypothesis of no long-run relationship between, LnY_t , $LnINVY_t$, $LnLEIY_t$, $Ln(a + g_t), Dum80, Dum74, Dum71$. However, when we repeat the same test for other variables it has been seen that none of other values are higher than their critical values.

Once we have found that there is a cointegrating relationship between the variables, we can estimate the long-run coefficients based on ARDL models selected by Akaike Information Criterion (AIC) and Schwarz Bayesian Criterion (SBC). These results are given in Table 8.6:

Long-run	AIC(2 lag)	SBC(2 lag)
Regressor	<u>ARDL(1,0,0,0)</u>	<u>ARDL(0,0,0,0)</u>
	Coefficients	Coefficients
Intercept	-1.73[4.44]	0.45[4.16]
$Ln\hat{Y}_{t-1}$	0.17[0.13]	
LnINVY,	0.13[0.03]	0.14[0.03]
LnLEIY,	-0.01[-0.001]	-0.03[0.001]
In(a+g)	-0.07[-0.03]	-0.02[-0.01]
Time	-0.002[0.04]	0.02[0.03]
Dum80	-0.05[0.03]	-0.07[0.02]
Dum74	0.04[0.02]	0.05[0.01]
Dum71	0.04[0.02]	0.05[0.02]
R	0.99	0.99
\overline{R}^2	0.99	0.99
DW	2.32	2.27
F	746.41	826.83
SC	2.51	1.71
FF	0.24	1.13
N	0.04	0.82
Н	0.00	0.80

TABLE 8.6The Long-Run Coefficients Based on ARDL Models Selected bySBC and AIC with Two Lags

* Standard errors are shown in the parenthesis

According to AIC results, the sign of $LnINVY_t$ is positive and the signs of Ln(a+g)

and $LnLEIY_t$ are negative and they are all statistically significant. These results are also consistent with EG and VAR results. Dum80 has negative sign, Dum74 and Dum71 have positive signs. In addition, the coefficient of population is -0.07 and statistically significant in AIC but not in SBC.

Since standard errors in AIC are much smaller than standard errors in SCB in Table 8.7, the error correction representation for the selected ARDL(1,0,0,0) model is based on AIC.

From the error correction model associated with these long-run estimates it can be seen that the ECM coefficient has the correct sign and it suggests a moderate speed of convergence to equilibrium.

$Dependent Variable is \Delta LnY$			
Regressor	Coefficient	T-Ratio	
ECM_{t-1}	-0.18	-6.04	
$\Delta LnINVY_t$	0.13	3.93	
$\Delta LnLEIY_t$	-0.01	-2.29	
$\Delta Ln(a+g_t)$	-0.12	-3.50	
Δ <i>Dum</i> 80	-0.05	-1.89	
Δ <i>Dum</i> 74	0.03	2.24	
$\Delta Dum71$	0.04	2.64	
$R^2 = 0.75$ \bar{R}	$\bar{\ell}^2 0.64$ DW = 2.3	B1 F-Stat= 7.34	

 TABLE 8.7
 Error Correction Representation for the Selected ARDL Model

 ARDL (1,0,0,0) selected based on AIC

As can be seen from Table 8.7, ECM is also statistically significant and less than -1.

According to our ARDL test results, the stochastic nature of the variables is consistent with the Solow growth model because the income productivity, the propensities to accumulate physical capital, legislation expenditure and the growth rate of population are time series integrated of order one and they are cointegrated. In addition, the difference between the actual levels $(\Delta Ln\hat{Y}_t)$ and the equilibrium levels $(\Delta Ln\hat{Y}_{t-1})$ of productivity were stationary, so that it determined the subsequent growth rate of productivity. Moreover, the signs of $\Delta LnINVY_t$, $\Delta LnLEIY_t$ and $\Delta Ln(a+g_t)$ are as expected. While the coefficients of $\Delta LnINVY_t$, $\Delta LnLEIY_t$ and $\Delta Ln(a+g_t)$ are statistically significant, the coefficient of trend is not. Therefore, trend is not shown in the Table 8.7. These results also show that the impact of rent-seeking on economic growth is negative and statistically significant. That means that rent-seeking decreases economic growth and lower income levels 0.01 % each year.

8.2.3 Conclusion

In this section, we have applied three techniques to test the augmented Solow type of growth model. Our three techniques were: EG two stages, VAR method and ARDL approach. These three tests confirmed that there was only one cointegrating relationship between the variables in the long term. In addition, error correction coefficients of EG and ARDL techniques were statistically significant, less than one and negative. It means that variables have power to explain output level and output growth in the long-run and in the short-run.

Our main intention in applying these last two techniques was to confirm the results obtained from EG. As it is known, EG has explanatory power only if one cointegrating relationships exists between the variables. If there is more than one cointegrating relationship, EG does not provide information about it. However, we

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found that in each EG, and ARDL techniques the signs of coefficients are as expected. Each technique gives us similar coefficients that also support our model. In particular, since the sign of legislation expenditures is negative in each case we conclude that our rent-seeking variable has a negative impact on both per capita income levels and economic growth. As a policy outcome, the production of restrictive trade legislation should be controlled by an independent organisation apart from bureaucrats and politicians.

When we interpret our results that we get from two different techniques the share of investment in GNP was 0.14 in EG and 0.13 in ARDL. On the other hand, the share of legislation expenditures in GNP as a proxy for rent-seeking was 0.01 in EG, and in ARDL. In other words, one unit increase in legislation expenditures has a negative effect on per capita income, which is 0.01. Krueger's rent-seeking estimation for Turkey was 0.15 for the year 1968 and we claim that it is too high. In our study, since legislation expenditures are taken as a proxy for rent-seeking, it can be said that the share of legislation expenditures in time series framework is 0.01 during the period 1960-1990 and it is much less than 0.15 for only 1968.

8.3 AN ENDOGENOUS GROWTH MODEL:

8.3.1 Rama's Model

In Rama's (1993a, 1993b) model, the production function is chosen in reduced form, with capital and legislation as the production factors. In this model, households¹ set consumption plans and firms² decide about investment and lobbying.

