Making Ends Meet:

The Widening Gap Between Authorized FDI and Realized FDI in the Turkish Economy, 1980-2003

By Yiğit Kargın, B.A., B.A.

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the Faculty of Graduate Studies and Research
in partial fulfillment of
the requirements for the degree of
Master of Arts

Department of Political Science
Carleton University
Ottawa, Ontario
Canada

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To my grandparents Şükran Atak and Muammer Atak
to whom I will always owe more than I can ever give back

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Abstract

Foreign Direct Investment (FDI) has become an important vehicle of economic development for emerging markets over the course of the last twenty-five years in a neo-liberal global economic environment. The benefits of FDI include the eradication of unemployment through stable long-term funding and managerial, organizational and technological spill-overs, which policy makers in emerging markets can use as remedies to cure the chronic problems present in these economies in order to achieve sustainable growth rates. At this point, the issue of whether these emerging markets are able to fulfill their true FDI potential becomes crucial. In other words, the subject of what happens to FDI after it arrives at the host state requires further clarification. Although numerous studies exist in the political economy literature on the FDI-host state relationship through an FDI inflow determinants perspective, the issue of what happens to FDI in the aftermath of its arrival at the host state has not been sufficiently addressed. This thesis addresses this issue in the context of the Turkish economy as an emerging market in the 1980-2003 period through the lenses of economic neo-liberalism. The aftermath of the FDI inflows to the Turkish economy is analyzed by using the concept of "unrealized FDI permits", which categorizes FDI inflows to the economy as authorized FDI and realized FDI and which is defined as the portion of authorized FDI by the host state authorities that fails to be transformed into actual investment projects. Since 1980, observers witness a widening discrepancy between authorized FDI and realized FDI in the Turkish economy, the reasons of which are explored in this thesis in order to determine how much each reason contributes to this problem of unrealized FDI and to outline the policy implications of this situation for Turkey. By using an induction methodology, the media is scanned by using the internet for the selection of particular case studies highlighting the reasons behind the investment decision reversals on the part of Multinational Enterprises (MNEs) and the structural problems of the Turkish economy contributing to the problem of unrealized FDI in the 1980-2003 period are determined as follows: the absence of sufficient environmental regulation, the presence of an inconsistent tax system, corruption and macroeconomic instability. These structural problems are discussed both theoretically and empirically from a neo-liberal perspective and the variables presented by these structural problems are measured in the Turkish context through the utilization of several indices in order to construct an econometric model linking unrealized FDI in the Turkish economy in the 1980-2003 period to these measured structural problems with the purpose of determining to what extent each structural problem contributes to unrealized FDI in Turkey. The hypothesis presented before the econometric analysis is that all these structural problems will have a significant correlation with the problem of unrealized FDI in line with the economic neo-liberal view. The conclusion reached at the end of the econometric analysis, however, is that the absence of sufficient environmental regulation and corruption significantly account for the presence of this problem in the Turkish economy, whereas the presence of an inconsistent tax system and macroeconomic instability do not. Furthermore, the absence of sufficient environmental regulation has a greater impact on unrealized FDI in comparison to corruption. Thus in line with the economic neo-liberal view, the policy implication of this outcome for Turkey is that enhanced public action is required to resolve these problems simultaneously through the strengthening of the relevant judicial mechanisms, while giving more emphasis to environmental regulation during this process, in order to make sure that Turkey fulfills its true FDI potential by reducing the size of unrealized FDI.

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Acknowledgments

This thesis began as an idea in the winter of 2005 based on a small graph I saw in an article I was reading for one of my courses as a graduate student in the Department of Political Science at Carleton University in Ottawa, Canada. It has been a challenging and an equally enriching experience for me to try to mold this idea into a meaningful piece of work over the course of a year and a half. For making this process possible, I owe special thanks to Associate Professor Randall Germain in the Department of Political Science at Carleton University for both accepting to supervise my thesis and agreeing to work on the drafts through e-mail correspondence while I stayed in Istanbul, Turkey during the 2005-2006 academic year. I also thank Assistant Professor Yanling Wang in the Norman Paterson School of International Affairs at Carleton University for accepting to become my advisor for the econometric analysis part of the work. Professor Michael Dolan in the Department of Political Science and Assistant Professor Teddy Samy in the Norman Paterson School of International Affairs at Carleton University have provided me with invaluable comments that have enabled me to significantly improve the initial draft of my thesis. Their input will serve as an important milestone as I dwell upon this work in more detail in the future.

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Yiğit Kargın
Istanbul, 20 August 2006

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PART I

Introduction

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1. Foreign Direct Investment (FDI) and Turkey

Over the course of the last twenty-five years, FDI has become a major source of stable long-term funding for emerging markets throughout the globe. According to the World Bank sources, the net FDI inflows to emerging markets have increased from around US$ 10 billion in 1985 to US$ 133 billion in 2003.[1] The reasons behind this trend can be analyzed in two dimensions: the home state-specific determinants and the host state-specific determinants. The home state-specific determinants mainly include high labor costs, rigid taxation and high saturation levels in the domestic market, whereas the host state-specific determinants can be broadly listed as huge market size, low labor costs, flexible tax policies, improving infrastructure and developing human resources quality.[2] Hence, companies that face costly policies in their home states prefer to extend or relocate their business activities to host states with less costly policies and new opportunities.

From the perspective of emerging economies, FDI brings additional value to the host state from two perspectives. First, it replaces speculative short term capital, the sudden flight of which has been a key element triggering the recent economic crises in these countries, with more reliable and stable long term investments, which contribute to the provision of goods and services and the eradication of unemployment.[3] Second, FDI enriches the technical and managerial capacities of the host state through technological

---

[1] Chan, K.K. & Gemayel, E.R. (2004). *Risk Instability and the Pattern of Foreign Direct Investment in the Middle East and North African Region.* [IMF Working Paper WP/04/139]. International Monetary Fund website. Available at: http://www.imf.org/external/pubs/ft/wp/2004/wp04139.pdf

[2] Caves, R.E. (1996). *Multinational Enterprise and Economic Analysis*. Cambridge: Cambridge University Press.

[3] Chan, K.K. & Gemayel, E.R. (2004). *Risk Instability and the Pattern of Foreign Direct Investment in the Middle East and North African Region.* [IMF Working Paper WP/04/139]. International Monetary Fund website. Available at: http://www.imf.org/external/pubs/ft/wp/2004/wp04139.pdf

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and organizational spill-overs.[4] Due to these obvious benefits, policy makers in host economies work towards bettering the conditions of the determinants of FDI inflows in order to make their domestic markets more attractive to foreign investors.

Turkey, as an emerging market, has been pursuing a more friendly approach to FDI since the early 1980s, which mark the transition from an import substitution industrialization (ISI) era to an export-based free market period with the aim of achieving a higher level of integration with the global economy.[5] Thus in order to attract more FDI, Turkish policy makers, too, have been engaged in various efforts since the early 1980s to improve the investment infrastructure in the Turkish economy by trying to regulate labor standards, tax policies and commercial law in a more favorable way in order to provide macroeconomic and legal stability and consistency for foreign investors.[6]

Although a vast literature exists on the subject of FDI inflow determinants in general and those specific to the Turkish economy in particular, very little attention has been devoted to what happens once foreign investors arrive at the host state after being convinced by the strength of the pull factors of the host economy that this particular country offers a valuable investment opportunity. There might be times when the officials of the host state authorize the FDI project, but foreign investors change their mind and choose not to proceed with their investment plans. Such a possibility underlines the necessity to disaggregate FDI inflows to a host state into two categories: authorized FDI and realized FDI. Authorized FDI can be described as the FDI inflow level to a particular

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[4] Ibid.
[5] Erdal, F. & Tatoglu, E. (2002). Locational Determinants of Foreign Direct Investment in an Emerging Market Economy: Evidence from Turkey. *Multinational Business Review, Vol. 10, Number 1, 2002.* Econturk website. Available at: http://www.econturk.org/Turkisheconomy/fuatekrem.pdf
[6] Basar, M. & Tosunoglu, S. (2005). *EU Integration Process: Will Turkey Overcome the FDI Obstacles?* Fakulteta za management Koper website. Available at: http://www.fm-kp.si/zalozba/isbn/961-6573-03-9/basar.pdf

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host state that is approved by the state authorities in the form of FDI permits. Realized FDI can be defined as the portion of authorized FDI which foreign investors choose to realize in that host state. The presence of a significant difference between the two FDI types, characterized by *unrealized FDI permits*, is indicative of the existence of deeper structural problems in the host economy beyond the determinants that pull foreign investors to that host economy in the first place. A considerable difference between authorized FDI and realized FDI exists in the Turkish context as will be discussed in detail in the following sections.

The significance of studying this distinction lies in the fact that the presence of deeper structural problems that create such a discrepancy between authorized FDI and realized FDI weakens the strength of the FDI determinants that attract foreign investors into the host country in the first place and prevents the economy from fulfilling its true FDI potential. Considering that FDI is an important economic development engine for emerging markets, such as Turkey, the urgency of coping with the problems that create such a discrepancy is self-evident. Therefore, the purpose of this thesis is to define the structural problems that cause a gap between authorized FDI and realized FDI in the Turkish economy in the 1980-2003 period, pinpoint the degree at which these structural problems cause this problem of unrealized FDI and draw policy implications in order to deal with this issue accordingly.

The next section explores the issue of unrealized FDI in the Turkish economy in detail.

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2. Establishing the Facts: Unrealized FDI in the Turkish Economy in the 1980-2003 Period

When the FDI inflow patterns to the Turkish economy are thoroughly analyzed for the period between 1980 and 2003, the presence of a discrepancy between the authorized FDI inflow level and the realized FDI inflow level is evident.[7] For the year 1980, the authorized FDI inflow amount is US$ 97 million; however, the realized FDI inflow amount remains at US$ 35 million, marking a US$ 62 million difference, which corresponds to a realization ratio of only 36%. This difference rises to a record level of US$ 2,922 million for 1996, corresponding to a realization ratio of 24%, with the authorized FDI inflow level being US$ 3,836 million and the realized FDI inflow level being US$ 914 million. Finally, for 2003, the difference slightly drops to US$ 2,056 million as the authorized FDI inflow amount decreases to US$ 2,416 million and the realized FDI inflow amount decreases to US$ 360 million, which corresponds to an even lower realization ratio of 15%. An analysis of the 1980-2003 period as a whole leads to the conclusion that the Turkish economy has displayed a poor performance in terms of realizing the authorized FDI inflow with a realization ratio of 46% as only the US$ 16,582 million portion of the total authorized US$ 36,410 million FDI inflow is realized, marking a difference of US$ 19,828 million.

When the FDI figures in these two categories are plotted on a graph and the best fit line of each curve is taken, another trend emerges. The discrepancy level between the authorized FDI inflow and the realized FDI inflow increases for the 1980-2003 period.[8] The best fit line for the authorized FDI inflow has a slope of +129.250 and a y intercept

[7] Please refer to Table 1 below.
[8] Please refer to Graph 1 and Graph 2 below.

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of –98.591. The best fit line for the realized FDI inflow has a slope of +67.546 and a y intercept of –153.410. The fact that the y intercepts are very close to each other

Table 1: Authorized and Realized FDI Inflows to Turkey 1980-2003[9]

AUTHORIZED AND REALIZED FDI INFLOWS TO TURKEY 1980-2003				
Years	**Authorized FDI (US$ Millions)***	**Realized FDI (US$ Millions)****	**Difference (Authorized - Realized)*****	**Realization Ratio (Realized / Authorized)*****
1980	97	35	62	36.08%
1981	338	141	197	41.72%
1982	167	103	64	61.68%
1983	103	87	16	84.47%
1984	271	113	158	41.70%
1985	234	99	135	42.31%
1986	364	125	239	34.34%
1987	655	115	540	17.56%
1988	821	354	467	43.12%
1989	1,512	663	849	43.85%
1990	1,861	684	1,177	36.75%
1991	1,967	907	1,060	46.11%
1992	1,820	911	909	50.05%
1993	2,063	746	1,317	36.16%
1994	1,478	636	842	43.03%
1995	2,938	934	2,004	31.79%
1996	3,836	914	2,922	23.83%
1997	1,678	852	826	50.77%
1998	1,646	953	693	57.90%
1999	1,700	813	887	47.82%
2000	3,477	1,707	1,770	49.09%
2001	2,725	3,288	-563	120.66%
2002	2,243	1,042	1,201	46.46%
2003	2,416	360	2,056	14.90%
TOTAL	36,410	16,582	19,828	45.54%

*** The authorized FDI inflow level for 2003 is given as of June at US$1,208 million in the original table. Thus a run rate for 2003 is taken by multiplying this amount by 2 in this table.**
**** The realized FDI inflow level for 2003 is given as of May at US$150 million in the original table. Thus a run rate for 2003 is taken by multiplying this amount by 2.4 in this table.**
***** These columns do not exist in the original table. They are formed based on the information available in the original table.**

[9] Treasury of the Republic of Turkey. (2005). *FDI Inflows to Turkey*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/english/ybs/geneling.htm

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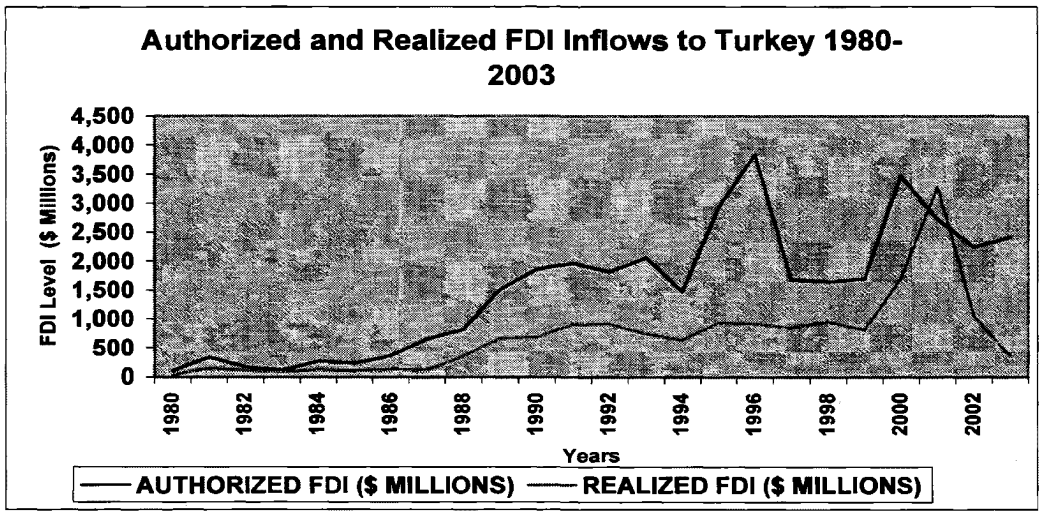
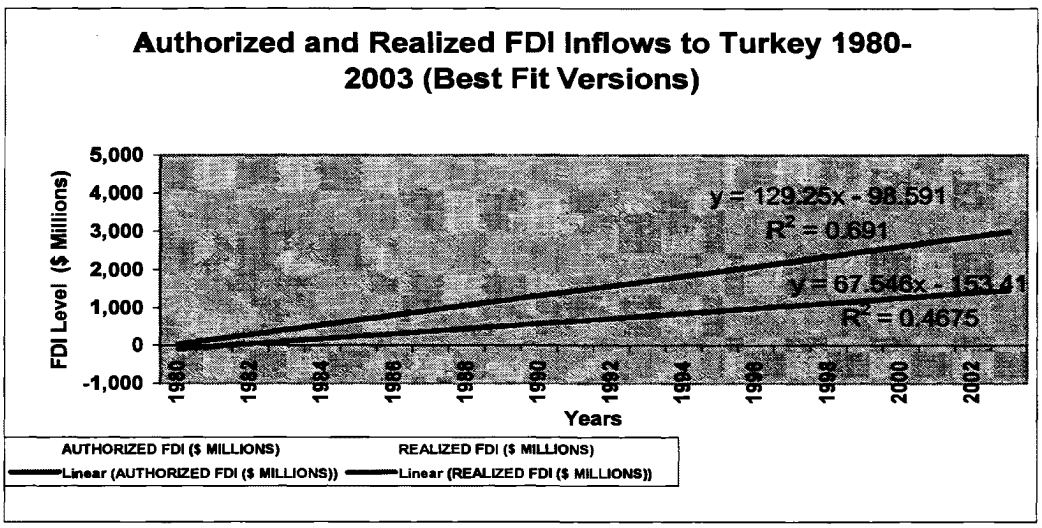
Graph 1: Authorized and Realized FDI Inflows to Turkey 1980-2003[10]



Graph 2: Authorized and Realized FDI Inflows to Turkey 1980-2003 (Best Fit Versions)[11]



[10] This graph is formed based on the information available in Table 1 above.
[11] This graph is formed based on the information available in Table 1 above.

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and that the slope of the best fit line for the authorized FDI inflow is greater than that of the best fit line for the realized FDI inflow clearly indicates that the difference between the authorized FDI inflow level and the realized FDI inflow level in the Turkish economy has been increasing from marginal levels since 1980.

The next logical and equally interesting step is to look at this difference through a magnifying glass and determine a trend for its apparent increase. The graph showing the changes in this difference between 1980 and 2003 and its best fit line version achieve this purpose.[12] The slope of the best fit line for the difference between the authorized FDI inflow and the realized FDI inflow is +61.708, meaning that for each year between 1980 and 2003, this difference has increased on average by US$ 61.708 million.

Finally, the determination of a trend for the realization ratio for FDI inflows to Turkey is crucial for gaining a clearer perspective on the authorized and realized FDI inflow levels in the Turkish economy in the 1980-2003 period from a comparative perspective. The realization ratio is obtained by dividing the realized FDI inflow amount by the authorized FDI inflow amount. This ratio is an indicator to measure how much of the potential of the authorized FDI inflow is realized in the economy. The realization ratio curve and the best fit line drawn for this curve reveal that an increasing trend exists for this ratio as well.[13] The slope of the best fit line for the realization ratio is +0.0025 and the y intercept is +0.4276. In other words, the realization ratio has increased from 42.76% in 1980 to 48.51% in 2003 at a rate of 0.25% per year. The average of this increase corresponds to 45.51% by the end of 1991, which is the median of the 1980-2003 period. This value is very close to the realization ratio of 45.54% obtained as a result

[12] Please refer to Graph 3 and Graph 4 below.
[13] Please refer to Graph 5 and Graph 6 below.

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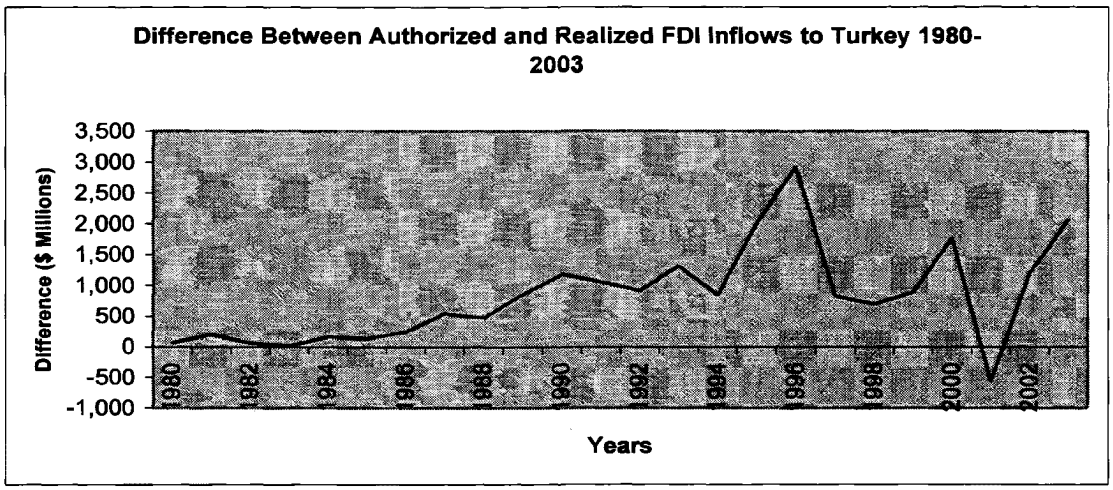
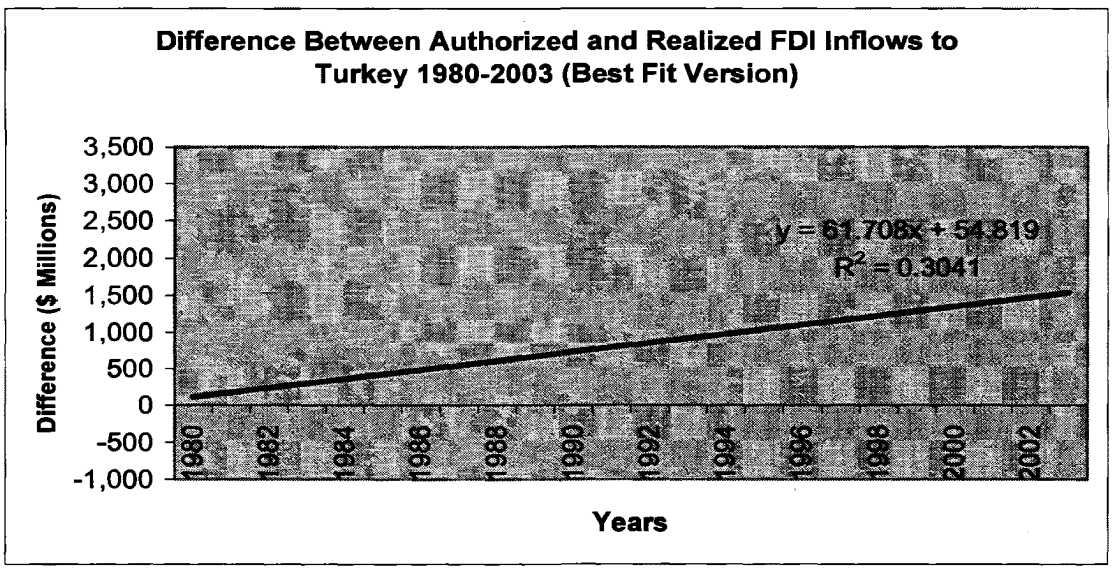
Graph 3: Difference Between Authorized and Realized FDI Inflows to Turkey 1980-2003[14]



Graph 4: Difference Between Authorized and Realized FDI Inflows to Turkey 1980-2003 (Best Fit Version)[15]



[14] This graph is formed based on the information available in Table 1 above.
[15] This graph is formed based on the information available in Table 1 above.

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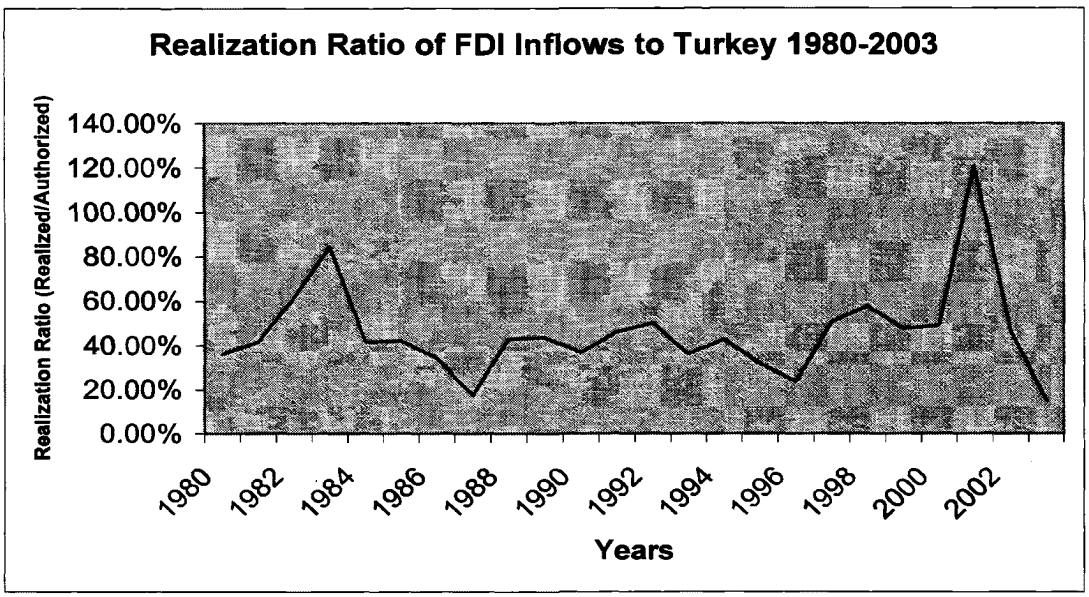
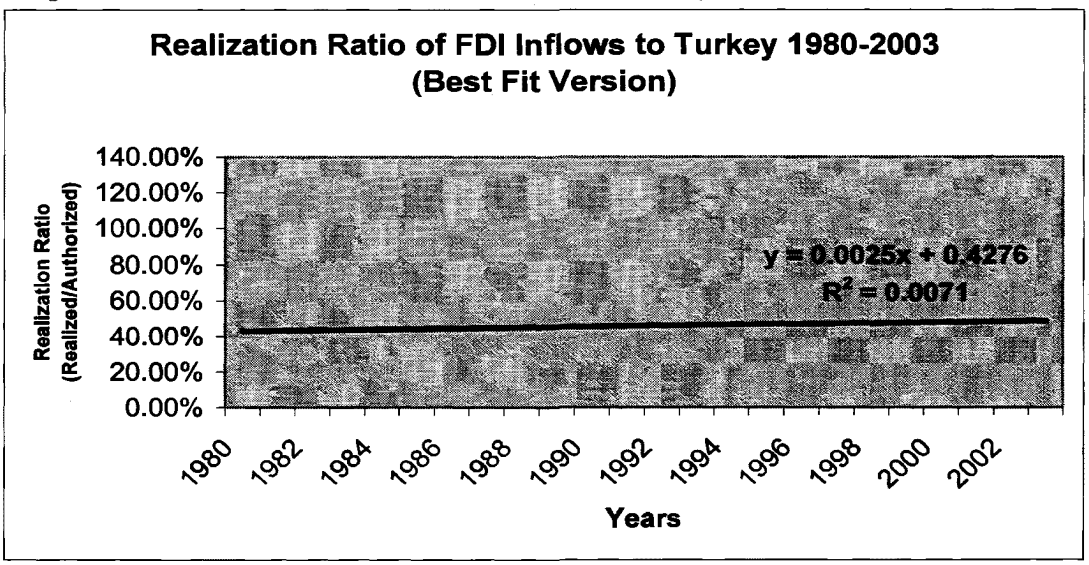
Graph 5: Realization Ratio of FDI Inflows to Turkey 1980-2003[16]



Graph 6: Realization Ratio of FDI Inflows to Turkey 1980-2003 (Best Fit Version)[17]



[16] This graph is formed based on the information available in Table 1 above.
[17] This graph is formed based on the information available in Table 1 above.

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of a general analysis of Table 1 above showing the authorized and the realized FDI inflow levels in the Turkish economy between 1980 and 2003.

All these calculations point to the following conclusion. For the 1980-2003 period in the Turkish economy, the discrepancy between the authorized FDI inflow level and the realized FDI inflow level has increased to a total of US$ 19,828 million with a total realization ratio of 45.54%. This difference is characterized by a phenomenon called *unrealized FDI permits* as mentioned before, by which foreign investors choose not to proceed with their investment projects after having acquired the FDI permits from the state authorities, which lead to the emergence of unrealized FDI in the economy. The next section analyzes the subject of FDI permits in Turkey in closer perspective.

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3. The FDI Permits in Turkey

The FDI permits in the Turkish economic context were defined as legal documents issued by the Turkish state in the name of a foreign legal entity in order to authorize an investment project to take place within the administrative boundaries of the Republic of Turkey at a specified amount and a pre-determined time period.[18] In other words, these permits served as economic passports for foreign investors and multinational enterprises (MNEs) for entering into the Turkish market.

The *General Directorate of Foreign Investment at the Undersecretariat of Treasury of the Prime Ministry of the Republic of Turkey* used to issue these permits between 1980 and 2003 in the most updated fashion.[19] Nevertheless, similar permits existed in different forms in the Turkish economy in the pre-1980 period as well.[20] Oksay states that up to the year 1980, the total FDI flow into the economy authorized by these permits only amounted to US$ 228 million.[21] This poor performance of the Turkish economy in attracting FDI led to compulsory revisions in foreign investment incentive programs in 1980 as a result of which emerged the type of FDI permits that would dominate the 1980-2003 era.[22]

There were a total of seven types of FDI permits granted to foreign investors by the *General Directorate of Foreign Investment at the Undersecretariat of Treasury of the*

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[18] Onaner, M. (2005). *Turkiye'de Yabanci Sermaye Mevzuati ve Yatirimlari*. The Central Bank of the Republic of Turkey website. Available at: http://www.tcmb.gov.tr/yeni/evds/yayin/kitaplar/kitap2/turkyabserm.doc

[19] Hunt. E. (2003). *Turkey Country Commercial Guide FY 2004: Investment Climate*. Strategis website. [Canada's Business and Consumer site]. Available at: http://strategis.ic.gc.ca/epic/internet/inimr-ri/nsf/en/gr118234e.html

[20] Oksay, S. (1998). *Cokuluslu Sirketler Teorileri Cercevesinde, Yabanci Sermaye Yatirimlarinin Incelenerek Degerlendirilmesi*. The Undersecretariat of the Prime Ministry for Foreign Trade website. Available at: http://www.foreigntrade.gov.tr/ead/DTDERGI/ocak98/cokulus.htm

[21] Ibid.

[22] Ibid.

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Prime Ministry of the Republic of Turkey.[23] They were as follows: *company and branch establishment pre-permits, foreign partner participation pre-permits, investment permits, permits regarding changes in field of activity of foreign companies, permits regarding capital increase or sale of shares of foreign companies, indirect participation permits and registrations of licence, know-how, technical assistance and similar agreements.*[24] The first permit was used by MNEs that planned to open a subsidiary in Turkey. Foreign companies planning to form partnerships with domestic companies were required to obtain the second type of permit. The investment permits were taken by foreign investors who wanted to invest in the Turkish market from scratch. The fourth permit served as a shifting ticket for foreign companies in the Turkish economy that wished to change their field of operation as can easily be understood by its name. The fifth permit allowed indirect participation in projects on the part of foreign investors in the form of acquiring the shares of a foreign company that had already been involved in a direct investment project in Turkey. Foreign investors were obliged to use the sixth type of permit in order to alter the capital composition of their companies. Finally, the last permit was utilized for infrastructure and research and development (R&D)-related activities.

The total amount of FDI inflow authorized by these permits reached US$ 36,410 million in the 1980-2003 period.[25] 53.1% of this figure belonged to the manufacturing sector.[26] The service sector occupied a portion of 43.6%.[27] It was followed by the

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[23] Treasury of the Republic of Turkey. (2005). *10 Key Questions Regarding Turkey's New Foreign Direct Investment Law*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/realsectorleg.htm

[24] Ibid.

[25] Treasury of the Republic of Turkey. (2005). *FDI Inflows to Turkey*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/english/ybs/geneling.htm

[26] Turkan, E. (2005). *Turkiye'de Ekonomik Aktivite Icinde Yabanci Sermaye Payi*. The Central Bank of the Republic of Turkey website. Available at: http://www.tcmb.gov.tr

[27] Ibid.

