DIRECT FOREIGN INVESTMENT IN TURKISH MANUFACTURING INDUSTRY

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ABSTRACT

DIRECT FOREIGN INVESTMENT IN TURKISH MANUFACTURING INDUSTRY

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This study deals with direct foreign investment (DFI) in Turkish manufacturing industry with two main objectives: First, the reasons of the failure of Turkish economy in attracting sufficiently high levels of DFI is analysed as compared to the experiences other developing countries that have been successful on this count. Second, the impact of DFI in Turkish manufacturing industry is analysed in terms of export, employment, and technology contribution as well as the comparative behaviour of domestic and DFI firms. In addition to various data sets, the study utilized the results collected from two separate surveys that were implemented to domestic and DFI firms operating in Turkish manufacturing industry. Firstly, it turned out that the failure of Turkish economy in attracting high inflows of DFI cannot be attributed to investment climate problems, as the experiences of other developing countries have shown. Secondly, there does not seem to be a significant difference between the performances of domestic and DFI firms. While DFI seemed to contribute positively to exports, insufficient contribution of DFI on employment and negative balance of payments effects as well as the lack of its contribution in terms of research and development and innovative activities were also notable. Then, the study argues that rather than focusing solely on improvements in investment climate and liberalizing eagerly the development regime, it seems more appropriate to have a broad development strategy, in which both domestic investment and DFI

are handled in an integrated approach, within the framework of appropriate industrial, trade and technology policies.

Keywords: Direct Foreign Investment, Investment Climate, Manufacturing Industry.

ÖZ

TÜRKİYE İMALAT SANAYİİNDE DOĞRUDAN YABANCI YATIRIMLAR

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Çalışmada, iki temel soru çerçevesinde Türkiye imalat sanayiinde doğrudan yabancı yatırımlar (DYY) konusu irdelenmektedir: İlk olarak, DYY konusunda başarılı olmuş gelişmekte olan ülkelerin deneyimleri ışığında Türkiye'nin yeterli düzeyde DYY çekememesinin nedenleri çözümlenmektedir. İkinci olarak, DYY'nin Türkiye imalat sanayiine etkisi, ihracat, istihdam ve teknoloji katkısı yanında, yerli ve yabancı sermayeli firmaların karşılaştırmalı analizi doğrultusunda tartışılmaktadır. Çalışmada çeşitli veri setlerine ek olarak, Türkiye imalat sanayiinde faaliyet gösteren yerli ve yabancı sermayeli şirketlere uygulanan anket sonuçları kullanılmıştır.

Diğer gelişmekte olan ülkelerin deneyimleri, Türkiye'nin doğrudan yabancı yatırımlar konusundaki başarısız performansını yatırım ortamına ilişkin sorunlara atfetmenin doğru olmayacağını göstermektedir. Öte yandan, yerli ve yabancı sermayeli firmaların perfromansları arasında anlamlı bir fark gözlenmemektedir. Doğrudan yabancı yatırımların, ihracata olumlu katkılarının yanında, istihdama yetersiz katkısı ve ödemeler dengesine olumsuz etkileri ile araştırma-geliştirme ve yenilik faaliyetleri bakımından yeterli katkıda bulunmadıkları da vurgulanmalıdır. Sadece yatırım ortamını iyileştirmeye ve ekonomi politikalarını hızla ve kapsamlı biçimde serbestleştirmeye odaklanmaktan çok, uygun sanayi, teknoloji ve ticaret politikaları çerçevesinde yerli ve yabancı sermayeli yatırımların bütünsel bir yaklaşımla ele alındığı, daha geniş bir gelişme stratejisine sahip olmanın daha doğru olacağı sonucuna varılmaktadır.

Anahtar Kelimeler: Doğrudan Yabancı Yatırımlar, Yatırım Ortamı, İmalat Sanayii

To my parents

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AB	Avrupa Birliği
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BEC	Broad Economic Categories
BOT	Build Operate Transfer
CBRT	Central Bank of the Republic of Turkey
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
CZK	Czech Koruna
DFI	Direct Foreign Investment
DTÖ	Dünya Ticaret Örgütü
DYY	Doğrudan Yabancı Yatırımlar
EO	Export Orientation
ERP	Enterprise Resource Planning
EU	European Union
FIAS	Foreign Investment Advisory Service
FIO	Foreign Investment Office
GATT	General Agreement on Tariffs and Trade
GDFI	General Directorate of Foreign Investment
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GNI	Gross National Income
HP	Hodrick – Prescott
IAC	Investment Advisory Council
ICI	İstanbul Chamber of Industry
ICSID	International Centre for Settlement of Investment Disputes
ICT	Information and Communication Technologies
IMF	International Monetary Fund
IS	Import Substitution

ISIC	International Standard Industry Classification
JBIC	Japanese Bank for International Cooperation
M&A	Mergers and Acquisitions
MERCOSUR	Common Market of the South (Spanish acronym)
MIGA	Multilateral Investment Guarantee Agency
MNE	Multinational Enterprise
NAFTA	North American Free Trade Area
n.e.s.	not elsewhere specified
OECD	Organisation for Economic Development and cooperation
Rev.	Revision
R&D	Research and Development
RIA	Regional Integration Agreement
SIS	State Institute of Statistics
SITC	Standard International Trade Classification
SNA	System of National Accounts
SPO	State Planning Organisation
TAYSAD	Association of Transport Equipment Parts Industrialists (Turkish acronym)
TFP	Total Factor Productivity
TİM	assembly of Turkish Exporters (Turkish acronym)
TL	Turkish Lira
TNC	Transnational Corporation
TOBB	Union of Chambers of Commerce and Industry (Turkish acronym)
TPMA	Turkish Pharmaceuticals Manufacturers' Association
TRIMs	Trade Related Investment Measures
TRN Cyprus	Turkish Republic of Northern Cyprus
TÜPRAŞ	Turkish Petroleum Refineries Corporation (Turkish acronym)
TÜSİAD	Association of Turkish Industrialists and Businessmen (Turkish acronym)
UK	United Kingdom
UN	United Nations