In Cobb-Douglas form:

$$Y_{ii} = A_{ii} K^{\alpha}_{ii} R^{\beta}_{ii} \overline{K}^{\chi}_{ii} \overline{R}^{\phi}_{ii} L^{1-\alpha-\beta-\chi-\phi}_{ii}$$

$$\tag{8.16}$$

where Y_{it} is the output of the representative firm; A_{it} is for technology; K_{it} is for physical capital and knowledge of the representative firm; \overline{K} is average physical capital and knowledge of the remaining firms, which generates a positive external effect on the rest of the economy; L_{it} is for Labour; R_{it} illustrates the amount of restrictive trade legislation bills in force in favour of the firm; \overline{R}_{it} is the average amount of pieces of restrictive trade legislation which favours the remaining firms

$$U = \int_{0}^{\infty} \{u(c_t) \exp[-\rho t]\} dt$$

where c_i is consumption per person and $\rho >0$ is the constant rate of time preference. Rama assumed, for analytical convenience, that the momentary utility function is given by $u(c_i) = \log c_i$. ² In Rama's model, the representative firm, must decide the amount of resources to devote to productive investment ($i \ge 0$) and to lobbying activities ($l \ge 0$). These decisions are taken so as to maximise the present value PV of net revenues. It is important to mention that the discount rate is now the interest rate which to be paid to households. f_{tz} stands to show the interest rate which to be paid to households. Therefore, it can be accounted as the discount rate.

$$PV_{t} = \int_{0}^{+\infty} \left\{ (y_{t} - i_{t} - l_{t}) \exp\left[-\int_{0}^{t} f_{tz} dz\right] \right\} dt$$

¹ The representative household seeks to maximise their lifetime utility in the form:

which generate a negative external effect on the rest of the economy. Each restrictive trade legislation in favour of a firm may bring more incentives, tax rebates, etc. to this firm, and may bring more restrictions for other competitors. If the number of beneficiaries increases, it results less rent-seeking share for the existing firm. Output of the representative firm will increase when its capital stock and the average capital stock of the remaining firms increase. This is a result of a spillover effect. Output by the representative firm depends not only on capital stock but also on legislation. Legislation in favour of the firm increases its output, but if all firms get these kinds of transfer, there is a loss in overall efficiency. Hence, output decreases with the average amount of restrictive legislation bills which favour the remaining firms.

In addition it is also accepted that $0 \le \alpha \le 1$, $0 \le \chi \le 1$ and, because of spillover effect $\beta \ge 0$. On the other hand $\phi \le 0$. In Rama's model, all firms are identical in equilibrium, R= r. So redistribution based on the amount restrictive legislation that leads to a dead-weight loss, is equivalent to $\chi + \phi \le 0$. However, the number of firms being very large, strategic behaviour may be disregarded. Players will generally defect (r = R > 0), so that there will be a gap between actual and potential output. Such a gap provides a measure of the monetary Harberger costs arising from restrictive legislation for a given capital stock. In addition, in order to avoid a long run tendency towards the stationary state, the production function has to be characterised by non-decreasing returns to the reproducible factors (Rebelo 1991). It is assumed that $\alpha + \beta + \chi + \phi = 1$.

In his model, investment i leads to an increase of the capital stock. Setting

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depreciation aside and presenting the private cost of additional cost (ω):

$$k_t = i_t / \omega \tag{8.17}$$

Lobbying expenditures, in turn, determine the amount of restrictive legislation which favour the firm:

$$r = l / \eta \tag{8.18}$$

In this equation, r and 1 are treated as continuous variables. The parameter η measures the private cost of passing additional legislation, which is likely to depend on the prevailing institutional arrangements.

8.3.2 The Empirical Evidence

To test his model, Rama differentiated equation (8.16) with respect to time and taking equation (8.18) into account yields:

$$\frac{\dot{y}_t}{y_t} = \frac{\alpha}{\mu} \frac{\dot{i}_t}{k_t} + \frac{\beta}{r_t} \frac{\dot{r}_t}{r_t} + \frac{\chi}{\mu} \frac{I_t}{\bar{k}_t} + \frac{\phi}{\bar{r}_t} \frac{\dot{\bar{r}}_t}{\bar{r}_t}$$
(8.19)

Equation (8.19) shows the production function in reduced form for the representative firm taking into consideration capital stock and the amount of new restrictive legislation approved. Because of data unavailability in relation to capital stock and the amount of 'new' restrictive legislation approved in the current year, Rama assumed that $k_t = y_t$, $\bar{k}_t = Y_t$, $\dot{r}_t / r_t = \dot{r}_t$ and $\dot{\bar{r}}_t / \bar{r}_t = \dot{\bar{r}}_t$ estimated the equation (8.19) as follows:

$$\frac{\dot{y}_t}{y_t} = \theta_0 + \theta_1 \frac{\dot{t}_t}{y_t} + \theta_2 \frac{I_t}{Y_t} + \theta_3 \dot{r}_t + \theta_4 \dot{\bar{r}}_t$$
(8.20)

and assuming $\theta_1 > 0$, $\theta_2 > 0$, $\theta_3 > 0$ and $\theta_4 < 0$ together with i/y=I/Y and $\dot{R} = \dot{r}$ in equilibrium, equation (8.20) can also be expressed as follow for aggregate data;

$$\frac{\dot{Y}_t}{Y_t} = \theta_0 + (\theta_1 + \theta_2) \frac{I_t}{Y_t} + (\theta_3 + \theta_4) \dot{R}_t$$
(8.21)

To be consistent with our first model we can rewrite (8.21) in log form as follows:

$$\Delta LnY_t = Intercept + \alpha_1 \Delta LnINVY_t + \alpha_2 \Delta LnR_t + \varepsilon_t$$
(8.22)

Because we could not find consistent disaggregated data for Turkey, we can only estimate equation (8.22) for aggregate level.

Data

For Rama, testing the theoretical model required information on endogenous legislation. The data that will be used in our model is also related with the amount of restrictive trade legislation in force assuming they are endogenously determined by legislators. It has to be emphasised that legislation which had no identified promoter but are concerned with a small number of products are added to the series and legislation in favour of government's non-profit organisations and legislation promoted by foreign governments for the compliance with international agreements, are set aside. Aggregate output and aggregate investment data are collected from Turkish sources (from the SIS and SPI).

where:

Ln : is for natural log.