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agriculture sector at 1.7% and the mining sector at 1.6%.[28] The performance of the authorized FDI inflows to the Turkish economy improved with each passing year over the course of the 1980-2003 period. For example, in 2002, the authorized FDI level had risen to US$ 2,243 million from US$ 97 million in 1980.[29] The composition of this US$ 2,243 million according to the country of FDI origin suggested that the European Union (EU) was the leading region in the world sending investors to Turkey with an impressive ratio of 65.9%.[30] North America remained at 14.5% and the Middle East displayed an even lower performance at 2.2%.[31] In 2003, the authorized FDI inflow level increased to US$ 2,416 million.[32] In terms of investment types, 20.8% of this amount categorized as *new investment* without any domestic partners or prior involvement.[33] A huge chunk of 71.9% was a *capital increase* process and the remaining 7.3% qualified as *participation* in the form of mergers and acquisitions or business partnerships.[34]

However, all of these FDI permits do not eventually result in actual investment. During the 1980-2003 period, only US$ 16,582 million managed to materialize in investment projects out of the total authorized FDI inflow of US$ 36,410 million, indicating a realization ratio of 45.54%.[35] This discrepancy brings up the issue of

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[28] Ibid.
[29] Treasury of the Republic of Turkey. (2005). *FDI Inflows to Turkey*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/english/ybs/geneling.htm
[30] General Directorate of Foreign Investment, Undersecretariat of Treasury, Prime Ministry of the Republic of Turkey. (2003). *Foreign Investment in Turkey 2002*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/duyuru/basin/report_ing.pdf
[31] Ibid.
[32] Treasury of the Republic of Turkey. (2005). *FDI Inflows to Turkey*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/english/ybs/geneling.htm
[33] Treasury of the Republic of Turkey. (2005). *FDI Permits by Types of Investment*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/english/ybs/ybssoning.htm
[34] Ibid.
[35] Treasury of the Republic of Turkey. (2005). *FDI Inflows to Turkey*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/english/ybs/geneling.htm

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unrealized FDI permits once again. *Unrealized FDI permits* account for a significant and yet unrevealed part of this 54.46% gap.[36]

The following parts of this thesis will discuss the structural reasons behind these *unrealized FDI permits* within the Turkish context; however, before moving onto discussing this issue, it is instrumental to outline the theoretical framework and the methodology within which this discussion will proceed. The next part will explain the theoretical framework to be utilized for the exploration of the reasons of *unrealized FDI permits* in the Turkish economy in the 1980-2003 period.

[36] Onaner, M. (2005). *Turkiye'de Yabanci Sermaye Mevzuati ve Yatirimlari.* The Central Bank of the Republic of Turkey website. Available at: http://www.tcmb.gov.tr/yeni/evds/yayin/kitaplar/kitap2/turkyabserm.doc

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PART II

Theoretical Framework

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4. Economic Neo-liberalism and the Turkish Economy

The theoretical framework chosen for the discussion of the structural problems that cause the problem of unrealized FDI in the Turkish economy in the 1980-2003 period is economic neo-liberalism. Economic neo-liberalism is described as a theoretical framework that is based on a revival of classical economic liberalism of the eighteenth century in the post-1980 period and is characterized as the withdrawal of state presence from the productive, distributive and re-distributive aspects of the economy and the domination of economic affairs with open free market principles both at the national level and the global level. The economic neo-liberal view envisages a minimal state with three basic functions: the provision of security against internal and external threats, the proper implementation of the rule of law and the provision of public infrastructure. There are two main sets of reasons behind the preference of economic neo-liberalism as the theoretical framework of this thesis.

The first set of reasons revolves around the fact that the global economy has experienced a transition from a state-controlled economic structure to a free market system with growing linkages among national economies in the late 1970s, which has had its own repercussions in the Turkish context as well.[37] The architects of this transition in the global economy were the US President Ronald Reagan and the British Prime Minister Margaret Thatcher.[38] By the late 1970s, the welfare state model in Europe had come to a serious impasse and a free market economy with minimum state intervention in economic

[37] Onis, Z. (1999). Political Economy of Turkey in the 1980s: Anatomy of Unorthodox Liberalism. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 12 (pp. 183-196). Istanbul: Bogazici University Press.
[38] Balaam, D.N. & Veseth, M. (2001). *Introduction to International Political Economy*. New Jersey: Prentice-Hall, Inc.

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activity was embraced and advocated as the only viable solution by the US and Britain.[39] Thus with the restructuring of the international institutions by this transition, economic neo-liberalism became the dominant paradigm governing economic affairs both at the national and the global levels.[40]

In line with this transformation, the Turkish economy began to experience the transition from the state-controlled closed economic system of ISI to the export-oriented liberalized free market economy in the early 1980s. The two main pillars of this transition process that began with the IMF stabilization program in 1980 were trade liberalization, which removed the restrictions on imports, and full capital account liberalization in August 1989, which removed the restrictions on the free flow of capital into and out of the Turkish economy.[41] Thus all price and currency controls were abolished and economic outcomes were left to market forces.[42]

The second set of reasons is that the concept of FDI itself is closely related to the neo-liberal economic logic, which favors an open and globally integrated economic model over a closed system. The opening of a closed economy to foreign investment infers a liberal economic climate in which policy makers welcome foreign investors as much as local investors with minimum intervention in their business activities.[43] Thus the mentality of economic neo-liberalism concurs with and reinforces FDI in national economies as a part of the economic liberalization process. Hence, the quest of identifying the structural problems that cause *unrealized FDI permits* in the Turkish

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[39] Ibid.
[40] Onis, Z. (1999). Political Economy of Turkey in the 1980s: Anatomy of Unorthodox Liberalism. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 12 (pp. 183-196). Istanbul: Bogazici University Press.
[41] Ibid.
[42] Ibid.
[43] Balaam, D.N. & Veseth, M. (2001). *Introduction to International Political Economy*. New Jersey: Prentice-Hall, Inc.

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context should be evaluated in light of this logic of economic neo-liberalism as an effort to further eliminate the obstacles that prevent policy makers from fully implementing the requirements of economic neo-liberalism, receiving the benefits generated by this policy at the maximum level and drawing proper boundaries for it in the Turkish economy.

For these reasons, economic neo-liberalism is chosen as the theoretical framework, which will guide this thesis from here on in discussing *unrealized FDI permits* in the Turkish case. The next part will define the methodology by which the structural problems related to the issue of *unrealized FDI permits* will be analyzed in this thesis. The methodology part is composed of three sections. In the first section, the methodology of case study selection is explained. In the second section, the econometric model to be used to measure the impact of these structural problems on unrealized FDI in the Turkish economy in the 1980-2003 period is briefly explored. In the last section, the rationale for choosing the 1980-2003 period for this study is provided.

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PART III

Methodology

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5. The Methodology of Case Studies

In order to pinpoint the structural problems that cause *unrealized FDI permits* in the Turkish economy in the 1980-2003 period, the media sources have been scanned by using the internet for potential case studies corresponding to this period that reveal the nature of these structural problems. The objective of the scan has been to find reports of incidents in which an MNE decides not to proceed with the initial investment plan after having acquired the FDI permits from the Turkish state. The specific reason behind this last minute bail-out by the MNE has been used to shed light on the inherent structural problem in the Turkish economy that contributes to the problem of unrealized FDI in the 1980-2003 period.

After spotting the reason behind the incident in question, that particular case study is generalized and attributed to the entire economy as a structural problem through induction. The inductive research strategy is composed of three stages: data collection, generalization and instance confirmation.[44] In this case, data collection is made through the media scan conducted by using the internet and generalizations are made on the basis of the particular case studies. Nevertheless, proper justifications should be offered in order to convince the reader that these generalizations are valid. Three such justifications are stated below in order to support the assertion that the individual problems revealed by the selected case studies are in fact indicative of the broader structural problems in the Turkish economy regarding FDI.

First, the case studies to be analyzed in this thesis are selected on a purely coincidental and objective basis. The author did not have any solid idea as to what kind

[44] Blaikie, N. (2000). *Designing Social Research: The Logic of Anticipation*. Malden, MA, USA: Blackwell Publishers, Inc.

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of reasons would be behind any decision reversal on the part of MNEs regarding their investment plans in Turkey. Thus there was no prejudice present in the mind of the author concerning these inherent structural problems in the Turkish economy causing unrealized FDI in the 1980-2003 period and these structural problems were picked out as the author encountered these individual case studies as the media scanning unfolded. For this reason, the case study selection was made in an unbiased manner.

Second, the selected case studies consist of events happening to a single MNE in its investment process in Turkey. Thus the question to be answered here is whether it is likely that other MNEs encounter similar problems in the Turkish economy. Considering the fact that the same regulations regarding FDI apply to all MNEs in Turkey, it is reasonable to draw the conclusion that it is very probable that other MNEs also encounter similar problems to the ones detailed in the selected case studies.

Third, a significant literature exists on the Turkish economy that testifies to the presence of these structural problems revealed by the selected case studies in the general level. This literature is used to explore these broader structural problems in the Turkish economy in greater depth in the following parts of the thesis.

All these justifications combined add up to the conclusion that the generalizations made from the selected case studies in constructing the broader structural problems that lie behind the presence of unrealized FDI in the Turkish economy in the 1980-2003 period possess a significant degree of validity that erases the present qualms about the inductive research strategy used in this process.

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6. Building an Econometric Model

The literature contains many econometric studies conducted on the FDI performance of the Turkish economy. For instance, *Erdal* and *Tatoglu* (2002) use a famous time series technique formulated by *Johansen* in 1988 in order to determine the extent at which the locational determinants specific to the Turkish economic context impact the realized FDI inflows to the Turkish economy between 1980 and 1998.[45] Since no substantial study has been made to date on the specific problem of the gap between authorized FDI and realized FDI in the Turkish economy, the econometric model to be used for determining the degree at which the structural problems in the Turkish economy exposed by the selected case studies contribute to the problem of unrealized FDI in the 1980-2003 period will be built from stratch.

A multiple regression model will be used for representing unrealized FDI in the Turkish case in statistical form. According to this model, the dependent variable is calculated as a function of more than one independent variable spread over a certain period of time.[46] The general form of the model is written as follows:

$$Y_t = X_{t1}*B_1 + X_{t2}*B_2 + X_{t3}*B_{t3} + \ldots + X_{tK}*B_K + \in$$

In this model, Y represents the dependent variable, or in other words, the problem of unrealized FDI in the Turkish economy. X_{t1}, X_{t2}, X_{t3}, ..., X_{tK} represent the independent varibles, which are yet to be determined by the selected case studies in the following part of this thesis. The symbols t_1, t_2, t_3, ..., t_K represent the years covering the 1980-2003 period. Thus as the thesis unfolds, the structural problems causing the problem of

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[45] Erdal, F. & Tatoglu, E. (2002). Locational Determinants of Foreign Direct Investment in an Emerging Market Economy: Evidence from Turkey. *Multinational Business Review, Vol. 10, Number 1, 2002.* Econturk website. Available at: http://www.econturk.org/Turkisheconomy/fuatekrem.pdf

[46] Griffiths, W.E., Hill. R.C. & Judge, G.G. (1993). *Learning and Practicing Econometrics*. US: John Wiley & Sons, Inc.

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unrealized FDI in the Turkish economy in the 1980-2003 period will be operationalized by using several indices and will be factored into the model above in order to determine the coefficients in the equation, which will indicate the degree at which each structural problem contributes to unrealized FDI in the Turkish economy.

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7. The Time Range for the Study

The 1980-2003 period is chosen as the time range in this study for two reasons.

First, the year 1980 marks the beginning of the neo-liberal experiment in Turkey as explained in the previous part. The neo-liberal period in the Turkish economy is still in the process of unfolding itself in various dimensions and this thesis focuses on the FDI aspect of this experiment in Turkey.

Second, the *General Directorate of Foreign Investment at the Undersecretariat of Treasury of the Prime Ministry of the Republic of Turkey* started issuing FDI permits in the format they were used in the last two decades in 1980, even though different forms of FDI permits were issued by the same institution in the pre-1980 period as well.[47] Thus the year 1980 can also be interpreted as the beginning of the phenomenon of *unrealized FDI permits* in the Turkish economy. However, on 5 June 2003, the new *Foreign Direct Investment Law No. 4875* was enacted.[48] This new law was a revised version of the old *Law 6224 on Encouragement of Foreign Capital* enacted in 1954. These revisions were made according to the changing characteristics of both the global economy and the Turkish economy. The new law was published in the *Official Gazette* on 17 June 2003 and was put into effect thereon.[49] Among all the clauses of the new FDI law, the most significant one for the purpose of this thesis was related to the FDI permits. Previously, foreign investors were obliged to obtain investment permits from the *General Directorate*

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[47] Oksay, S. (1998). *Cokuluslu Sirketler Teorileri Cercevesinde, Yabanci Sermaye Yatirimlarinin Incelenerek Degerlendirilmesi*. The Undersecretariat of the Prime Ministry for Foreign Trade website. Available at: http://www.foreigntrade.gov.tr/ead/DTDERGI/ocak98/cokulus.htm

[48] Treasury of the Republic of Turkey. (2005). *Regulation for Implementation of Foreign Direct Investment Law*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/realsectorleg.htm

[49] Treasury of the Republic of Turkey. (2005). *Foreign Direct Investment Law*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/realsectorleg.htm

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of Foreign Investment within the *Treasury of the Republic of Turkey*.[50] With this new law in 2003, these permits were abolished.[51]

For these reasons, this thesis will only cover the 1980-2003 period in analyzing the factors behind the widening gap between authorized FDI and realized FDI as data pertaining to authorized FDI levels after 2003 are no longer available with the abolition of the FDI permits.

[50] Treasury of the Republic of Turkey. (2005). *About the Foreign Direct Investment Law*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/realsectorleg.htm
[51] Ibid.

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PART IV

Case Studies

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8. An Empirical Excavation: From Case Studies to Structural Problems

The purpose of this section is to underline the presence of certain structural problems in the Turkish economy, which have caused the occurrence of *unrealized FDI permits* leading to the emergence of the problem of unrealized FDI in Turkey in the 1980-2003 period. In order to attain this goal, the notion of *unrealized FDI permits* will be analyzed in individual empirical case studies, each indicating the existence of a structural problem in the Turkish economy on the general level.

At this point however, it is necessary to make two statements regarding these case studies. First, due to the decision of the *Treasury of the Republic of Turkey* not to disclose any detailed information on the FDI permits between 1980 and 2003, whether the foreign companies mentioned in the following case studies had already obtained FDI permits during that time cannot be specified. In the absence of proper data and information for assessment, it will be assumed, based on the fact that in order to engage in an investment project in Turkey in the 1980-2003 era, a foreign company was obliged to get an FDI permit, that the foreign companies that are the subject of the case studies already had FDI permits, which eventually resulted in *unrealized FDI permits* with the failure to initiate or complete the investment project. Given the procedural logic of investing in Turkey as a foreigner, the probability that this assumption is false is very insignificant. Second, these case studies deal with MNEs in the Turkish economy, which are legal entities. Some of the discussions generated over these individual cases contain unpleasant elements, which might have detrimental impact on the corporate image of the companies and the state authorities in question. It is crucial to underline the fact that the purpose of these case studies is not to make allegations about these MNEs or state authorities in any way. The

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discussion below solely reflects the media coverage on these issues on a one-to-one basis without adding or subtracting anything.

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9. Case Study: Balfour Beatty

The first case study revolves around the issue of the inadequacy of environmental regulation in Turkey, which hampers the prospects of foreign investment projects. This case study involves a British engineering company, *Balfour Beatty*, which invested in dam projects in Turkey at the turn of the new century.[52]

Balfour Beatty was one of the main investors in the Ilisu dam project on the Tigris River near Hasankeyf in the city of Mardin in the southeastern part of Turkey.[53] The Ilisu dam project was an integral part of the wide-scale Southeastern Anatolia Project, created in order to meet the growing hydroelectric production demand in Turkey and to contribute to the economic development of a relatively backward region.[54] The Ilisu dam project was highly controversial and could not be completed since the final investment design was approved in 1982.[55] The controversy surrounding the project largely had environmental connotations. Iraq, Turkey's neighbor in the region, expressed deep concerns that the dam project would reduce its water supplies from the Tigris River and was openly against the construction of the dam.[56] Domestic and international environmentalist groups claimed that the project would result in the displacement of nearly 60,000 people residing in the area.[57] The last voiced concern was that the flooding caused by the dam would inevitably destroy an ancient archeological site nearby, the

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[52] Energy Information Administration. (2002). *Turkey: Environmental Issues*. Energy Information Administration website. Available at: http://www.eia.doe.gov/emeu/cabs/turkenv/html
[53] BBC News. (2001, November 13). Balfour abandons Turkish dam project. *BBC News website*. Available at: http://news.bbc.co.uk/1/hi/business/1653727.stm
[54] Energy Information Administration. (2002). *Turkey: Environmental Issues*. Energy Information Administration website. Available at: http://www.eia.doe.gov/emeu/cabs/turkenv/html
[55] BBC News. (2001, November 13). Balfour abandons Turkish dam project. *BBC News website*. Available at: http://news.bbc.co.uk/1/hi/business/1653727.stm
[56] Energy Information Administration. (2002). *Turkey: Environmental Issues*. Energy Information Administration website. Available at: http://www.eia.doe.gov/emeu/cabs/turkenv/html
[57] BBC News. (2001, November 13). Balfour abandons Turkish dam project. *BBC News website*. Available at: http://news.bbc.co.uk/1/hi/business/1653727.stm

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ancient Mesopotamian city of Hasankeyf.[58] All these factors led environmentalist groups and the international community to exert pressure on the Turkish government as well as the foreign company involved for ending the project.

As a result of this environmentalist pressure, *Balfour Beatty* decided to withdraw from the project on 13 November 2001.[59] In a declaration issued by the company, it was stated that the withdrawal decision was taken as a result of an extensive assessment of the commercial, environmental and social impact of the project, which revealed that it was not in the best overall interest of the company to go through with the investment process.[60] Special emphasis was given to the environmental complexities of the project.[61] The Ilisu dam project was worth US$ 1.5 billion[62] and *Balfour Beatty* had a share of approximately US$ 300 million, which constituted a major setback for the project as well as the Turkish FDI performance.[63]

One might stick to the long-lasting argument that the presence of weak environmental standards is in fact a pull factor for FDI. However, the fact that civil society has gained far more power than expected in the last decades in business and politics both at the local level and the global level renders this argument obsolete. The presence of weak environmental standards has slowly begun to work in the opposite direction in the contemporary world. Thus the absence of sufficient environmental regulation stands out

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[58] Ibid.
[59] Unicorn. (2005). *Balfour Beatty Withdraws from Ilisu Dam: Corruption Case*. Unicorn: United Against Corruption, A Global Unions Anti-Corruption Network website. Available at: http://www.againstcorruption.org/BriefingsItem.asp?id=8544
[60] Balfour Beatty. (2001). *Balfour Beatty withdraws from Ilisu Project*. Balfour Beatty website. Available at: http://www.balfourbeatty.com/bbeatty/media/pr/2001/2001-11-13/
[61] Ibid.
[62] Arnold, J. (2001, November 13). Dam failure piles on economic woe. *BBC News website*. Available at: http://news.bbc.co.uk/1/hi/business/1654214.stm
[63] BBC News. (2001, November 13). Balfour abandons Turkish dam project. *BBC News website*. Available at: http://news.bbc.co.uk/1/hi/business/1653727.stm

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as a significant structural problem in the Turkish economy contributing to the presence of unrealized FDI.

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10. Case Study: Mazda

The second case study is related to the adversity of the Turkish tax system from the perspective of foreign companies. The inconsistency of the tax system in Turkey constitutes a major push factor for FDI. The focus of this case study is on a globally recognized Japanese company in the automotive industry, *Mazda*.[64]

The story of *Mazda* in Turkey began in 2004 when the company decided to increase its facility capacity with a new investment project.[65] The automotive industry sales are subject to the *Special Consumption Tax* (OTV) in Turkey.[66] On 2 November 2004, the *Ministry of Finance of the Republic of Turkey* declared that the OTV rates were augmented by 7 to 9 points.[67] The reason of the increase was stated as the concern felt over the widening trade deficit of the Turkish economy.[68] The tax regime on the automotive sector was tightened as a precautionary measure for this deficit problem in the face of the 143% increase in automotive imports, reaching US$ 7.5 billion in 2004.[69] Toward the end of 2004, the automotive sector imports constituted 7% of the total trade deficit in Turkey.[70]

The response of the automotive industry to this tax increase was highly critical. The *Automotive Manufacturers Association*, the *Automotive Distributors Association*, the *Association of Automotive Parts and Components Manufacturers*, and the *Uludag Exporters Association* issued joint declarations to underline the perils of such a policy

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[64] NTVMSNBC. (2004, November 4). Otomobilde OTV artisi firsat kacirtti. *NTVMSNBC website*. Available at: http://www.ntv.com.tr/news/294517.asp
[65] Ibid.
[66] NTVMSNBC. (2004, November 2). Binek otoda OTV oranlari artirildi. *NTVMSNBC website*. Available at: http://www.ntv.com.tr/news/294131.asp
[67] Ibid.
[68] Ibid.
[69] Ibid.
[70] NTVMSNBC. (2004, November 2). Otomotivciler OTV artisina tepkili. *NTVMSNBC website*. Available at: http://www.ntv.com.tr/news/294242.asp

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strategy.[71] These declarations indicated that the new tax regulations would cause a 3% contraction in market demand for every 1 point tax increase and this market demand reduction would easily climb to %20.[72] As a result, the export performance of the automotive industry would be seriously harmed and the policy would undermine its initial goal as tax revenues of the state would gradually decline.[73] The emergence of these conditions in the Turkish automotive industry would give bad signals to foreign investors.[74]

Mazda gave the first reaction to this development in the Turkish tax system as a foreign investor. The management of *Mazda* decided to freeze its investment plan of facility expansion in Turkey toward the end of 2004 as a result of the highly unfavorable terms of the tax regime.[75]

This example paints a clear picture of how state interests and corporate interests can come to a clashing conflict with detrimental consequences for the economy. In the case of *Mazda*, the needs of the Turkish state for generating more revenue and the plans of this foreign company to decrease investment costs pulled in opposite directions, robbing the Turkish economy off the benefits of a capital increase project. Hence, the gap between authorized FDI and realized FDI widened further. This case study clearly highlights that the presence of an inconsistent tax system in the Turkish economy is definitely a contributing factor to unrealized FDI.

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[71] NTVMSNBC. (2004, November 4). Otomobilde OTV artisi firsat kacirtti. *NTVMSNBC website*. Available at: http://www.ntv.com.tr/news/294517.asp
[72] Ibid.
[73] Ibid.
[74] Takvim. (2004, November 15). Sektore yildirim dustu. *Takvim website*. Available at: http://www.takvim.com.tr/2004/11/15/akt103.html
[75] Takvim. (2004, November 15). Mazda yatirimi dondurdu. *Takvim website*. Available at: http://www.takvim.com.tr/2004/11/15/akt110.html

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It should be highlighted, however, before moving onto the next case study, that this incident described above regarding the investment decision reversal of *Mazda* in the Turkish economy took place in 2004, which falls beyond the time scope of this thesis covering the 1980-2003 period. Despite this fact, the structural problem of the presence of an inconsistent tax system in Turkey revealed by this case study is relevant to the 1980-2003 period in the following way: it was indicated in the relevant news report that the increase in the OTV that took place in 2004 was the fifth tax hike in the past two years, which implied that similar OTV increases happened in 2002 and 2003 as well.[76] Moreover, Turgay Durak, the President of the *Automotive Manufacturers Association*, stated that four major foreign investment projects in the Turkish automotive sector were abandoned in the recent years as a result of these inconsistent tax hikes.[77] Even though the author of this thesis was not able to reach detailed information regarding these abandoned FDI projects in the past years, this statement is taken as solid evidence for the contributing impact of the presence of an inconsistent tax system in the Turkish economy to the problem of unrealized FDI in the final years of the 1980-2003 period. Thus this case study of *Mazda* in 2004 will be taken as an indirect analysis of the unrevealed cases that led to an increase in the level of unrealized FDI in the Turkish economy between 1980 and 2003.

[76] NTVMSNBC. (2004, November 4). Otomobilde OTV artisi firsat kacirtti. *NTVMSNBC website*. Available at: http://www.ntv.com.tr/news/294517.asp
[77] Takvim. (2004, November 15). Sektore yildirim dustu. *Takvim website*. Available at: http://www.takvim.com.tr/2004/11/15/akt103.html

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11. Case Study: Volvo

The media coverage of the story of *Volvo*, a renowned Swedish car manufacturer, highlights the sensitive issue of corruption in Turkey. The possibility of corrupt activities is a strong push factor for FDI for any host country, which can have long-lasting damages on an economy's reputation that are hard to fix. Therefore, it is regarded as a strong signal for foreign investors hinting the dimensions of potential financial risk and as an important agenda item host country governments vow to resolve.

According to a revised corporate strategy, *Volvo* declared in 1999 its intention to merge all its business activities in Turkey under one roof.[78] To realize this strategic objective, the company planned to construct a general office building, which would be used as a headquarter for future investments in Turkey.[79] *Volvo* spared US$ 3 million from its budget for this project and purchased a piece of land with a construction permit in Istanbul.[80] The daily newspaper *Milliyet* claimed that at the beginning stage of the construction process, the company started to encounter unusual demands from the authorities.[81] The CEO of *Volvo Turkey* claimed that several institutions including the municipality and the *Istanbul Water and Canalization Administration* demanded bribes from the company for various stages of the construction process.[82] As a result of these demands, *Volvo* announced that it took the investment plan out of its agenda for Turkey in 2003.[83]

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[78] Yucebiyik, S. (2003, April 3). Volvo rusvetten bezdi yatirimdan vazgecti. *Milliyet website*. Available at: http://www.milliyet.com/2003/04/03/ekonomi/aeko.html
[79] Ibid.
[80] Ibid.
[81] Ibid.
[82] Ibid.
[83] Ibid.

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Such examples of misconduct have two kinds of effects on economic activity. First, the exposure of such behavior brings immediate branding on the parties involved, which damage their reputations almost in an irrevocable way. And second, putting ethical concerns aside, bribery and similar demands raise investment costs for foreign companies, which decreases the attractiveness of the projects they engage in. In the end, foreign companies may choose to change their investment strategies like *Volvo* did, which is another factor that increases unrealized FDI. This outcome emphasizes corruption as another structural problem present in the Turkish economy.

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12. Case Study: Pirelli

Periods of economic instability can also have negative consequences in terms of the FDI performance of an economy. The story of *Pirelli* in Turkey in the unstable economic environment of the pre-November 2000/February 2001 twin financial crises era is a perfect example supporting this claim.

Negative developments in the Turkish economy in the second half of the 1990s necessitated the formation of the *2000 Disinflation Program* by a joint platform composed of the Turkish government and the IMF, the implementation of which began in 1999.[84] Despite these efforts by the Turkish government, 1999 turned out to be a dreadful year for the Turkish economy as a whole.[85] A powerful earthquake devastated major settlements in the northwestern Marmara region of the country on 17 August 1999, killing 15,000 people and severely crippling economic production in the region, which was the industrial and commercial heartland of the economy.[86] Due to this major blow to the economic capacity of the country, a 2% decrease in the gross national product (GNP) figure was noted at the end of the year.[87] Moreover, the annual inflation rate was soaring at 68.8%.[88] The real interest rates wandered around 20% while the domestic debt stock to

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[84] Ercel, G. (1999). *Disinflation Program for the Year 2000: Implementation of Exchange Rate and Monetary Policy*. The Central Bank of the Republic of Turkey website. Available at: http://www.tcmb.gov.tr/yeni/eng/index.html

[85] Office of the Prime Minister, Directorate General of Press and Information. (2000). *Turkiye ve Italya Arasinda Yeni Ortaklik*. [Newspaper article-Il Sole 24 Ore]. Office of the Prime Minister, Directorate General of Press and Information website. Available at: http://www.byegm.gov.tr/YAYINLARIMIZ/DISBASIN/2000/02/18x02x00.HTM

[86] Ibid.

[87] Ibid.

[88] Istanbul Revenue Office of the Ministry of Finance of the Republic of Turkey. (2005). *Enflasyon Oranlari*. Istanbul Revenue Office of the Ministry of Finance of the Republic of Turkey website. Available at: http://www.ist-def.gov.tr/pratik/oranlar/tefetufeorn.htm

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GNP ratio exceeded 30%.[89] Macroeconomic indicators were radiating signs of a downward spiral ahead. Hence, the *2000 Disinflation Program* aimed at reversing these potential future trends by setting inflation targets for the upcoming years. The inflation target for the end of 2000 was set at 25%, being reduced to 12% for the end of 2001 and to 7% for the end of 2002.[90] Through the implementation of this program, the Turkish government hoped to pull other macroeconomic indicators to acceptable levels as well and thus achieve economic stability. By the end of February in 2000, the inflation rate dropped to 50.1%.[91]

Nonetheless, there were two more obstacles that caused foreign investors to re-evaluate their investment plans in Turkey. The first one was the presence of a coalition government ruling the country. This coalition government was regarded as highly unstable by outside observers as it was composed of three political parties of very different ideologies, which emerged as victors from the general elections held in April of 1999. These political parties were the *Democratic Left Party*, which represented the left of center, the *Motherland Party*, which could be placed in the center-right, and the *Nationalist Action Party*, which was at the right of center in the ideological spectrum. The existence of such different positions in a single government raised concerns over the possibility of severe disagreements over key issues in the political agenda, which could perpetuate political instability in the country. The second one was increasing material demands from various interest groups in the society as the deteriorating economic

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[89] Ercel, G. (1999). *Disinflation Program for the Year 2000: Implementation of Exchange Rate and Monetary Policy*. The Central Bank of the Republic of Turkey website. Available at: http://www.tcmb.gov.tr/yeni/eng/index.html

[90] Ibid.

[91] Office of the Prime Minister, Directorate General of Press and Information. (2000). *Turkiye ve Italya Arasinda Yeni Ortaklik*. [Newspaper article-Il Sole 24 Ore]. Office of the Prime Minister, Directorate General of Press and Information website. Available at: http://www.byegm.gov.tr/YAYINLARIMIZ/DISBASIN/2000/02/18x02x00.HTM

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conditions began to harm their interests.[92] Among these, the demands foreign investors were especially concerned about came from the labor unions.[93] The common goal of the labor unions was to make the government accept their wage increase demands.[94] Needless to say, such a possibility would increase labor costs in Turkey for foreign investors. Thus unsurprisingly, Pirelli announced a freeze on its investment plans in Turkey in 2000 drawing special attention to the general outlook of the economy and a wage increase demand of 130% by the labor unions.[95]

The conclusion drawn from the analysis of this case is that the emergence of economic instability in a country can alter several economic variables that can increase financial vulnerability and bring about a significant decrease in the investment attractiveness of the economy. This situation eventually translates into a factor that further contributes to the unrealized FDI level.

The following part of the thesis explores the structural problems highlighted by the case studies above in further detail in order to determine the level of their contribution to the problem of unrealized FDI in the Turkish economy in the 1980-2003 period.

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[92] Ibid.
[93] Ibid.
[94] Ibid.
[95] Ibid.

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PART V

Structural Problems

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13. The Absence of Sufficient Environmental Regulation

The case study of *Balfour Beatty* suggests that the concept of environmental regulation can possess a considerable amount of potential to influence a foreign investment project either in a positive or a negative direction. However, the dynamics of this relationship between environmental regulation and FDI inflows require further clarification.