UNCTAD	United Nations Conference on Trade and Development
US	United States
USA	United States of America
USD	United States Dollars
VAT	Value Added Tax
WB	World Bank
WTO	World Trade Organisation
WDR	World Development Report
WDI	World Development Indicators
WPI	Wholesale Price Index
YASED	Association of Foreign Investment (Turkish Acronym)
YOİKK	Coordination Committee for the Improvement of Investment Climate (Turkish acronym)
YSGM	Yabancı Sermaye Genel Müdürlüğü

CHAPTER 1

INTRODUCTION

As compared with countries at comparable levels of development, direct foreign investment (DFI) inflows to Turkey have not reached high proportions. Measured as percentage of GDP, while inflows of DFI to Turkey have increased during 1980-90 period (from almost nil to 0.5 %), a stagnation at around 0.4 % of GDP is observed especially after 1990. Despite all the advantages that Turkey allegedly has in this respect, the expected increase in DFI in the post-1980 period has not been realised. This failure has not been analysed in the literature yet. Moreover, comprehensive and detailed studies of DFI performance in Turkey in terms of investment motives of DFI firms and impact of DFI on the Turkish economy are lacking, particularly for 1990s.

This study has two main objectives: Firstly, it analyses the reasons for the failure of Turkey in attracting sufficiently high levels of DFI as compared to other developing countries, which have been successful on this count. To this aim, investment climates, DFI regimes, macroeconomic and competitiveness indicators of 15 developing countries are compared with that of Turkey. Moreover, the role of privatization and regional integration in DFI inflows as well as the obstacles perceived as hindering DFI inflows in Turkey are analysed.

Secondly, the impact of DFI inflows on Turkish manufacturing industry is analysed in order to find an answer to the question of whether DFI inflows can help Turkey to overcome its structural problems and attain its industrialisation and development objectives by expanding and deepening its export base and upgrade its existing technological capabilities. The answer to this question is searched along the following lines: First, an up-to-date pattern of DFI in comparison with domestic investment pattern is presented. Second, the motivations of DFI firms in investing in Turkey are analysed. Third, the significance of mergers and acquisitions as well as privatisation in DFI inflows is discussed. Fourth, export, employment and technological performances of DFI and domestic firms as well as their responses to

the Customs Union and the economic crises are compared. Fifth, the standard definition of DFI is challenged. And lastly, the pattern of outward DFI from Turkey is analysed.

The study reaches the important conclusion that, investment climate does not turn out to be a significant explanatory variable in attracting high amounts of DFI inflows. In other words, the failure of Turkey in attracting high levels of DFI inflows cannot be attributed to the problems of Turkish investment climate. Moreover, there does not seem to be a significant difference between performances of DFI and domestic firms, in particular in terms export orientation and technological and innovative activities. Indeed, insufficient contribution of DFI on employment and negative balance of payments effects of DFI are also notable. Based on these results, it is argued in the study that DFI policy need not be a part of a neo-liberal package. Rather, DFI policies should be subsumed by a development strategy, in particular a selective and strategic industrial policy, complemented with appropriate trade and technology policies, in order to be beneficial for developing countries (Chang, 2003:248).

1.1 DFI Policies as Part of the Neo-Liberal Agenda

In the last 130 years, the pendulum of capitalism swang from one globalisation to the other, in the middle being the "short-twentieth-century", the term coined by Hobsbawm (1994). The first globalisation era was between 1870 and 1913. After the two world wars and the "golden age of capitalism", and the age of "developmental state", the second era of globalisation was set in stage: from the end of 1970s to date.

According to the dominant discourse of globalism, the backswing of the pendulum in the early 1980s was a return to "happy days". That is, as was the case during the 1870-1913 period, "the freedom of capital under the guidance of profit opportunities" guarantees growth for everybody all over the world. The days between 1870 and 1913 were "happy", because countries got closer to each other both in terms of economies and cultures in a peaceful environment.

Moreover, economic growth was rapid and incomes converged.[1]

The globalisation of capitalism during the 1870-1913 period was not without its tensions among the leading developed countries of the time, due to the struggle to conquer the rest of the world. Thus, the very process of globalisation itself may have contributed to the outbreak of the First World War and the end of the first era of globalisation.

The end of the first globalisation era meant to be a qualitative transformation in the characteristics of the capitalist system. The experience of two world wars and the Great Depression in-between, the Soviet Revolution, and the emergence of new socialist states as well as former colonies as independent nation-states, were all instrumental in reducing the supremacy of capital against labour after the Second World War. The 1950-70 period was named as the "Golden Age of Capitalism", because almost all countries experienced high and sustainable growth, with apparent improvements in the quality of life and in the rights of working-class in the framework of welfare states (Chang, 2003:18-19; Milanovic, 2002:25).

In this era of "civilised" capitalism, a certain degree of compromise between capital and labour was achieved under the leadership of the territorial nation state. Development policies were based on national explanations and pursued national objectives, and industrialisation was the primary goal of developing countries. The goal of industrialisation was pursued by deliberate state action under the policies of import-substituting policies (See, *inter alia*, Rodrik (2003), Rodrik (2001), Şenses and Taymaz (2003) and Yeldan (2002)).

The tensions of the golden age started to be manifested through the end of the 1960s. On the one hand, growth rates in the developed countries started to decline. Firms in these countries experienced a profit squeeze, requiring them to seek new profit opportunities. The rise in wages within nation states to boost domestic demand could have opened one such avenue. As this would have presented a further threat to profitability due to rising labour costs, internationalisation of capital emerged as the only viable route for capital to expand their business.

[1] On the basis of three empirical studies of the time, Milanovic (2002:7-13) has shown that there is no evidence of income convergence among the countries in that era, on the contrary, there is income divergence. Moreover, as colonialism was the driving force behind the spread of capitalism in that period, Milanovic (2002) has rightly argued that the world was not as peaceful a place as it is alleged to be.

On the other hand, due to high interest rates, fiscal imbalances, foreign exchange shortages and large amounts of external debt, the import-substituting industrialisation process in the developing countries came to a halt. For the problems of developed as well as developing countries, the blame was put on the welfare state policies and the active role of state in the economy. This paved the way for the pendulum swing back to the increased supremacy of capital against labour. All of the problems were alleged to arise because of the hindrance of capital to achieve its profit-maximising objectives. Thus, as in the 1870-1913 period, the free movement of capital was expected to solve every problem (See Milanovic, 2002:25; Yeldan, 2002:3).