 ΔLnY_t : is output growth for Turkey. The change in GNP per capita income in constant prices (1968=100).

 $\Delta LnINVY_t$: is the growth of real investment to real output

 ΔLnR_t : is the amount of restrictive trade legislation in force that are enacted during the period 1960-1990.

The first thing is to find out whether variables in equation (8.22) are stationary or not.

Results are presented in Table 8.8

 TABLE 8.8
 The ADF Test for Integration Level

Va r iable	ADF	CV*	Order of Integration
ΔLnY_t	-4.28(0)	-2.97	I(0)
$\Delta LnINVY_t$	-4.64(0)	-2.97	I(0)
ΔLnR_t	-5.83(0)	-2.97	I(0)

*Critical values are taken from MacKinnon (1991) reported by MFIT 4.0^3 .

Since all variables are stationary, now we can estimate our regression on OLS. In addition to replication of Rama's model for Turkey we also tested another model with dummy variables to be consistent with our previous model that we carried on the first section. Equation (8.22) can also be written with dummies as follows:

³ Table 8.8 is the estimation of equation (8.22) in their first differences.

 $\Delta LnY_{t} = Intercept + \alpha_{1}\Delta LnINVY_{t} + \alpha_{2}\Delta LnR_{t} + \alpha_{3}\Delta Dum80 + \alpha_{4}\Delta Dum74$ $+ \alpha_{5}\Delta Dum71 + \varepsilon_{t}$

(8.23)

Regressor	Model 1	Model 2
	Coefficients	Coefficients
Intercept	0.02[4.36]	0.02 [4.58]
$\Delta LnINVY_t$	0.17[4.55]	0.15 [3.97]
ΔLnR_t	-0.05[-1.91]	-0.05 [-1.89]
Δ Dum80		-0.40 [-1.82]
ΔDum74		0.03 [1.18]
Δ Dum71		-0.01 [-0.80]
R^2	0.44	0.54
\overline{R}^2	0.40	0.46
DW	1.80	2.10
F	10.81	5.84
SC	0.19	0.28
FF	0.12	0.38
Н	0.76	1.15
N	0.66	0.26

TABLE 8.9OLS results for the period 1960-1990Dependent Variable is ΔLnY .

As can be seen from Table 8.9 the effect of the restrictive trade legislation variable as a proxy for rent-seeking is much higher in this model than the model we tested previously. While it was before -0.01% in Table 8.3. and -0.05% in Table 8.9. It shows that endogenously determined rent-seeking waste reduces the economic growth more. According to these results, $\Delta LnINVY_t$'s sign is positive, and ΔLnR_t 's sign is negative. This means that while investment has positive effect, the number of pieces of

restrictive trade legislation has negative effect on economic growth in Turkey. In addition, both variables are statistically significant.

8.4 CONCLUSION

Tullock (1980b) claims that rent-seeking activities in an autocratic system reduces the rate of economic growth and correspondingly leads to lower levels of real income. The contribution of this chapter was to test whether rent-seeking activities did indeed reduce economic growth and lead to lower levels of real income in a semi-democratic Turkey. Our results appear to justify Tullock's statement.

In order to come to this conclusion we applied two growth models to Turkish time series data: i) neo-classical type of simple growth model (Solow growth model) and ii) the endogenous type of growth model. Then, we set the question of 'if these two models explain the effect of rent-seeking activities on the rate of growth or not. Finally, we concluded that both models reached the same result, which is rent-seeking activities reduce economic growth and growth levels, although they approach the same issue from different perspectives.

We claim that the endogenous growth model explains more since it includes the spillover effects, endogenous government policy, interest groups etc. In the endogenous growth model, the amount of restrictive trade legislation in force is assumed to be endogenously determined by government policy and by interest groups. In other words, institutions and institutional changes have been taken as an important element. In addition, the rate of technological progress is not assumed to be constant and the long-run tendency for capital to experience diminishing returns is eliminated.

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Therefore, a constant-return production function at the aggregate level reflects spillovers of knowledge with the implications for desirable government policy. In this model it is assumed that each firm's knowledge is a public good that any other firm can access at zero cost. In other words, each firm's advances in knowledge can be spills over instantly once discovered. Hence, the change in each firm's technology term, \dot{A} , corresponds to the economy's overall learning, and is therefore proportional to the change in the aggregate capital stock, \dot{K} . In the production function, the firm's output is an upward function of its own capital stock and the average capital stock of the remaining firms displaying a good example of the existence of a spillover, in the tradition of learning-by-doing models. Furthermore, government trade legislation activities are considered as an additional statues in favour of the firm, such as tariff barrier to foreign competition, increase its output. However, if all firms get similar kind of transfers, there is a loss in overall efficiency. As a result, output decreases with the average number of restrictive legislation which favour the remaining firms.

In empirical side, our other very important contribution in this chapter is to apply a time series study for Turkish data for the period 1960-1990 for each model. In order to estimate time series data, we applied Engle-Granger (1987) two stages, Johansen's (1988) VAR technique and Pesaran et al.'s (1996) ARDL technique. What we found from the estimation of our first model is that while investment has positive incidence on growth as Solow predicted, legislation expenditures have negative effect on growth in Turkish case. And this waste is 1 % of per capita income.

Similarly, for the endogenous growth model, we also reached the same conclusion that

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the amount of restrictive trade legislation has a negative impact on Turkish output growth and the cost of rent-seeking activities is 5 % of per capita income.