Classic arguments aiming to cast light on this particular relationship mainly point to one of the pillars of the neo-liberal economics literature by emphasizing the role of the *race to the bottom hypothesis* in FDI processes in the global economy from a host country perspective.[96] The counterpart of this line of reasoning from the perspective of an MNE highlights the *pollution haven hypothesis*, which complements the neo-liberal argument put forth by the latter.[97]

According to the *race to the bottom hypothesis*, the imposition of strict environmental standards on business activity augments operational costs and thus puts a downward pressure on future profits.[98] Given the fact that high environmental standards are usually applied in industrialized welfare economies, business incentives force these companies to relocate their operations from their home countries to less developed countries with weaker environmental regulation in order to preserve their competitive

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[96] Himberg, H.A. (2002). *International Financial Institutions, Environmental Standards and Foreign Direct Investment: Bringing the Learning Curve to Full Circle*. New America Foundation website. Available at: http://www.newamerica.net/Download_Docs/pdfs/Pub_File_1007_1.pdf

[97] Smarzynska, B.K. & Wei, S. (2001). *Pollution Havens and Foreign Direct Investment: Dirty Secret or Popular Myth?* SICE Foreign Trade Information System website. Available at: http://www.sice.oas.org/geograph/environment/wei.pdf

[98] Wheeler, D. (2000). *Racing to the Bottom? Foreign Investment and Air Quality in Developing Countries*. The World Bank website. Available at: http://www.worldbank.int/nipr/work_paper/RaceWP1.pdf

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edge in the market.[99] These less developed host states are willing to lower their environmental standards even further as a part of a national strategy to attract FDI and boost up economic performance.[100] This complex web of incentives generates a severe race among less developed economies in which they compete with one another by lowering their environmental standards as much as possible in order to attract foreign investment projects.[101]

The *pollution haven hypothesis* completes the missing brush strokes in this seemingly logical and straightforward proposition and paints a full picture in order to strengthen the argumentative logic presented by the *race to the bottom hypothesis* by dwelling on the two basic sub-arguments of the latter. These two sub-arguments are as follows: foreign companies intend to maximize their business interests by continuously seeking ways to lower operational costs and less developed host states are willing to relax environmental restrictions in order to attract FDI, which will contribute to their economic development in the long run. Based on these sub-arguments, the *pollution haven hypothesis* proposes that foreign investors exploit the vulnerable position of less developed host economies and cause an even fiercer competition for FDI to emerge among these host states, which increases the pace of the race to the bottom process with more relaxed environmental regulation and more detrimental environmental costs.[102] This race creates pollution havens in the less developed world which foreign companies can take advantage of.[103]

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[99] Ibid.
[100] Ibid.
[101] Ibid.
[102] Smarzynska, B.K. & Wei, S. (2001). *Pollution Havens and Foreign Direct Investment: Dirty Secret or Popular Myth?* SICE Foreign Trade Information System website. Available at: http://www.sice.oas.org/geograph/environment/wei.pdf
[103] Ibid.

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These two parallel streams of thought constitute an important pillar in economic neo-liberalism. The neo-liberal argument views foreign investment as a crucial determinant for the economic development of a less developed country. These economies are in dire need for long term funds to compensate for their fiscal and capital deficits. Foreign investment brings economic stability and predictability to these host states by creating jobs and contributing to economic production, which ideally raises the living standards in the long run.[104] Due to the profit-maximizing behavior of companies, the presence of strict environmental standards acts as a push factor for FDI from the perspective of host countries. Thus the neo-liberal view advocates the dismantlement of environmental standards in less developed countries as a part of a general strategy to be applied to achieve stable economic growth.[105]

Nevertheless, empirical evidence suggests that this neo-liberal assertion is being challenged on several accounts and therefore, requires some modification in order to become viable within the confines of the neo-liberal paradigm. The purpose of this modification is not to perpetuate a paradigm shift, but to underline the deficiencies of the *race to the bottom hypothesis* and the *pollution haven hypothesis* and to reconstruct them in a compatible manner with their neo-liberal background. Hence, the first part of this section deals with reversing the underlying logic of these two hypotheses and arguing within the neo-liberal context that the presence of sufficient environmental regulation is indeed a pull factor for FDI from the perspective of host states, instead of a repelling force. The second part will briefly explain the historical and current situation in the

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[104] Wheeler, D. (2000). *Racing to the Bottom? Foreign Investment and Air Quality in Developing Countries*. World Bank website. Available at: http://www.worldbank.int/nipr/work_paper/RaceWP1.pdf
[105] Ibid.

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Turkish economy regarding environmental regulation in relation to the FDI performance of the country.

i. Environmental Regulation: Obstacle or Advantage?

This section will persuade the reader that the presence of environmental regulation in a host country is in fact a significant determinant for FDI inflows rather than a blunt obstacle. This argument will be constructed in two stages. First, the common anti-environmental regulation framework composed by the *race to the bottom hypothesis* and the *pollution haven hypothesis* will be shown not to be true and second, the *learning curve hypothesis* in the political economy literature will be adopted to foreign investor-host country relations in order to reconstruct the argument in the opposite direction.

The invalidation of the academic defence of this anti-environmental regulation policy depends on four cornerstones.

The first leg of the counter-argument emphasizes the fact that no observation has been made to confirm that the presence of sufficient environmental standards in a country pushes away foreign investors.[106] In other words, no empirical evidence exists to support the assertion that FDI chooses not to arrive at host economies that do not relax their environmental regulation.[107] Similarly, there is no solid empirical support for the argument that host countries are willing to engage in a fierce race with each other by self-destructively abandoning their national environmental protection plans in order to attract

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[106] Working Party on Global and Structural Policies, Environment Policy Committee of Environment Directorate, Organization for Economic Co-operation and Development. (2002). *Environmental Issues in Policy-Based Competition for Investment: A Literature Review*. The Organization for Economic Co-operation and Development website. Available at: http://www.olis.oecd.org/olis/2001.doc.nsf/43bb6130e5e86e5fc12569fa005d004c/e7d0659b07238fcac1256b91003d49ab/$FILE/JT00123687.PDF

[107] Ibid.

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FDI.[108] *Smarzynska* and *Wei* (2001) conclude in the study they conducted by analyzing a broad database on numerous foreign investment projects in 24 transition economies that the existing evidence for the *pollution haven hypothesis* is rather weak.[109] The analyses made by *Wu* (2000, 2004) through a game theoretical perspective reveal that once the asymmetrical information trait of the system, where firms are well aware of the environmental consequences of their activities, but governments are not, is factored into the equation in an environment in which co-operative trends among governments gain special importance, the findings run contrary to the *pollution haven hypothesis.*[110] Moreover, *Millimet* and *List* (2004) show that the response of foreign investors to strict environmental regulation varies depending on the location-specific characteristics of host economies, further undermining the absoluteness of the *pollution haven hypothesis* across time and space.[111] More specifically, a study by *Dean, Lovely* and *Wang* (2002) analyzes the validity of the *pollution haven hypothesis* in the case of China and arrives at the conclusion that FDI to China from the OECD and the other non-Chinese countries chooses regions in China with high pollution standards.[112]

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[108] Ibid.

[109] Smarzynska, B.K. & Wei, S. (2001). *Pollution Havens and Foreign Direct Investment: Dirty Secret or Popular Myth?* SICE Foreign Trade Information System website. Available at: http://www.sice.oas.org/geograph/environment/wei.pdf

[110] Wu, X. (2000). *"Pollution Havens" and the Regulation of Multinationals by Multiple Governments.* The Econometric Society website. Available at: http://www.econometricsociety.org/meetings/wc00/pdf/1766.pdf & Wu, X. (2004). Pollution Havens and the Regulation of Multinationals with Asymmetric Information. *Contributions to Economic Analysis & Policy, Volume 3 Issue 1, 2004*, pp. 1-27. The University of North Carolina at Chapel Hill website. Available at: http://www.unc.edu/~wux/pollution.pdf

[111] Millimet, D.L. & List, J.A. (2004). *The Case of the Missing Pollution Haven Hypothesis.* Southern Methodist University website. Available at: http://faculty.smu.edu/millimet/pdf/hetero.pdf

[112] Dean, J.M., Lovely, M.E. & Wang, H. (2002). *Foreign Direct Investment and Pollution Havens: Evaluating the Evidence from China.* Yale University website. Available at: http://www.econ.yale.edu/seminars/NEUDCO3/dean.pdf

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The *race to the bottom hypothesis* shares a similar fate with the *pollution haven hypothesis* when it comes to seeking empirical evidence to support it. A study conducted by *Revesz* (1992) indicates that host governments are not involved in a spontaneous competition to abandon their environmental schemes for the sake of increasing foreign investment projects in their economies.[113] *Wheeler* (2000) also confirms this claim by stating that the consequences inferred by the *race to the bottom hypothesis* have not been observed in the global economy yet.[114] One can encounter similar studies along this line of reasoning if the political economy literature is scanned.

The second leg of the counter-argument rests upon the generally underestimated impact of other local factors on both host governments and foreign companies.[115] These local factors vary from civil society organizations to local firms in the sector.[116] These entities might have a stake in protecting the existing environmental standards in the community for various reasons and raise strong objections against any tendency on the part of governments and foreign investors to by-pass environmental regulation. Although these local forces are financially weak against the economic capacities of corporate actors, they are well capable of exerting extensive political and social pressure on them. Hence, the bargaining power balance among various actors with vested interests in the

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[113] Working Party on Global and Structural Policies, Environment Policy Committee of Environment Directorate, Organization for Economic Co-operation and Development. (2002). *Environmental Issues in Policy-Based Competition for Investment: A Literature Review*. The Organization for Economic Co-operation and Development website. Available at: http://www.olis.oecd.org/olis/2001.doc.nsf/43bb6130e5e86e5fc12569fa005d004c/e7d0659b07238fcac1256b91003d49ab/$FILE/JT00123687.PDF

[114] Wheeler, D. (2000). *Racing to the Bottom? Foreign Investment and Air Quality in Developing Countries*. World Bank website. Available at: http://www.worldbank.int/nipr/work_paper/RaceWP1.pdf

[115] Working Party on Global and Structural Policies, Environment Policy Committee of Environment Directorate, Organization for Economic Co-operation and Development. (2002). *Environmental Issues in Policy-Based Competition for Investment: A Literature Review*. The Organization for Economic Co-operation and Development website. Available at: http://www.olis.oecd.org/olis/2001.doc.nsf/43bb6130e5e86e5fc12569fa005d004c/e7d0659b07238fcac1256b91003d49ab/$FILE/JT00123687.PDF

[116] Ibid.

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process becomes crucially important.[117] Studies by *Zarsky* (1999) and *Afsah* (1996) underline the importance of local pressure and bargaining power in foreign investment decisions.[118]

The third leg of the counter-argument sheds light on another widely disregarded aspect of FDI inflows to less developed economies. The cost of including the proper application of environmental protection in investment plans is quite insignificant for most foreign companies in comparison to the potential benefits to be acquired along the way.[119] *Jaffe* (1995) concludes that the cost of environmental compliance for foreign investors coming from the OECD countries are very small.[120] For this reason, the cancellation of investment projects for such a small price to pay in adapting to local environmental standards is not economically rational for foreign companies. Moreover, foreign companies are understandably reluctant to relocate their investment projects to other places as relocation would mean new feasibility studies, government deals and thus extra costs.[121] Complying with environmental standards in the community seems like a more alluring option.[122]

The fourth and the final leg of the counter-argument states that MNEs do not usually defy the environmental framework advocated by the OECD in their host country

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[117] Ibid.
[118] Ibid.
[119] Wheeler, D. (2000). *Racing to the Bottom? Foreign Investment and Air Quality in Developing Countries*. World Bank website. Available at: http://www.worldbank.int/nipr/work_paper/RaceWP1.pdf
[120] Ibid.
[121] Working Party on Global and Structural Policies, Environment Policy Committee of Environment Directorate, Organization for Economic Co-operation and Development. (2002). *Environmental Issues in Policy-Based Competition for Investment: A Literature Review*. The Organization for Economic Co-operation and Development website. Available at: http://www.olis.oecd.org/olis/2001.doc.nsf/43bb6130e5e86e5fc12569fa005d004c/e7d0659b07238fcac1256b91003d49ab/$FILE/JT00123687.PDF
[122] Ibid.

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activities in order to preserve their corporate image.[123] As communication technologies surround the business world and the role of advertisement becomes even more important in corporate activities, the importance of corporate image and corporate social responsibility become equally crucial. Preserving corporate integrity and casting a responsible and caring image to consumers have emerged as a major determinant of maintaining market shares for business as consumers are bombarded by the media with news on environmental damage and other issues that sharpen public consciousness. A study by *Konar* and *Cohen* (1997) shows that bad press affects company stocks in a negative way, whereas good press contributes to their upward trend in stock markets.[124] This and similar examples clearly indicate the high level of interests companies have in complying with environmental standards in the regions they operate.

When all these sub-arguments are combined with the related evidence explained above, the reasonable mind draws the conclusion that the *race to the bottom hypothesis* and the *pollution haven hypothesis* are not yet validated, or to state it in a more proper way, these hypotheses have not been proven to be true up to this point in time. However, proving that these two hypotheses are not correct does not suggest that their opposites are true. These hypotheses can only be invalidated. In order to complete the invalidation cycle and come up with an alternative approach, one needs to offer another hypothesis that claims otherwise. The *learning curve hypothesis* will be used to create this alternative approach in order to argue that it is the absence rather than the presence of sufficient environmental regulation in host countries which deters foreign investors.

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[123] Wheeler, D. (2000). *Racing to the Bottom? Foreign Investment and Air Quality in Developing Countries*. World Bank website. Available at: http://www.worldbank.int/nipr/work_paper/RaceWP1.pdf
[124] Ibid.

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The concept of a *learning curve* came up in the finance literature when scholars began dealing with the issue of an international financial architecture.[125] The discussions revolving around the idea of an international financial architecture point out the difference between world trade and world finance as the presence of a global regulatory organization for world trade, the World Trade Organization, and the absence of such an organization for world finance.[126] This situation creates a fundamental distortion in global financial operations as a result of which the adverse effects of these activities cannot be prevented. Environmental damage is one of those adverse effects that needs to dealt with.[127]

However, market actors progress towards a spontaneous and gradual convergence in their business activities from a total avoidance of environmental problems towards their full recognition, which can be characterized by a *learning curve hypothesis.*[128] This pattern prepares the behavioral background for the establishment of an international financial organization regulating the world finance in the future. *Jeucken* (2000) proposes the *learning curve hypothesis* for international financial institutions (IFIs), more specifically for the banking sector, which carry FDI around the globe.[129] It will not be a far-fetched assumption to state that the same model can be applied to all agents operating in the international financial system.

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[125] Himberg, H.A. (2002). *International Financial Institutions, Environmental Standards and Foreign Direct Investment: Bringing the Learning Curve to Full Circle.* New America Foundation website. Available at: http://www.newamerica.net/Download_Docs/pdfs/Pub_File_1007_1.pdf
[126] Ibid.
[127] Ibid.
[128] Ibid.
[129] Ibid.

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The *learning curve hypothesis* is composed of four phases: the defensive phase, the preventive phase, the proactive phase and the sustainable phase.[130] The *defensive phase* covers the initial attitude of MNEs against concerns over environment.[131] Investors regard environmental protection as a cost that should be avoided at all costs; hence, they oppose the creation and the development of this concept.[132] The *preventive phase* represents a small step towards the full recognition of environmental protection through the acceptance of environmental damage as a business fact as a result of social and market pressures.[133] Therefore, MNEs begin making environmental assessments for their projects with the purpose of defining and managing environmental risk.[134] Note that the attitude of investors are not in compliance with actively protecting the environment at this stage, but rather they try to reduce the level of harm they inflict on the environment.[135] The *proactive phase* captures the transformation in the attitude of market agents from environmentally neglecting business entities to environmentally friendly business entities as social and market forces gain even more strength.[136] In this stage, MNEs begin evaluating environmental protection as a benefit rather than a cost, realizing that consumer preferences depend considerably on whether their business activities are damaging the environment and understanding that an opposition attempt against social forces will be rather costly.[137] And in the *sustainable phase*, this business methodology is institutionalized by a corporate social responsibility framework through which MNEs establish the required corporate agencies and form strong bonds with related

[130] Ibid.
[131] Ibid.
[132] Ibid.
[133] Ibid.
[134] Ibid.
[135] Ibid.
[136] Ibid.
[137] Ibid.

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organizations with the aim of ensuring the continuity of an environmentally friendly business strategy.[138]

After piecing together the *learning curve hypothesis* in opposition to the *race to the bottom hypothesis* and the *pollution haven hypothesis*, it needs to be dressed with empirical evidence to radiate a certain degree of persuasion power. At this point, the detailed accounts of the *Balfour Beatty* case mentioned in the previous sections serve as empirical evidence to illustrate the *defensive phase* and the *preventive phase* of the *learning curve hypothesis*. This case study gives a fair idea about how environmentally neglecting business strategies are eventually bound to fail in the long run and how social and political forces can influence market agents in their investment decisions. The lesson drawn from this analysis is that foreign companies cannot escape environmental concerns in their operations. The *proactive phase* and the *sustainable phase* of the *learning curve hypothesis* are reflected in the case of China, Mexico and Brazil throughout the 1980s and the 1990s.[139] For instance, FDI inflows have steadily increased while air pollution has steadily decreased in China between 1987 and 1995.[140] The statistics suggest a similar trend in Mexico between 1989 and 1997 and in Brazil between 1985 and 1997.[141] These examples indicate that foreign companies have undertaken investment projects in these countries at an increasing pace with a growing compliance with environmental standards. Turkey, categorized as an emerging market like China, Mexico and Brazil and sharing many common features with these economies along with minor differences, can also be regarded in the same fashion. Needless to say, air pollution has gradually begun

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[138] Ibid.
[139] Wheeler, D. (2000). *Racing to the Bottom? Foreign Investment and Air Quality in Developing Countries*. World Bank website. Available at: http://www.worldbank.int/nipr/work_paper/RaceWP1.pdf
[140] Ibid.
[141] Ibid.

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to decrease in Turkey in the recent couple of years as the FDI performance of the economy has started to improve.[142] Thus it is reasonable to assume that foreign investors in Turkey have also started to move through the phases of the *learning curve hypothesis.*

Putting everything together, the following sub-conclusions are reached: first, there is no empirical evidence to prove the validity of the *race to the bottom hypothesis* and the *pollution haven hypothesis.* Second, empirical evidence exists to suggest just the opposite of what these two hypotheses infer. Third, however, the existence of this evidence is not sufficient to prove that the opposite of what they claim is true. Further analysis is required. Fourth, the *learning curve hypothesis* argues the opposite of what the *race to the bottom hypothesis* and the *pollution haven hypothesis* proposes. Fifth, empirical evidence is in place to support the *learning curve hypothesis.* Sixth, however, this is not enough to assert that this hypothesis is correct. Further analysis is required. And seventh, when the these two opposing views are objectively weighed, the general conclusion is that the *learning curve hypothesis* seems more plausible than the *race to the bottom hypothesis* and the *pollution haven hypothesis* as empirical evidence is present to back up the former, but is absent to bolster the latter.

Thus the environmental regulation premise in the paradigm of neo-liberal economics regarding host country-FDI relations has been reversed. The absence of sufficient environmental regulation in a host economy no longer acts as a pull factor for FDI as it previously did. On the other hand, the presence of sufficient environmental regulation is a strong determinant for FDI inflows from the perspective of a host country.

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[142] Ministry of Environment and Forestry of the Republic of Turkey. (2005). *Yoksullukla Mucadele.* The Ministry of Environment and Forestry of the Republic of Turkey website. Available at: http://www.cevreorman.gov.tr/site_03.asp

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ii. Environmental Regulation in Turkey

In terms of environmental protectionism, Turkey began taking concrete steps in the 1970s.[143] However, these steps failed to go beyond highlighting problematic areas and lacked implementation measures.[144] The notion of environment first appeared in a constitutional text in Turkey with the renewal of the Turkish Constitution in 1982.[145] Article 56 in the Constitution stated that every citizen was entitled to the right to live in a healthy and balanced environment and it was the duty of both the state and the citizens to achieve this purpose.[146]

The *Environment Law* regarding this constitutional regulation was passed on 8 August 1983 to be published in the *Official Gazette* on 11 August 1983.[147] This law re-emphasized the basic citizen right to live in a well protected environment, made a division of labor among state institutions to protect environmental interests, established guidelines for the creation of monitoring mechanisms and underlined the importance of project management in order to minimize potential negative effects on the environment.[148]

After the establishment of the *Ministry of Environment* in 1991, the state authorities began to assume a more extensive and serious role in environmental

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[143] Okumus, K. (2002). *Turkey's Environment: A Review and Evaluation of Turkey's Environment and its Stakeholders*. The Regional Environmental Center for Central and Eastern Europe website. Available at: http://www.rec.org/REC/Programs/ExtensionToTurkey/TurkeysEnvironment.pdf
[144] Orhan, G. (2004). *Relevance of Environmental Policy for Turkey's Politics and for the Turkish Society*. Technischen Universitat Berlin website. Available at: http://www.tu-berlin.de/fak7/ilup/fg-hartje/publikationen/tuerkei/Goekhan_Orhan/pdf
[145] Turkiye Isveren Sendikalari Konfederasyonu. (2000). *Cevre ve Sanayi Semineri*. Ankara: TSOF Plaka Matbaacilik Tic. ve San. A.S.
[146] Turkiye Buyuk Millet Meclisi. (1995). *Turkiye Cumhuriyeti Anayasasi*. Istanbul: Salan Yayinlari.
[147] Turkiye Buyuk Millet Meclisi. (1983). *Turkiye Cumhuriyeti Resmi Gazete*, 11 August 1983 Number 18132. Ankara: Basbakanlik Basimevi.
[148] Ibid.

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regulation.[149] The next major milestone in the development process of environmental regulation in Turkey was the *Environmental Impact Assessment Regulation*, which was prepared by the *Ministry of Environment* and published in the *Official Gazette* on 23 June 1997.[150] This regulation pointed out in great depth and detail the responsibilities of institutions in conducting extensive environmental impact assessment for their intended projects, assigned administrative and monitoring duties to several state institutions and put into effect clear guidelines for the related implementation processes.[151]

These efforts were further strengthened by the formation of the *National Environmental Strategy and Action Plan* in 1998.[152] This strategy and action plan aimed at creating incentives for both the private sector and the public sector to reach the goal of a more efficient and sustainable utilization of natural resources in the environment.[153] The late 1990s also marked the period in which the environmental reform process gathered additional momentum due to the obligation of Turkey to comply with the EU environmental standards as a part of Turkey's EU bid. For instance, an important clause in the *Accession Partnership Document* for Turkey on 8 March 2001was that Turkey was required to adopt the *EU Environmental Impact Assessment Directive* to its own environmental legislation.[154]

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[149] Keskin, L. & Yuksel, E. (2005). *Specially Protected Area Management – Towards a Sustainable Resource Management and Settlement Development in Turkey*. Eldis Gateway to Development Information website. Available at: http://www.eldis.org/fulltext/sparea.pdf

[150] Turkiye Buyuk Millet Meclisi. (1997). *Turkiye Cumhuriyeti Resmi Gazete*, 23 June 1997 Number 23028. Ankara: Basbakanlik Basimevi.

[151] Ibid.

[152] Keskin, L. & Yuksel, E. (2005). *Specially Protected Area Management – Towards a Sustainable Resource Management and Settlement Development in Turkey*. Eldis Gateway to Development Information website. Available at: http://www.eldis.org/fulltext/sparea.pdf

[153] Ibid.

[154] Turk Sanayicileri ve Isadamlari Dernegi. (2002). *Avrupa Birligi Cevre Mevzuatina Uyum Sureci*. Istanbul: Lebib Yalkin Yayimlari ve Basim Isleri A.S.

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Despite all these positive developments, the Turkish environmental policy had significant deficiencies. These deficiencies can be grouped into three sections. First, in terms of environmental impact assessment, the environmental regulation in Turkey granted a more than necessary maneuver ability to project owners while performing the impact procedures.[155] The assessment reports were prepared by project owners themselves, and moreover, the participation of project owners into the evaluation process were allowed.[156] Hence, this situation created a moral hazard case for these project owners, who had the capacity to distort the assessment reports and misinform the government and to exert pressure on the commission which submitted the reports to the *Ministry of Environment* for the final decision. Second, although an efficient division of labor was made among various state institutions, which projected an image of full coverage, problems were encountered in monitoring and implementation. And third, the sanctions imposed in cases of violation of the law carried the potential of losing their effectiveness through time as they mostly consisted of administrative fines, project freeze and total halt.[157] The danger of project freeze and total halt could be eliminated through the first deficiency stated above and administrative fines could become affordable depending on the financial power of the project owner and the potential benefits of the project.

When these problems are evaluated in an objective manner, the conclusion is self-evident: Turkey has an improving infrastructure in terms of environmental protection;

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[155] Turkiye Buyuk Millet Meclisi. (1983). *Turkiye Cumhuriyeti Resmi Gazete*, 11 August 1983 Number 18132. Ankara: Basbakanlik Basimevi.
[156] Turkiye Buyuk Millet Meclisi. (1997). *Turkiye Cumhuriyeti Resmi Gazete*, 23 June 1997 Number 23028. Ankara: Basbakanlik Basimevi.
[157] Turkiye Isverenler Sendikalari Konfederasyonu. (2002). *Cevre ve Sanayi Semineri*. Ankara: Yorum Matbaacilik.

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however, the deficiencies that are mentioned above prevent the codes of conduct from being properly implemented, causing the continuation of gradual environmental deterioration despite growing institutional and public awareness on the issue.

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14. The Presence of an Inconsistent Tax System

The case study of *Mazda* points to another important structural problem in the Turkish economy in terms of attracting sufficient foreign investment according to the neo-liberal paradigm, which is the presence of a tax system with an unfriendly attitude towards FDI. This unfriendly attitude is characterized by the notion of inconsistency in this thesis, which is more specifically evaluated as the possibility of unpredictable hikes in company-related taxes in a host economy.

The relationship between foreign investors and tax systems in host states is an issue to which political economists attribute a very high level of priority when it comes to discussions surrounding FDI. There are two apparent reasons for such an attribution. First, tax policies have a direct impact on the business activities of MNEs in terms of their cost-revenue structures as tax rates are often pre-determined by governments and are not flexible except in cases of the provision of incentive programs. And second, tax policies constitute the most significant source of revenue generation in relation to corporate activity from the perspective of host states. For this reason, this policy area is often subject to tough negotiations between host state governments and MNEs as it is regarded as value input by the former and value loss by the latter.

The dominant neo-liberal paradigm in the global economy suggests that tax policies of host states carry huge weight on the business decisions of MNEs.[158] The imposition of excessive amounts of tax burden on business activity has a substantial level

[158] Hines Jr., J.R. (1996). *Tax Policy and the Activities of Multinational Corporations*. University of California, Berkeley, Economics Department website. Available at: http://emlab.berkeley.edu/~burch/16corpor/pdf

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of adverse impact on foreign investors when deciding whether to enter a host market.[159] Among other strong determinants of FDI inflows to a host economy, tax policies also play a decisive role for MNEs.[160] In other words, excessively high tax rates in a host state constitute a push factor for FDI, whereas favorable tax rates influence foreign investors in a positive way. This assertion is bolstered by several empirical studies conducted by various scholars. An econometric analysis prepared by *Desai* and *Hines* in 2001 reveals that the elasticity of FDI to tax rates ranges from –0.6 to –2.8, the negative signs indicating that FDI inflows and local tax rates are inversely proportional to one another.[161] *Kemsley* and *Lang* (1998) report that their analysis of a pooled sample of MNEs originating from the U.S. in the 1984-1992 period indicates that those MNEs that choose to invest in host states with less tax burden announce higher profits.[162] Furthermore, again *Desai* and *Hines* (2001) state in a study conducted on U.S.-based MNEs that FDI is not only sensitive to direct taxation, such as corporate tax and income tax, but it also displays a high level of mobility at the face of excessive and unbalanced indirect taxation, such as value-added tax.[163]

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[159] Organizaton for Economic Co-operation and Development. (2000). *Corporate Tax Incentives for Foreign Direct Investment.* [Background Paper for Special Session III on FDI and the restructuring of transition and emerging economies at the Financing for Development United Nations Economic Commission for Europe Regional Conference in co-operation with the EBRD and UNCTAD on 6-7 December 2000]. United Nations Economic Commission for Europe website. Available at: http://www.unece.org/ead/misc/ffd2000/clark.pdf

[160] Benassy-Quere, A., Fontagne, L. & Lahreche-Revil, A. (2004). *How Does FDI React to Corporate Taxation?* Centre D'Etudes Prospectives et D'Informations Internationales website. Available at: http://www.cepii/fr/anglaisgraph/pagepers/Webabq/Papers/Benassy-Quere_et_al.pdf

[161] Ibid.

[162] Desai, M.A., Foley, C.F. & Hines Jr., J.R. (2002). *Chains of Ownership, Regional Tax Competition, and Foreign Direct Investment.* Harvard Business School website. Available at: http://www.people.hbs.edu/mdesai/chains.pdf

[163] Benassy-Quere, A., Fontagne, L. & Lahreche-Revil, A. (2004). *How Does FDI React to Corporate Taxation?* Centre D'Etudes Prospectives et D'Informations Internationales website. Available at: http://www.cepii/fr/anglaisgraph/pagepers/Webabq/Papers/Benassy-Quere_et_al.pdf

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In order to assess the details of the adverse impact of unfavorable taxation on FDI, it is crucial to analyze the issue from a theoretical perspective.

i. Riding a Political Economic Seesaw: Low Taxes and High FDI

Two parallel studies will be conducted in order to prepare the background for the theoretical assessment of the FDI-host state relationship. The first one will deal with how tax policies influence the initiation and the location decisions of FDI and the other will closely examine how taxation alters the magnitude and the direction of FDI.

The first study is concerned with the process of investment initiation and the related issues surrounding its departure and destination. This approach necessitates the inclusion of tax policy into the analysis both at the home state level and the host state level in a comparative perspective.[164] For the sake of the argument, this issue is exemplified by an abstract firm without any national or international connections. Before setting up a facility, an investor is faced with the decision of whether he or she should enter a particular line of business area at all.[165] This decision is made based on the following factors: the presence of substantial demand for the goods and services to be offered by the firm, set-up costs and profit potential for an indefinite future.[166] Assuming that the first criterion is satisfied, the issue of whether future revenues will outweigh the set-up costs and future costs in a foreseeable period of time is closely related to what kind of tax policies the firm will be exposed to. Since the first criterion is achieved, there is no concern about future profits. The only external factor to cause a significant reduction in these figures is taxation. If an investor finds a country in which all these criteria are

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[164] Razin, A., Rubinshtein, Y. & Sadka, E. (2005). *Corporate Taxation and Bilateral FDI with Threshold Barriers*. Tel Aviv University website. Available at: http://www.tau.ac.il/~razin/rrsCorporateTaxation.pdf
[165] Ibid.
[166] Ibid.

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fulfilled, then there are no obstacles left for investment initiation except for the provision of start-up capital. Relying on the assumption that there exists an equal level of demand for the business in all countries around the globe, the last two criteria play an additional role in determining the location of the investment. Putting the example of the abstract firm in context, suppose the home country of the firm does not have favorable tax regulation and that firm can find a more advantageous tax environment in another country. Under these circumstances, the investment will be from the home country to the most favorable host state, which will determine the location of FDI.[167]

The second study is about the magnitude and the direction of FDI, which is highly linked to the tax policies adopted by host state governments. The amount of capital spared for FDI by MNEs is a direct function of complex cost-benefit calculations made by company strategists. Hence, tax rates and tax incentives are factored into business forecasts and the exact amount to be used for FDI is determined in line with the company target. Once the investment takes place however, the future presence of that investment in the host state is not under any guarantee, as many countries engage in a fierce competition of reducing their tax barriers as much as their financial capabilities permit them in a liberal international economic environment. This brings up the issue of the direction of FDI. FDI carries the potential of using the host countries it is present in as a jumping board in order to seek and move to other host states with better options. Among other determinants of FDI inflows, the tax race becomes an important tool for governments for luring foreign investors into their country.