If the first era of globalisation in the 1870-1913 period was a period of liberalism, the second era of globalisation after the 1970s has been marked by neo-liberalism. Neo-liberalism is a package of policies designed to remove all barriers in front of capital domestically and internationally. On the domestic front, the state should be rolled back through budget cuts, privatisation of state enterprises and deregulation in labour and financial markets. On the international front, the restrictions on international flows of trade, finance and technology should be removed (Chang, 2003:247). Actually, neo-liberalism is a broader agenda

> "… that aims to *call into question any and all collective structures* that could serve as an obstacle to the logic of the pure market: the nation, whose space to maneuver continually decreases; work groups, for example through the individualisation of salaries and of careers as a function of individual competences, with the consequent atomisation of workers; collectives for the defence of the rights of workers, unions, associations, cooperatives; even the family, which loses part of its control over consumption through the constitution of markets by age groups" (Bourdieu, 1998: 1).

The reflection of neo-liberalism in development economics turned out to be a heavy refutation of state intervention through industrial policy and financial repression, leaving the relative prices such as interest rates and exchange rates free, lifting trade and capital controls. Leaving the market to work out its dynamics freely without any intervention from state was argued to be the driving force of rapid and equitable growth (Öniş and Şenses, 2003:1-3).

Actually, direct foreign investment (DFI) is taken to be an integral part of neo-liberal package, which recommends an across-the-board liberalization for all

developing countries to achieve their development goals. Full liberalization along the lines of Washington Consensus[2] and Augmented Washington Consensus[3] (Rodrik, 2001:2,25 and 2003:4,43) will bring all the benefits to the domestic economies in terms of economic growth. However, as Milanovic (2002:14) shows, worldwide growth rates during 1978-98 were all lower than in 1960-78. Moreover, Rodrik (2001 and 2003) shows that China, India and East Asian Countries owe their growth and development success not to liberal policies as dictated by neo-liberalism, but on the contrary, to the implementation of heterodox policies.

In this study, we single out direct foreign investment (DFI) by transnational corporations (TNCs) from the general policy prescriptions of the neo-liberal agenda. We prefer to focus on DFI rather than on short-term portfolio investment and other sources of international financing within the framework of international capital flows, because DFI is more important in terms of development objectives as TNCs have longer-term interests in the host countries in which they invest. In particular, TNCs are supposed to promote the integration of developing countries to the world economy, and enhance efficiency and growth in these countries. All in all, TNCs are seen as "indispensable and unstoppable" agents of development, which developing countries have to accommodate (Chang, 2003:248). If DFI and the activities of TNCs are indispensable realities of the second era of globalisation, but across-the-board liberalization could not realise its promises, then we must think of alternative policies for "development with TNCs" in the age of globalisation.

1.2 The Definition of DFI and TNCs as the Main Agents of DFI

1.2.1 The Definition of DFI

According to IMF (1993) and OECD (1992), DFI is that category of investment in which a resident entity in one country obtains a lasting interest in an enterprise resident in another country. A lasting interest implies, on the one hand, a long-term relationship between the investor and the enterprise, and on the other hand,

[2] Washington Consensus emphasizes fiscal discipline, trade and financial liberalization, privatization and deregulation.

[3] The original Washington Consensus was "augmented" by corporate governance, adherence to international financial codes and standards, independent central banks and inflation targeting, and targeted poverty reduction.

a significant degree of influence by the investor on the management of the enterprise. The criterion that distinguishes DFI from other types of investment is the 10 per cent rule. Thus, when a resident in one economy owns 10 per cent or more of the ordinary shares or voting power of an enterprise resident in another economy, that investment is counted as DFI[4]. DFI is divided into equity capital, reinvested earnings, and other capital (UNCTAD, 1999:4).

1.2.2 TNCs as the Main Agents of DFI[5]

Exporting

The initial stage of the internationalisation of production is the export of goods produced in the home country. However, as the firms become concerned about their competitiveness in export markets due to several reasons (e.g. real appreciation of exchange rates), and about the actual and anticipated trade barriers, they enter a different stage where they want to enter directly to the markets abroad. Of course, in the process of exporting, the firms gain information and experience about the markets in the foreign country, and use this information and experience in engaging in DFI in that country.

Licensing

At this stage, as the first alternative, the firms may sell their licenses to a foreign firm in order to utilise the process or product technologies of that foreign firm. However, if the technology is complex and the source firm does not want to make its technology available to its competitors, then licensing would not be a preferred option. Perhaps, licensing would be preferred for old technologies only.

DFI

If licensing is not preferable for a firm, but still it has concerns about profitability, market growth, cost levels, and wants to exploit economies of scale, it will start to produce in a foreign country. At this stage, the firm becomes a multinational enterprise (MNE) by engaging in DFI activities. As the

[4] A survey conducted by the IMF and OECD show that about three-fourths of the 96 OECD and non-OECD respondent countries applies this rule. However, in Turkey no such rule applies. In Turkey any positive amount of foreign investment is counted as DFI.

[5] This section is based on Moosa (2002:6,12-13).

internationalisation of the activities of the firm increases and the distinction between home and abroad becomes blurred, MNE is transformed into a transnational corporation (TNC).

1.3 The Global DFI Inflows[6]

Acceleration in DFI Inflows

Global DFI flows accelerated especially in the second half of the 1980s, outpacing a number of other global economic flows. In the second half of 1990s, the acceleration attained record highs. While the growth rate of DFI inflows was twice as much as the growth rate of GDP (at current prices) in 1986-90, it was four times of GDP growth in 1991-1995 and 30 times in 1996-2000. In 2000, the growth rate of DFI inflows was 10 times of GDP growth rate at current prices. Likewise, DFI inflows grew 1.7 times as fast as gross fixed capital formation in 1986-1990, five times as fast in 1991-1995, and sixteen-and-a-half times as fast in 1996-2000. The growth of DFI flows as compared to the growth rates of exports of goods and non-factor services, and technology payments as measured by royalties and license fees were also very impressive in these periods. In the three sub-periods above, respectively, DFI flows grew 1.8 times, two-and-a-half times, and eleven times as fast as exports of goods and non-factor services. Likewise, they grew, respectively, almost at the same rate, one-and-a-half times, and five times as fast as technology payments in the same three subperiods.