Appendix -8A

The derivation of \dot{k}_t and \dot{r}_t as follows:

Assume now that $k_t = \frac{K_t}{A_t L_t}$. Then the first derivative of this value will be:

$$\dot{k}_{t} = \frac{d}{dt} \left(\frac{K_{t}}{A_{t}L_{t}} \right) = \frac{(A_{t}L_{t})\dot{K} - K(A_{t}L_{t})}{(A_{t}L_{t})^{2}}$$
(8A-1)

Next:

$$\dot{k}_{t} = \frac{\dot{K}}{A_{t}L_{t}} - \frac{K}{(A_{t}L_{t})^{2}}(A_{t}L_{t}) \text{ where } A_{t}L_{t} = \dot{A}_{t}L_{t} + A_{t}\dot{L}_{t}$$
 (8A-2)

Then:

$$\dot{k}_{t} = \frac{K_{t}}{A_{t}L_{t}} - \frac{K_{t}}{(A_{t}L_{t})^{2}} [\dot{A}_{t}L_{t} + A_{t}\dot{L}_{t}]$$
(8A-3)

Finally, we will get:

$$\dot{k}_{t} = \frac{\dot{K}_{t}}{A_{t}L_{t}} - \frac{K_{t}}{A_{t}L_{t}} \left[\frac{\dot{A}_{t}}{A_{t}} + \frac{\dot{L}_{t}}{L_{t}} \right]$$
(8A-4)

Since $a = \frac{\dot{A}_t}{A_t}$, $g = \frac{\dot{L}_t}{L_t}$, making substitution into equation (8A-4):

(8A-5)

$$\dot{k}_t = \frac{\dot{K}_t}{A_t L_t} - (a+g) \frac{K_t}{A_t L_t}$$

Next:

$$\dot{K}_t = s_K Y_t \tag{8A-6}$$

So:

$$\dot{k} = \frac{s_K Y_t}{A_t L_t} - (a+g) \frac{K_t}{A_t L_t}$$
(8A-7)

Then,

$$\dot{k}_{t} = s_{K} y_{t} - (a + g_{t}) \dot{k}_{t}$$
 (8A-8)

Finally, since $y_t = k^{\alpha} r^{\beta}$, assuming $0 < \alpha < 1$ and $0 < \beta < 1$, we get:

$$\dot{k}_t = s_K k_t^{\alpha} r_t^{\beta} - (a + g_t) k_t$$
(8A-9)

The same method can be applied for the volume of restrictive legislation;

As
$$r_t = \frac{R_t}{A_t L_t}$$
. Then the first derivative of this value will be:

$$\dot{r}_{t} = \frac{d}{dt} \left(\frac{R_{t}}{A_{t}L_{t}} \right) = \frac{(A_{t}L_{t})\dot{R}_{t} - R_{t}(A_{t}L_{t})}{(A_{t}L_{t})^{2}}$$
(8A-10)

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Next:

$$\dot{r}_{t} = \frac{\dot{R}_{t}}{A_{t}L_{t}} - \frac{R_{t}}{(A_{t}L_{t})^{2}}(A_{t}L_{t}) \text{ where } A_{t}L_{t} = \dot{A}_{t}L_{t} + A_{t}\dot{L}_{t}$$
(8A-11)

Then:

$$\dot{r}_{t} = \frac{\dot{R}_{t}}{A_{t}L_{t}} - \frac{R_{t}}{(A_{t}L_{t})^{2}} [\dot{A}_{t}L_{t} + A_{t}\dot{L}_{t}]$$
(8A-12)

Finally, we get:

$$\dot{r}_{t} = \frac{\dot{R}_{t}}{A_{t}L_{t}} - \frac{R_{t}}{A_{t}L_{t}} \left[\frac{\dot{A}_{t}}{A_{t}} + \frac{\dot{L}_{t}}{L_{t}} \right]$$
(8A-13)

Since
$$a = \frac{\dot{A}_t}{A_t}$$
, $g = \frac{\dot{L}_t}{\dot{L}_t}$, making substitution into equation (8A-14):

$$\dot{r}_{t} = \frac{\dot{R}_{t}}{A_{t}L_{t}} - (a+g)\frac{R_{t}}{A_{t}L_{t}}$$
(8A-15)

Similarly,

$$\dot{R}_t = s_R Y_t \tag{8A-16}$$

So,

$$\dot{r}_{t} = \frac{s_{R}Y_{t}}{A_{t}L_{t}} - (a+g)\frac{R_{t}}{A_{t}L_{t}}$$
(8A-17)

.

Then,

$$\dot{r}_t = s_R y_t - (a + g_t) r_r$$

Finally,

$$\dot{r}_r = s_R k^{\alpha} r_t^{\beta} - (a + g_t) r_t$$

(8A-18)

(8**A**-19)

Appendix -8B

Quantitative Implications:

As in the Solow model, the long-run growth rate of output is determined by the exogenous rate of technical progress because output is rising both for the usual reason that A is rising and because K and r are rising. Hence, output is growing at a rate greater than g. For this reason, the permanent increase in the saving rate leads to a temporary increase in the economy's growth rate. The level of y on the balanced growth path is y^* , and the values of k and r on the balanced growth path are k^* and r^* . As the Equations (8A-9) and (8A-18) imply: $\dot{k} = \dot{r} = 0$, we get:

$$s_{K}k^{*\alpha}r^{*\beta} = (a+g)k^{*}$$
(8B-1)

$$s_R k^* r^* = (a+g)r^*$$
(8B-2)

Since $s_K k^* \alpha r^* \beta = (a + g)k^*$ this condition is equivalent to :

- . . .

$$k^{*1-\alpha} = \left[\frac{s_K}{(a+g)}\right] r^{*\beta}$$
(8B-3)

$$k^{*} = \left[\frac{s_{K}}{(a+g)}\right]^{1/(1-\alpha)} r^{*\beta/(1-\alpha)}$$
(8B-4)

The combination of legislation expenditure and physical capital accumulation satisfy this condition since $\beta < 1 - \alpha$, second derivatives of \dot{k} with respect to r is negative. So that, k is increasing in r. This is the same for r^* .

$$s_R k^* r^* \beta = (a+g)r^*$$
(8B-5)

$$r^* = \left(\frac{\frac{s_R k^{\alpha}}{a+g}}{a+g}\right)^{1/(1-\beta)}$$
(8B-6)

$$r^* = \left(\frac{s_R}{a+g}\right)^{1/(1-\beta)} k^*^{\alpha/(1-\beta)}$$
(8B-7)