An econometric study by *Razin*, *Rubinshtein* and *Sadka* (2005) covers 24 OECD countries between 1981 and 1998 and looks at how tax policies affect investment

[167] Ibid.

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decisions and the magnitude and the direction of FDI.[168] Their findings provide evidence for the validity of the arguments presented above.[169]

The issue of the direction of FDI, which carries the implication that the attractiveness of a particular host state for FDI is not safe in the long-run and that the host state should engage in an active competition with other host states by constantly reforming itself to preserve its attractiveness, prepares the background for the discussion regarding the theoretical relationship between FDI and taxation. This theoretical discussion revolves around the fierce tax-based competition among host states for FDI inflows and the policies they adopt in line with this goal.

The *theory of tax competition* argues that in an economy with full mobility, taxes on business activity face strict downward pressure, eventually dropping all the way to zero.[170] However, such an assertion stays at the theoretical level and fails to find its counterpart in real life as domestic constraints often restrict the ability of national governments to implement drastic reductions in taxation policies. The degree of these constraints and the potential of finding alternative solutions for them determine how competitive host states can become in terms of taxation. Thus host states implement various tax incentive programs regarding FDI, such as *tax holidays*, *investment allowances and tax credits*, *timing differences* and *tax rate reductions*.[171] The policy of *tax holidays* is applied to new firms in the country as a result of which these firms are exempt from taxation for a pre-determined period of time as they are in the process of

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[168] Ibid.
[169] Ibid.
[170] Benassy-Quere, A., Fontagne, L. & Lahreche-Revil, A. (2004). *How Does FDI React to Corporate Taxation?* Centre D'Etudes Prospectives et D'Informations Internationales website. Available at: http://www.cepii/fr/anglaisgraph/pagepers/Webabq/Papers/Benassy-Quere_et_al.pdf
[171] Holland, D. & Vann, R.J. (1998). Income Tax Incentives for Investment. In V. Thuronyi (Ed.), *Tax Law Design and Drafting*, Volume 2, Chapter 23. International Monetary Fund website. Available at: http://www.imf.org/external/pubs/nft/1998/tlaw/eng/ch23.pdf

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setting up their business.[172] *Investment allowances and tax credits* are forms of tax relief by which companies receive tax support at a value over their asset depreciation level; therefore, the total amount of tax deduction from income is reduced.[173] *Timing differences* are actualized by rescheduling tax payments through deferrals.[174] This way, the company can pay the deferred tax amount at a more appropriate time. And lastly, *tax rate reductions* are obviously decreases in the tax rate for companies that possess certain qualifications set by host states.[175]

These tools of tax competition were used by many countries in several regions. For instance, in South Eastern Europe, countries such as Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Macedonia, Moldova and Romania have used these policies in order attract FDI in the aftermath of the Cold War.[176] Another region that heavily resorted to this strategy was Central Europe again in the post-Cold War period.[177] The countries in this region included Poland, Hungary, Slovakia and Czech Republic. For example, from 1993 to 2000, the corporate tax rates in Czech Republic declined from 45% to 31%, in Poland from 40% to 32%, in Slovakia from 45% to 29% and in Hungary from 40% to 18%.[178] Armenia and Georgia in the Caucases region and Kazakhstan, Kyrgyz Republic,

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[172] Ibid.
[173] Ibid.
[174] Ibid.
[175] Ibid.
[176] Owens, J. (2004). *Competition for FDI and the Role of Taxation: The Experience of South Eastern European Countries*. Universita Degli Studi Di Pavia website. Available at: http://www.unipv.it/websiep/wp/316.pdf
[177] Sedmihradsky, M. & Klazar, S. (2001). *Tax Competition for FDI in Central-European Countries*. Vysoka Skola Ekonomicka v Praze website. Available at: http://nb.vse.cz/~klazar/pres/Tax competition for FDI in Central-European Countries.pdf
[178] Ibid.

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Tajikistan, Turkmenistan and Uzbekistan in Central Asia have used similar tactics to increase their FDI inflow levels.[179]

This international tax competition regarding FDI, the examples of which are stated above, covers both industrialized and developing countries. However, the dynamics of the global financing structure suggest that emerging economies are in more need of FDI inflows for development purposes and thus are more keen on applying tax incentive programs while simultaneously possessing more budget-related and domestic interest group-based constraints against doing so, which causes an ambivalent and complex situation to emerge for them. For this reason, emerging markets tend to radiate unpredictable signals about FDI-related tax regulation, which might have detrimental consequences for MNEs.[180]

As a result of this theoretical evaluation of the link between FDI and taxation, one arrives at a conclusion, which reiterates the statement advocated by the neo-liberal economic worldview. MNEs, being profit-maximizing entities in essence, tend to avoid high taxes and unpredictable tax environments, which makes competitive tax reduction and tax policy consistency a necessary condition for host states, if their objective is to attract more FDI.

ii. The Historical Development of the Tax System in Turkey

The historical development of the Turkish tax system can be divided into two eras: the 1923-1950 period during which the Ottoman tax system was abolished after the foundation of the Republic of Turkey and the period stretching from 1950 to today during

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[179] Edmiston, K., Mudd, S. & Valev, N. (2003). *Tax Structures and FDI: The Deterrent Effects of Complexity and Uncertainty*. Georgia State University website. Available at: http://www.2gsu.edu/~econtv/complexity.pdf

[180] Ibid.

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which the modern tax system in Turkey was established.[181] As the agriculture-oriented economic system of the Ottoman Empire gave way to the strengthening of industrialization in the embodiment of a nation-state after the 1919-1923 Turkish revolution, a parallel structural change in the tax system was inevitable. The abolition of the Ottoman tax system in the 1923-1950 period began when the *asar tax*, which was one of the main agricultural taxes during the Ottoman period, was deemed no longer in effect in 1925.[182] Other similar changes followed suit, partly as an integral component of the revolution process and partly out of necessity due to the 1930-1939 world economic depression, which prepared the background for the establishment of the new *corporate* and *income* tax systems along modern lines.[183]

The *corporate tax* law was enacted by the *Turkish Grand National Assembly* on 3 June 1949 and was published in the *Official Gazette* on 10 June 1949.[184] The *income tax* law was passed through the *Turkish Grand National Assembly* on 31 December 1960 and it was put into effect on 6 January 1961 with its publication in the *Official Gazette*.[185]

Turkey has joined the tax-based worldwide competition for attracting FDI by implementing special incentive programs in the first phase of the economic liberalization process that began in the early 1950s. However, when the history of the Republic of Turkey is closely examined, one can find that investors have received preferential treatment since the 1930s.[186] In the early years of the Republic though, these incentives

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[181] Kolcak, M. (1994). *Turk Vergi Sistemi*. Erzurum: Ataturk Universitesi Basimevi.
[182] Ibid.
[183] Bildirici, Z. (1995). *Turk Vergi Sistemi*. Eskisehir: Anadolu Universitesi.
[184] Turkish Grand National Assembly. (1949). *Kurumlar Vergisi Kanunu*. Gelir Idaresi Baskanligi website. Available at: http://www.gelirler.gov.tr/gelir2.nsf
[185] Turkish Grand National Assembly. (1960). *Gelir Vergisi Kanunu*. Gelir Idaresi Baskanligi website. Available at: http://www.gelirler.gov.tr/gelir2.nsf
[186] Duran, M. (2002). *Turkiye'de Yatirimlara Saglanan Tesvikler ve Etkinligi*. Ankara: Hazine Mustesarligi Matbaasi.

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were directed toward national investors in Turkey as the country needed to firmly establish its national bourgeoisie as a part of the industrialization process.[187] In the 1950s, these incentive programs started to target both domestic and foreign investors.[188] During the second phase of economic liberalization in Turkey, which began in the 1980s, this investment incentive structure was expanded to include technology transfer and industrial capacity increase with the purpose of augmenting the level of competition in the Turkish market.[189]

The investment incentive programs were composed of the following policies: the customs tax exemption, investment tax cuts, the value-added tax exemption in the purchase of machines and other investment-related materials, the duty tax exemption, energy support, real estate distribution and credit transfers.[190] These incentive programs were applied to local and foreign companies under pre-determined conditions.[191] Despite these efforts however, the possibility of unpredictable complexities in the Turkish tax system, which is a common problem in all emerging markets, has always been a factor that has led foreign investors to reconsider their investment options.

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[187] Ibid.
[188] Ibid.
[189] Ibid.
[190] Istanbul Ticaret Odasi. (2000). *Sorularla Vergi Mevzuati ve Yatirim Tesvikleri Rehberi*. Istanbul: Prive Grafik & Matbacilik Sanayi ve Ticaret Ltd. Sti.
[191] Treasury of the Republic of Turkey. (2005). *Turkish Investment Encouragement System*. The Treasury of the Republic of Turkey website. Available at: http://www.treasury.gov.tr/english/tugeng090804.pdf

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15. Corruption

In an economic context, corruption often breeds upon the presence of excessive bureaucracy. When the bureaucratic structure operates in an inefficient way, certain incentives emerge for the actors involved to resolve potential complexities that might be costly in the future through the introduction of less costly external methods to the transaction in question. These external methods take the form of additional fees, gifts or material packages paid to the bureaucratic structure by the parties whose interest are at stake in this transaction. This process is termed as corruption. This connection between corruption and bureaucracy in an economic setting will be discussed in detail in this section as an integral part of the theoretical analysis on corruption.

i. Corruption and FDI: A Theoretical Assessment

The case study of *Volvo* unveils another important obstacle to FDI in host economies, which centers around the notion of extortion through the exploitation of the political power of bureaucracy, or in other words, corruption. This notion is indirectly, if not directly, related to the neo-liberal interpretations of economics through the presence of the state apparatus in its creation as a problem for FDI. The neo-liberal paradigm regards the presence of heavy bureaucratic procedures in the economy as a serious obstacle to any kind of business activity in the form of state intervention. Several studies have established a positive correlation between heavy state bureaucracy and corruption. One of the most well known theories about this relationship is the *theory of informative red tape*.

The *theory of informative red tape* explores the link between the presence of heavy state bureaucracy and the emergence of corruption in a scheme of a principal-

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bureaucrat-agent triangle.[192] According to this theory, corruption emerges in two kinds of scenarios. The first scenario corresponds to the time period between the decision of the MNE to invest in a host country and the investment application to the host state authorities.[193] In such a case, the bureaucrat anticipates the MNE's willingness to pay a high fee for the acceptance of the investment decision and imposes an accordingly high level of bureaucracy to the agent in order to extort an equally high bribe.[194] The second scenario covers the post-greenlight period after the bureaucrat approves the investment application of the MNE.[195] In this case, the bureaucrat attains information about the MNE regarding possible socially harmful or unacceptable investment strategies or side-effects and uses this information to extort bribes from foreign investors with the threat of informing the principal, a higher state official, if the bribe demand is not met by the MNE.[196] This framework explicitly lays down the inherent relationship between heavy state bureaucracy and corruption that stems from it. Thus corruption, like bureaucracy, is not a desirable factor for the neo-liberal economic paradigm as far as FDI is concerned.

Two other theories support the neo-liberal view that corruption brings about extra costs for foreign investors as a result of state involvement in the process. These theories are the *theory of rent-seeking* and the *theory of rent extraction.* The *theory of rent-seeking* was first constructed by *Gordon Tullock* in 1967 and it proposes that state intervention in the economy in the form of the creation of monopolies or bureaucratic agencies produces

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[192] Guriev, S. (2000). *A theory of informative red tape*. Russian Academy of Sciences website. Available at: http://www.ras.ru/ph/0005/TUIIJ0PG.pdf
[193] Ibid.
[194] Ibid.
[195] Ibid.
[196] Ibid.

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social costs as well in addition to deadweight losses and neutral wealth transfers.[197] These social costs include bribes to public officials, lobbying activities, litigation and other forms of regulation with the purpose of influencing the political decision-making process.[198] The *theory of rent extraction*, which was introduced by *Fred McChesney* in 1987 asserts that the demand for activities that lead to corruption does not only come from non-state actors; state officials themselves are also rent-seeking agents who mold economic and political actions to their own benefits by abusing their authority and threatening third parties with investigations and legislative penalties.[199] These theories give strong support to the neo-liberal argument that the involvement of the host state in FDI processes in the form of heavy bureaucratic structures creates incentives for the emergence of high level corruption, which is an effective push factor for foreign investors.

Several analyses conducted on the corruption-FDI relationship yield outcomes that are parallel with this neo-liberal view. *Johnson* and *Dahlstrom* (2004) argue that there exists a negative relationship between host-country corruption and FDI inflows to that host economy.[200] In a study covering 49 countries between 1992 and 1995, *Drabek* and *Payne* (2001) reveal that non-transparency and corruption in host economies strongly repel foreign investors; furthermore, these two scholars make a daring statement by claiming that a host country can improve its FDI performance by 40% in return for a one

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[197] Montanye, J.A. (2003). *On Rent Thinking and the Corruption of Republican Government.* The Independent Institute website. Available at: http://www.independent.org/pdf/tir/tir_07_4_montanye.pdf
[198] Ibid.
[199] Ibid.
[200] Johnson, A. & Dahlstrom, T. (2004). *Bureaucratic Corruption, MNEs and FDI.* The European Trade Study Group website. Available at: http://www.etsg.org/ETSG2004/Papers/Johnson.pdf

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point increase in its transparency ranking.[201] *Smarzynska* and *Wei* (2002) carefully document how corruption acts as an additional tax on foreign investors leading to a considerable reduction in FDI.[202] In an analysis conducted on the behavior of Swedish MNEs encountering corruption abroad, *Hakkala*, *Norback* and *Svaleryd* (2004) reveal that the presence of corruption has a negative impact on the probability of investment by an MNE in a host economy.[203]

This neo-liberal approach towards corruption has serious implications for the FDI performance of the Turkish economy as discussed in the next section.

ii. The Role of Corruption in the Turkish FDI Performance

Corruption has unfortunately been a major characteristic of Turkish politics with severe reflections onto the Turkish economy. Corrupt activities, such as patronage and nepotism, have come to become inherent elements in the interactions of the Turkish bureaucracy with third parties. Even though Turkey possesses the necessary judiciary infrastructure to combat corruption, ineffective enforcement mechanisms cause leaks in the system.[204] As a result of these weak enforcement mechanisms, political and economic

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[201] Drabek, Z. & Payne, W. (2001). *The Impact of Transparency on Foreign Direct Investment.* [Staff Working Paper ERAD-99-02]. World Trade Organization website. Available at: http://www.wto.org/english/res_e/reser_e/erad-99-02.doc

[202] Smarzynska, B.K. & Wei, S. (2002). *Corruption and Cross-Border Investment: Firm-Level Evidence.* Inter-American Development Bank website. Available at: http://www.iadb.org/res/publications/pubfiles/pubs-FDI-7.pdf

[203] Hakkala, K., Norback, P. & Svaleryd, H. (2004). *FDI and Corruption: Evidence from Swedish Multinational Firms.* The European Trade Study Group website. Available at: http://www.etsg.org/ETS2004/Papers/Hakkala.pdf

[204] Esmer, Y. (2005). Integrity Assessment. In *Global Integrity: An Investigative Report Tracking Corruption, Openness and Accountability in 25 Countries: Turkey.* (pp. 2-4). The Center for Public Integrity website. Available at: http://www.publicintegrity.org/docs/ga/2004Turkey.pdf

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actors tend to regard their status in the system as a way for seeking rent creation and extraction methods for self-interest.[205]

With the beginning of economic liberalization in the early 1980s, the Turkish bureaucracy experienced a mandatory retreat from economic affairs.[206] The powers of the *State Planning Organization*, which had formulated and implemented economic development plans throughout the 1960s and the 1970s, were seriously curbed.[207] The economic goal of the country was set as an export-driven strategy with a free import regime and a full capital account liberalization, enabling the inflow of short-term and long-term capital. More role was given to the private sector in the implementation of these policies in comparison to the government authorities as state involvement in the economy began to be restricted with the start of the privatization process of several state economic enterprises in the mid-1980s.[208]

Nevertheless, there were two persistent factors present in the Turkish economy in this transformation from a mostly state-controlled economic structure to the reign of free markets, which contributed to the continuity of corruption. First, the economic liberalization process was not accompanied by the proper creation of the required legal infrastructure for monitoring and regulatory purposes.[209] In the absence of such oversight, the re-emerging private sector found itself in an economic climate full of new business

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[205] Munir, M. (2005). Corruption Notebook. In *Global Integrity: An Investigative Report Tracking Corruption, Openness and Accountability in 25 Countries: Turkey*. (pp. 5-7). The Center for Public Integrity website. Available at: http://www.publicintegrity.org/docs/ga/2004Turkey.pdf

[206] Onis, Z. (1999). Organization of Export-Oriented Industrialization: The Turkish Foreign Trade Companies in a Comparative Perspective. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 14 (pp. 217-238). Istanbul: Bogazici University Press.

[207] Ibid.

[208] Onis, Z. (1999). The Evolution of Privatization in Turkey: The Institutional Context of Public-Enterprise Reform. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 11 (pp. 149-192). Istanbul: Bogazici University Press.

[209] Ibid.

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opportunities with limited and ineffective inspection, which created strong incentives for illegal behavior. For instance, the export-driven Turkish economy of the 1980s was often characterized by the notion of *fictitious exports* by which export companies forged documents to inflate their export volumes in order to get more subsidies from the state.[210] Second, the state bureaucracy, even though somewhat pacified by the transition to the market-oriented economy, retained its old habits of improper conduct.[211] Thus starting with the 1980s, both the state bureaucracy and the private sector began engaging in corrupt behaviour in their activities.

Various corruption scandals shook the political scene of the country in the 1990s. In 1994, the Prime Minister was accused of fraud in asset disclosure, which is demanded of every government in Turkey before taking office.[212] Investigation calls of the opposition into the incident were turned down.[213] In 1996, a traffic accident revealed the connections between the state bureaucracy and organized crime as a prominent police chief, an organized crime leader and a politician were found in the wreck of the car.[214] Corruption allegations continued to play a role in the economy as well. In 1998, the Prime Minister was accused of manipulating the privatization of a state-owned bank.[215]

The early twenty-first century witnessed increasing corruption-related incidents in the Turkish economy. The *Banking Regulation and Supervision Agency*, which was

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[210] Onis, Z. (1999). The Dynamics of Export Oriented Growth in a Second Generation NIC: Perspectives on the Turkish Case, 1980-1990. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 17 (pp. 285-303). Istanbul: Bogazici University Press.
[211] Esmer, Y. (2005). Integrity Assessment. In *Global Integrity: An Investigative Report Tracking Corruption, Openness and Accountability in 25 Countries: Turkey*. (pp. 2-4). The Center for Public Integrity website. Available at: http://www.publicintegrity.org/docs/ga/2004Turkey.pdf
[212] Center for Public Integrity. (2005). Corruption Timeline. In *Global Integrity: An Investigative Report Tracking Corruption, Openness and Accountability in 25 Countries: Turkey*. (pp. 8-10). The Center for Public Integrity website. Available at: http://www.publicintegrity.org/docs/ga/2004Turkey.pdf
[213] Ibid.
[214] Ibid.
[215] Ibid.

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established in 1999, launched an investigation into the Turkish banking sector in order to pinpoint corrupt business practices.[216] Moreover, political pressures for rent distribution played an important role as a causal effect in the exchange rate-related financial crisis in Turkey in 2001.[217]

Nevertheless, the external anchorage of a possible EU membership has given an important motivation to Turkish officials for fighting corruption beginning in the early 1990s.[218] Tackling corruption is one of the criteria established for accession countries in the 1993 Copenhagen Summit.[219] Moreover, various civil society projects have been launched in the Turkish society in order to highlight the reasons of corruption and seek ways to annihilate them. One example is the corruption project launched by a Turkish think-tank called the *Turkish Economic and Social Studies Foundation* in late 2000 with the intention of drawing public attention to corruption and encouraging effective confrontation with the actors that engage in such behavior.[220]

Despite these efforts, corruption continues to play a determining role in all social relations, including the ones in the Turkish business world.[221] In order to resolve this issue permanently, a lot remains to be done.

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[216] Tunc, H. (2003). The Lost Gamble: The 2000 and 2001 Turkish Financial Crises in Comparative Perspective. In Z. Onis & B. Rubin (Eds.), *The Turkish Economy in Crisis*, Chapter 2 (pp. 31-52). London: Frank Cass and Company Limited.

[217] Akcay, O.C. (2003). The Turkish Banking Sector Two Years after the Crisis: A Snapshot of the Sector and Current Risks. In Z. Onis & B. Rubin (Eds.), *The Turkish Economy in Crisis*, Chapter 8 (pp. 169-187). London: Frank Cass and Company Limited.

[218] Michael, B. (2005). The Role of Anti-Corruption in the Turkish Accession to the EU. *Turkish Policy Quarterly*, *Volume 3*, *Number 4*, pp. 17-28. European Stability Initiative website. Available at: http://www.esiweb.org/pdf/esi_turkey_tpq_id_14.pdf

[219] Ibid.

[220] Goksel, D.N. (2001). A civil society initiative in the fight against corruption in Turkey. *South-East Europe Review*, *2/2001*, pp. 33-36. Hans-Bockler-Stiftung website. Available at: http://www.boeckler.de/pdf/South-East_Europe_Review-2001-02-p033.pdf

[221] Adaman, F. & Carkoglu, A. (2003). Social Capital and Corruption during Times of Crisis: A Look at Turkish Firms during the Economic Crisis of 2001. In Z. Onis & B. Rubin (Eds.), *The Turkish Economy in Crisis*, Chapter 6 (pp. 120-145). London: Frank Cass and Company Limited.

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16. Macroeconomic Instability

The concept of macroeconomic instability seems too wide and abstract at first sight to be pinned down to the confines of a structural discussion. Nevertheless, a comprehensive analysis of this notion reveals the theoretical characteristics that link it to the FDI-host state relationship from a neo-liberal perspective.

Macroeconomic instability is often associated with the presence of investment risk in a host economy.[222] The main determinants of investment risk are composed of fundamental macroeconomic indicators, such as inflation, exchange rate and interest rates, which have direct implications for the business activities of MNEs in the form of wages, the cost and value of investment and the cost of borrowing.[223] High volatility and inconsistency in these macroeconomic indicators imply significant levels of uncertainty for various cost and value-related aspects of corporate activity as exemplified above. Thus such a condition creates a strong push factor for FDI as far as host economies are concerned.

The theoretical underpinnings of this argument are as follows.

i. Macroeconomic Instability and FDI: A Theoretical Overview

The theoretical framework of the relationship between macroeconomic instability and investment risk is outlined by an old but still highly cherished theory by *Irving Fisher*, the *theory of investment*. *Irving Fisher* first planted the seeds of this theory in his *Nature of Capital and Income* in 1906 and then in *Rate of Interest* in 1907.[224] Later, in

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[222] Chan, K.K. & Gemayel, E.R. (2004). *Risk Instability and the Pattern of Foreign Direct Investment in the Middle East and North Africa Region.* [IMF Working Paper, WP/04/139]. International Monetary Fund website. Available at: http://www.imf.org/external/pubs/ft/wp/2004/wp04139.pdf

[223] Egilmez, M. & Kumcu, E. (2005). *Ekonomi Politikasi: Teori ve Turkiye Uygulamasi.* Istanbul: Remzi Kitabevi.

[224] New School. (2003). *Irving Fisher's Theory of Investment.* The History of Economic Thought website at New School. Available at: http://cepa.newschool.edu/het/essays/capital/fisherinvest.htm

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1930, he introduced a fully-fledged version of this theory in *Theory of Interest.*[225] The core of this theory is composed of the unveiling of the inherent connection between interest rate and return on investment through simple mathematical modeling.[226] According to this model, output (Y_{t+1}) at time t+1 is defined as a function of the investment made at time t (I_t); the cost of investment is shown by the inclusion of the rate of borrowing, in other words, the nominal interest rate (i) into the calculation, which is represented as $(1+i)*I_t$.[227] Thus the profit of investment is calculated as the difference between output and the cost of investment, $Y_{t+1} - (1+i)*I_t$.[228] Ceterus paribus, this infers that as nominal interest rates increase, the profit of investment is reduced as the cost of investment augments. Hence, there is a negative relationship between nominal interest rates and the profit of investment.

This theory gains more explanatory ground in terms of general macroeconomics with the famous *Fisher equation* again proposed by *Irving Fisher.* The *Fisher equation* suggests that nominal interest rates (i), real interest rates (r) and inflation (Π) in an economic setting are related to each other in the following form: $i = r + \Pi$.[229] This equation reveals the direct impact of inflation on nominal interest rates at which banks and other financial institutions lend to firms for investment purposes. An increase in the rate of inflation leads to an increase in nominal interest rates and makes it more costly for investors to borrow capital. This one-to-one impact is called the *Fisher effect.*[230] As inflation climbs up, pressures from labor unions build up for an increase in wages;

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[225] Ibid.
[226] Ibid.
[227] Ibid.
[228] Ibid.
[229] Mankiw, N.G. (2000). *Macroeconomics.* New York: Worth Publishers.
[230] Ibid.

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increasing nominal interest rates cause more short-term capital to flow into the economy, causing an appreciation of the exchange rate, which in turn further increases the cost of doing business. All these factors combined creates an unfavorable climate for FDI.

The neo-liberal aspect of this argument is nested in the idea that forces of the free market bring all macroeconomic indicators to a stable equilibria with favorable outcomes as opposed to the failures of the tested state-controlled economic policies, which produce volatile and inconsistent macroeconomic results.[231] A study conducted by *Baniak, Cukrowski* and *Herczynski* (2002) on the transition experience of the post-communist Central and Eastern European countries to free market economics reveals that high macroeconomic volatility causes a significant reduction in FDI inflows.[232] *Chan* and *Gemayel* (2004) argue in their analysis of the FDI performance of the Middle Eastern and North African countries that the presence of investment risk in this region, which is characterized by currency risk and country financial risk associated with strong government regulation in the form of exchange rate and capital controls, affects FDI performance in a negative way.[233]

It is often mentioned in the literature that political uncertainty is closely correlated with macroeconomic instability. Political uncertainty results from two main roots, instability and arbitrariness.[234] Instability is defined as a pattern of inconsistent and

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[231] Baniak, A., Cukrowski, J. & Herczynski, J. (2002). *On Determinants of Foreign Direct Investment in Transition Economies*. Central European University website. Available at: http://www.ceu.hu/econ/economic/baniakfdi_ceuwp.pdf

[232] Ibid.

[233] Chan, K.K. & Gemayel, E.R. (2004). *Risk Instability and the Pattern of Foreign Direct Investment in the Middle East and North Africa Region.* [IMF Working Paper, WP/04/139]. International Monetary Fund website. Available at: http://www.imf.org/external/pubs/ft/wp/2004/wp04139.pdf

[234] Streb, J.M. (2001). Political Uncertainty and Economic Underdevelopment. *Estudios de Economia, Vol. 28 Number 1, June 2001*, pp. 89-114. Universidad del CEMA website. Available at: http://www.cema.edu.ar/~jms/papers/EstudiosEconomicosv28-1-e.pdf

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frequent change in judicial legislation that sets the rules of politics.[235] Arbitrariness is defined as the inconsistency in the application of the pre-determined political rules due to the presence of loopholes in the system.[236] The combination of these two factors produces uncertainty on the political front in a host state. Due to instability and arbitrariness in political institutions, property rights, which are of crucial importance to corporate activity, cannot be protected properly.[237] The emergence of such a condition increases the level of investment risks and transaction costs in that particular country, which reflect onto the macroeconomic arena as high interest rates, appreciating exchange rates and inflationary pressures in the medium to long run with negative FDI and growth-related consequences.[238]

A study by *Streb* (2001) concludes that there exists a strong positive correlation between political certainty and income per capita.[239] *Aisen* and *Veiga* (2005) reveal in their analysis covering data from approximately 100 countries between 1960 and 1999 that a high level of political instability is closely associated with high inflation, especially in developing economies with already existing inflation problems above 50%.[240] Thus due to this intrinsic relationship, which has always manifested itself in a causal direction from political uncertainty to macroeconomic instability in the Turkish context, and due to the absence of a firm-specific case suggesting a direct link between the notion of political

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[235] Ibid.
[236] Ibid.
[237] North, D.C. (2002). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
[238] Streb, J.M. (2001). Political Uncertainty and Economic Underdevelopment. *Estudios de Economia, Vol. 28 Number 1, June 2001*, pp. 89-114. Universidad del CEMA website. Available at: http://www.cema.edu.ar/~jms/papers/EstudiosEconomicosv28-1-e.pdf
[239] Ibid.
[240] Aisen, A. & Veiga, F.J. (2005). *Does Political Instability Lead to Higher Inflation? A Panel Data Analysis*. [IMF Working Paper WP/05/49]. International Monetary Fund website. Available at: http://www.imf.org/external/pubs/ft/wp/2005/wp0549.pdf

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uncertainty and unrealized FDI in the Turkish economy for the 1980-2003 period, the presence of uncertainty in Turkish politics will be addressed as a component of macroeconomic instability in explaining the FDI performance of the Turkish economy rather than a structural problem in itself.

ii. A Macroeconomic Anatomy of the Turkish Economy

The neo-liberal era in the Turkish economy in the post-1980 period has witnessed two sets of economic crises in 1994 and 2000-2001 as will be discussed below.

1980 marked the end of the implementation of the ISI strategy in the Turkish economy after the 1978-1979 economic crisis, which implied a state-controlled and closed economic system, and a paradigm shift took place from inward-oriented protectionism to free market ideology based on export growth with the IMF stabilization program.[241] There was approximately a 30% reduction in wages as the welfare state of the ISI period started to go through some restructuring.[242] In the 1980-1984 period, the high inflation rate of 1980, which ranged at 110.2%, was brought down to 51.8% and the GNP growth rate of −1.1% in 1980 was pulled up to 3.4%.[243] Nevertheless, the macroeconomic environment started to turn in the opposite direction toward the end of the decade as the populist profligacy of governments led to huge domestic and foreign borrowing, which created immense pressure on fiscal balances.[244] The remedy offered by

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[241] Onis, Z. (1999). Stabilization and Growth in a Semi-Industrial Economy: An Evaluation of the Recent Turkish Experiment, 1977-1984. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 2 (pp. 15-29). Istanbul: Bogazici University Press.
[242] Keyder, C. (2004). The Turkish Bell Jar. *New Left Review, Number 28, July-August 2004*, pp. 65-84. New Left Review website. Available at: http://www.newleftreview.net/PDFarticles/NLR26204.pdf
[243] Onis, Z. (1999). Inflation and Importing Industrialization: An Interpretation of the Turkish Case. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 3 (pp. 31-60). Istanbul: Bogazici University Press.
[244] Ismihan, M., Metin-Ozcan, K. & Tansel, A. (2002). *Macroeconomic Instability, Capital Accumulation and Growth: The Case of Turkey 1963-1999*. [ERC Working Papers in Economics 02/04]. Economic

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the government in order to cope with this economic deadlock was full capital account liberalization in August 1989, which, when combined with the crawling peg exchange rate regime being implemented since the early 1980s, would open up the Turkish capital markets to the international markets even more in order to attract a higher level of outside financing.[245] However, as the exchange rate appreciated, speculative short-term capital started flowing into the economy in the early 1990s.[246] In relation to this, the current account deficit reached US$ 6.4 million in 1993 from US$ 2.6 million in 1990, which sent warning signals to foreign investors with vested interests in the Turkish market.[247] The lowering of the credit rating of the country by two internationally recognized credit rating agencies in 1994 triggered a massive capital flight leading to the first major crisis of the neo-liberal period in the Turkish economy.[248] The GNP growth rate dropped from 7.6% in 1993 to –6.0% in 1994 and the inflation rate increased from 62.5% to 149.6% for the same years.[249] In the late 1980s and the early 1990s, the Turkish political scene showed signs of tension with the rising political Islam as a threat to the secular nature of the regime and the PKK terrorism as a threat to the national and territorial integrity of the country.[250] There is no doubt that this political condition also intensified the trouble

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Research Center website at Middle East Technical University. Available at: http://www.erc.metu.edu.tr/menu/series02/0204.pdf

[245] Onis, Z. (1999). The Dynamics of Export Oriented Growth in a Second Generation NIC: Perspectives on the Turkish Case, 1980-1990. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 17 (pp. 285-303). Istanbul: Bogazici University Press.