Recent Slowdown in DFI Inflows

As a result of high growth in DFI inflows during the 1986-2000 period, the world DFI stock reached USD 6 trillion in 2000, from USD 3 trillion in 1995, USD 972 billion in 1985, and USD 693 billion in 1980. However, beginning from 2001, the world witnessed a slowdown in global DFI inflows. The growth rate of DFI inflows turned out to be negative in 2001, 2002 and 2003: The figures for these three years were -41.1%, -17.0% and -17.6%, respectively. These rates of decline were very similar to, albeit somewhat less than, the negative growth rates in cross-border mergers and acquisitions (M&A's) which fell by 48.1%, 37.7%, and 19.7%,

[6] Unless otherwise stated, the figures are taken from World Investment Report 2004, which presents the most up-to-date statistics that are available.

respectively. As M&A's have been one of the most important driving forces of global DFI inflows, their slowdown has also pulled down the growth rates of DFI inflows.

The sharp decline in 2001, and the continuation thereof, was mainly the result of the slowdown in the world's largest three economies, namely the US, EU and Japan (UNCTAD 2002: xvi). The decline in the growth rates of cross-border M&A's was a consequence of the recession in developed economies. Looking at this process at a finer level of detail, the negative growth rates of DFI inflows are mainly due to the decline in DFI inflows to developed countries. Although the growth of DFI flows to developing countries were also negative in 2001 and 2002, albeit at much lower rates than those to developed countries, they actually grew in 2003 as opposed to the decline in flows to developed countries.

Prospects

It is expected that DFI will grow positively in 2005 (see UNCTAD 2004: xvi,31-34). The optimism regarding the prospects for global DFI inflows rests on a worldwide economic recovery, increasing share prices, and increasing cross-border M&A's. Reinvested earnings stemming from higher profits have already picked up in 2003, and equity and intra-company loans have picked up in 2004. Apparently, reinvested earnings, equity and intra-company loans form the three components of DFI inflows.

According to the results of UNCTAD surveys, DFI is expected to rebound particularly in Asia and the Pacific (China and India) and the Central and Eastern Europe (especially in Poland)[7] (UNCTAD 2004:33). Conventional practices in the preferred mode of DFI is expected to continue in the coming years. Namely, greenfield investment is preferred in developing countries and cross-border M&A's are preferred in developed countries (UNCTAD 2004:32). Although a shift towards

[7] It is interesting that these three countries, China, India and Poland were ranked highest in the forecasts of locations expected to attract the highest DFI in the coming two-years (2005 and 2006). It is interesting, because China and India did not implement an across-the-board liberalization but "liberalised their economies only partially and gradually". And, Poland turned out to be a successful example of transition from socialism to capitalism probably due to the relatively short-time period of socialism, which did not destroy the memory of capitalist institutions completely. On the one hand, these countries are successful examples of partial and gradual liberalization. On the other hand, they show the importance of designing a development strategy based on the specific needs of one country and tailored to the peculiar characteristics of existing institutions in that country. (See Rodrik, 2001: 13, 24-26).

services (e.g. transport, banking, insurance, and management), in terms of sectoral preferences of DFI inflows, is expected in the coming years, DFI is also expected to continue to flow to some manufacturing industries (e.g. food and beverages, motor vehicles, and electrical and electronic products) (UNCTAD 2004:33).

Global Distribution of DFI Inflows

DFI flows are not equally distributed globally. Developed countries, accounting for 80 % of global inflows in 2000, remained to be the prime destination of DFI until 2000. However, as the DFI inflows declined in 2001-2003 due to the recession in developed economies, the share of developed countries in world DFI inflows also decreased gradually to 66 % in 2003. On the other hand, developed countries remain as the prime source of DFI outflows with their share in total outflows increasing from 91 % in 2000 to 93 % in 2003. Within the developed countries, the Triad –the EU, the United States and Japan- accounted for 65 % of world inflows and 83 % of outflows in 2000-2003. Cross-border mergers and acquisitions, which are mainly concentrated in the developed countries, represent the main stimulus behind the large share of the Triad in DFI inflows.

Developing Countries

The inflows of DFI to the developing countries remained well below those to the developed world. Although the absolute volume of DFI flows to developing countries has continued to increase, their share in world flows showed a volatile pattern. The share of developing countries reached a maximum of 39 % in 1997, then showed a steady decline to 19 % in 2000, rebounding to 27 % in 2001, falling back to 23 % in 2002 and again rising to 31 % in 2003.

There are three upswings in the share of developing countries: 1980-85, 1990-97, and 2001-2003. For the period 1985-90, UNCTAD (1992:3) argues that despite a declining share, the rate of growth of DFI flows to developing countries was more than twice the rate of growth of domestic output, investment and technology imports of these countries. Then, we can talk about a continuous surge of DFI flows to developing countries from the early 1980s to the late 1990s. The foreign acquisition of domestic firms in the process of privatisation, and their increased economic and

financial integration are the main factors behind the surge of DFI inflows into the developing countries (UNCTAD, 1998:vii).

1.4 The Determinants of DFI

Motivations of TNCs

In the DFI literature, the motivation that makes a firm multinational (or transnational) is based on the eclectic theory of Dunning (1988). According to this theory, a firm should have ownership, location, and internalisation advantages to become a multinational (transnational) one. Thus, a firm must own or control a unique mobile asset that renders an advantage to the firm vis-à-vis the other firms. This mobile asset may be an efficient management which can identify and invest in profitable job opportunities; complex technology and product differentiation; advanced marketing, advertising and distribution techniques; privileged access to raw materials due to market control, transportational or processing advantages; ability to exploit economies of scale; and having bargaining and political power vis-à-vis host countries' governments. Secondly, it must be cost-efficient for the firm to exploit this asset abroad instead of, or in addition to, in the home country of the firm itself. And thirdly, rather than contracting out to a foreign firm, the firm must find it profitable to exploit the asset itself (Hanson, 2001:10; Lim, 2001:10-11; Moosa, 2002: 31; Tatoğlu and Glaister, 2001:10).