Since we already derive the equation (8B-7), the substitution can be made into equation (8B-1):

$$s_{K}k^{*}\alpha\left(\frac{s_{R}k^{*}\alpha}{a+g}\right)^{\beta/(1-\beta)} = (a+g)k^{*}$$
(8B-8)

$$s_{K}k^{*\alpha}(\frac{S_{R}^{\beta/(1-\beta)}k^{*\alpha\beta/(1-\beta)}}{(a+g)^{\beta/(1-\beta)}}) = (a+g)k^{*}$$
(8B-9)

$$s_{K} \frac{s_{R}^{\beta/(1-\beta)}}{(a+g)^{\beta/(1-\beta)}(a+g)} = k^{*}k^{*}^{-\alpha}k^{*}^{-\alpha\beta/(1-\beta)}$$
(8B-10)

(8B-11)

$$s_K \frac{s_R^{\beta/(1-\beta)}}{(a+g)^{\beta/(1-\beta)}(a+g)} = k^*^{1-\alpha-\alpha\beta/(1-\beta)}$$

$$s_{K} \frac{s_{R}^{\beta/(1-\beta)}}{(a+g)^{\beta/(1-\beta)}(a+g)} = k^{*}^{(1-\beta-\alpha)/(1-\beta)}$$
(8B-12)

$$\frac{s_K s_R^{\beta/(1-\beta)}}{(a+g)^{\beta/(1-\beta)}(a+g)} = k^*^{(1-\alpha-\beta)/(1-\beta)}$$
(8B-13)

$$\frac{s_K s_R^{\beta/(1-\beta)}}{(a+g)^{1/(1-\beta)}} = k^* (1-\alpha-\beta)/(1-\beta)$$
(8B-14)

Assuming that s_K , s_R , k and (a + g) > 0, the equation (8B-14) can be expressed in logarithmic (natural) form:

$$Lns_{K} + \frac{\beta}{1-\beta}Lns_{R} - \frac{1}{1-\beta}Ln(a+g) = \frac{1-\alpha-\beta}{1-\beta}Lnk^{*}$$
(8B-15)

$$Lnk^{*}_{t} = \frac{1-\beta}{1-\alpha-\beta}Lns_{K} + \frac{\beta}{1-\alpha-\beta}Lns_{R} - \frac{1}{1-\alpha-\beta}Ln(\alpha+g_{t})$$
(8B-16)

For Lm_t^* equation (8B-4) can be substituted into equation into (8B-2):

$$s_{R}\left[\left[\frac{s_{K}}{(a+g)}\right]^{1/(1-\alpha)}r^{*\beta/(1-\alpha)}\right]^{\alpha}r^{*\beta} = (a+g)r^{*}$$
(8B-17)
$$s_{R}\left[\left[\frac{s_{K}}{(a+g)(a+g)}\right]^{1/(1-\alpha)}\right]^{\alpha} = r^{*}r^{*-\alpha\beta/(1-\alpha)}r^{*\beta}$$
(8B-18)

$$s_{R}\left[\left[\frac{s_{K}}{(a+g)(a+g)}\right]^{1/(1-\alpha)}\right]^{\alpha} = r^{*}^{1-\alpha/1-\alpha-\beta}$$
(8B-19)

Assuming that s_K , s_R , k and (a + g) > 0, the equation (8B-19) can be expressed in logarithmic (natural) form:

$$Lmr^{*} = \frac{1-\alpha}{(1-\alpha)(1-\beta)}Lns_{R} + \frac{\alpha}{(1-\alpha)(1-\beta)}Lns_{K} + \frac{\alpha\beta}{(1-\alpha)(1-\beta)}Lnr^{*}$$

$$-\frac{1}{(1-\alpha)(1-\beta)}Ln(a+g)$$
(8B-20)

Then:

$$Lmr^*\left(1 - \frac{\alpha\beta}{(1-\alpha)(1-\beta)}\right) = \frac{1-\alpha}{(1-\alpha)(1-\beta)}Lns_R + \frac{\alpha}{(1-\alpha)(1-\beta)}Lns_K$$
$$-\frac{1}{(1-\alpha)(1-\beta)}Ln(\alpha+g)$$
(8B-21)

Next:

$$Lnr^{*}\left(\frac{1-\alpha+\beta-\alpha\beta+\alpha\beta}{(1-\alpha)(1+\beta)}\right) = \frac{1-\alpha}{(1-\alpha)(1-\beta)\beta}Lns_{R} + \frac{\alpha}{(1-\alpha)(1-\beta)}Lns_{K}$$

$$-\frac{1}{(1-\alpha)(1-\beta)}Ln(a+g)$$
(8B-22)

Similarly:

$$Lnr^{*}\left(\frac{1-\alpha-\beta}{(1-\alpha)(1-\beta)}\right) = \frac{1-\alpha}{(1-\alpha)(1-\beta)}Lns_{R} + \frac{\alpha}{(1-\alpha)(1-\beta)}Lns_{K}$$
$$-\frac{1}{(1-\alpha)(1-\beta)}Ln(a+g)$$
(8B-23)

$$Lnr^{*} = \frac{(1-\alpha)(1-\beta)}{1-\alpha-\beta} \begin{bmatrix} \frac{1-\alpha}{(1-\alpha)(1-\beta)} Lns_{R} + \frac{\alpha}{(1-\alpha)(1-\beta)} Lns_{K} \\ -\frac{1}{(1-\alpha)(1-\beta)} Ln(a+g) \end{bmatrix}$$
(8B-24)

Finally,

$$Lnr_{t}^{*} = \frac{\alpha}{1-\alpha-\beta}Lns_{Kt} + \frac{1-\alpha}{1-\alpha-\beta}Lns_{Rt} - \frac{1}{1-\alpha-\beta}Ln(\alpha+g_{t})$$
(8B-25)