[246] Onis, Z. (1999). Globalization and Financial Blow-Ups in the Semi-Periphery: Turkey's Financial Crisis of 1994 in Retrospect. In Z. Onis (Ed.), *State and Market: The Political Economy of Turkey in Comparative Perspective*, Chapter 27 (pp. 513-529). Istanbul: Bogazici University Press.

[247] Ibid.

[248] Ibid.

[249] Ibid.

[250] Jung, D. (2003). *The Sevres Syndrome: Turkish Foreign Policy and its Historical Legacies.* The University of North Carolina at Chapel Hill website. Available at: http://www.unc.edu/depts/diplomat/archives_roll/2003_07-09/jung_sevres/jung_sevres.html

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experienced by the Turkish economy during its adoption of neo-liberal policies in the post-1980 period by robbing the country off of overall stability.

Another problem with this economic neo-liberal restructuring process was the absence of a parallel installment of proper judicial and systemic infrastructure alongside trade and financial liberalization. In other words, the pace of the latter excessively exceeded the pace of the formulation of the necessary safety measures in order to ensure the operation of well-designed check-balance mechanisms and prevent the emergence of loopholes in the system, which could create moral hazard. On top of this, macroeconomic indicators began to worsen toward the end of the 1990s with the public sector borrowing requirement to GNP ratio rising from 5.2% in 1995 to 12.5% in 2000, the budget deficit as a percentage of GNP increasing from 4.0% to 10.9% and the domestic debt to GNP ratio climbing from 6.2% to 15.3% in the same years.[251] When this cloudy macroeconomic environment was combined with the weak foundations of the neo-liberal experiment in Turkey, the banking system began to give out warning signals with widening open positions.[252] In 1999, a disinflation program was signed with the IMF in order to heal the macroeconomic condition of the economy.[253] Nevertheless, the absence of harmony among the three political parties that made up the coalition government in Turkey at the time created some setbacks for the successful implementation of this program.[254] Hence, the political situation could not be described as very stable in Turkey at the turn of the new century. Moreover, the *Banking Regulation and Supervision*

[251] Ertugrul, A. & Yeldan, E. (2003). On the Structural Weaknesses of the Post-1999 Turkish Disinflation Program. In Z. Onis & B. Rubin (Eds.), *The Turkish Economy in Crisis*, Chapter 3 (pp. 53-66). London: Frank Cass and Company Limited.
[252] Ibid.
[253] Onis, Z. (2003). Domestic Politics versus Global Dynamics: Towards a Political Economy of the 2000 and 2001 Financial Crises in Turkey. In Z. Onis & B. Rubin (Eds.), *The Turkish Economy in Crisis*, Chapter 1 (pp. 1-30). London: Frank Cass and Company Limited.
[254] Ibid.

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Agency, which was established in 1999 in order to prevent systemic misconduct in the banking sector, caused anxiety among banks due to its rigorous regulatory behavior.[255] This panicky atmosphere led to a capital flight of US$ 5 billion in one week from the Turkish markets in the last week of November 2000.[256] About a month later, a political rift between the Prime Minister and the President at a National Security Council meeting, which was surfaced by the comments of the Prime Minister later on, fueled a speculative attack on the Turkish lira and caused one of the most serious crises in the Turkish economic history on 21 February 2001.[257] Short term interest rates skyrocketed to 6,200% and total capital flight almost reached US$ 6.3 billion.[258] The post-2001 period witnessed a gradual recovery from these twin crises.

This brief summary of the Turkish economic history from 1980 onwards gives a clear idea to the reader about the significance and continuation of macroeconomic instability as a problematic issue in the Turkish economy.

The next part of the thesis explains the operationalization of these structural problems in the Turkish economy for the assessment of their contribution to the problem of unrealized FDI in the 1980-2003 period.

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[255] Tunc, H. (2003). The Lost Gamble: The 2000 and 2001 Turkish Financial Crises in Comparative Perspective. In Z. Onis & B. Rubin (Eds.), *The Turkish Economy in Crisis*, Chapter 2 (pp. 31-52). London: Frank Cass and Company Limited.
[256] Ibid.
[257] Ibid.
[258] Ibid.

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PART VI

Data

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17. Measuring Environmental Regulation in Turkey: The Environmental Sustainability Index

The *Environmental Sustainability Index (ESI)* is used to measure the level of environmental regulation in Turkey.[259] The *ESI* project was initiated as a pilot study by the Yale Center for Environmental Law and Policy (YCELP) at Yale University and the Center for International Earth Science Information Network (CIESIN) at Columbia University in 2000.[260] The time range of the indicator covers 2000, 2001, 2002 and 2005.

The *ESI* is a benchmark that measures the ability of nations to maintain environmental sustainability standards by taking into account 76 data sets, evaluating them through 21 environment-related indicators and merging them into a single composite indicator.[261] The variables marked by 76 different data sets range from various gas emission rates to waste recycling rates to death rates.[262] The 21 indicators that measure these variables range from air quality to private sector responsiveness to participation in international collaborative efforts.[263] These indicators are then weighed equally to compose the composite indicator called the *ESI* over a scale of 0 to 100.[264]

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[259] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2005). *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship*. Yale University website. Available at: http://www.yale.edu/esi/ESI2005_Main_Report.pdf

[260] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2000). *Pilot Environmental Sustainability Index: An Initiative of the Global Leaders for Tomorrow Environment Task Force, World Economic Forum*. The Center for International Earth Science Information Network at Columbia University website. Available at: http://www.ciesin.org/indicators/ESI/ESI.pdf

[261] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2005). *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship*. Yale University website. Available at: http://www.yale.edu/esi/ESI2005_Main_Report.pdf

[262] Ibid.

[263] Ibid.

[264] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2005). *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship Appendix A: Methodology*. Yale University website. Available at: http://www.yale.edu/esi/a_methodology.pdf

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Higher scores indicate a higher level of environmental regulation and sustainability in a particular country.[265]

Two major criticisms have been raised to the *ESI* since its launch.[266] The first one states that the method of giving equal weights to the related indicators while calculating the *ESI* is false.[267] This criticism is based on the claim that different factors have different effects on this issue.[268] In defense of the *ESI*, there are many elements that impact environmental protection and it is very difficult to determine the degree at which everyone of them factors into the picture.[269] Hence, giving an equal and constant weight to the building indicators is the best method for leveling out any differences arising from the way they impact the environment.[270] The second criticism is that the *ESI* includes many disparate indicators within itself and this fact causes a meaningless outcome to emerge at the end.[271] Scholars have questioned the methodology of this index in terms of variable selection and the relevance of these variables to environmental issues.[272] However, such an argument is not sound as it is clearly established that all indicators concerned are related to the environment in a certain way. Moreover, the inclusion of a wide array of environment-related variables into the index reveals the comprehensive nature of the *ESI* project taking into account many different factors, omitting few and

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[265] Ibid.
[266] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2005). *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship Appendix H: Critiques and Responses*. Yale University website. Available at: http://www.yale.edu/esi/h_critiques.pdf
[267] Ibid.
[268] Ibid.
[269] Ibid.
[270] Ibid.
[271] Ibid.
[272] Jha, R. & Murthy, K.V.B. (2003). *A Critique of the Environmental Sustainability Index*. Research School of Pacific and Asian Studies, Australian National University website. Available at: http://rspas.anu.edu.au/economics/publish/papers/wp2003/wp-econ-2003-08.pdf

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leaving a little margin for error.[273] Thus it is one of the most trustworthy environment-related indicators currently present in the literature. For these reasons, the *ESI* will be used in this thesis to operationalize environmental regulation in the Turkish context.

However, a serious problem needs to be tackled at this point. This thesis conducts a study for the problem of unrealized FDI in the Turkish economy between 1980 and 2003; however, the *ESI* scores are available only for 2000, 2001, 2002 and 2005.

In order to overcome this problem, the following method is used. Turkey's *ESI* scores for 2000, 2001, 2002 and 2005 are plotted on a graph and a best fit line is drawn in order to come up with a general equation for Turkey's *ESI* performance. The *ESI* score for 2000 is 52.0.[274] This figure drops down to 46.3 in 2001[275], only to rise to 50.8 in 2002.[276] The *ESI* score for 2005 is 46.6.[277] The plotted graph and the best fit line equation for these data are shown below. The best fit line equation is y = -0.75*x + 1550.4, which translates into the *ESI* context as ESI Score = -0.75*Years + 1550.4. By using this equation, Turkey's *ESI* performance is calculated for the 1980-2003 period. The table

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[273] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2005). *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship Appendix H: Critiques and Responses*. Yale University website. Available at: http://www.yale.edu/esi/h_critiques.pdf

[274] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2000). *Pilot Environmental Sustainability Index: An Initiative of the Global Leaders for Tomorrow Environment Task Force, World Economic Forum*. The Center for International Earth Science Information Network at Columbia University website. Available at: http://www.ciesin.org/indicators/ESI/ESI.pdf

[275] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2001). *2001 Environmental Sustainability Index: An Initiative of the Global Leaders of Tomorrow Environment Task Force, World Economic Forum*. The Center for International Earth Science Information Network at Columbia University website. Available at: http://www.ciesin.org/indicators/ESI/ESI_01a.pdf

[276] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2002). *Environmental Sustainability Index 2002 Rankings*. The Center for International Earth Science Information Network at Columbia University website. Available at: http://www.ciesin.columbia.edu/indicators/ESI/rank.html

[277] Yale Center for Environmental Law and Policy at Yale University & Center for International Earth Science Information Network at Columbia University. (2005). *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship*. Yale University website. Available at: http://www.yale.edu/esi/ESI2005_Main_Report.pdf

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below displays this performance during that era. The completion of the missing *ESI* scores by using this method is appropriate for the purposes of this thesis for two reasons. First, it is the best mathematical method available given the multi-faceted and complex nature of the re-calculation of the scores of the index for the missing years. Second and more importantly, it is established in the related section of this thesis that the environment in Turkey is in the process of gradual deterioration since 1980 despite strengthening instititutional infrastructure and growing public awareness on this issue and the negative slope of the best fit line is indicative of this fact. Thus the gradual increase in the level of environmental degradation in Turkey is captured in the *ESI* scores calculated for the 1980-2003 period by using the best fit line equation.

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Graph 7: Turkey's ESI Performance

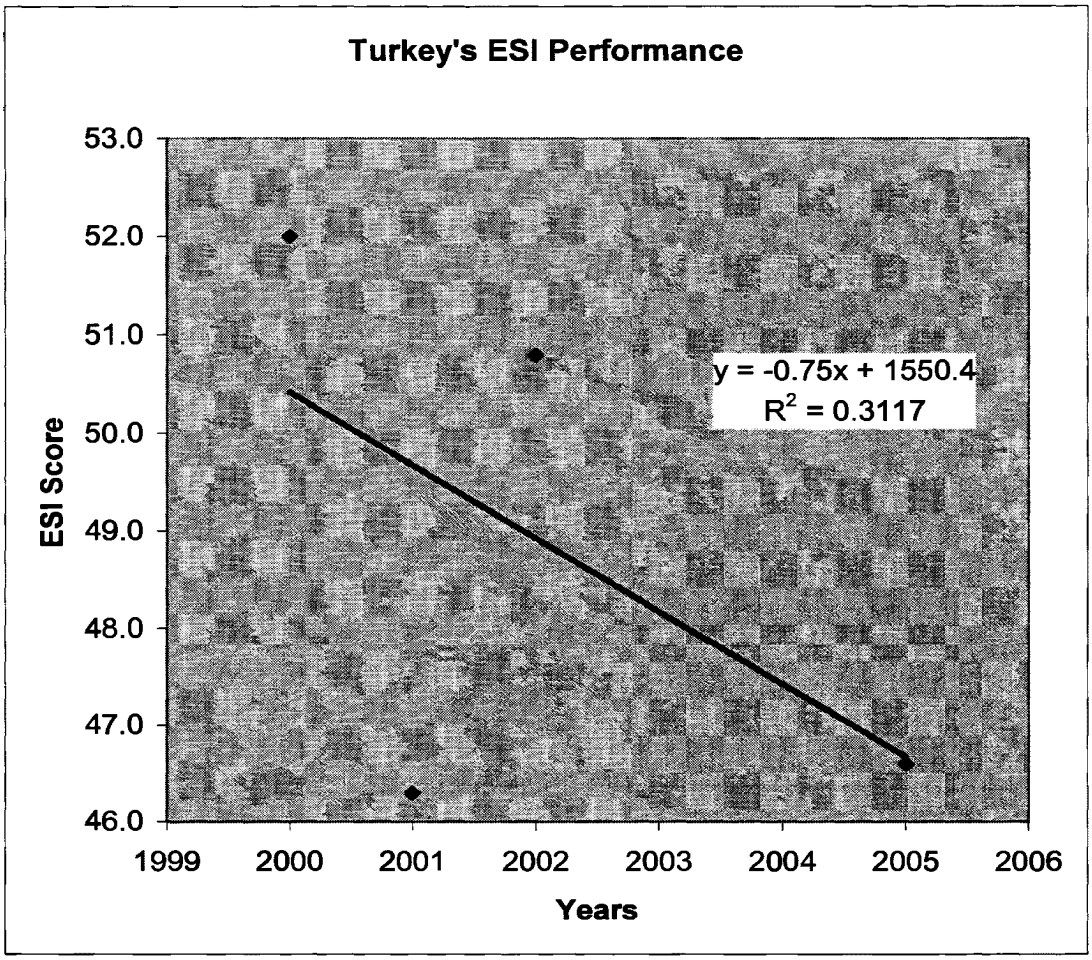

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Table 2: Turkey's ESI Performance 1980-2003

Turkey's ESI Performance 1980-2003	
Year	**ESI Score**
1980	65.40
1981	64.65
1982	63.90
1983	63.15
1984	62.40
1985	61.65
1986	60.90
1987	60.15
1988	59.40
1989	58.65
1990	57.90
1991	57.15
1992	56.40
1993	55.65
1994	54.90
1995	54.15
1996	53.40
1997	52.65
1998	51.90
1999	51.15
2000	52.00
2001	46.30
2002	50.80
2003	48.15

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18. Measuring Inconsistent Taxation in Turkey: The Forbes Tax Misery and Reform Index

In order to provide a satisfactory answer to the question of to what extent the Turkish tax system acted as a contributor or an obstacle in the FDI performance of the Turkish economy in the 1980-2003 period, the *Forbes Tax Misery and Reform Index* will be used. This is an indicator prepared by the famous international business magazine called *Forbes*.

In measuring Turkey's tax-related FDI performance between 1980 and 2003, this indicator is preferred for the following reason. When the structure of the index is analyzed, it is seen that the calculation mechanism is based on an inclusive yet simple methodology, which makes it less prone to errors and easy to implement.

The tax matrix that lies at the core of the *Forbes Tax Misery and Reform Index* has six components: the *corporate income tax*, the *personal income tax*, the *wealth tax*, the *employer social security rate*, the *employee social security rate* and the *value-added/sales tax*.[278] This index aims to capture the common denominator of every tax system around the world and for this reason, the kinds of taxes that vary across countries are omitted. Hence, this index succeeds in gathering the common features of the tax systems in all countries and is therefore, inclusive. The calculation mechanism of the index is very simple. The addition of the *corporate tax rate*, the *personal income tax rate*, the *wealth tax rate*, the *employer social security rate*, the *employee social security rate* and the *value-added/sales tax rate* of a state makes up the *Forbes Tax Misery and Reform*

[278] Forbes. (2004). *Tax Misery & Reform Index*. Forbes Magazine website. Available at: http://www.forbes.com/home_europe/global/2004/0524/074chart1.html

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Index score of that particular country.[279] This simple system enables scholars to use this index easily.

There might be two potential criticisms directed against this index. First, the fact that this index only captures the common taxes shared by most countries around the world, as mentioned above, may hinder the ability of this index to measure the impact of taxation on business in every country in a precise manner, giving birth to the necessity to customize its methodology according to the economy-specific features of each country in order to attain accurate measurements. Such a counter-argument is refuted by pointing to the fact that this index includes all the major taxes in every economy, namely the *corporate tax*, the *personal income tax*, the *wealth tax*, the *employer social security rate*, the *employee social security rate* and the *value-added tax*, which almost cover the entire tax system in an economy. Thus the remaining taxes constitute a minority with insignificant potential impact on the calculation of the *Forbes Tax Misery and Reform Index* score. The second counter-argument can be constructed around the inherent systemic bias present in this index. The methodology of this index takes a systemic approach towards the issue of inconsistent taxation by focusing on the picture as a whole and taking into account only the different tax rates. While doing so, the possible business reactions vis-à-vis changes in taxation are not addressed. Different business practices might have different elasticity levels in terms of tax hikes and inconsistencies, altering the degree of taxation misery in an economy. This counter-argument is mitigated by stating that the neo-liberal economic paradigm, which is the main theoretical framework of this thesis, operates on the assumption that from a business point of view, inconsistent

[279] Ibid.

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taxation in all forms is regarded as a serious obstacle to corporate activity, an assertion that has been supported both theoretically and empirically on many occasions.

Turkey's *Forbes Tax Misery and Reform Index* score for the 1980-2003 period is calculated by adding the mentioned tax rates for each year. At this point, however, it should be noted that due to the difficulties experienced in accessing the related information for the *income tax rate* and the *social security premium rate for employers* and the *social security premium rate for employees* for this period, these taxes will be taken out of this assessment. In addition to this, the *wealth tax* will be omitted from this calculation as it was not a significant part of the Turkish tax system between 1980 and 2003. Thus only the *corporate tax rate* and the *value-added tax rate* will be used in exploring Turkey's standing in the tax-related FDI performance during this era. It is obvious that this missing information will have a negative impact on this assessment; however, this negativity will be offset to a degree by the fact that the missing part of the score will be proportional to the remaining part at all times since it is assumed that these tax rates tend to change more or less at coinciding times at similar ratios. Thus the calculated score will not give the reader the absolute figure, but a relative figure, preserving its reliability.

The *corporate tax rate* and the *value-added tax rate* in Turkey between 1980 and 2003 is shown in the tables below along with Turkey's *Forbes Tax Misery and Reform Index* score at corresponding years.

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Table 3: Corporate Tax Rate & Value-Added Tax Rate in Turkey 1980-2003[280]

Corporate Tax Rate & Value-Added Tax Rate in Turkey 1980-2003		
Year	**Corporate Tax Rate**	**Value-Added Tax Rate**
1980	50%	0%
1981	50%	0%
1982	40%	0%
1983	40%	0%
1984	40%	0%
1985	46%	10%
1986	46%	10%
1987	46%	12%
1988	46%	12%
1989	46%	10%
1990	46%	10%
1991	46%	12%
1992	46%	12%
1993	25%	12%
1994	25%	15%
1995	25%	15%
1996	25%	15%
1997	25%	15%
1998	25%	15%
1999	33%	15%
2000	33%	17%
2001	33%	18%
2002	33%	18%
2003	30%	18%

[280] The statistical information on the corporate tax rate and the value-added tax rate in Turkey in the 1980-2003 period is obtained from the Ministry of Finance of the Republic of Turkey. The value-added tax law has been put into effect in Turkey in 1985. Thus up until 1985, this tax rate is taken to be zero.

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Table 4: Turkey's Forbes Tax Misery and Reform Index Performance 1980-2003[281]

Turkey's Forbes Tax Misery and Reform Index Performance 1980-2003	
Year	**Forbes Tax Misery and Reform Index Score**
1980	50
1981	50
1982	40
1983	40
1984	40
1985	56
1986	56
1987	58
1988	58
1989	56
1990	56
1991	58
1992	58
1993	37
1994	40
1995	40
1996	40
1997	40
1998	40
1999	48
2000	50
2001	51
2002	51
2003	48

[281] Turkey's Forbes Tax Misery and Reform Index score is calculated by adding the corporate tax rate and the value-added tax rate in the 1980-2003 period.

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19. Measuring Corruption in Turkey: The Corruption Perceptions Index

The *Corruption Perceptions Index* is one of the most reputable indices measuring corruption in the world. It is prepared by one of the most respected non-governmental organizations that specializes on corruption, *Transparency International*. This index is a composite one constructed by a meticulous analysis of surveys of the business world and country evaluations by 10 independent institutions after a rigorous elimination process.[282] After relevant information is collected from the related sources, the data are standardized in order to be fit into a uniform scale that produces the overall score of a country.[283]

The *Corruption Perceptions Index* is chosen as a measurement of the corruption level in Turkey for the 1980-2003 period for three reasons. First, *Transparency International* has gained worldwide recognition as a non-governmental organization conducting research and studies on corruption; thus this index infers confidence for researchers due to its widespread acceptance in the world of academia. Second, the methodology used leaves little room for potential error despite being qualitative in essence.[284] All concepts are clearly defined in detail in surveys used by the organization in different countries.[285] The survey tools deployed by the researchers on many individuals and interest groups enable them to gather extensive data on the perception of corruption, which can be merged into a meaningful whole, increasing the reliability level of the index.[286] And lastly, the index is one of the oldest indices used in the measurement

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[282] Lambsdorff, J.G. (2005). *The Methodology of the 2005 Corruption Perceptions Index*. Internet Center for Corruption Research website. Available at: http://www.icgg.org/downloads/CPI_Methodology.pdf
[283] Ibid.
[284] Ibid.
[285] Ibid.
[286] Johnston, M. (2000). *The New Corruption Rankings: Implications for Analysis and Reform*. Colgate University website. Available at: http://departments.colgate.edu/polisci/papers/mjohnston/originals/JohnstonIPSA2000.pdf

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of corruption dating back to 1980 with slight modifications, which provides a complete coverage of Turkey in terms of corruption for the 1980-2003 period.[287]

There are two significant criticisms raised against this index. The first one is that the surveys used to construct the *Corruption Perceptions Index* mostly focus on high-level practices of corruption that take more visible forms, such as bribery, while discarding more petty forms of corruption, such as nepotism and clientalism, which are less visible to the ordinary eye.[288] Nevertheless, the exclusion of petty corruption in the *Corruption Perceptions Index* has immaterial impact on the assessment of the role of corruption in the FDI performance of the Turkish economy as it is the types of corruption with material costs that matter for MNEs while conducting their investment feasibility studies for a particular host country. These types of corruption are generally included in the category of high-level corruption with adverse financial impact on investors. Thus this deficiency of the *Corruption Perceptions Index* does not deviate this thesis from its purpose in any way. The second criticism is concerned with the distinction between the perception of corruption and corruption itself.[289] The index measures the perception of corruption in particular countries that might be different from the levels of actual corruption.[290] However, it is very difficult to disentangle the two notions from each other as common sense dictates that the perception of corruption is engendered by the presence of actual corruption in an economy in the first place and contributes to the generation of further corrupt activities by creating a certain level of expectation in the society toward

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[287] Lambsdorff, J.G. (2005). *The Methodology of the 2005 Corruption Perceptions Index*. Internet Center for Corruption Research website. Available at: http://www.icgg.org/downloads/CPI_Methodology.pdf
[288] Johnston, M. (2000). *The New Corruption Rankings: Implications for Analysis and Reform*. Colgate University website. Available at: http://departments.colgate.edu/polisci/papers/mjohnston/originals/JohnstonIPSA2000.pdf
[289] Ibid.
[290] Ibid.

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that end. Thus the perception of corruption and actual corruption move hand in hand with one another.

The *Corruption Perceptions Index* runs on a scale of 0 to 10, with 0 indicating the highest level of corruption and 10 indicating the presence of a clean economic, political and social environment in a country.[291] Turkey's *Corruption Perceptions Index* performance for the 1980-2003 period can be observed in the table below.

[291] Lambsdorff, J.G. (2005). *The Methodology of the 2005 Corruption Perceptions Index*. Internet Center for Corruption Research website. Available at: http://www.icgg.org/downloads/CPI_Methodology.pdf

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Table 5: Turkey's Corruption Perceptions Index Performance 1980-2003[292]

Turkey's Corruption Perceptions Index Performance 1980-2003	
Year	**Score**
1980	4.06
1981	4.06
1982	4.06
1983	4.06
1984	4.06
1985	4.06
1986	4.06
1987	4.06
1988	4.05
1989	4.05
1990	4.05
1991	4.05
1992	4.05
1993	4.05
1994	4.05
1995	4.10
1996	3.54
1997	3.21
1998	3.40
1999	3.60
2000	3.80
2001	3.60
2002	3.20
2003	3.10

[292] Corruption Perceptions Index scores for the 1986-1987 period and the 1993-1994 period were not originally available. Thus for the 1986-1987 period, the Corruption Index Score of 1985 is used and for the 1993-1994 period, the Corruption Index Score of 1992 is used based on the assumption that the corruption level of the previous years is maintained in 1986-1987 and 1993-1994 due to the shortness of these periods. The index scores for the 1980-1985 period and the 1988-1992 period are available at: http://www.icgg.org/corruption.cpi_olderindices_historical.html. The 1995 index scores are available at: http://www.icgg.org/corruption.cpi_olderindices_1995.html. The 1996 index scores are available at: http://www.icgg.org/corruption.cpi_olderindices_1996.html. The 1997 index scores are available at: http://www.icgg.org/corruption.cpi_olderindices_1997.html. The 1998 index scores are available at: http://www.icgg.org/corruption.cpi_olderindices_1998.html. The 1999 index scores are available at: http://www.icgg.org/corruption.cpi_olderindices_1999.html. The 2000 index scores are available at: http://www.icgg.org/downloads/CPI_2000.xls. The 2001 index scores are available at: http://www.icgg.org/downloads/CPI_2001.xls. The 2002 index scores are available at: http://www.icgg.org/downloads/CPI_2002.xls. The 2003 index scores are available at: http://www.icgg.org/downloads/CPI_2003.xls.

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20. Measuring Macroeconomic Instability in Turkey: The Turkish Economic Stability Index

In order to operationalize macroeconomic instability in the Turkish context as a contributing factor to unrealized FDI in the 1980-2003 period, the *Turkish Economic Stability Index (TESI)* will be used. *TESI* is a data mining model developed by *Assistant Professor I. Ilkay Boduroglu* at the Informatics Institute at Istanbul Technical University and graduate student *Zeynep Erenay* at the Systems & Control Engineering Department at Bogazici University in order to predict financial crises in Turkey seven months before they take place.[293] *TESI* is constructed by using five ratios, each composed of nine macro-economic variables.[294] These ratios are the current account to GNP ratio, the short term outstanding external debt to total outstanding external debt ratio, the short term capital to international reserves ratio, the capital adequacy ratio and the FDI to GNP ratio.[295] These separate ratios are then weighted and combined in a linear way in order to come up with the scalar index of *TESI*.[296] On a coordinate axis, the x-axis is taken to be the early warning threshold; any value on the y-axis above this threshold means a non-crisis situation and any value below the threshold is interpreted as a crisis situation.[297] As the *TESI* curve approaches the warning threshold from above, danger bells ring for the macroeconomic indicators; as the *TESI* curve distances itself from the warning threshold in an upward direction, macroeconomic indicators are taken to be improving.[298] Similarly, as the *TESI* curve gets away from the warning threshold in a downward

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[293] Boduroglu, I.I. & Erenay, Z. (2005). *A Data Mining Model for Predicting a Financial Crisis in Turkey: Turkish Economic Stability Index*. Istanbul Technical University website. Available at: http://kullanici.be.itu.edu.tr/~ilkay/ilkay.net/Papers/TESI.pdf

[294] Ibid.

[295] Ibid.

[296] Ibid.

[297] Ibid.

[298] Ibid.

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direction, it means that the crisis is deepening, whereas any proximity to the warning threshold from below is interpreted as an improvement in the crisis situation.[299]

TESI is selected for the purposes of this thesis for three reasons. First, it is a unique index for Turkey as it incorporates the structural characteristics of the Turkish economy as an emerging market into the calculation process.[300] Therefore, it is customized and specialized to emerging markets in general and Turkey in particular. Second, although the core data used in its construction process is the one pertaining to the 2000-2001 Turkish economic crisis, the validity of the methodology of the index has been confirmed by a successful test using the data related to the 1994 economic crisis.[301] And third, *TESI* accounts for the impact of political and social events on macroeconomic balances as well as financial events, such as government crisis, earthquakes and terrorist bombings.[302] Hence, this index is quite comprehensive in terms of including as many relevant factors as possible with potential impact on the dynamics of an economy.

As the index does not cover the 1980-1992 period, the *TESI* scores for this period are estimated based on a comparison of the macroeconomic climate between the 1980-1992 period and the 1993-2003 period. The logic of the *TESI* score estimation for the 1980-1992 period is as follows. The 1980-1992 period shows a significant degree of similarity to the 1994-1999 period in terms of the business cycle experienced. Macroeconomic conditions start moving in a positive direction in the early 1980s and between 1994 and 1995 after the crises only to worsen in the second half of each decade. The deteriorating conditions in the late 1980s result with the 1994 crisis and the

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[299] Ibid.
[300] Ibid.
[301] Ibid.
[302] Ibid.

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economic downward spiraling of the late 1990s bring about the 2000-2001 crises. For this reason, the 1994-1999 period will be taken as a model for the creation of the missing portion of the *TESI* curve corresponding to the 1980-1992 period on a one-to-one basis. Hence, the *TESI* scores of the 1994-1999 period also apply to the 1980-1992 period.

The table with the *TESI* scores covering the 1980-2003 period for the Turkish economy can be seen below.

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Table 6: TESI scores for the Turkish economy 1980-2003[303]

TESI Scores for the Turkish Economy 1980-2003	
Year	**TESI Score**
1980	-2.83
1981	-2.83
1982	2.17
1983	2.17
1984	0.67
1985	0.67
1986	-0.83
1987	-0.83
1988	0.67
1989	0.67
1990	-0.83
1991	-0.83
1992	0.67
1993	0.83
1994	-2.83
1995	2.17
1996	0.67
1997	-0.83
1998	0.67
1999	0.50
2000	0.50
2001	-1.00
2002	4.17
2003	6.33

[303] TESI scores for the Turkish economy for the 1993-2003 period are measured from the graph provided on page 19 of the TESI report prepared by Assistant Professor I. Ilkay Boduroglu and graduate student Zeynep Erenay entitled *A Data Mining Model for Predicting a Financial Crisis in Turkey: Turkish Economic Stability Index* available at the website of Istanbul Technical University at http://kullanici.be.itu.edu.tr/~ilkay/ilkay.net/Papers/TESI.pdf. As the results of this report were provided in only a graph format, the TESI scores for the 1993-2003 period were meticulously measured from the TESI graph in the paper with minimum margin of error. For the missing TESI scores of the 1980-1992 period, the TESI scores of the 1994-1999 period were taken as a model on a one-to-one basis with corresponding scores repeating themselves twice for the 1980-1992 period except for 1992 due to the fact that there exists 13 years in the 1980-1992 period and 6 years in the 1994-1999 period. Thus the entire TESI score table for the 1980-2003 period was formed based on this logical estimation.