Host Country Determinants

De Mello (1997:4) groups the factors determining DFI flows into developing countries under three headings: Institutional features, economic factors and policy incentives. The institutional features of the host country attracting DFI are the degree of political stability and government intervention; the existence of property rights legislation determining the legal rights of foreign firms and limitations on foreign ownership; the property and profit tax system; and the extent and severity of bureaucratic procedures. The openness, the trade and investment regime, and the adequacy of basic infrastructure of the host country constitute the economic factors. Among the policy incentives designed to attract DFI are fiscal incentives (tax rebates and exemptions), financial incentives (subsidised loans and grants), and non-financial incentives (basic infrastructure provision) are the most prominent.

Similarly, UNCTAD (1998:91) classifies the host country determinants of DFI under three headings: Policy framework, economic determinants, and business facilitation. Policy framework includes economic, political and social stability, rules and standards regarding the entry and operation of foreign affiliates, international agreements on DFI, and competition, merger, privatisation, tax, and trade policies. Business facilitation refers to the policies that promote investment such as investment-facilitating services, incentives, administrative efficiency, quality of life, and after-investment services.

Regarding the economic determinants, UNCTAD (1998:91) goes to a further disaggregation in that it links the determinants of DFI in the host countries to the motives of transnational corporations (TNCs). If a TNC is a market seeking one, then the size, growth and the structure of the host market, access to the regional and global markets, and the structure of consumer preferences in the host country are important determinants for such a TNC to invest in the host country.

If a TNC is a resource or asset seeking one, then the important determinants turn out to be availability of raw materials, low-cost unskilled labour, technological, innovatory and other created assets, and physical infrastructure.

As a third case, a TNC may be an efficiency-seeking one. In this case, in addition to the costs of resources mentioned in the second case, transport, communication and intermediate input costs, labour productivity, and membership of a regional integration agreement conducive to the establishment of regional corporate networks become the important determinants of DFI.

From the perspective of TNCs, while market size, economies of scale, and relative factor prices are the main determinants of the location of production; inflation in the host country deters DFI inflows by increasing the user cost of capital. Exchange rates, on the other hand, affect the relocation decisions of TNCs in so far as they affect the investor firm's expected cash flows, expected profitability and the attractiveness of domestic assets to foreign investors. Foreign investors would prefer relatively weak domestic currencies relative to their own currencies (de Mello, 1997:5).

On the other hand, the experience of developing countries implementing an open-door policy with DFI is not very promising. Based on the empirical studies, it can be argued that growth is a prerequisite for DFI attraction, not that DFI is a

prerequisite for growth. Then, in order to attract more DFI, host countries should first attain a sustainable growth rate, and DFI policies should be a part of broader industrial strategy (Chang, 2003: 264).

In order for DFI to be a win-win situation, it is not enough for host countries to simply implement the above-cited host country determinants. As recent theoretical developments and empirical studies show, developing countries should rely on an industrial strategy emphasising the establishment and improvement of local capabilities, be it managerial, organisational and technological. DFI should be used in a selective and strategic manner only to accelerate this process (Chang, 2003: 256).

1.5 Host Country Expectations

Complementing Domestic Savings

In the first step, DFI is a component of capital flows to developing countries that may contribute to fill the financing gap needed to complement domestic savings (UNCTAD, 1999:22). Other than this financial contribution, DFI can contribute to the development of host countries through four elements (UNCTAD, 1992: 8-14): Capital formation, technology transfer, human resources development, and export promotion.

Source of Capital

TNCs are a major source of capital and a major channel for transferring capital across borders. The contribution of TNCs to development as a source of direct capital formation will be important especially if they invest in high technology manufacturing sectors. In so far as the local producers are developed sufficiently, TNCs may promote domestic production through linkage affects (UNCTAD, 1992:8).

Technology

TNCs being the major actors in the development of technologies, they can contribute to the development process through technology transfer, by engaging in local R&D activities, stimulating technology development by local R&D institutions, and by their spillover effects to the enterprises in the host countries (UNCTAD,

1992:9).

Exports

It is also widely accepted that TNCs improve the export performance of the developing countries and thereby enhance growth in the host countries (UNCTAD, 1992:10). However, it may well be the case that export oriented economies attract DFI rather than DFI promotes exports (Singh and Jun, 1995:2). Based on Granger-causality tests, Singh and Jun (1995:21) find that export orientation is a significant determinant of DFI flows for high-DFI countries.

1.6 How Can Developing Countries Benefit From DFI?

Manufacturing Sector

As it is stated above, developing countries will benefit from DFI in so far as DFI promotes growth and development in these countries. Having in mind that the manufacturing industry plays an important role in economic development for it serves as a "hub" for the generation and diffusion of new technologies to the rest of the economy (Taymaz, 1999:2), DFI in the manufacturing sector should be the primary aim of the host countries. As Lall (2000:3) argues, in the context of the pattern of world trade over the past two decades, manufactured products grew four times faster than primary products, and within manufactured products, growth was driven by technology. High technology exports were the fastest growing group and resource based products the slowest. Lall (2000:3) argues further that in high technology exports, TNCs played the dominant role.

Technology and skills

Although DFI is primarily a source of funding in an environment of insufficient domestic savings for the developing countries, and it is less volatile than other types of capital flows, in order that developing countries benefit more from DFI, it should be seen as a medium for acquiring technology, skills, organisational and managerial techniques, and access to international markets (Nourbaksh, Paloni and Youssef, 2001:1593). Shatz (2001:5) suggests that DFI inflows will be beneficial to the host countries in so far they bring new technologies and management

techniques, increased international linkages and expanded export opportunities, and greater domestic competition and product variety.

Spillovers

Theoretically, these arguments rest on the endogenous growth models. According to these models, DFI enhances growth as it leads to productivity spillovers, human capital augmentation and technological change in developing economies, since it promotes the use of more advanced technologies by domestic firms and provides specific productivity-increasing labour training and skill formation. While DFI is growth enhancing as it leads to new capital accumulation, it also leads to productivity gains as new technologies give way to spillovers to domestic firms. Even without physical capital accumulation, DFI can lead to knowledge transfers to the domestic economy in the form of leasing, licensing and start-up agreements, management contracts and joint ventures. These knowledge transfers will be meaningful and beneficial as the relationships with the foreign investors lead to labour training, skill acquisition and diffusion, and acquisition of new management practices in the recipient economy (de Mello, 1997:9-15).