Appendix 8C

Finally, the production function $Y_{i} = K_{i}^{\alpha} R_{i}^{\beta} (A_{i} L_{i})^{1-\alpha-\beta}$ implies $Lny^{*} = \alpha Lnk^{*} + \beta Lnr^{*}$. Substituting (B-16) and (B-26) into this expression and combining terms yields:

$$Lny^{*} = \alpha \left(\frac{1-\beta}{1-\alpha-\beta} Lns_{K} + \frac{\beta}{1-\alpha-\beta} Lns_{R} - \frac{1}{1-\alpha-\beta} Ln(a+g) \right) + \beta \left(+ \frac{1-\alpha}{1-\alpha-\beta} Lns_{R} + \frac{\alpha}{1-\alpha-\beta} Lns_{K} - \frac{1}{1-\alpha-\beta} Ln(a+g) \right)$$
(8C-1)

$$Lny^{*} = \left(\frac{(1-\beta)\alpha}{1-\alpha-\beta}Lns_{K} + \frac{\beta\alpha}{1-\alpha-\beta}Lns_{R} - \frac{\alpha}{1-\alpha-\beta}Ln(a+g)\right) + \left(\frac{(1-\alpha)\beta}{1-\alpha-\beta}Lns_{R} + \frac{\alpha\beta}{1-\alpha-\beta}Lns_{K} - \frac{\beta}{1-\alpha-\beta}Ln(a+g)\right)$$
(8C-2)

$$Lny_{t}^{*} = \frac{\alpha}{1-\alpha-\beta}Lns_{Kt} + \frac{\beta}{1-\alpha-\beta}Lns_{Rt} - \frac{\alpha+\beta}{1-\alpha-\beta}Ln(\alpha+g_{t})$$
(8C-3)

(8D-1)

Appendix 8D

$$\dot{y} = A\alpha_{1}k^{\alpha_{1}-1}\dot{k}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}$$

$$+ Ak^{\alpha_{1}}\alpha_{2}K^{\alpha_{2}-1}\dot{K}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}$$

$$+ Ak^{\alpha_{1}}K^{\alpha_{2}}\alpha_{3}(1+s)^{\alpha_{3}-1}\dot{s}(1+S)^{\alpha_{4}}$$

$$+ Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}\alpha_{4}(1+S)^{\alpha_{4}-1}\dot{S}$$

$$\frac{\dot{y}}{y} = \frac{A\alpha_{1}k^{\alpha_{1}-1}\dot{k}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}}{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}} + \frac{Ak^{\alpha_{1}}\alpha_{2}K^{\alpha_{2}-1}\dot{K}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}}{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}} + \frac{Ak^{\alpha_{1}}K^{\alpha_{2}}\alpha_{3}(1+s)^{\alpha_{3}-1}\dot{s}(1+S)^{\alpha_{4}}}{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}} + \frac{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}\alpha_{4}(1+S)^{\alpha_{4}-1}}{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}} + \frac{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}\alpha_{4}(1+S)^{\alpha_{4}-1}}{Ak^{\alpha_{1}}K^{\alpha_{2}}(1+s)^{\alpha_{3}}(1+S)^{\alpha_{4}}}$$

$$(8D-2)$$

$$\frac{\dot{y}}{y} = \frac{\alpha_1 k^{\alpha_1 - 1} \dot{k}}{k^{\alpha_1}} + \frac{\alpha_2 K^{\alpha_2 - 1} \dot{K}}{K^{\alpha_2}} + \frac{\alpha_3 (1 + s)^{\alpha_3 - 1} \dot{s}}{(1 + s)^{\alpha_3}} + \frac{\alpha_4 (1 + S)^{\alpha_4 - 1} \dot{S}}{(1 + S)^{\alpha_4}}$$
(8D-3)

$$\frac{\dot{y}}{y} = \frac{\alpha_1 \dot{k}}{k} + \frac{\alpha_2 \dot{K}}{K^{\alpha}} + \frac{\alpha_3 \dot{s}}{(1+s)} + \frac{\alpha_4 \dot{S}}{(1+S)}$$
(8D-4)

Since $\dot{k} = \frac{i}{\mu}$ and it is also assumed that $\frac{i}{k} = \frac{I}{K}$

$$\frac{\dot{y}}{y} = \frac{\alpha_1 \frac{\dot{i}}{\mu}}{k} + \frac{\alpha_2 \frac{I}{\mu}}{K^{\alpha}} + \frac{\alpha_3 \dot{s}}{(1+s)} + \frac{\alpha_4 \dot{S}}{(1+S)}$$
(8D-5)

$$\frac{\dot{y}}{y} = \frac{\alpha_1}{\mu}\frac{\dot{i}}{k} + \frac{\alpha_2}{\mu}\frac{I}{K^{\alpha}} + \alpha_3\frac{\dot{s}}{(1+s)} + \alpha_4\frac{\dot{S}}{(1+S)}$$

(8D-6)

CHAPTER 9

CONCLUSION

9.1 OVERVIEW OF STUDY

The purpose of this study was to examine both normative and positive aspects of rentseeking in Turkey. By looking at Turkish trade policy, as a case study, we were able to measure the social and economic costs of rent-seeking and its main causes. This research has resulted in several unique contributions to the study of rent-seeking. We claim that our contributions were to: i) look at rent-seeking descriptively and empirically from both normative and positive sides, ii) combine the state centred public choice approach with recent time series techniques, iii) examine the state-interest group relationship by offering a new approach, monism, not only for Turkey but for many other semi-democratic countries and iv) check if rent-seeking has an effect on economic growth in the long term using time series techniques.

In order to make these contributions, we asked such questions the following as: Is rent-seeking high in Turkey compared with other countries? What have been the social and economic costs of rent-seeking to Turkish society during the period 1960-1990? If it is high what are the causes of it? In our conclusion chapter we will analyse our findings to see if we really find some answers to at least some of the questions or not

In chapter 2, we critically examined the political economy of rent-seeking from different perspectives. After we defined the concept of rent-seeking, both normative and positive rent-seeking, types of rent-seeking and rent-seeking in international trade were reviewed. The main objective of this chapter was to provide a basis for the

following chapters which were divided into three sections. We discussed the fact that the cost of rent-seeking to societies, is very high and, in the long-run, may even produce irreparable damage. In order to understand the problem more fully, the first thing is to measure the cost of rent-seeking. However, finding such measurement is very difficult, even in the Western economies which are relatively open and with wellinformed statistical knowledge. Despite the difficulties, there are still numerous ongoing attempts at devising appropriate techniques to measure the cost of rentseeking using some proxies. In this study we have followed that tradition.

Section I consists of chapters 3 and 4, which examined the property rights issue in the development process in order to answer the question whether rent-seeking is high in Turkey. In chapter 3 we discussed rent-seeking phenomena in both developed and developing countries from the normative rent-seeking point of view. By doing that, we argued that rent-seeking activities differ significantly between these countries as a result of major differences in their institutional settings and democratic traditions. Although we claimed that rent-seeking is higher in developing countries than in their developed counterparts, we did not apply any measurement technique, to see if the extent of rent-seeking differs significantly between these two groups and, if so, what the reasons were.