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PART VII

Regression Results and Policy Implications

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21. The Details of the Constructed Econometric Model

The operationalized structural problems in the Turkish economy, which constitute the independent variables, are linked to the problem of unrealized FDI, which is the dependent variable, by a logarithmic multiple regression model in five different scenarios each having two versions, which is constructed as follows:

Problem of unrealized FDI:	UnFDI
Absence of sufficient environmental regulation:	Env
Presence of an inconsistent tax system:	Tax
Corruption:	Cor
Macroeconomic instability:	Mac

$\ln(UnFDI_t) = \lambda_{1t}*\ln(Env_t) + \lambda_{2t}*\ln(Tax_t) + \lambda_{3t}*\ln(Cor_t) + \lambda_{4t}*\ln(Mac_t) + e$;

where λ_{1t} is the coefficient for the absence of sufficient environmental regulation, λ_{2t} is the coefficient for the presence of an inconsistent tax system, λ_{3t} is the coefficient for corruption, λ_{4t} is the coefficient for macroeconomic instability and e is the residual. This econometric model will be used for the version of the five different scenarios in which the independent variable of macroeconomic instability is treated as a quantitative variable. For the second version of the five different scenarios where the independent variable of macroeconomic instability is treated as a qualitative dummy variable, the following econometric model will be used for the analysis:

$\ln(UnFDI_t) = \lambda_{1t}*\ln(Env_t) + \lambda_{2t}*\ln(Tax_t) + \lambda_{3t}*\ln(Cor_t) + d_{1t}*Mac + e$; where

as a dummy variable, Mac = 1 if there is macroeconomic instability

0 if there is no macroeconomic instability

with all the other coefficients in the econometric model remaining the same.

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Before proceeding with the econometric analysis of the five different scenarios, two issues require further clarification.

First, one should highlight why two versions are applied to each scenario with the independent variable of macroeconomic instability being treated as a quantitative variable in one and as a qualitative dummy variable in the other, while all the other remaining independent variables are chosen to be quantitative in both versions of the five scenarios.

The absence of sufficient environmental regulation, the presence of an inconsistent tax system and corruption are evaluated only as quantitative independent variables for two reasons. First, the impact of these variables on the economy is more suitable for assessment in material terms rather than in abstract perception-related terms. It is more reasonable to measure the degree at which environmental regulation is applied in a host country in comparison to answering the question of whether there is sufficient environmental regulation in that particular place in a simple yes or no fashion. Similarly, a simple statement as to whether the tax system in a host economy is inconsistent does not provide substantial evidence in itself about the precise impact it has on the general economic performance of a country without a numerical assessment. One might argue that the notion of corruption is more perception-oriented than numerical as evidenced by the name given to the index used to operationalize its effect, the *Corruption Perceptions Index*. However, it should be noted that the degree of the presence of corruption in an economy is quite definitive in terms of the damage this structural problem inflicts on economic performance. Thus different levels of corruption should be distinguished from one another in order to make a more proper assessment. Moreover, the perception of corruption and actual corruption is closely related with each other as explained in the

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related part of this thesis. The second reason for prefering a quantitative scale on these variables is the fact that different MNEs deal with these structural problems on an individual basis at different levels once they enter the host state as investors. The levels of environmental regulation, taxation and corruption might show significant variations across different sectors of the economy with different mixtures of state bureaucracy and private initiative. Hence, the experience of each MNE might be different in essence with regard to these investment-related problems. This inherent heterogeneity necessitates a distinct assessment on a quantitative basis rather than an overall qualitative one.

The independent variable of macroeconomic instability can also be treated as a quantitative variable as the level of macroeconomic instability in a particular country can be measured in detail as evidenced by the *TESI*. Furthermore, it is probable that different MNEs might react at different levels in an economic crisis depending on the measured level of macroeconomic instability present in an economy. In addition to this first version of analysis, however, the independent variable of macroeconomic instability is also treated as a qualitative dummy variable in the econometric model for two reasons. First, the notion of macroeconomic instability appeals to the perception of different actors involved in economic affairs even though the degree of instability in a host economy can be measured by taking into account various macroeconomic indicators, such as the exchange rate, inflation, interest rates, etc., as can be observed in the *TESI*. It is reasonable to classify an economy as stable or in decline as opposed to referring to the level of instability present. Second, different market actors respond to the qualitative nature of macroeconomic conditions in a host economy in their entirety as well. The simple question of whether a market is stable or experiencing trouble gains special

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importance and plays a key role in the exit decision of investors and the answer to this question might trigger the beginning of what is known as the herd behavior among investors leading to massive capital flight. Thus the impact of macroeconomic instability on economic performance is more uniform and general unlike the other variables discussed above. Thus it is also suitable to categorize this structural problem as a qualitative dummy variable.

The presence of two versions for each scenario in the econometric analysis with the independent variable of macroeconomic instability being categorized as a quantitative variable and a qualitative dummy variable has two main advantages: first, the two versions for each scenario will act as a check and balance mechanism for the econometric results achieved, making sure that any elements missed by one version is captured by the other. Second, conducting the econometric analysis with the two different versions of the independent variable of macroeconomic instability will provide the researcher with insight as to whether it is more appropriate to categorize this particular independent variable as a quantitative variable or a qualitative dummy variable, or whether this categorization does not matter at all, depending on the variation of the econometric results obtained at the end.

The second issue that requires further clarification is the fact that scores of the *Corruption Perceptions Index* measuring the level of corruption in the Turkish economy is in reverse order as far as the numerical logic of an econometric analysis is concerned. In the *Environmental Sustainability Index*, higher scores mean a higher level of environmental regulation and sustainance and vice versa. In the *Forbes Tax Misery and Reform Index*, higher scores correspond to more tax inconsistency and vice versa.

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Similarly, in the *TESI*, positive scores indicate macroeconomic stability whereas negative scores indicate macroeconomic instability. Nevertheless, in the *Corruption Perceptions Index*, high scores are interpreted as lower degrees of corruption, whereas corruption increases as the score falls. Hence, in terms of environmental regulation, taxation and macroeconomic stability, the numerical logic is as it is supposed to be; however, for the concept of corruption, it works in the opposite direction. This situation creates a problem for the econometric regression analysis as the computer does not recognize what these scores stand for and processes them only as numbers. This problem is solved by a simple trick applied in the econometric model by reversing the sign of the coefficient for the variable of corruption. This way, the reverse logic of the corruption scores in the index is turned in the opposite direction to resemble the numerical logic present in the other variables of the model. Thus the revised version of the logarithmic multiple regression model is written as follows:

$\ln(UnFDI_t) = \lambda_{1t}*\ln(Env_t) + \lambda_{2t}*\ln(Tax_t) + \lambda'_{3t}*\ln(Cor_t) + \lambda_{4t}*\ln(Mac_t) + e$;

where $\lambda'_{3t} = -\lambda_{3t}$; λ_{3t} being the coefficient of the variable of corruption in the original logarithmic multiple regression model

$\ln(UnFDI_t) = \lambda_{1t}*\ln(Env_t) + \lambda_{2t}*\ln(Tax_t) + \lambda_{3t}*\ln(Cor_t) + \lambda_{4t}*\ln(Mac_t) + e$ over which the actual econometric regression is run.

The data to be used in this econometric analysis are presented in the table below.

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Table 7: Regression Data

REGRESSION DATA					
Years	**UnFDI (US$ Millions)**	**Env**	**Tax**	**Cor**	**Mac**
1980	62	65.40	50	4.06	-2.83
1981	197	64.65	50	4.06	-2.83
1982	64	63.90	40	4.06	2.17
1983	16	63.15	40	4.06	2.17
1984	158	62.40	40	4.06	0.67
1985	135	61.65	56	4.06	0.67
1986	239	60.90	56	4.06	-0.83
1987	540	60.15	58	4.06	-0.83
1988	467	59.40	58	4.05	0.67
1989	849	58.65	56	4.05	0.67
1990	1,177	57.90	56	4.05	-0.83
1991	1,060	57.15	58	4.05	-0.83
1992	909	56.40	58	4.05	0.67
1993	1,317	55.65	37	4.05	0.83
1994	842	54.90	40	4.05	-2.83
1995	2,004	54.15	40	4.10	2.17
1996	2,922	53.40	40	3.54	0.67
1997	826	52.65	40	3.21	-0.83
1998	693	51.90	40	3.40	0.67
1999	887	51.15	48	3.60	0.50
2000	1,770	52.00	50	3.80	0.50
2001	-563	46.30	51	3.60	-1.00
2002	1,201	50.80	51	3.20	4.17
2003	2,056	48.15	48	3.10	6.33

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The econometric analysis is conducted based on five different scenarios. In these scenarios, the problem of unrealized FDI is quantified in different ways in order to be able to make a thorough and comprehensive assessment of this issue in Turkey in relation to the defined structural problems. In the first scenario, the dependent variable is taken to be the difference between authorized FDI and realized FDI in the Turkish economy in the 1980-2003 period and a constant of 564 is added to this dependent variable for each year in order to get rid of the negative value for the year 2001 and to factor this dependent variable into a logarithmic multiple regression model. In the second scenario, the depedent variable is again taken as the difference between authorized FDI and realized FDI in the Turkish economy in the 1980-2003 period and this time the realization ratio for the year 2001 is taken to be almost 100% with the authorized FDI level being US$ 2,725 million and the realized FDI level being US$ 2,724 million, leaving an insignificant difference of US$ 1 million in order to be able to factor the dependent variable into the logarithmic multiple regression model. In the third scenario, the dependent variable is quantified as the realization ratio calculated by the division of realized FDI by authorized FDI in the Turkish economy in the 1980-2003 period. Through the utilization of the realization ratio as the dependent variable in this scenario, the problem of unrealized FDI in the Turkish economy is captured in percentage terms as opposed to nominal terms as in the previous two scenarios. In the fourth scenario, the dependent variable is quantified as the ratio of realized FDI to GDP in the Turkish economy in the 1980-2003 period in order to be able to capture the impact of the economic growth on the independent variables in the analysis generated by the transition to the neo-liberal economic system in Turkey. And in the fifth scenario, the dependent

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variable is chosen to be the difference between authorized FDI and realized FDI in the Turkish economy in the 1980-2003 period and is left as it is without adding or subtracting any constant for the sake of the logarithmic multiple regression model.

Each scenario described above has two versions with the independent variable of macroeconomic instability being treated as a quantitative varible and as a qualitative dummy variable. In the versions where the independent variable of macroeconomic instability is treated as a quantitative variable, a constant of 3.83 is added to the *TESI* scores for each year in order to be able to factor this variable into the logarithmic multiple regression model.

The regression is run by using a statistics and data analysis software called *Stata 9.0*. The results are stated in the following pages. The natural expectation, as discussed explicitly for each independent variable in the model in the relevant sections of the thesis explaining the structural problems in the Turkish economy, is that any decrease in environmental regulation and sustainability and any increase in tax inconsistency, corruption and macroeconomic instability will lead to an increase in the degree of the problem of unrealized FDI in Turkey, and vice versa.

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22. Five Scenarios: The Results of the Econometric Analysis

i. First Scenario

Table 8: First Scenario Regression Data with Mac as a Quantitative Variable

First Scenario Regression Data – First Version					
Years	**UnFDI (US$ Millions)**	**Env**	**Tax**	**Cor**	**Mac**
1980	626	65.40	50	4.06	1.00
1981	761	64.65	50	4.06	1.00
1982	628	63.90	40	4.06	6.00
1983	580	63.15	40	4.06	6.00
1984	722	62.40	40	4.06	4.50
1985	699	61.65	56	4.06	4.50
1986	803	60.90	56	4.06	3.00
1987	1,104	60.15	58	4.06	3.00
1988	1,031	59.40	58	4.05	4.50
1989	1,413	58.65	56	4.05	4.50
1990	1,741	57.90	56	4.05	3.00
1991	1,624	57.15	58	4.05	3.00
1992	1,473	56.40	58	4.05	4.50
1993	1,881	55.65	37	4.05	4.66
1994	1,406	54.90	40	4.05	1.00
1995	2,568	54.15	40	4.10	6.00
1996	3,486	53.40	40	3.54	4.50
1997	1,390	52.65	40	3.21	3.00
1998	1,257	51.90	40	3.40	4.50
1999	1,451	51.15	48	3.60	4.33
2000	2,334	52.00	50	3.80	4.33
2001	1	46.30	51	3.60	2.83
2002	1,765	50.80	51	3.20	8.00
2003	2,620	48.15	48	3.10	10.16

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Table 9: First Scenario Logarithmic Regression Data with Mac as a Quantitative Variable

First Scenario Logarithmic Regression Data – First Version					
Years	ln(UnFDI)	ln(Env)	ln(Tax)	ln(Cor)	ln(Mac)
1980	6.439350	4.180522	3.912023	1.401183	0.000000
1981	6.634633	4.168988	3.912023	1.401183	0.000000
1982	6.442540	4.157320	3.688879	1.401183	1.791759
1983	6.363028	4.145513	3.688879	1.401183	1.791759
1984	6.582025	4.133565	3.688879	1.401183	1.504077
1985	6.549651	4.121473	4.025352	1.401183	1.504077
1986	6.688355	4.109233	4.025352	1.401183	1.098612
1987	7.006695	4.096841	4.060443	1.401183	1.098612
1988	6.938284	4.084294	4.060443	1.398717	1.504077
1989	7.253470	4.071588	4.025352	1.398717	1.504077
1990	7.462215	4.058717	4.025352	1.398717	1.098612
1991	7.392648	4.045680	4.060443	1.398717	1.098612
1992	7.295056	4.032469	4.060443	1.398717	1.504077
1993	7.539559	4.019082	3.610918	1.398717	1.539015
1994	7.248504	4.005513	3.688879	1.398717	0.000000
1995	7.850883	3.991758	3.688879	1.410987	1.791759
1996	8.156510	3.977811	3.688879	1.264127	1.504077
1997	7.237059	3.963666	3.688879	1.166271	1.098612
1998	7.136483	3.949319	3.688879	1.223776	1.504077
1999	7.280008	3.934762	3.871201	1.280934	1.465568
2000	7.755339	3.951244	3.912023	1.335001	1.465568
2001	0.000000	3.835142	3.931826	1.280934	1.040277
2002	7.475906	3.927896	3.931826	1.163151	2.079442
2003	7.870930	3.874321	3.871201	1.131402	2.318458

The first version of the logarithmic multiple regression model in the first scenario run on the data presented above yields the following results:

Table 10: First Scenario Logarithmic Regression Results with Mac as a Quantitative Variable

Observation	R-Squared						
24	0.1452						
		Coefficient	Standard Error	t	P>|t|	95% Confidence Interval	
ln(UnFDI)							
	ln(Env)	7.382562	5.196718	1.42	0.172	-3.494294	18.25942
	ln(Tax)	-0.8657007	2.101294	0.41	0.685	-5.26376	3.532359
	ln(Cor)	-3.911909	5.58841	-0.70	0.492	-15.60859	7.784768
	ln(Mac)	0.67295	0.5984102	1.12	0.275	-0.5795368	1.925437
	Constant	-15.20515	18.5467	-0.82	0.422	-54.02385	23.61354

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The results of the econometric model run on the first version of the data in the first scenario conclude that the coefficients of the independent variables are not statistically significant for this particular set up model at a confidence interval of 95%.

Table 11: First Scenario Regression Data with Mac as a Dummy Variable

First Scenario Regression Data – Second Version					
Years	**UnFDI (US$ Millions)**	**Env**	**Tax**	**Cor**	**Mac**
1980	626	65.40	50	4.06	1
1981	761	64.65	50	4.06	1
1982	628	63.90	40	4.06	0
1983	580	63.15	40	4.06	0
1984	722	62.40	40	4.06	0
1985	699	61.65	56	4.06	0
1986	803	60.90	56	4.06	1
1987	1,104	60.15	58	4.06	1
1988	1,031	59.40	58	4.05	0
1989	1,413	58.65	56	4.05	0
1990	1,741	57.90	56	4.05	1
1991	1,624	57.15	58	4.05	1
1992	1,473	56.40	58	4.05	0
1993	1,881	55.65	37	4.05	0
1994	1,406	54.90	40	4.05	1
1995	2,568	54.15	40	4.10	0
1996	3,486	53.40	40	3.54	0
1997	1,390	52.65	40	3.21	1
1998	1,257	51.90	40	3.40	0
1999	1,451	51.15	48	3.60	0
2000	2,334	52.00	50	3.80	0
2001	1	46.30	51	3.60	1
2002	1,765	50.80	51	3.20	0
2003	2,620	48.15	48	3.10	0

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Table 12: First Scenario Logarithmic Regression Data with Mac as a Dummy Variable

First Scenario Logarithmic Regression Data – Second Version					
Years	**ln(UnFDI)**	**ln(Env)**	**ln(Tax)**	**ln(Cor)**	**Mac**
1980	6.439350	4.180522	3.912023	1.401183	1
1981	6.634633	4.168988	3.912023	1.401183	1
1982	6.442540	4.157320	3.688879	1.401183	0
1983	6.363028	4.145513	3.688879	1.401183	0
1984	6.582025	4.133565	3.688879	1.401183	0
1985	6.549651	4.121473	4.025352	1.401183	0
1986	6.688355	4.109233	4.025352	1.401183	1
1987	7.006695	4.096841	4.060443	1.401183	1
1988	6.938284	4.084294	4.060443	1.398717	0
1989	7.253470	4.071588	4.025352	1.398717	0
1990	7.462215	4.058717	4.025352	1.398717	1
1991	7.392648	4.045680	4.060443	1.398717	1
1992	7.295056	4.032469	4.060443	1.398717	0
1993	7.539559	4.019082	3.610918	1.398717	0
1994	7.248504	4.005513	3.688879	1.398717	1
1995	7.850883	3.991758	3.688879	1.410987	0
1996	8.156510	3.977811	3.688879	1.264127	0
1997	7.237059	3.963666	3.688879	1.166271	1
1998	7.136483	3.949319	3.688879	1.223776	0
1999	7.280008	3.934762	3.871201	1.280934	0
2000	7.755339	3.951244	3.912023	1.335001	0
2001	0.000000	3.835142	3.931826	1.280934	1
2002	7.475906	3.927896	3.931826	1.163151	0
2003	7.870930	3.874321	3.871201	1.131402	0

The second version of the logarithmic multiple regression model in the first scenario run on the data presented above yields the following results:

Table 13: First Scenario Logarithmic Regression Results with Mac as a Dummy Variable

Observation	**R-Squared**						
24	0.2981						
		Coefficient	**Standard Error**	**t**	**P>|t|**	**95% Confidence Interval**	
ln(UnFDI)							
	ln(Env)	7.162276	5.03267	1.42	0.171	-3.371222	17.69577
	ln(Tax)	-0.1183471	2.115031	-0.06	0.956	-4.545158	4.308464
	ln(Cor)	-4.81201	5.358899	-0.90	0.380	-16.02832	6.404295
	Mac	-1.04407	0.6746657	-1.55	0.138	-2.456162	0.3680212
	Constant	-14.72724	17.72109	-0.83	0.416	-51.81791	22.36344

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The results of the econometric model run on the second version of the data in the first scenario also conclude that the coefficients of the independent variables are not statistically significant for this particular set up model at a confidence interval of 95%.

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ii. Second Scenario

Table 14: Second Scenario Regression Data with Mac as a Quantitative Variable

Second Scenario Regression Data – First Version					
Years	**UnFDI (US$ Millions)**	**Env**	**Tax**	**Cor**	**Mac**
1980	62	65.40	50	4.06	1.00
1981	197	64.65	50	4.06	1.00
1982	64	63.90	40	4.06	6.00
1983	16	63.15	40	4.06	6.00
1984	158	62.40	40	4.06	4.50
1985	135	61.65	56	4.06	4.50
1986	239	60.90	56	4.06	3.00
1987	540	60.15	58	4.06	3.00
1988	467	59.40	58	4.05	4.50
1989	849	58.65	56	4.05	4.50
1990	1,177	57.90	56	4.05	3.00
1991	1,060	57.15	58	4.05	3.00
1992	909	56.40	58	4.05	4.50
1993	1,317	55.65	37	4.05	4.66
1994	842	54.90	40	4.05	1.00
1995	2,004	54.15	40	4.10	6.00
1996	2,922	53.40	40	3.54	4.50
1997	826	52.65	40	3.21	3.00
1998	693	51.90	40	3.40	4.50
1999	887	51.15	48	3.60	4.33
2000	1,770	52.00	50	3.80	4.33
2001	1	46.30	51	3.60	2.83
2002	1,201	50.80	51	3.20	8.00
2003	2,056	48.15	48	3.10	10.16

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Table 15: Second Scenario Logarithmic Regression Data with Mac as a Quantitative Variable

Second Scenario Logarithmic Regression Data – First Version					
Years	**ln(UnFDI)**	**ln(Env)**	**ln(Tax)**	**ln(Cor)**	**ln(Mac)**
1980	4.127134	4.180522	3.912023	1.401183	0.000000
1981	5.283204	4.168988	3.912023	1.401183	0.000000
1982	4.158883	4.157320	3.688879	1.401183	1.791759
1983	2.772589	4.145513	3.688879	1.401183	1.791759
1984	5.062595	4.133565	3.688879	1.401183	1.504077
1985	4.905275	4.121473	4.025352	1.401183	1.504077
1986	5.476464	4.109233	4.025352	1.401183	1.098612
1987	6.291569	4.096841	4.060443	1.401183	1.098612
1988	6.146329	4.084294	4.060443	1.398717	1.504077
1989	6.744059	4.071588	4.025352	1.398717	1.504077
1990	7.070724	4.058717	4.025352	1.398717	1.098612
1991	6.966024	4.045680	4.060443	1.398717	1.098612
1992	6.812345	4.032469	4.060443	1.398717	1.504077
1993	7.183112	4.019082	3.610918	1.398717	1.539015
1994	6.735780	4.005513	3.688879	1.398717	0.000000
1995	7.602900	3.991758	3.688879	1.410987	1.791759
1996	7.980024	3.977811	3.688879	1.264127	1.504077
1997	6.716595	3.963666	3.688879	1.166271	1.098612
1998	6.541030	3.949319	3.688879	1.223776	1.504077
1999	6.787845	3.934762	3.871201	1.280934	1.465568
2000	7.478735	3.951244	3.912023	1.335001	1.465568
2001	0.000000	3.835142	3.931826	1.280934	1.040277
2002	7.090910	3.927896	3.931826	1.163151	2.079442
2003	7.628518	3.874321	3.871201	1.131402	2.318458

The first version of the logarithmic multiple regression model in the second scenario run on the data presented above yields the following results:

Table 16: Second Scenario Logarithmic Regression Results with Mac as a Quantitative Variable

Observation	**R-Squared**						
24	0.0664						
		Coefficient	**Standard Error**	**t**	**P>|t|**	**95% Confidence Interval**	
ln(UnFDI)							
	ln(Env)	-1.855002	6.374892	-0.29	0.774	-15.1978	11.4878
	ln(Tax)	0.2637268	2.577689	0.10	0.920	-5.131439	5.658892
	ln(Cor)	-1.267005	6.855387	-0.18	0.855	-15.61549	13.08148
	ln(Mac)	0.4931843	0.7340787	0.67	0.510	-1.04326	2.029629
	Constant	13.50624	22.75152	0.59	0.560	-34.11323	61.12572

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The results of the econometric model run on the first version of the data in the second scenario conclude that the coefficients of the independent variables are not statistically significant for this particular set up model at a confidence interval of 95%.

Table 17: Second Scenario Regression Data with Mac as a Dummy Variable

Second Scenario Regression Data – Second Version					
Years	**UnFDI (US$ Millions)**	**Env**	**Tax**	**Cor**	**Mac**
1980	62	65.40	50	4.06	1
1981	197	64.65	50	4.06	1
1982	64	63.90	40	4.06	0
1983	16	63.15	40	4.06	0
1984	158	62.40	40	4.06	0
1985	135	61.65	56	4.06	0
1986	239	60.90	56	4.06	1
1987	540	60.15	58	4.06	1
1988	467	59.40	58	4.05	0
1989	849	58.65	56	4.05	0
1990	1,177	57.90	56	4.05	1
1991	1,060	57.15	58	4.05	1
1992	909	56.40	58	4.05	0
1993	1,317	55.65	37	4.05	0
1994	842	54.90	40	4.05	1
1995	2,004	54.15	40	4.10	0
1996	2,922	53.40	40	3.54	0
1997	826	52.65	40	3.21	1
1998	693	51.90	40	3.40	0
1999	887	51.15	48	3.60	0
2000	1,770	52.00	50	3.80	0
2001	1	46.30	51	3.60	1
2002	1,201	50.80	51	3.20	0
2003	2,056	48.15	48	3.10	0

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Table 18: Second Scenario Logarithmic Regression Data with Mac as a Dummy Variable

Second Scenario Logarithmic Regression Data – Second Version					
Years	**ln(UnFDI)**	**ln(Env)**	**ln(Tax)**	**ln(Cor)**	**Mac**
1980	4.127134	4.180522	3.912023	1.401183	1
1981	5.283204	4.168988	3.912023	1.401183	1
1982	4.158883	4.157320	3.688879	1.401183	0
1983	2.772589	4.145513	3.688879	1.401183	0
1984	5.062595	4.133565	3.688879	1.401183	0
1985	4.905275	4.121473	4.025352	1.401183	0
1986	5.476464	4.109233	4.025352	1.401183	1
1987	6.291569	4.096841	4.060443	1.401183	1
1988	6.146329	4.084294	4.060443	1.398717	0
1989	6.744059	4.071588	4.025352	1.398717	0
1990	7.070724	4.058717	4.025352	1.398717	1
1991	6.966024	4.045680	4.060443	1.398717	1
1992	6.812345	4.032469	4.060443	1.398717	0
1993	7.183112	4.019082	3.610918	1.398717	0
1994	6.735780	4.005513	3.688879	1.398717	1
1995	7.602900	3.991758	3.688879	1.410987	0
1996	7.980024	3.977811	3.688879	1.264127	0
1997	6.716595	3.963666	3.688879	1.166271	1
1998	6.541030	3.949319	3.688879	1.223776	0
1999	6.787845	3.934762	3.871201	1.280934	0
2000	7.478735	3.951244	3.912023	1.335001	0
2001	0.000000	3.835142	3.931826	1.280934	1
2002	7.090910	3.927896	3.931826	1.163151	0
2003	7.628518	3.874321	3.871201	1.131402	0

The second version of the logarithmic multiple regression model in the second scenario run on the data presented above yields the following results:

Table 19: Second Scenario Logarithmic Regression Results with Mac as a Dummy Variable

Observation	**R-Squared**						
24	0.0989						
		Coefficient	**Standard Error**	**t**	**P>|t|**	**95% Confidence Interval**	
ln(UnFDI)							
	ln(Env)	-1.959675	6.232075	-0.31	0.757	-15.00356	11.08421
	ln(Tax)	0.9182491	2.619094	0.35	0.730	-4.563577	6.400075
	ln(Cor)	-1.903702	6.636054	-0.29	0.777	-15.79312	11.98572
	Mac	-0.8970933	0.8354548	-1.07	0.296	-2.64572	0.8515336
	Constant	13.23303	21.94445	0.60	0.554	-32.69724	59.1633

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The results of the econometric model run on the second version of the data in the second scenario conclude that the coefficients of the independent variables are not statistically significant for this particular set up model at a confidence interval of 95%.

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iii. Third Scenario

Table 20: Third Scenario Regression Data with Mac as a Quantitative Variable

Third Scenario Regression Data – First Version					
Years	**UnFDI**	**Env**	**Tax**	**Cor**	**Mac**
1980	36.08%	65.40	50	4.06	1.00
1981	41.72%	64.65	50	4.06	1.00
1982	61.68%	63.90	40	4.06	6.00
1983	84.47%	63.15	40	4.06	6.00
1984	41.70%	62.40	40	4.06	4.50
1985	42.31%	61.65	56	4.06	4.50
1986	34.34%	60.90	56	4.06	3.00
1987	17.56%	60.15	58	4.06	3.00
1988	43.12%	59.40	58	4.05	4.50
1989	43.85%	58.65	56	4.05	4.50
1990	36.75%	57.90	56	4.05	3.00
1991	46.11%	57.15	58	4.05	3.00
1992	50.05%	56.40	58	4.05	4.50
1993	36.16%	55.65	37	4.05	4.66
1994	43.03%	54.90	40	4.05	1.00
1995	31.79%	54.15	40	4.10	6.00
1996	23.83%	53.40	40	3.54	4.50
1997	50.77%	52.65	40	3.21	3.00
1998	57.90%	51.90	40	3.40	4.50
1999	47.82%	51.15	48	3.60	4.33
2000	49.09%	52.00	50	3.80	4.33
2001	120.66%	46.30	51	3.60	2.83
2002	46.46%	50.80	51	3.20	8.00
2003	14.90%	48.15	48	3.10	10.16

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Table 21: Third Scenario Logarithmic Regression Data with Mac as a Quantitative Variable

Third Scenario Logarithmic Regression Data – First Version					
Years	**ln(UnFDI)**	**ln(Env)**	**ln(Tax)**	**ln(Cor)**	**ln(Mac)**
1980	-1.019431	4.180522	3.912023	1.401183	0.000000
1981	-0.874190	4.168988	3.912023	1.401183	0.000000
1982	-0.483210	4.157320	3.688879	1.401183	1.791759
1983	-0.168774	4.145513	3.688879	1.401183	1.791759
1984	-0.874669	4.133565	3.688879	1.401183	1.504077
1985	-0.860147	4.121473	4.025352	1.401183	1.504077
1986	-1.068859	4.109233	4.025352	1.401183	1.098612
1987	-1.739547	4.096841	4.060443	1.401183	1.098612
1988	-0.841183	4.084294	4.060443	1.398717	1.504077
1989	-0.824395	4.071588	4.025352	1.398717	1.504077
1990	-1.001032	4.058717	4.025352	1.398717	1.098612
1991	-0.774140	4.045680	4.060443	1.398717	1.098612
1992	-0.692148	4.032469	4.060443	1.398717	1.504077
1993	-1.017217	4.019082	3.610918	1.398717	1.539015
1994	-0.843273	4.005513	3.688879	1.398717	0.000000
1995	-1.146018	3.991758	3.688879	1.410987	1.791759
1996	-1.434225	3.977811	3.688879	1.264127	1.504077
1997	-0.677865	3.963666	3.688879	1.166271	1.098612
1998	-0.546453	3.949319	3.688879	1.223776	1.504077
1999	-0.737726	3.934762	3.871201	1.280934	1.465568
2000	-0.711515	3.951244	3.912023	1.335001	1.465568
2001	0.187806	3.835142	3.931826	1.280934	1.040277
2002	-0.766578	3.927896	3.931826	1.163151	2.079442
2003	-1.903809	3.874321	3.871201	1.131402	2.318458

The first version of the logarithmic multiple regression model in the third scenario run on the data presented above yields the following results:

Table 22: Third Scenario Logarithmic Regression Results with Mac as a Quantitative Variable

Observation	**R-Squared**						
24	0.0606						
		Coefficient	**Standard Error**	**t**	**P>|t|**	**95% Confidence Interval**	
ln(UnFDI)							
	ln(Env)	-1.225543	1.530061	-0.80	0.433	-4.427997	1.976911
	ln(Tax)	-0.4071699	0.6186804	-0.66	0.518	-1.702083	0.8877431
	ln(Cor)	1.355494	1.645386	0.82	0.420	-2.088339	4.799326
	ln(Mac)	-0.062642	0.1761889	-0.36	0.726	-0.4314096	0.3061255
	Constant	3.911837	5.460673	0.72	0.482	-7.517484	15.34116

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The results of the econometric model run on the first version of the data in the third scenario conclude that the coefficients of the independent variables are not statistically significant for this particular set up model at a confidence interval of 95%.