The pattern and distribution of global DFI flows have not been favorable for developing countries until now, however. This is due to the differences in the level of concentrations in the industries with different technology levels. Thus, the more advanced the level of technology in an industry, the higher the level of concentration tends to be. Consequently, DFI in high-technology and medium-high technology industries (biotechnology, semiconductors, and TV and radio receivers) tend to agglomerate in selected locations in the world. On the other hand, food and beverages industry is more evenly spread among host countries. In short, regarding the volume of DFI flows, while more skill- and technology-intensive functions are allocated to industrially more advanced regions, less industrialised locations are only assigned simpler tasks like assembly and packaging UNCTAD (2001:xvi).

Emerging Determinants

According to UNCTAD (2001:xvii), while the traditional determinants of DFI location like large markets, possession of natural resources and access to low-cost or

semi-skilled labour remain relevant, they are diminishing in importance[8]. Policy liberalization, technical progress and managerial and organisational factors, instead, become increasingly relevant for the locational decisions of DFI, particularly for the most dynamic industries. That is, as trade barriers are being removed, and trade blocs and regional links are formed across nations, the markets become more demanding and competition intensifies. Thus, as technological content of processes and products increases, industries become more dynamic and new determinants of DFI emerge (UNCTAD, 2001: 5). Policy liberalization in the areas of trade and investment gives TNCs greater freedom to specialise and search for competitive locations. Technical progress refers to the ability of host countries to provide the complementary skills, infrastructure, suppliers and institutions to operate technologies efficiently and flexibly. Regarding the third factor, new organisational factors such as stronger emphasis on flatter hierarchies and especially networking allow a more efficient management of global operations, encouraging a greater relocation of functions at various points in the value chain from design and innovation to marketing and servicing (UNCTAD, 2001:xviii).

Backward Linkages

From this perspective, then, in order to attract DFI and benefit from it in the development process, it is lo longer sufficient to simply open up the economy to the external world. While the host countries should design policies to target foreign investors at the level of industries and firms to meet their specific locational needs at the activity and cluster level in the light of the country's developmental priorities, they should also promote the backward linkages with foreign affiliates in order to ensure the diffusion of skills, knowledge and technology to the domestic firms (UNCTAD, 2001:xix-xxi).

[8] The importance of low-cost labor is, however, still on the top of the list as it is obvious from the fact that Japanese electronics manufacturers are investing in China where engineers are paid one-quarter as much as of their Japanese colleagues (Ken Belson, "Japan's pride and joy gets a 'Made in China' label", New York Times, Feb.17, 2004).

1.7 Specific Research Questions

1) Effects of Policy Framework on DFI

Before analysing the economic impact of DFI on Turkish manufacturing industry, it is asked in the study whether the low level of DFI inflows to Turkey has something to do with the investment climate[9] including the foreign investment regime of Turkey. For this purpose, fifteen countries have been selected as top recipients of DFI among developing countries from Latin America, Asia, and Europe. These countries are Argentina, Brazil, Venezuela, Chile, Mexico, China, India, Hong Kong, Singapore, South Korea, Malaysia, Thailand, Poland, Czech Republic and Hungary. The experience of these countries are briefly discussed in terms of investment climate, DFI regimes, and various macroeconomic, development and competitiveness indicators. Then the DFI policy framework of Turkey is analysed qualitatively in terms of its openness as compared to these countries.

The following questions are asked:

Do these countries attract high DFI inflows just because they have a stable macroeconomic environment and a sound investment climate? Is the legislative framework of DFI in these countries without any "restrictions"?

Do these selected countries have any measures directed specifically towards the operations of TNCs within their territories? Do they impose any specific performance criteria on foreign investors and if so how does this practice affect the volume of DFI inflows? Does the level of DFI inflows to developing countries successful in attracting DFI have something to do with the labour costs and macroeconomic, development and competitiveness indicators of these countries? Or do these successful countries have some kind of trade and industrial strategies directed towards development objectives to which DFI policies were subordinated?

What is the role of privatization and regional economic integration in the success of these countries in attracting high volumes of DFI?

Is the underperformance of Turkey in terms of attracting DFI due to absence of a sound investment climate and a stable macroeconomic environment or due to the lack of trade and industrial policies in the post-1980 period delineating a broad development strategy? It will be investigated whether the lack of an integrated

[9] See Chapter 3 for the definition of and the discussion on investment climate.

industrial, trade and technology policies in Turkey forms an obstacle in attracting DFI inflows and in new investment decisions of domestic firms.

2) Analysis of Export, Employment and Technology Performances of DFI Firms

As the first step in tackling the more specific research questions under this heading, a detailed analysis of DFI exports will be conducted in comparison with domestic exports. The distribution of exports in each category by country, region, sector, broad economic categories (BEC), and OECD technology classification will be examined.[10] It will be investigated whether there is a regular pattern between the country of origin of DFI firms and the destination of their exports. In doing this, the aim of the study is to try to detect whether foreign firms use Turkey as a jump-base for their exports, and if so to which markets.

In addition to exports, DFI and domestic firms will be compared and contrasted along the following lines:

- employment generation performance,
- education level of workers,
- training schemes for workers
- the share of unionised and part-time workers in total employment,
- wages and labour productivity.

In analysing export and employment performances of DFI firms, the criterion employed in conventional definitions of DFI, that is the 10% rule, will also be challenged. That is, it will be investigated how the performance of DFI firms change as the foreign share, and hence the definition of DFI, changes.

DFI and domestic firms will be compared and contrasted in terms of their type of technology transfer, R&D expenditures, the number of patents they own, and their degree of technological cooperation with universities and public institutions. In addition, the interaction between domestic and DFI firms will be investigated in the field of innovation: Are there any kind of innovations that domestic firms implement

[10] Examining the distribution of exports in all these respects and also comparing and contrasting DFI exports with domestic exports, this study analyses export performance at a much finer level of detail than Göver (2004).

by observing DFI firms? Finally, the ways that domestic firms are affected as the number of DFI firms in their industry increases will be investigated.