In chapter 4, we looked at the issue empirically and we analysed rent-seeking waste arising from government budgetary allocations, following a method suggested by Katz and Rosenberg. As Katz and Rosenberg (1989: 140) stated, "developed economies with established hierarchies tend to be less wasteful than less developed economies, which are typically still trying to find their political and social identity by shifts in the

relative power of pressure groups". By extending Katz and Rosenberg's cross section study for twenty developed/developing countries we found out that Katz and Rosenberg's distinction between developed and developing countries in terms of rentseeking still exists. Whilst governments in both types of country stimulate rentseeking, and transfer resources from society merely to a few privileged groups (interest groups), rent-seeking in developing countries is much greater than in developed countries. We concluded that the states' political and economic structures and rentseeking activities vary from country to country significantly.

Then we applied a time series study to Turkey alone to figure out Turkish rent-seeking costs. In order to find out a cointegrated relationship between variables, we tested our null hypothesis that there was no cointegration. The rejection of the non-cointegration hypothesis shows that the proposed relationship is a valid cointegrating vector which makes the regression of budgetary rent-seeking on the variables non-spurious. Existence of cointegration means that budgetary rent-seeking and the other variables tend to move together. Following recent literature, the link between cointegration and the error correction is explored by the two step procedure (Engle and Granger 1987). The first stage is simply to estimate the static cointegrating (OLS) regression, the second is to estimate the error correction model. From our results, we found that there is a cointegrating relationship between rent-seeking as a percentage of the budget R_i and government size (GY_i), and GNP per capita income ($GNPC_i$) in our Model 1 and with dummies in Model 2. We found that independent variables help to explain rent-seeking waste in Turkey during the period 1960-1994. In addition to these cointegrated relationships, we showed that adjustments were made towards restoring

the long-run relationship between rent-seeking and other variables.

In section II, in chapters 5 and 6, we addressed the question of why rent-seeking in Turkey is so high. To do that, in chapter 5, the theory of the state-interest group formation was discussed descriptively in both democratic and undemocratic countries. Then Turkey's strong-state tradition and monistic state-interest group relation was theoretically discussed in relation to semi-democratic countries as a reason for high rent-seeking. In chapter 6, we built an empirical framework for our hypothesis following the Interest Group Theory of Legislation literature in order to answer the question of why there is a high rent-seeking in Turkey. The Turkish trade policy legislation system was analysed from this perspective. The issue to be considered was not whether a given law is 'good' or 'bad', but rather 'why the law was passed'. In order to develop a testable economic model of the lobbying behaviour of interest groups in the pursuit of wealth transfers, we considered demand and supply factors which helped to generate the volume of legislation in a reduced form. The reduced form of the theoretical model shows that the level of rent set by the legislator is a function of the incomes of bureaucrats and politicians, the size of government, the number of firms, the volume of imports, the number of voters and the population. In this model, it is considered that on the supply side, voters, and on the demand side, business groups, locate and legislators pair these suppliers and demanders. Therefore, it is assumed that the Turkish legislators' productive process (such as the size of government (GY) and the bureaucrats'-politicians' wages and salaries (BWSB)) highlights the *political and economic environment* (such as population (POP) and the number of voters (VOT/POP)) which reflects the facts underlying the supply of

legislation (i.e. the transfers and regulation, such as number of private firms in manufacturing (N) and import (I)) in the Turkish trade legislation system).

The slope of the supply curve of legislation is a function of the organisational cost facing voters, whereas the position of the supply curve of legislation is a function of the technical proficiency of any given legislative process. In this model, while politicians-bureaucrats are brokers who maximise their salaries and budget size, business groups demand legislation to maximise their profit and, finally, voters supply legislation to maximise their welfare. From our test, we obtained negative signs for BWSB, N, and positive signs for GY, I VOTP and POP. These results support the interest group theory of legislation in Turkish case. After applying cointegration analysis, we see that there is a long run relationship between business groups, bureaucrats and politicians in Turkish trade policies. This relationship also explains long term stability among the three interest groups in terms of rent-seeking. Politicians act not only as brokers who pair demanders and suppliers, but also as rent-seekers who try to maximise their incomes. From the demand side, any increases in the number of trade companies decreases rent-seeking as a result of greater competition. From the supply side, any increase in the number of voters and population raises rent-seeking. One of the most important implications of our model is that a reduction in rent-seeking and social waste might be obtained by an increase in the salary of the politiciansbureaucrats. This increases the opportunity cost of rent-seeking behaviour on their part.

As Olson (1982) claimed smaller business groups benefit more than larger groups from government transfers, since organisation costs are much lower and their selective

incentives are much higher for small groups. Therefore, they can easily lobby governments in order to transfer resources. However if the number of interest groups increases in the market, their rent seeking shares decrease as a result of competition. From that perspective, Turkish case presents a very good example of Olson's theory. In these cases where competition increases, more firms enter the market and decrease the share of existing rent. Therefore, any increase in the number of firms reduces rentseeking. On the empirical side, using time series data, our main intention is to apply interest group theory of legislation for Turkey to see if this theory works for a semidemocratic Turkey by testing the null hypothesis of non-cointegration between the amount of restrictive trade legislation and the response variables, against the alternative hypothesis. In order to test our hypothesis, we applied both the Engle-Granger two-stage approach and later, the ARDL approach, in order to verify the results that we obtained from E-G two stages..

Section III, chapters 7 and 8, we concentrated on institutional changes and their effect upon economic growth. Tullock (1980b) claimed that rent-seeking activities in an autocratic system reduce the rate of economic growth and correspondingly generate lower levels of real income. Further to this statement, our contribution was to show that rent-seeking activities also reduce economic growth and lower levels of real income in Turkey. We suggest that the rent-seeking literature can provide an interesting insight into economic growth and how it is influenced by institutions. In chapter 7, we concentrated on the economics of institutions and their effects on economic performance. In this, we were preparing a base for chapter 8 which considers the growth issue empirically in Turkey.