Table 23: Third Scenario Regression Data with Mac as a Dummy Variable

Third Scenario Regression Data – Second Version					
Years	**UnFDI**	**Env**	**Tax**	**Cor**	**Mac**
1980	36.08%	65.40	50	4.06	1
1981	41.72%	64.65	50	4.06	1
1982	61.68%	63.90	40	4.06	0
1983	84.47%	63.15	40	4.06	0
1984	41.70%	62.40	40	4.06	0
1985	42.31%	61.65	56	4.06	0
1986	34.34%	60.90	56	4.06	1
1987	17.56%	60.15	58	4.06	1
1988	43.12%	59.40	58	4.05	0
1989	43.85%	58.65	56	4.05	0
1990	36.75%	57.90	56	4.05	1
1991	46.11%	57.15	58	4.05	1
1992	50.05%	56.40	58	4.05	0
1993	36.16%	55.65	37	4.05	0
1994	43.03%	54.90	40	4.05	1
1995	31.79%	54.15	40	4.10	0
1996	23.83%	53.40	40	3.54	0
1997	50.77%	52.65	40	3.21	1
1998	57.90%	51.90	40	3.40	0
1999	47.82%	51.15	48	3.60	0
2000	49.09%	52.00	50	3.80	0
2001	120.66%	46.30	51	3.60	1
2002	46.46%	50.80	51	3.20	0
2003	14.90%	48.15	48	3.10	0

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Table 24: Third Scenario Logarithmic Regression Data with Mac as a Dummy Variable

Third Scenario Logarithmic Regression Data – Second Version					
Years	**ln(UnFDI)**	**ln(Env)**	**ln(Tax)**	**ln(Cor)**	**Mac**
1980	-1.019431	4.180522	3.912023	1.401183	1
1981	-0.874190	4.168988	3.912023	1.401183	1
1982	-0.483210	4.157320	3.688879	1.401183	0
1983	-0.168774	4.145513	3.688879	1.401183	0
1984	-0.874669	4.133565	3.688879	1.401183	0
1985	-0.860147	4.121473	4.025352	1.401183	0
1986	-1.068859	4.109233	4.025352	1.401183	1
1987	-1.739547	4.096841	4.060443	1.401183	1
1988	-0.841183	4.084294	4.060443	1.398717	0
1989	-0.824395	4.071588	4.025352	1.398717	0
1990	-1.001032	4.058717	4.025352	1.398717	1
1991	-0.774140	4.045680	4.060443	1.398717	1
1992	-0.692148	4.032469	4.060443	1.398717	0
1993	-1.017217	4.019082	3.610918	1.398717	0
1994	-0.843273	4.005513	3.688879	1.398717	1
1995	-1.146018	3.991758	3.688879	1.410987	0
1996	-1.434225	3.977811	3.688879	1.264127	0
1997	-0.677865	3.963666	3.688879	1.166271	1
1998	-0.546453	3.949319	3.688879	1.223776	0
1999	-0.737726	3.934762	3.871201	1.280934	0
2000	-0.711515	3.951244	3.912023	1.335001	0
2001	0.187806	3.835142	3.931826	1.280934	1
2002	-0.766578	3.927896	3.931826	1.163151	0
2003	-1.903809	3.874321	3.871201	1.131402	0

The second version of the logarithmic multiple regression model in the third scenario run on the data presented above yields the following results:

Table 25: Third Scenario Logarithmic Regression Results with Mac as a Dummy Variable

Observation	**R-Squared**						
24	0.0553						
		Coefficient	**Standard Error**	**t**	**P>|t|**	**95% Confidence Interval**	
ln(UnFDI)							
	ln(Env)	-1.175865	1.526749	-0.77	0.451	-4.371387	2.019658
	ln(Tax)	-0.4218471	0.6416319	-0.66	0.519	-1.764798	0.921104
	ln(Cor)	1.451079	1.625717	0.89	0.383	-1.951585	4.853743
	Mac	0.0293897	0.2046717	0.14	0.887	-0.3989932	0.4577726
	Constant	3.546945	5.376006	0.66	0.517	-7.705164	14.79905

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The results of the econometric model run on the second version of the data in the third scenario conclude that the coefficients of the independent variables are not statistically significant for this particular set up model at a confidence interval of 95%.

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iv. Fourth Scenario

Table 26: Realized FDI to GDP Ratio in Turkey in the 1980-2003 Period[304]

Realized FDI to GDP Ratio in Turkey, 1980-2003			
Years	**Realized FDI (US$ Millions)**	**GDP (US$ Millions)**	**Realized FDI to GDP Ratio**
1980	35	68,794	0.051%
1981	141	71,040	0.198%
1982	103	64,545	0.160%
1983	87	61,679	0.141%
1984	113	59,990	0.188%
1985	99	67,234	0.147%
1986	125	75,727	0.165%
1987	115	87,168	0.132%
1988	354	90,853	0.390%
1989	663	107,143	0.619%
1990	684	150,676	0.454%
1991	907	151,041	0.600%
1992	911	159,095	0.573%
1993	746	180,422	0.413%
1994	636	130,652	0.487%
1995	934	169,319	0.552%
1996	914	181,465	0.504%
1997	852	189,878	0.449%
1998	953	200,307	0.476%
1999	813	184,858	0.440%
2000	1,707	199,264	0.857%
2001	3,288	145,573	2.259%
2002	1,042	184,162	0.566%
2003	360	239,700	0.150%

[304] The GDP data for the Turkish economy for the 1980-2003 period is obtained from the National Accounts Main Aggregates Database section of the United Nations Statistics Division available at: http://unstats.un.org/unsd/snaama/SelectionCountry.asp

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Table 27: Fourth Scenario Regression Data with Mac as a Quantitative Variable

Fourth Scenario Regression Data – First Version					
Years	**UnFDI**	**Env**	**Tax**	**Cor**	**Mac**
1980	0.051%	65.40	50	4.06	1.00
1981	0.198%	64.65	50	4.06	1.00
1982	0.160%	63.90	40	4.06	6.00
1983	0.141%	63.15	40	4.06	6.00
1984	0.188%	62.40	40	4.06	4.50
1985	0.147%	61.65	56	4.06	4.50
1986	0.165%	60.90	56	4.06	3.00
1987	0.132%	60.15	58	4.06	3.00
1988	0.390%	59.40	58	4.05	4.50
1989	0.619%	58.65	56	4.05	4.50
1990	0.454%	57.90	56	4.05	3.00
1991	0.600%	57.15	58	4.05	3.00
1992	0.573%	56.40	58	4.05	4.50
1993	0.413%	55.65	37	4.05	4.66
1994	0.487%	54.90	40	4.05	1.00
1995	0.552%	54.15	40	4.10	6.00
1996	0.504%	53.40	40	3.54	4.50
1997	0.449%	52.65	40	3.21	3.00
1998	0.476%	51.90	40	3.40	4.50
1999	0.440%	51.15	48	3.60	4.33
2000	0.857%	52.00	50	3.80	4.33
2001	2.259%	46.30	51	3.60	2.83
2002	0.566%	50.80	51	3.20	8.00
2003	0.150%	48.15	48	3.10	10.16

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Table 28: Fourth Scenario Logarithmic Regression Data with Mac as a Quantitative Variable

Fourth Scenario Logarithmic Regression Data – First Version					
Years	ln(UnFDI)	ln(Env)	ln(Tax)	ln(Cor)	ln(Mac)
1980	-7.581100	4.180522	3.912023	1.401183	0.000000
1981	-6.224658	4.168988	3.912023	1.401183	0.000000
1982	-6.437752	4.157320	3.688879	1.401183	1.791759
1983	-6.564166	4.145513	3.688879	1.401183	1.791759
1984	-6.276484	4.133565	3.688879	1.401183	1.504077
1985	-6.522493	4.121473	4.025352	1.401183	1.504077
1986	-6.406980	4.109233	4.025352	1.401183	1.098612
1987	-6.630124	4.096841	4.060443	1.401183	1.098612
1988	-5.546779	4.084294	4.060443	1.398717	1.504077
1989	-5.084820	4.071588	4.025352	1.398717	1.504077
1990	-5.394828	4.058717	4.025352	1.398717	1.098612
1991	-5.115996	4.045680	4.060443	1.398717	1.098612
1992	-5.162040	4.032469	4.060443	1.398717	1.504077
1993	-5.489478	4.019082	3.610918	1.398717	1.539015
1994	-5.324661	4.005513	3.688879	1.398717	0.000000
1995	-5.199377	3.991758	3.688879	1.410987	1.791759
1996	-5.290349	3.977811	3.688879	1.264127	1.504077
1997	-5.405903	3.963666	3.688879	1.166271	1.098612
1998	-5.347508	3.949319	3.688879	1.223776	1.504077
1999	-5.426151	3.934762	3.871201	1.280934	1.465568
2000	-4.759488	3.951244	3.912023	1.335001	1.465568
2001	-3.790248	3.835142	3.931826	1.280934	1.040277
2002	-5.174331	3.927896	3.931826	1.163151	2.079442
2003	-6.502290	3.874321	3.871201	1.131402	2.318458

The first version of the logarithmic multiple regression model in the fourth scenario run on the data presented above yields the following results:

Table 29: Fourth Scenario Logarithmic Regression Results with Mac as a Quantitative Variable

Observation	R-Squared						
24	0.6799						
		Coefficient	Standard Error	t	P>|t|	95% Confidence Interval	
ln(UnFDI)							
	ln(Env)	-9.997137	1.661116	-6.02	0.000	-13.47389	-6.520381
	ln(Tax)	0.1549155	0.6716726	0.23	0.820	-1.250911	1.560742
	ln(Cor)	5.544264	1.786319	3.10	0.006	1.805456	9.283073
	ln(Mac)	-0.0336941	0.1912801	-0.18	0.862	-0.4340479	0.3666597
	Constant	26.63616	5.928399	4.49	0.000	14.22787	39.04444

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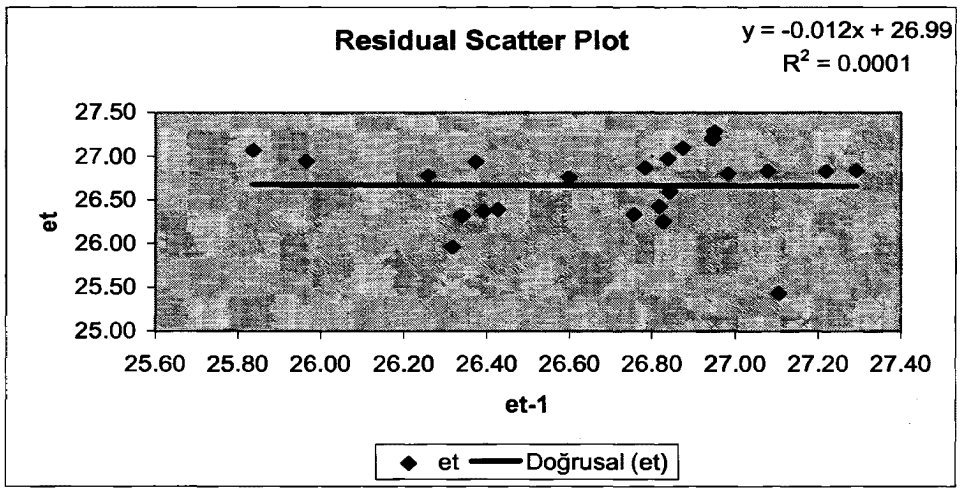
The results of the econometric model run on the first version of the data in the fourth scenario conclude that the R-squared value is at an acceptable level of 67.99%, highlighting the fact that the independent variables are able to account for 67.99% of the variability in ln(UnFDI) in the Turkish economy for the 1980-2003 period. Furthermore, the coefficients of the independent variables ln(Env) and ln(Cor) are statistically significant at a confidence interval of 95%. The residual scatter plot for this econometric model can be seen below:

Graph 8: Fourth Scenario Residual Scatter Plot with Mac as a Quantitative Variable



The autocorrelation analysis conducted for the residuals in the model reveal a p value of –0.0164177, corresponding to a Durbin-Watson statistic d of 2.0328354 at a confidence interval of 95%, which implies that there are no autocorrelated errors present in this econometric model. The conclusion reached at the end of this econometric analysis is that only the absence of sufficient environmental regulation and corruption are significantly correlated with the realized FDI to GDP ratio in the Turkish economy for the 1980-2003 period, whereas the presence of an inconsistent tax system and macroeconomic instability are not.

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Table 30: Fourth Scenario Regression Data with Mac as a Dummy Variable

Fourth Scenario Regression Data – Second Version					
Years	**UnFDI**	**Env**	**Tax**	**Cor**	**Mac**
1980	0.051%	65.40	50	4.06	1
1981	0.198%	64.65	50	4.06	1
1982	0.160%	63.90	40	4.06	0
1983	0.141%	63.15	40	4.06	0
1984	0.188%	62.40	40	4.06	0
1985	0.147%	61.65	56	4.06	0
1986	0.165%	60.90	56	4.06	1
1987	0.132%	60.15	58	4.06	1
1988	0.390%	59.40	58	4.05	0
1989	0.619%	58.65	56	4.05	0
1990	0.454%	57.90	56	4.05	1
1991	0.600%	57.15	58	4.05	1
1992	0.573%	56.40	58	4.05	0
1993	0.413%	55.65	37	4.05	0
1994	0.487%	54.90	40	4.05	1
1995	0.552%	54.15	40	4.10	0
1996	0.504%	53.40	40	3.54	0
1997	0.449%	52.65	40	3.21	1
1998	0.476%	51.90	40	3.40	0
1999	0.440%	51.15	48	3.60	0
2000	0.857%	52.00	50	3.80	0
2001	2.259%	46.30	51	3.60	1
2002	0.566%	50.80	51	3.20	0
2003	0.150%	48.15	48	3.10	0

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Table 31: Fourth Scenario Logarithmic Regression Data with Mac as a Dummy Variable

Fourth Scenario Logarithmic Regression Data – Second Version					
Years	ln(UnFDI)	ln(Env)	ln(Tax)	ln(Cor)	Mac
1980	-7.581100	4.180522	3.912023	1.401183	1
1981	-6.224658	4.168988	3.912023	1.401183	1
1982	-6.437752	4.157320	3.688879	1.401183	0
1983	-6.564166	4.145513	3.688879	1.401183	0
1984	-6.276484	4.133565	3.688879	1.401183	0
1985	-6.522493	4.121473	4.025352	1.401183	0
1986	-6.406980	4.109233	4.025352	1.401183	1
1987	-6.630124	4.096841	4.060443	1.401183	1
1988	-5.546779	4.084294	4.060443	1.398717	0
1989	-5.084820	4.071588	4.025352	1.398717	0
1990	-5.394828	4.058717	4.025352	1.398717	1
1991	-5.115996	4.045680	4.060443	1.398717	1
1992	-5.162040	4.032469	4.060443	1.398717	0
1993	-5.489478	4.019082	3.610918	1.398717	0
1994	-5.324661	4.005513	3.688879	1.398717	1
1995	-5.199377	3.991758	3.688879	1.410987	0
1996	-5.290349	3.977811	3.688879	1.264127	0
1997	-5.405903	3.963666	3.688879	1.166271	1
1998	-5.347508	3.949319	3.688879	1.223776	0
1999	-5.426151	3.934762	3.871201	1.280934	0
2000	-4.759488	3.951244	3.912023	1.335001	0
2001	-3.790248	3.835142	3.931826	1.280934	1
2002	-5.174331	3.927896	3.931826	1.163151	0
2003	-6.502290	3.874321	3.871201	1.131402	0

The second version of the logarithmic multiple regression model in the fourth scenario run on the data presented above yields the following results:

Table 32: Fourth Scenario Logarithmic Regression Results with Mac as a Dummy Variable

Observation	R-Squared						
24	0.6795						
		Coefficient	Standard Error	t	P>|t|	95% Confidence Interval	
ln(UnFDI)							
	ln(Env)	-9.958795	1.654168	-6.02	0.000	-13.42101	-6.49658
	ln(Tax)	0.168886	0.6951812	0.24	0.811	-1.286145	1.623917
	ln(Cor)	5.600378	1.761396	3.18	0.005	1.913735	9.287021
	Mac	-0.0111984	0.2217532	-0.05	0.960	-0.4753333	0.4529364
	Constant	26.31226	5.824676	4.52	0.000	14.12107	38.50344

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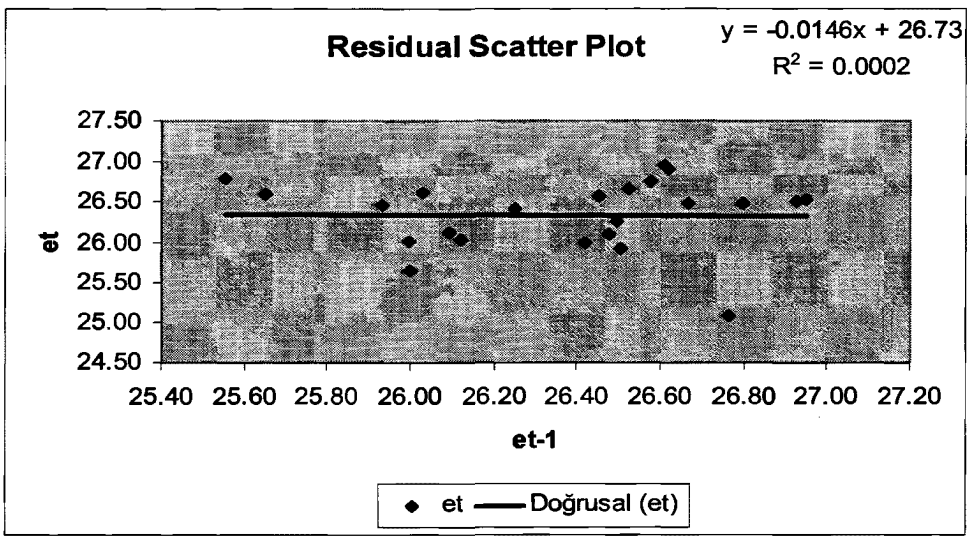
The results of the econometric model run on the second version of the data in the fourth scenario conclude that the R-squared value is at an acceptable level of 67.95%, highlighting the fact that the independent variables are able to account for 67.95% of the variability in ln(UnFDI) in the Turkish economy for the 1980-2003 period. Furthermore, the coefficients of the independent variables ln(Env) and ln(Cor) are statistically significant at a confidence interval of 95%. The residual scatter plot for this econometric model can be seen below:

Graph 9: Fourth Scenario Residual Scatter Plot with Mac as a Dummy Variable



The autocorrelation analysis conducted for the residuals in the model reveal a p value of –0.019243, corresponding to a Durbin-Watson statistic d of 2.038486 at a confidence interval of 95%, which implies that there are no autocorrelated errors present in this econometric model. The conclusion reached at the end of this econometric analysis is that only the absence of sufficient environmental regulation and corruption are significantly correlated with the realized FDI to GDP ratio in the Turkish economy for

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the 1980-2003 period, whereas the presence of an inconsistent tax system and macroeconomic instability are not.

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v. Fifth Scenario

Table 33: Fifth Scenario Regression Data with Mac as a Quantitative Variable

Fifth Scenario Regression Data – First Version					
Years	**UnFDI**	**Env**	**Tax**	**Cor**	**Mac**
1980	62	65.40	50	4.06	1.00
1981	197	64.65	50	4.06	1.00
1982	64	63.90	40	4.06	6.00
1983	16	63.15	40	4.06	6.00
1984	158	62.40	40	4.06	4.50
1985	135	61.65	56	4.06	4.50
1986	239	60.90	56	4.06	3.00
1987	540	60.15	58	4.06	3.00
1988	467	59.40	58	4.05	4.50
1989	849	58.65	56	4.05	4.50
1990	1,177	57.90	56	4.05	3.00
1991	1,060	57.15	58	4.05	3.00
1992	909	56.40	58	4.05	4.50
1993	1,317	55.65	37	4.05	4.66
1994	842	54.90	40	4.05	1.00
1995	2,004	54.15	40	4.10	6.00
1996	2,922	53.40	40	3.54	4.50
1997	826	52.65	40	3.21	3.00
1998	693	51.90	40	3.40	4.50
1999	887	51.15	48	3.60	4.33
2000	1,770	52.00	50	3.80	4.33
2001	-563	46.30	51	3.60	2.83
2002	1,201	50.80	51	3.20	8.00
2003	2,056	48.15	48	3.10	10.16

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Table 34: Fifth Scenario Logarithmic Regression Data with Mac as a Quantitative Variable

Fifth Scenario Logarithmic Regression Data – First Version					
Years	**ln(UnFDI)**	**ln(Env)**	**ln(Tax)**	**ln(Cor)**	**ln(Mac)**
1980	4.127134	4.180522	3.912023	1.401183	0.000000
1981	5.283204	4.168988	3.912023	1.401183	0.000000
1982	4.158883	4.157320	3.688879	1.401183	1.791759
1983	2.772589	4.145513	3.688879	1.401183	1.791759
1984	5.062595	4.133565	3.688879	1.401183	1.504077
1985	4.905275	4.121473	4.025352	1.401183	1.504077
1986	5.476464	4.109233	4.025352	1.401183	1.098612
1987	6.291569	4.096841	4.060443	1.401183	1.098612
1988	6.146329	4.084294	4.060443	1.398717	1.504077
1989	6.744059	4.071588	4.025352	1.398717	1.504077
1990	7.070724	4.058717	4.025352	1.398717	1.098612
1991	6.966024	4.045680	4.060443	1.398717	1.098612
1992	6.812345	4.032469	4.060443	1.398717	1.504077
1993	7.183112	4.019082	3.610918	1.398717	1.539015
1994	6.735780	4.005513	3.688879	1.398717	0.000000
1995	7.602900	3.991758	3.688879	1.410987	1.791759
1996	7.980024	3.977811	3.688879	1.264127	1.504077
1997	6.716595	3.963666	3.688879	1.166271	1.098612
1998	6.541030	3.949319	3.688879	1.223776	1.504077
1999	6.787845	3.934762	3.871201	1.280934	1.465568
2000	7.478735	3.951244	3.912023	1.335001	1.465568
2001		3.835142	3.931826	1.280934	1.040277
2002	7.090910	3.927896	3.931826	1.163151	2.079442
2003	7.628518	3.874321	3.871201	1.131402	2.318458

The first version of the logarithmic multiple regression model in the fifth scenario run on the data presented above yields the following results:

Table 35: Fifth Scenario Logarithmic Regression Results with Mac as a Quantitative Variable

Observation	**R-Squared**						
23	0.7865						
		Coefficient	**Standard Error**	**t**	**P>|t|**	**95% Confidence Interval**	
ln(UnFDI)							
	ln(Env)	-18.473	2.638247	-7.00	0.000	-24.01575	-12.93025
	ln(Tax)	1.37842	0.9051809	1.52	0.145	-0.5232943	3.280135
	ln(Cor)	6.198326	2.477084	2.50	0.022	0.9941666	11.40249
	ln(Mac)	-0.3019225	0.265154	-1.14	0.270	-0.8589905	0.2551454
	Constant	67.66134	9.187608	7.36	0.000	48.35889	86.96379

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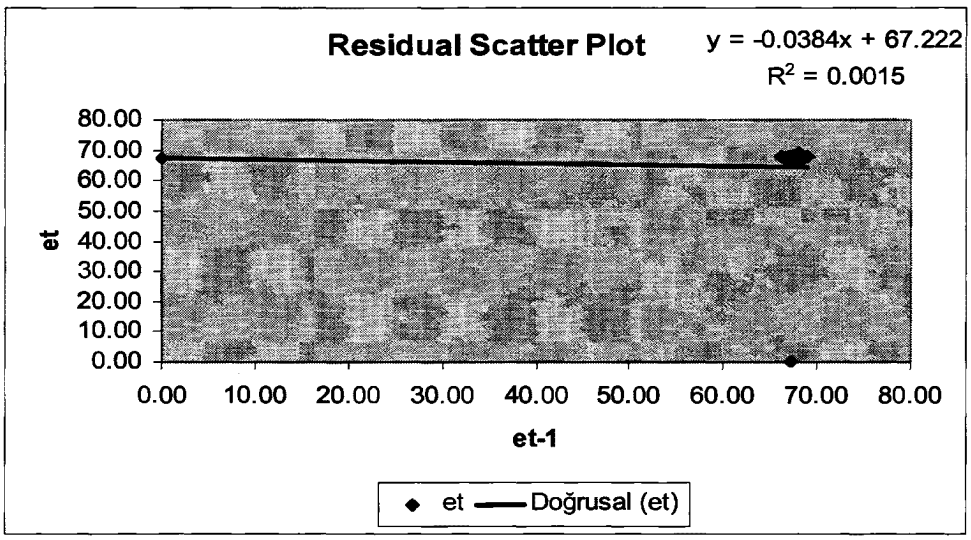
The results of the econometric model run on the first version of the data in the fifth scenario conclude that the R-squared value is at an acceptable level of 78.65%, highlighting the fact that the independent variables are able to account for 78.65% of the variability in ln(UnFDI) in the Turkish economy for the 1980-2003 period. Furthermore, the coefficients of the independent variables ln(Env) and ln(Cor) are statistically significant at a confidence interval of 95%. The residual scatter plot for this econometric model can be seen below:

Graph 10: Fifth Scenario Residual Scatter Plot with Mac as a Quantitative Variable



The autocorrelation analysis conducted for the residuals in the model reveal a p value of 0.0129149, corresponding to a Durbin-Watson statistic d of 1.9741702 with a confidence interval of 95%, which implies that there are no autocorrelated errors present in this econometric model. The conclusion reached at the end of this econometric analysis is that only the absence of sufficient environmental regulation and corruption are significantly correlated with the difference between authorized FDI and realized FDI in the Turkish economy for the 1980-2003 period, whereas the presence of an inconsistent tax system and macroeconomic instability are not.

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Table 36: Fifth Scenario Regression Data with Mac as a Dummy Variable

Fifth Scenario Regression Data – Second Version					
Years	**UnFDI**	**Env**	**Tax**	**Cor**	**Mac**
1980	62	65.40	50	4.06	1
1981	197	64.65	50	4.06	1
1982	64	63.90	40	4.06	0
1983	16	63.15	40	4.06	0
1984	158	62.40	40	4.06	0
1985	135	61.65	56	4.06	0
1986	239	60.90	56	4.06	1
1987	540	60.15	58	4.06	1
1988	467	59.40	58	4.05	0
1989	849	58.65	56	4.05	0
1990	1,177	57.90	56	4.05	1
1991	1,060	57.15	58	4.05	1
1992	909	56.40	58	4.05	0
1993	1,317	55.65	37	4.05	0
1994	842	54.90	40	4.05	1
1995	2,004	54.15	40	4.10	0
1996	2,922	53.40	40	3.54	0
1997	826	52.65	40	3.21	1
1998	693	51.90	40	3.40	0
1999	887	51.15	48	3.60	0
2000	1,770	52.00	50	3.80	0
2001	-563	46.30	51	3.60	1
2002	1,201	50.80	51	3.20	0
2003	2,056	48.15	48	3.10	0

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Table 37: Fifth Scenario Logarithmic Regression Data with Mac as a Dummy Variable

Fifth Scenario Logarithmic Regression Data – Second Version					
Years	ln(UnFDI)	ln(Env)	ln(Tax)	ln(Cor)	Mac
1980	4.127134	4.180522	3.912023	1.401183	1
1981	5.283204	4.168988	3.912023	1.401183	1
1982	4.158883	4.157320	3.688879	1.401183	0
1983	2.772589	4.145513	3.688879	1.401183	0
1984	5.062595	4.133565	3.688879	1.401183	0
1985	4.905275	4.121473	4.025352	1.401183	0
1986	5.476464	4.109233	4.025352	1.401183	1
1987	6.291569	4.096841	4.060443	1.401183	1
1988	6.146329	4.084294	4.060443	1.398717	0
1989	6.744059	4.071588	4.025352	1.398717	0
1990	7.070724	4.058717	4.025352	1.398717	1
1991	6.966024	4.045680	4.060443	1.398717	1
1992	6.812345	4.032469	4.060443	1.398717	0
1993	7.183112	4.019082	3.610918	1.398717	0
1994	6.735780	4.005513	3.688879	1.398717	1
1995	7.602900	3.991758	3.688879	1.410987	0
1996	7.980024	3.977811	3.688879	1.264127	0
1997	6.716595	3.963666	3.688879	1.166271	1
1998	6.541030	3.949319	3.688879	1.223776	0
1999	6.787845	3.934762	3.871201	1.280934	0
2000	7.478735	3.951244	3.912023	1.335001	0
2001		3.835142	3.931826	1.280934	1
2002	7.090910	3.927896	3.931826	1.163151	0
2003	7.628518	3.874321	3.871201	1.131402	0

The second version of the logarithmic multiple regression model in the fifth scenario run on the data presented above yields the following results:

Table 38: Fifth Scenario Logarithmic Regression Results with Mac as a Dummy Variable

Observation	R-Squared						
23	0.7909						
		Coefficient	Standard Error	t	P>|t|	95% Confidence Interval	
ln(UnFDI)							
	ln(Env)	-18.60091	2.617046	-7.11	0.000	-24.09912	-13.1027
	ln(Tax)	1.109365	0.921455	1.20	0.244	-0.8265402	3.04527
	ln(Cor)	6.75117	2.44985	2.76	0.013	1.604227	11.89811
	Mac	0.4107559	0.3146223	1.31	0.208	-0.250241	1.071753
	Constant	67.9335	9.036716	7.52	0.000	48.94806	86.91893

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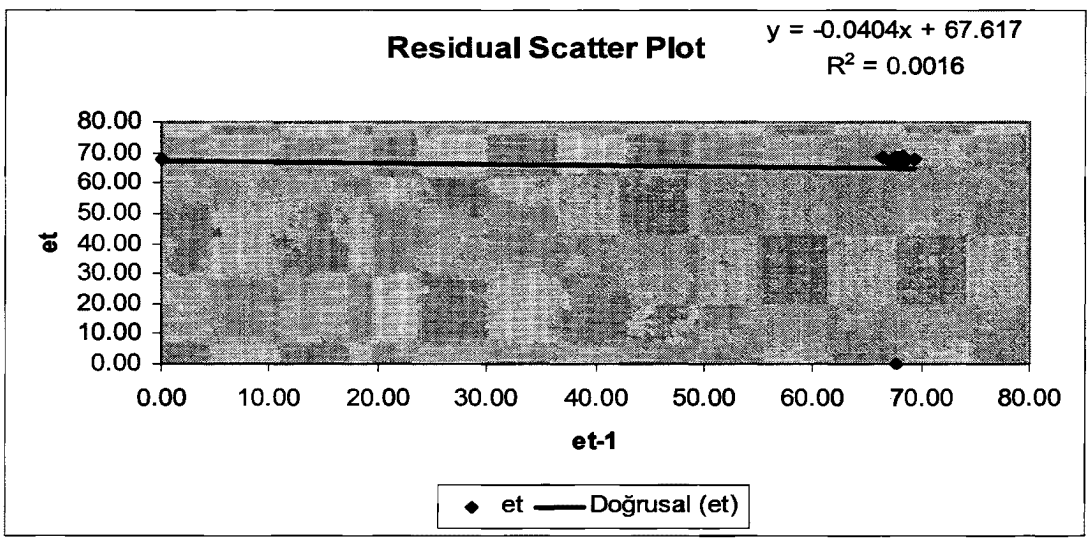
The results of the econometric model run on the second version of the data in the fifth scenario conclude that the R-squared value is at an acceptable level of 79.09%, highlighting the fact that the independent variables are able to account for 79.09% of the variability in ln(UnFDI) in the Turkish economy for the 1980-2003 period. Furthermore, the coefficients of the independent variables ln(Env) and ln(Cor) are statistically significant at a confidence interval of 95%. The residual scatter plot for this econometric model can be seen below:

Graph 11: Fifth Scenario Residual Scatter Plot with Mac as a Dummy Variable



The autocorrelation analysis conducted for the residuals in the model reveal a p value of –0.0167876, corresponding to a Durbin-Watson statistic d of 2.0335752 with a confidence interval of 95%, which implies that there are no autocorrelated errors present in this econometric model. The conclusion reached at the end of this econometric analysis is that only the absence of sufficient environmental regulation and corruption are significantly correlated with the difference between authorized FDI and realized FDI in

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the Turkish economy for the 1980-2003 period, whereas the presence of an inconsistent tax system and macroeconomic instability are not.