3) Up-to-date Pattern of DFI in Turkey

Under this heading DFI inflows will be analysed with respect to their pace, type and sectoral distribution of investment, and geographical distribution of the home countries. The pattern of DFI inflows into Turkey will be assessed in comparison with the pattern of domestic investment. In analyzing DFI inflows by type, it is aimed to isolate mergers and acquisitions from the overall DFI inflows. In this context, the contribution of privatization of state economic enterprises to DFI inflows will also be discussed.

4) DFI Outflows from Turkey

The main concern here will be to investigate DFI outflows from Turkey, a subject not much explored except for Erdilek (2003). The distribution of outward DFI from Turkey will be analysed by sector, country, and motivations of investors. By analyzing the motivations of domestic firms engaged in DFI abroad, it is hoped to obtain further clues about the lack of DFI inflows into Turkey. By delving into this subject, information will be obtained on net DFI inflows based on the comparison of inward and outward flows, which yield interesting results. For example, 58.0% of DFI inflows in 2003 were actually due to real estate purchases of foreigners in Turkey. Excluding real estate-related DFI inflows, outward DFI from Turkey in this particular year exceeded DFI inflows.

1.8 The Data and Methodology

This study employs data sets from different sources, which are grouped below under six main headings.

DFI Authorisations of GDFI

The first data set is the database of the General Directorate of Foreign Investment (GDFI) of the Undersecretariat of Treasury on authorised DFI, providing information on the distribution of DFI by sector and type and country of origin of investment. By utilising this data set, it will be possible to decompose DFI

authorisations in Turkey according to the types of DFI: new, expansion, capital increase and portfolio investment. Utilising the data on portfolio investment authorisations, and the list of firms acquired by foreigners with a majority ownership in 2001 and 2002, it will also be possible to depict a picture of mergers and acquisitions in Turkey.

Foreign Trade Statistics of Foreign Firms

The second data set is on foreign trade statistics of foreign firms in Turkish manufacturing industry, available from the General Directorate of Foreign Investment (GDFI) of the Undersecretariat of the Treasury. This data set includes distribution of foreign trade by sector and country.

Data Set of Istanbul Chamber of Industry

The data set on largest 500 firms (1993-2003) published by the Istanbul Chamber of Industry (ICI) provides firm-level information on capital share (public, private and foreign), sector classification (ISIC Rev.3), sales from production, sales revenue, net assets, equity capital, gross value-added, income, exports, and employment.

The firms included in the ICI data set are fairly representative of Turkish manufacturing industry. They account for around 58 percent of total manufactured value added, and 50 percent of total manufactured exports.

Manufacturing Database of State Institute of Statistics (SIS)

The SIS data set contains data for the manufacturing industry classified at the level of 3-digit ISIC (Rev.2) for the 1992-2001 period. It includes data on the number of firms, employment, wages, hours worked, value added, and imported machinery and equipment for each sub-sector of the manufacturing industry. The data is also categorized with respect to foreign share and presented in 10 % increments of foreign share. That is, for each sub-sector, the firms are aggregated with respect to their foreign shares as 0-10 %, 10-20 %, 20-30%, and so on up to 90-100%.

Survey Results

Finally, two surveys are prepared, one for DFI firms and one for domestic firms operating in Turkish manufacturing industry. The survey for DFI firms included 42 questions in 9 parts. The survey for domestic firms included 46 questions in 10 parts. The surveys are given in Appendix A2 at the end of the study.

The questions included in the questionnaires broadly fall under the following categories 1) The motivations of TNCs in investing in Turkey. 2) The determinants of DFI in Turkey as perceived by existing DFI firms in Turkey. 3) The problems of the investment climate in Turkey as perceived by DFI as well as domestic firms. 4) The existence of any positive spillovers from DFI to domestic firms. 5) The mode of technology acquisition, R&D expenditures, the number of patents owned, and technological cooperation with universities and public institutions. 6) Number of workers and their level of educational attainment, and the share of unionized and part-time workers. 7) Volume of exports and the motivation to export. 8) The responses of DFI and domestic firms to economic crises, Customs Union with the European Union, and prospects for full EU membership.

80 responses from DFI firms and 60 responses from domestic firms are obtained. The response rates for DFI and domestic firms are, respectively, 17.5% and 11.0%. The qualitative assessment based on the data sets as supplemented by survey results derived from two questionnaires will constitutes the main methodology of the study.

1.9 The Sequence of Presentation

Following this introduction, in Chapter 2 a brief review of the existing literature on the subject matter of the thesis will be given. The chapter will focus on investigating the ways and means of increasing the benefits from DFI from the point of view of developing countries. Special emphasis will be on the impact of DFI on technology, productivity, and export spillovers, the labour market, and the interaction between DFI and domestic investment and growth. The last part of the chapter will be devoted to a brief review of the previous studies on Turkish DFI experience.

In Chapter 3, Turkish investment climate and openness of the DFI regime will be analysed in comparison with a number of 15 selected countries. The comparison

is on the basis of business environment, DFI regimes, macroeconomic, development and competitiveness indicators, and the role of privatization and regional integration.

Using the most recent data available, Chapter 4 will provide a detailed examination of the pattern of DFI in Turkey and compare it to the pattern of domestic investment. Moreover, in this chapter, the significance of mergers and acquisitions and the privatization process for DFI inflows to Turkey, as well as the pattern of outward DFI from Turkey will be analysed.

Chapter 5 will be on export and employment contribution of DFI firms as compared to the performances of domestic firms.

In Chapter 6, the results of the two surveys will be analysed.

The last chapter will present the conclusions of the study.

CHAPTER 2

A BRIEF SURVEY OF EMPIRICAL STUDIES ON THE EFFECTS OF DIRECT FOREIGN INVESTMENT ON HOST COUNTRIES

2.1 Introduction

From the point of view of developing countries, direct foreign investment (DFI) is increasingly seen as a source of economic development and modernisation. It is believed that DFI will accelerate the development process by increasing the sources of finance for investment. On the other hand, transnational corporations (TNCs) will bring in new technology, knowledge, expertise and advanced modes of organisation to the host countries. This new technology and stocks of knowledge and new organisational behaviour will spill over to domestic firms through various channels which will be elaborated below, and thus raise the productivity of domestic firms and enhance the competitive environment of the host economies.