In chapter 8, we analysed Turkey's case empirically in order to provide econometric evidence either for or against Tullock's hypothesis that rent-seeking reduces economic growth. To do this we applied two growth models to Turkish time series data: (i) the neo-classical type of a simple growth model (Solow growth model) and (ii) the endogenous type of growth model. Then, we posed the question of whether these two models would explain the effect of rent-seeking activities on the rate of growth or not. Finally, we concluded that both models reached a similar result: that rent-seeking activities reduce economic growth and growth levels, although they approach the same issue from different perspectives. In this sense, our results appear to justify Tullock's (1980b) statement in Turkish case.

As a second stage, our intention was to compare the Solow type of growth model with the endogenous growth model for Turkey.

In the Augmented Solow-type growth model, the number of pieces of restrictive trade legislation and physical capital were treated as state variables in a production function. Since the empirical counterparts of these variables were taken as legislation expenditures and investment, it was assumed that the growth rate increases with investment and decreases with legislation expenditure. We estimated the first model by assuming that the rates of capital accumulation, legislation expenditures and the growth of population were stochastic variables with unit roots rather than constant parameters. Consequently, the equilibrium level of labour productivity in efficiency units had a unit root also. Therefore, Solow's model was interpreted as an error correction model, consistent with the variables' stochastic nature.

The endogenous growth model represents an application to Turkish data of Rama's

(1993a, 1993b) model, which was based on the endogenous growth theory. Rama developed a model for Uruguay, in which the amount of restrictive trade legislation was endogenously determined by the interaction between government policy and interest groups activities. He found that restrictive trade legislation had a negative impact on the aggregate level of output in Uruguay. In our study, the empirical evidence was drawn from the period 1960-1990, when Turkey operated an import substitution policy, and after 1980, an export promotion policy. As a result, protectionist policy continued without any interruption for the a full 30 years. In this chapter, our hypothesis was that the number of pieces of trade legislation enacted each year, either exogenously or endogenously determined had a negative effect on economic growth. In an empirical test, we found that in both models rent-seeking activities tended to reduce the economic growth rate in Turkey.

We claim that the endogenous growth model is much more comprehensive than the Solow type of growth model since it includes the effect of spillovers, endogenous government policy, interest groups etc. In the neo-classical approach, transaction costs are assumed to be zero, whereas in the endogenous growth model they are not. Empirically our other very important contribution in this thesis is to apply for each model a time series study for Turkish data for the period 1960-1990. In order to estimate the time series data, we applied Engle-Granger's (1987) two stages, Johansen's (1988) VAR technique and Pesaran et al.'s, (1995, 1996) ARDL technique. What we found from the estimation of our first model is that, while investment has a positive incidence on growth as Solow predicted, legislation expenditures have a negative effect on growth in Turkey's case. Similarly, for the endogenous growth

model, we also reached the same conclusion that the amount of restrictive trade legislation has a negative impact on Turkish output growth and that the cost of rent-seeking activities is high.

In short, our conclusion for Turkish case is that rent-seeking is high, and that this is bad for the welfare of society, since scarce resources are consumed by artificially created transfers. In our empirical findings, rent-seeking reduces economic growth between 0.01% and 0.05% each year. There are several reasons why rent-seeking may be high in Turkey. The most important thing is that Turkey has a strong state tradition and there is a one to one monistic relationship between the state and business groups. From the state-centred public choice perspective, this can be explained since the civil-military bureaucrats are also composed of rational individuals, who try to maximise their benefits (income, power, etc.) as well as businessmen, who try to maximise their profits. Indeed they have established a kind of coalition among themselves in order not to lose their share of rent-seeking benefits.

Nevertheless, we know that even if we find the best theoretical and empirical measurement techniques to prove that the cost of rent-seeking is high, it is very difficult to abolish it altogether. All we can do is to try to control it and to minimise it.

9.2. DIRECTION FOR FUTURE RESEARCH

In closing we mention of this study and suggest several possible extensions to the above research.

First, the normative empirical analysis replicated here from Katz and Rosenberg' study does not claim to exhaust all the hypotheses and caveats of the economic analysis for

Turkey. Some scholars like Scully (1991) have criticised Katz and Rosenberg's measure as a conceptually incorrect evaluation of rent-seeking associated with government expenditure, and Schenytzer (1994) has criticised Katz and Rosenberg's measure as their measure of rent-seeking for budget allocation results is incorrect as applied to the different institutional setting of twenty countries considered in Katz and Rosenberg analysis. Even if Katz and Rosenberg's study provides a good base for our understanding of rent-seeking issue, it suffers from limitations.

First of all, their measure of rent-seeking is related to changes in government *spending* rather than to changes in government *transfers*. Katz and Rosenberg (1989:138) claimed that "to the extent government spending uses up real resources, any rent-seeking in that category is unlikely to be equal to 100 percent of spending. Yet that is what we are forced to assume from the data available" Katz and Rosenberg stressed that they may have overestimated rent-seeking when the changes in government *spending* are considered. Thus, a better way might be found to employ the changes in government transfer instead of the changes in government spending as a proxy for rent-seeking. This can also be done by taking into account the different institutional setting of twenty developing/developed countries as Schenytzer claimed; i.e., whether they are democratic or undemocratic.

In addition to existing variables, more variables such as the number of interest groups (agricultural and industrial organisations), the number of bureaucrats and measurements related to political stability and democratisation process, could be added to the regression equation.

Second, in order to analyse positive rent-seeking in Turkey, we estimated a simpler

model by applying a modified version of McCormick and Tollison's (1990) reducedform approach to the Turkish trade legislation system. Since testing the model required endogenous information on legislation, our data as a proxy for rent-seeking were the number of laws, decrees and administrative resolutions passed annually that create, maintain or modify a foreign-trade restriction for the benefit of a single firm or sector. Although our rent-seeking variable was not the perfect variable to estimate, it was the best among these available. In the future this limitation can be improved and a better rent-seeking variable estimated.

Third, when we conducted an analysis to provide econometric evidence either for or against the hypothesis that rent-seeking reduces economic growth, we applied two growth models: an Augmented Solow type of growth model and a simple endogenous growth model. These models produced but we have not undertaken a formal comparison of them. Future research might involve more significant statistical comparisons of the two models.

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