A detailed evaluation of these econometric findings in the Turkish context are made in the next section of this thesis.

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23. A Detailed Evaluation of the Econometric Findings

The findings of the econometric analyses conducted for the two versions of the five scenarios in the previous section can be evaluated in three segments.

In the first segment, the outcomes obtained from the econometric analyses conclude that out of the five different quantifications of the dependent variable of unrealized FDI in the Turkish economy, which are the difference between authorized FDI and realized FDI with the addition of 564 as a constant for each year for the transition to the logarithmic analysis, the difference between authorized FDI and realized FDI with the difference for the year 2001 taken as 1 for the sake of the logarithmic analysis, the realization ratio, the realized FDI to GDP ratio and the difference between authorized FDI and realized FDI as it is, only the last two, namely the realized FDI to GDP ratio and the difference between authorized FDI and realized FDI as it is, are able to significantly correlate with the measured structural problems in the Turkish economy.

A possible explanation for the insignificance of the first two quantifications of the problem of unrealized FDI in the Turkish economy, namely the difference between authorized FDI and realized FDI with the addition of 564 as a constant for each year and the difference between authorized FDI and realized FDI with the difference for the year 2001 taken as 1, for the constructed econometric model is that the modification of the values of the dependent variable might have distorted the structural relation of this variable to the values of the independent variables in the econometric model in a certain way. The reverse side of this argument is observed in the fact that the econometric model constructed with the quantification of the problem of unrealized FDI in the Turkish economy as the difference between authorized FDI and realized FDI as it is has been

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successful in establishing a significant correlation between the dependent variable and the independent variables as the values of the dependent variable have not been subject to any kind of modifications.

An alternative explanation for the significance of the difference between authorized FDI and realized FDI as it is as a dependent variable in the econometric model along with the significant correlations obtained by choosing the realized FDI to GDP ratio as a dependent variable as opposed to the realization ratio can be constructed around the idea of the pass-through impact of the neo-liberal transition experienced by Turkey since 1980 on the identified structural problems in the economy. At a first glance, it is surprising that the econometric model constructed has failed to find a significant correlation between the realization ratio as a dependent variable and the independent variables. After all, the realization ratio seems to be a superior indicator vis-a-vis the measure of the gap in nominal values and the realized FDI to GDP ratio as it provides a direct coverage of the success of the Turkish economy in converting authorized FDI to realized FDI for the 1980-2003 period. As far as the difference between authorized FDI and realized FDI is concerned, the numerical growth in this difference is only indicative of the fact that the Turkish economy has been liberalizing its investment regime since 1980, whereas the realization ratio captures the conversion rate of planned foreign investment to actual investment in a standardized manner independent of the numerical values of the investment amounts. However, dwelling upon the fact that the theoretical framework of this thesis is the neo-liberal perspective, one should not forget that the utilization of the difference between authorized FDI and realized FDI and similarly, the utilization of the realized FDI to GDP ratio as a dependent variable provides the

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researcher with an important opportunity to capture the effects of the interlinkages formed by neo-liberal economics between the dependent variable and the independent variables during the econometric analysis process, an opportunity the utilization of the realization ratio fails to capture due to the absence of an element implying neo-liberal economic growth in its composition. It is true that the difference between authorized FDI and realized FDI and the realized FDI to GDP ratio in the Turkish economy between 1980 and 2003 can be interpreted as a way of acknowledging that the Turkish economy has been going through a liberalization process since 1980. While affirming this, it cannot be gainsaid that neo-liberalism has had substantial impact on environmental regulation, tax regulation, corruption and macroeconomic conditions as well. The relationship between neo-liberalism and these structural issues has been explored in detail in the related sections of this thesis and will not be repeated. It will suffice to say that the utilization of the authorized FDI-realized FDI difference and the realized FDI to GDP ratio as a dependent variable in the econometric analysis matches the influence of the neo-liberal wave on the Turkish economy with the influence of the same economic transition on environmental regulation, tax regulation, corruption and macroeconomic conditions in the Turkish context on a one-to-one basis. The authorized FDI-realized FDI difference accomplishes this aim as the nominal value of this difference increases due to the neo-liberal economic transition experienced by the economy as more FDI flows into the country. The realized FDI to GDP ratio introduces the element of the neo-liberal transition into the dependent variable through the presence of the GDP measure in its composition. On the other hand, the realization ratio, being nothing more than a ratio of two types of FDI with no links to any economic growth-related measure fails to hint at

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this neo-liberal transition experienced by the economy. Thus when the authorized FDI-realized FDI difference and the realized FDI to GDP ratio is used as a dependent variable, any theoretical bias that might have been introduced into the setting up of the econometric model is eliminated and the outcome of the analysis is saved from being significantly skewed. For this reason, these dependent variables yield a correlation in the econometric findings, whereas the realization ratio does not.

In the second segment of the evaluation of the econometric findings, it is observed that for the econometric models that work, whether the independent variable of macroeconomic instability is categorized as a quantitative variable or a qualitative dummy variable does not matter as far as the significance of the correlation of the econometric outcomes are concerned. In either case, the independent variable of macroeconomic instability remains insignificant in terms of the correlation established with the dependent variable. Hence, it is difficult to make any solid interpretations regarding this categorization of macroeconomic instability as an independent variable from this point onwards. The only reasonable conclusion achieved is that this categorization does not alter the results of the econometric analysis in this study in any way.

In the third segment, the econometric model has concluded that the presence of an inconsistent tax system and macroeconomic instability do not significantly account for the problem of unrealized FDI in Turkey between 1980 and 2003. This conclusion is rather surprising in the sense that it defies the expectations of the author as the nature of the relationship of taxation and macroeconomic instability to FDI has been detailed in the relevant sections of this thesis. Thus this outcome requires a satisfactory explanation.

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A possible explanation for the insignificance of tax inconsistency in the FDI performance of the Turkish economy can be framed as follows: in this thesis, tax inconsistency is taken to have two components, which are the high levels of taxation and the unpredictable nature of tax hikes. When an MNE enters a host country, the absence of prior knowledge as to whether tax rates in that economy will increase further and if they do, the ambiguities surrounding the time period of that increase create potential financial problems regarding the investment projects of that company in the host country. Nevertheless, these potential tax hikes often take place at incremental margins rather than in big leaps. This was the situation in the case study of *Mazda* as well when the Turkish government increased the *Special Consumption Tax* by 7-9%.[305] The reason for preferring the implementation of incremental changes in taxation policy rather than adopting sudden wide-scale changes is the fact that the governments are under immense pressure from various economic interest groups, which have voluminous interests embedded in these taxation policies, and this pressure prevents policy makers from undertaking major instantaneous changes in tax-related procedures. It is easier for the governments in these host states to spread their plans regarding major changes in taxation policies over a long period of time and to implement them on a gradual basis. Therefore, it is highly probable that the additional costs shouldered by most MNEs in host states as a result of these minor tax hikes are sometimes less than the profit forecasts regarding their investment projects. When potential benefits outweigh extra costs, most MNEs decide to proceed with their investments. At other times, most MNEs cancel their investment plans. Of course, the case study of *Mazda* in Turkey in 2004 fits the latter category. This economic logic might be used to justify the failure to find a significant correlation

[305] For more information on this case study, please refer back to page 39.

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between the problem of unrealized FDI and the presence of an inconsistent tax system in the Turkish economy in the 1980-2003 period.

Regarding the insignificance of macroeconomic instability in Turkey for the FDI performance of the Turkish economy, the following explanation can be constructed: Although macroeconomic instability, which eventually leads to an economic crisis, triggers a flight away from potential losses for investors through the implementation of exit strategies from host economies, it also presents valuable opportunities. When an economic crisis occurs, the macroeconomic indicators rapidly deteriorate as interest rates skyrocket and the exchange rate is devalued. The instantaneous effects of such an environment are unequivocally hazardous for investors. However, the immediate post-crisis scenario also harbors several advantages. Despite a surge in interest rates and inflationary pressures arising from wage demands, the devalued currency acts as an anchor in terms of offsetting the impact of rising costs on business as a result of high interest rates and stubborn wage demands. The devaluation of the exchange rate implies lower transaction costs in a host country in comparison to the pre-crisis environment. Hence, when the potential benefits of the impact of devaluation are sufficient to cover the costs incurred by changes in interest rates and wages, it is feasible for an MNE to decide to continue with the implementation of business projects in that host state. The validity of this assertion can be confirmed by tracing the trajectory of realized FDI in Turkey in the two large economic crises experienced in the post-1980 period, the first one in 1994 and the second one in November 2000 and February 2001. In 1994, the realized FDI level was at US$ 636 million and this amount increased to US$ 934 million in 1995; similarly, the realized FDI amount of US$ 1,707 million in 2000 reached US$ 3,288 million by the

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end of 2001.[306] However, the potential benefits of devaluation cannot always afford the costs generated by high interest rates and wages. Thus some MNEs abort their investment plans in the face of increasing financial burdens. The case study of *Pirelli* can be shown as an example. It was announced in February 2000 that *Pirelli* was to freeze its investment plans in Turkey due to a 130% wage increase demand by labor unions.[307] Even though this freeze decision came before the outbreak of the crisis in November 2000, this case still illustrates that potential benefits of a weak currency at the present or in the future might not always be enough to cover the damages inflicted on MNEs by other macroeconomic factors. The conclusion drawn from these statements is that the impact of macroeconomic instability on the problem of unrealized FDI is most probably inconclusive as some MNEs find it more favorable to proceed with their investment plans in the host state whereas others do not. Evidence exists in the FDI performance of the Turkish economy around crisis times to support this claim. From 1994 to 1995, the authorized FDI-realized FDI difference increases from US$ 842 million to US$ 2,004 million as the authorized FDI level increases from US$ 1,478 million to US$ 2,938 million and the realized FDI level increases from US$ 636 million to US$ 934 million; similarly, the authorized FDI-realized FDI difference drops from US$ 1,770 million to -US$ 563 million from 2000 to 2001 as the authorized FDI level is reduced from US$ 3,477 million to US$ 2,725 million and the realized FDI level climbs from US$ 1,707 million to US$ 3,288 million.[308] The data suggest that the impact of macroeconomic

[306] For more information on the realized FDI amounts in Turkey for the 1980-2003 period, please refer to Table 1 on page 12.
[307] For more information on this case study, please refer to page 44.
[308] For more information on the realized FDI amounts in Turkey for the 1980-2003 period, please refer to Table 1 on page 12. For 2001, the difference between authorized FDI and realized FDI is at a negative value as the realized FDI level exceeds the authorized FDI level. One reason for this could be that some of

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conditions on unrealized FDI does not follow a steady pattern. Such an explanation can be utilized to justify and account for the insignificance of macroeconomic instability on the problem of unrealized FDI in the Turkish economy for the 1980-2003 period.

The absence of sufficient environmental regulation has the highest correlation with unrealized FDI in the Turkish context. Furthermore, the direction of correlation suits the expectations of the author as the negative sign of the coefficients implies that higher environmental regulation and sustainability levels lead to a reduction in the gap between authorized FDI and realized FDI in the Turkish economy. The significance of this finding can be summarized in two points. First, this outcome underlines the importance of growing environmental consciousness both at the national level and at the global level and the capacity this consciousness has in terms of organizing itself and exerting strong influence on business with the ability to obtain favorable results. The case study of *Balfour Beatty* explicitly highlights the power domestic and international environmentalist groups can have on the unfolding of a business project, as the MNE in question was obliged to withdraw from the construction of the *Ilisu Dam* in Turkey in 2001 due to growing environmentalist pressure.[309] The second point to make is that the increasing efficacy of environmental protectionism in economics necessitates a transformation in the environment-related tenets of the neo-liberal paradigm. The neo-liberal paradigm puts forth the classic argument that the presence of high environmental standards in a country hinders economic activity and acts as a push factor for investors as discussed in the related part of this thesis; however, with the institutionalization of the environmentalist wave in the form of civil society organizations, this notion is in the

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the foreign investment projects that were authorized in the pre-2001 period were realized in 2001 with time lags, causing the realized FDI amount to become higher than the authorized FDI amount in 2001.

[309] For more information on this case study, please refer to page 36.

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process of becoming an integral part of neo-liberal economics rather than an obstacle as compliance with environmental standards promises more benefits to investors in comparison to cost-cutting measures of deviation.[310] This transformation in the neo-liberal paradigm is evident in the emergence and cherishing of environment-related concepts, such as *Corporate Social Responsibility*, which aim to create a friendly realationship between environmental protectionism and business activities and which are being adopted by an increasing number of international organizations and MNEs in recent years.

The establishment of a significant correlation between the presence of unrealized FDI and corruption is not surprising as far as the expectations set forth in this thesis are concerned. The econometric analysis revealed a coefficient of a lesser value for the variable of corruption in comparison to environmental regulation. The direction of correlation in this coefficient suggests that as countries become less corrupt, the level of the problem of unrealized FDI increases.[311] Nevertheless, it should not be forgotten that the original econometric model created has been revised in order to reverse the unreasonable numerical logic of the *Corruption Perceptions Index*. Hence, the original model

$\ln(UnFDI_t) = \lambda_{1t}*\ln(Env_t) + \lambda_{2t}*\ln(Tax_t) + \lambda_{3t}*\ln(Cor_t) + \lambda_{4t}*\ln(Mac_t) + e$,

over which all the calculations are made, is turned into

$\ln(UnFDI_t) = \lambda_{1t}*\ln(Env_t) + \lambda_{2t}*\ln(Tax_t) + \lambda'_{3t}*\ln(Cor_t) + \lambda_{4t}*\ln(Mac_t) + e$; where $\lambda'_{3t} = -\lambda_{3t}$.

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[310] In order to revisit the section of the thesis on environmental regulation, please refer to pages 48-63.
[311] The *Corruption Perceptions Index* ranges from 0 to 10, with 0 representing the most corrupt level and 10 representing the least corrupt level. For a review of the index, please refer to page 100.

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Thus the coefficient to be used for determining the direction of correlation is the opposite of what the econometric results suggest. The revised coefficient implies that as host states become less corrupt, the level of the problem of unrealized FDI is reduced in line with the initial expectations of this thesis. The notion of corruption is the most sensitive issue among the structural problems analyzed in this thesis. It constitutes a major threat to the reputation of both governments and MNEs. No politician or investor can manage to stay impervious to corruption-related allegations no matter how clean a past record they might have. Even if the accusations are not true, the social association and branding that comes with these accusations are very likely to inflict substantial damage on the future careers of these people and entities. For these reasons, MNEs act very carefully to avoid such unpleasant experiences. As witnessed in the case study of *Volvo*, the CEO of the company decided to abandon his investment plans in Turkey in 2003 when the company encountered demands for bribes from various state authorities as claimed by the daily newspaper *Milliyet*.[312] It is not too far-fetched to assume that the CEO took such a decision and made a public declaration on this issue in order to protect the reputation of *Volvo* as a well known car manufacturer in the global economy.

It should be emphasized that the identification of the existence of correlation between unrealized FDI as the dependent variable and the absence of sufficient environmental regulation and corruption as explanatory variables does not imply a causal relationship in terms of econometrics. The econometric analysis only concludes that these variables are significantly related to each other. However, in the related sections of this thesis, the internal dynamics of the link of the FDI performance of the Turkish economy to environmental regulation and corruption have been explored both theoretically and

[312] For more information on this case study, please refer to page 42.

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empirically.[313] In light of these discussions, the relationship between the dependent variable and these independent variables in this analysis will be treated as a causal one. Thus the overall conclusion reached at the end of this econometric study is that the worsening environmental regulation conditions and increasing corruption in Turkey have contributed to the festering of the problem of unrealized FDI in the Turkish economy in the 1980-2003 period, preventing the economy from achieving its true FDI potential. The policy implications of this conclusion for Turkey are discussed in the next section of this thesis.

[313] To revisit the section on environmental regulation, please refer back to pages 48-63. To revisit the section on corruption, please refer back to pages 73-79.

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24. Implications for Turkey

In order to reduce the level of the problem of unrealized FDI in the Turkish economy in the coming years, Turkish policy makers should actively seek effective methods for finding permanent solutions to the structural problems of environmental regulation and corruption. During these efforts, more weight should be given to the improvement of the proper application of environmental standards in the Turkish economy as the outcome of the econometric analysis conducted in the previous sections has pointed out that the absence of sufficient environmental regulation in Turkey contributes more to the presence of the problem of unrealized FDI with higher coefficient values in comparison to corruption. Therefore, Turkish policy makers should deal with the structural problem of environmental regulation with more emphasis while formulating strategies to simultaneously address both the issue of environment and the issue of corruption in the economy.

When the outcome of the econometric analysis is evaluated through the lenses of the theoretical framework of this thesis, economic neo-liberalism, the following conclusion is reached: although the model has failed to find a significant correlation between unrealized FDI and the two explanatory variables, inconsistent taxation and macroeconomic instability, the establishment of a connection with environmental regulation and corruption in the Turkish context fulfills the neo-liberal expectations initially set out in this thesis. Furthermore, the necessity of enhanced public action to deal with these two structural problems in order to improve the FDI performance of the Turkish economy, as stated above, is compatible with the minimal state view of economic neo-liberalism. The Turkish state needs to strengthen the present judicial

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precautions regarding environmental protectionism and corruption and ensure their proper implementation in order to eradicate their negative impact on the FDI performance of the economy. Such an action plan can be classified as the provision of the rule of law for the smooth operation of free market principles within the confines of the minimal state view without interference into the productive, distributive and re-distributive aspects of economic activity.

The significance of these econometric findings for the Turkish economy is confirmed with the recent developments taking place in Turkey in the post-2003 period. Both environment-related matters and corruption allegations continue to occupy headlines in media coverage. To cite a fresh example on the environment front, on 8 April 2006, the daily newspaper *Hurriyet* announced that thousands of toxic barrels containing cancerous chemical materials were discovered buried under soil in an open field in Tuzla, Istanbul.[314] The situation is under investigation as of the time this section of the thesis is written.[315] In terms of corruption, the main opposition party in the *Turkish Grand National Assembly*, the social democratic *Republican People's Party*, has submitted several interpellations on the possibility of corrupt activities regarding some privatization deals, such as the sale of the Turkish petroleum refinery *Tupras* and the sale of a state-controlled port area in Istanbul named *Galataport*, undertaken by the ruling Islamist *Justice and Development Party* in the post-2003 period.[316] It should be added, however, that these allegations are yet inconclusive.

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[314] Hurriyet. (2006, April 8). Istanbul'u zehirlediler. *Hurriyet website*. Available at: http://www.hurriyet.com.tr/gundem/4221888.asp

[315] Turkish Press. (2006, April 13). Toxic Barrels In Tuzla – Environment Minister: We Will Expose The Guilty. *Turkish Press website*. Available at: http://www.turkishpress.com/news.asp?id=118843

[316] For the Tupras sale, please see the following: Hurriyet. (2006, February 14). CHP'den Erdogan ve Unakitan'a suc duyurusu. *Hurriyet website*. Available at: http://www.hurriyet.com.tr/ekonomi/3930202.asp?gid=52. For the Galataport sale, please see the

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Nonetheless, the persistence and the continuity of environmental problems and corruption-related allegations in Turkey highlight that these two problems remain as important obstacles to be tackled in order to improve the FDI performance of the Turkish economy. Thus it is imperative that policy makers in Turkey begin addressing these issues in an effective manner as soon as possible.

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following: Hurriyet. (2006, March 18). Newsweek: Unakitan yuzunden 'out'sunuz. *Hurriyet website*. Available at: http://www.hurriyet.com.tr/ekonomi/4101728.asp

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PART VIII

Pitfalls of the Analysis

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25. The Pitfalls of the Analysis

Four main deficiencies are identified in the analysis constructed in this thesis: the omission of other possible factors that might be contributing to the problem of unrealized FDI in the Turkish economy in the 1980-2003 period, the underlying technological restriction during the data collection process for the selection of case studies, the absence of index scores for certain years in the 1980-2003 period during the operationalization of the related structural problems in the Turkish context and the inaccessibility of data for the initial construction stage of the indices. These deficiencies will be briefly explored in this section as a self-critique of the analysis in the thesis and possible mitigating factors will be provided and discussed for each deficiency in order to assess whether these pitfalls have had significant impact on the formation of the conclusions of this thesis.

This thesis has taken the notion of *unrealized FDI permits* as the reason accounting for the problem of unrealized FDI in the Turkish economy between 1980 and 2003 and the related structural problems based on the selected case studies have been formulated accordingly. While *unrealized FDI permits* constitute the most important factor leading to the problem of unrealized FDI, there might be two other factors present in the picture as well. These two factors are characterized as the *deflating impact of devaluation* and the concept of *accrued investments*.[317] The contribution of the *deflating impact of devaluation* to unrealized FDI can be explained as follows: when a state authority approves the investment of an MNE, the total amount of the investment project is agreed upon, which passes onto the official records as the authorized FDI amount. If a devaluation takes place in the host economy after the approval stage of the investment,

[317] General Directorate of Foreign Investment, Undersecretariat of Treasury, Prime Ministry of the Republic of Turkey. (2003). *Foreign Investment in Turkey 2002*. The Treasury of the Republic of Turkey website. Available at: http://www.hazine.gov.tr/duyuru/basin/report_ing.pdf

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the MNE in question is able to undertake the investment-related transactions in that country at a cheaper cost due to the depreciation of the local currency.[318] Hence, the total value of the investment falls as it is realized in an economy undergoing a devaluation process and the realized FDI level amounts to a lower number in comparison to the authorized FDI level. The impact of *accrued investments* on the problem of unrealized FDI can be summarized in the following way: Some investment projects are not realized in the same year they are approved by host state authorities.[319] The actualization of the investment process might be spread over a long period of time exceeding one year. Thus only a small portion of the authorized FDI level might become realized in the same year, while the rest of the investment amount accrues to the upcoming years. This situation causes a gap to emerge between authorized FDI and realized FDI for a given year by pulling the latter down.

The presence of an assessment of the impact of macroeconomic instability on unrealized FDI in Turkey during the 1980-2003 period acts as a mitigating factor for the absence of an evaluation of the potential influence of the *deflating impact of devaluation* on the FDI performance of the Turkish economy. As macroeconomic instability implies an economic crisis situation by definition, which eventually triggers a devaluation process, the potential impact of a devaluation scenario on unrealized FDI in the Turkish economy between 1980 and 2003 has already been accounted for through the incorporation of the variable of macroeconomic instability into the econometric analysis as both a quantitative variable and a qualitative dummy variable. The result is that the role played by macroeconomic instability, which includes devaluation in itself, in the

[318] Ibid.
[319] Ibid.

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trajectory of the problem of unrealized FDI in Turkey in the 1980-2003 period is insignificant. No meaningful mitigating factor can be offered to make up for the lack of an analysis on the impact of *accrued investments* on the FDI performance of the Turkish economy. Access to official data regarding the terms of authorized investment projects in the *Treasury of the Republic of Turkey* is restricted. In the face of this technical difficulty, it was assumed that the notion of *accrued investments* had minimal impact on the problem of unrealized FDI in Turkey and the concept of *unrealized FDI permits* was taken as the focal point of the analysis.

The second main deficiency concerns the data collection phase of the applied methodology during the selection process of case studies. Candidate cases for the analysis were searched for in the media by using the internet. For this purpose, various search engines, daily newspaper websites, websites of several journals, official news sources and other databases were used. In spite of this rich network utilized in this process, the deployment of such a method raises the issue of a technological bias. The internet has been put to widespread public use from the mid-1990s onward. The analysis in this thesis covers the 1980-2003 period. The usage of the internet as a research medium favors the era stretching from the mid-1990s to 2003 over the era between 1980 and the mid-1990s in terms of the selection of the cases. Thus the scope of the case study selection process has been narrowed, which introduces the risk of skipping other structural problems in the analysis that might have contributed to the problem of unrealized FDI in the Turkish economy.

There are two mitigating factors offsetting the negative impact of this deficiency on the analysis conducted. First, most media sources on the internet have formed archives

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that keep past events before the mid-1990s in chronological order. Therefore, when a researcher engages in a research process on the internet, all events both before and after the beginning of the widespread public usage of the internet can be scanned. In light of this note, it can safely be assumed that during the data collection phase of the case selection process in this analysis, equal weight has been given to all business-related events in the 1980-2003 period. The second mitigating factor is that even if a technological bias exists in favor of the era between the mid-1990s and 2003 during this process, all the structural problems analyzed in this thesis got worse after the mid-1990s, except for the problem of inconsistent taxation, which displayed a fluctuating performance and the impact of which on the FDI performance of the Turkish economy is found to be insignificant. When the index scores for environmental regulation and sustainability and corruption are revisited, it is observed that these scores continue their transformation into more unfavorable levels after the mid-1990s. Moreover, as much as macroeconomic instability does not account for unrealized FDI in the Turkish context, the Turkish economy has experienced its two major crises of the neo-liberal era in the period covering the mid-1990s to 2003, the first one being in 1994 and the second one in 2000/2001. For these reasons, the possibility of encountering a case of an *unrealized FDI permit* from the mid-1990s onward is higher in the Turkish economy in comparison to the era covering 1980 to the mid-1990s.

The third deficiency of the analysis is about the missing index scores for some years in the 1980-2003 period during the operationalization of the related structural problems in the Turkish economy. Two indices out of the four used in the analysis have this problem, namely the *Environmental Sustainability Index* (*ESI*) used to measure the

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level of environmental regulation and sustainability and the *Turkish Economic Stability Index* (*TESI*) used to measure the degree of macroeconomic instability in Turkey. The *ESI* scores only exist for 2000, 2001, 2002 and 2005. Similarly, the *TESI* scores are available only for the 1993-2003 era. This situation leaves a gap in the econometric analysis for the 1980-1999 period and the year 2003 in terms of the assessment of environmental regulation and sustainability in Turkey and for the 1980-1992 period in terms of the assessment of macroeconomic instability in the Turkish economy.

As a mitigating factor for this deficiency, the missing index scores for these years have been reconstructed along logical assumptions. These assumptions have been drawn from the detailed analyses of the related structural problems in the Turkish context in the relevant sections of this thesis. For the *ESI*, a best fit line equation, which was formed based on the existing scores for 2000, 2001, 2002 and 2005, was used to calculate the missing scores for the 1980-1999 period and the year 2003. The trend of the best fit line equation was in conformity with the general pattern of environmental regulation and sustainability in Turkey as both confirmed that environmental deterioration was gradually increasing in the 1980-2003 period. It should be noted, however, that the best fit line used to complete the missing scores of the *ESI* had an R-squared value of 31.17%, meaning that it was able to account for only 31.17% of the variability in the existing scores of the *ESI*. Although this low R-squared value might raise questions about the representation of this best fit line for the true environmental regulation performance of the Turkish economy in the 1980-2003 period, it fails to overshadow the fact that the best available method has been deployed by the researcher to complete the missing scores in the *ESI*.[320] For the *TESI*, the missing scores for the 1980-1992 period were calculated based on a

[320] To revisit the section on the *Environmental Sustainability Index (ESI)*, please refer back to pages 89-94.

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comparison between the 1980-1992 era and the 1993-2003 era in Turkey in terms of macroeconomic outlook. Thus a parallel was drawn between the scores of these two eras in terms of the similarity of the macroeconomic conditions. Although it is for certain that the calculated scores would not match the actual ones if they existed, the utilization of a logical framework in their construction makes sure that the margin of error is not significant.

The last main deficiency of the analysis can be termed as the inaccessibility of certain data in the initial construction phase of the indices. There is only one index with this problem in this analysis, which is the *Forbes Tax Misery and Reform Index*. Data pertaining to the changes in the income tax rate, the social security premium rate for employers and the social security premium rate for employees in Turkey for the 1980-2003 period were not accessible through official channels. Only the information on the corporate tax rate and the value-added tax rate was available for the analysis. Hence, the *Forbes Tax Misery and Reform Index* was calculated in an incomplete way for the Turkish economy between 1980 and 2003. In other words, the econometric analysis was conducted in an impaired manner as far as the variable of inconsistent taxation is concerned.

The mitigating factor for this deficiency is formulated as follows: it is estimated that the changes in the missing components of the index, namely the changes in the income tax rate, the social security premium rate for employers and the social security premium rate for employees, will be proportional to the changes in the existing components of the index, namely the corporate tax rate and the value-added tax rate due to the assumption that major transformations in taxation policy tend to change these rates

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more or less at the same time at similar ratios. Thus even though the index scores do not reflect the actual values for the Turkish economy in the 1980-2003 period, they follow a similar pattern and can be relied upon for evaluation purposes. Nevertheless, this mitigating factor is a rather weak one for two reasons: first, the usage of index scores obtained as a result of an incomplete calculation process is likely to deform the regression results for the variable of inconsistent taxation, although these scores might follow a very similar pattern with the actual ones. Second, the assumption that the rates of these different taxes tend to simultaneously change at similar ratios during shifts in taxation policy can be seriously challenged. Thus this mitigating factor is constructed on a very volatile background. This volatility might even be the reason behind the failure of the econometric analysis to find a significant correlation between tax inconsistency and unrealized FDI in the Turkish economy in the 1980-2003 period.

In summary, two deficiencies emerge from this self-critique as strong weaknesses in this study: the absence of an assessment on the impact of *accrued investments* on the problem of unrealized FDI in the Turkish context and the inaccessibility of tax data for the complete calculation of the *Forbes Tax Misery and Reform Index* for the 1980-2003 period.

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PART IX

Conclusion

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26. Closing Remarks

The analysis in this thesis has been a humble attempt at digging further in one of the least excavated areas in the FDI literature by trying to identify the structural reasons behind the reversal of an investment decision on the part of an MNE after the authorization of state officials in a host economy is obtained. Hence, rather than dealing with what kind of a transformation process a host state should go through in order to attract more FDI, this thesis has focused on what happens to FDI after it arrives at the host economy. In this respect, it can be placed in a different category vis-à-vis other studies on the FDI-host state relationship.

The subject of this analysis has been the Turkish economy in the 1980-2003 period. The choice of Turkey as the host state and the selection of this period is significant for two reasons. First, Turkey is categorized as an emerging market with a capitalist market economy that is in the process of further development and the Turkish economy is increasingly playing an important role in the global arena. Second, the 1980-2003 period marks the introduction and the flourishing of neo-liberal market practices in the Turkish economy.

Thus the concept of unrealized FDI has been explored within the context of an emerging market in a neo-liberal environment. As emerging markets continue to compete with each other in order to attract more FDI and achieve sustainable growth rates, the issue of whether these host states are able to use the full potential present in the FDI once it has been successfully attracted gains crucial importance. By highlighting the obstacles preventing authorized FDI in Turkey from becoming realized, this study aims to

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contribute to the efforts of Turkish policy makers in making the Turkish economy fulfill its true FDI potential.

As the FDI literature in political economy becomes populated with studies that focus on the more apparent aspects of the FDI-host state relationship, the necessity emerges to focus on different perspectives of this issue. This study of unrealized FDI in the Turkish context has aimed to add a new dimension to the general topic of FDI and has attempted to complement the classic analyses on the FDI-host state relationship from a different perspective.

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