DFI is also seen beneficial for the developing countries to increase their export base. For the TNCs have better knowledge of tastes in foreign countries and have well-established distribution channels worldwide. Foreign affiliates in developing countries will export more easily than their domestic counterparts. If domestic firms somehow manage to learn from their behaviour, there will be a spillover effect in exporting to increase the overall exports of the host countries.

For direct foreign investment to contribute to the growth of the host countries, it should be the case that DFI crowds in domestic investment. Thus, the formation of backward and forward linkages from foreign affiliates to the domestic firms in the host countries is a key concept in the developmental role of DFI[11].

The contribution of DFI on human capital formation in the host countries (especially the developing ones) is another key concept cited as one of the merits of DFI. While foreign affiliates design and implement training programs for their

[11] See UNCTAD (2001) for the elaboration of issues on backward and forward linkages.

counterparts, it turns out that for DFI to contribute to growth and development, host countries should have some minimum level of human capital development to absorb the technologies of foreign affiliates.

These issues mentioned above do not unify in a comprehensive theory of DFI, but rather empirical studies have tried to shed light on the validity of the alleged benefits in the developing country context.

In this chapter, a rather selective group of studies are surveyed to find answers to the following questions: Are there any spillover benefits from foreign investment to domestic firms in terms of technology, productivity and export increases? Does DFI contribute to growth in developing countries and how? Does DFI crowd in or crowd out domestic investment? What is the effect of DFI on skill upgrading, employment and wages? The purpose of asking these questions is to review the empirical results to assess whether DFI can be *the* source of economic development and modernisation. On the other hand, previous studies on the DFI experience of Turkey are surveyed in the last part of the chapter, in order to emphasise the significance of the present study.

The chapter is organised as follows: Section 2 will discuss the technology, productivity and export spillovers from foreign firms to domestic ones. The relationship of DFI with domestic investment and growth will be discussed in Section 3. Section 4 will briefly review the effects of DFI on the labour market. Section 5 will provide an overview of the previous studies on Turkish DFI experience. The last section will conclude and discuss the policy implications derived from studies covered in this chapter.

2. 2 Host Country Spillovers from DFI

2.2.1 Technology and Productivity Spillovers

Theoretical Background

The existing literature on the spillover benefits from DFI owe much to the theorising efforts of DFI based on the theories of industrial organisation and endogenous growth. Thus, the effects of DFI on the host countries are accepted to be indirect in the way of externalities like transfer and diffusion of technology and knowledge, and the impact of DFI on the market structure and competition in the host countries (Blomström and Kokko, 1996:1-2).

Actually, host countries can acquire technology from foreign firms in various ways. A country can import higher-quality intermediate goods from technologically superior countries, and use this technology in its own production processes through reverse engineering and imitation. However, the way that this type of technology transfer maximises the benefits for a country is intra-industry trade, which is prevalent among developed countries. In the case of developing countries, on the other hand, it is the case where inter-industry trade with the developed countries is the prevalent trade mode. Thus, there is less scope for developing countries to acquire technology through trade (OECD, 2002: 96).

Another way of technology transfer for the developing countries is licensing agreements. However, licensing is not much preferable for the TNCs in that they face the risk of their technology being captured by firms in developing countries. So, TNCs generally make licensing agreements for their older technology, which does not make much sense for the technological improvement of the developing countries. As regards the most recent technologies, TNCs usually make license agreements to get knowledge of the local markets before making investments, thus, they license temporarily (OECD, 2002: 96-97). Another important reason that makes licensing less attractive for TNCs is the fact that the markets for technology are imperfect. That is, it is difficult to price any technology because of the public-good characteristics of knowledge (Blomström and Kokko, 1996: 8)

Given these caveats of the other modes of technology transfer, the remaining channel is DFI with externality benefits that cannot be provided by trade or licensing (OECD, 2002; Blomström and Kokko, 1996).

TNCs, possessing the highest R&D stock in the world economy and operating with highest technology, bring some amount of proprietary technology with them when establishing affiliates in the host countries. Having these ownership advantages, TNCs force local firms to increase their productivity levels through fierce competition, which generates spillovers that will help the diffusion of TNC technology to the host country firms (Blomström and Kokko, 1996: 7).

The technology of TNCs spill over local domestic firms through following channels: (i) imitation of the technology by the domestic firms, (ii) through severe competition so that domestic firms are forced to use the existing technology more efficiently, (iii) as the competition forces the domestic firms to search for new, more

efficient technologies (Blomström and Kokko, 1996:7). These three channels can be grouped under the heading of horizontal linkages (OECD, 2002: 98).

Besides the horizontal linkages, TNCs may transfer technology to their vendors or to the buyers of their products, which can be called as vertical linkages. Furthermore, the employees or managers previously working for the affiliates of the TNCs in the host country can switch to work for local firms or establish their own businesses. In this way of labour migration, the technology diffuses to the host country firms. Lastly, TNCs may create units to perform R&D activities in the host countries, which increases the knowledge stock of the host countries and help the diffusion of advanced technologies (OECD, 2002: 98).

Blomström, Globerman and Kokko (2000) analyse the determinants of host country spillovers from DFI in terms of interactions of forces underlying the supply of and demand for spillovers. The supply of spillovers is made by TNCs by making their technology available for local domestic firms. On the other hand, demand for spillovers by the local domestic firms is determined by the absorptive capacity of the host country.

As regards the determinants of supply, TNCs may benefit from economies of scale by enlarging their R&D activities to their affiliates in the host countries. As a second benefit, host country governments may reward TNCs some commercial advantages, which outweigh the commercial value of their appropriable technology. On the other hand, the value of the underlying technology and the lack of intellectual property rights protection in the host countries will appear as costs for the TNCs. As a mirror image on the side of the host countries, the value of the underlying technology will appear as a benefit, which determines the demand for spillovers (Blomström, Globerman and Kokko, 1996:5-11).

Empirical Evidence

Before continuing with the empirical evidence on the technology spillovers of DFI on the host countries, we first mention a study, which emphasises the role of R&D spillovers in general on economic growth. Coe and Helpman (1995) argue that both domestic and foreign R&D activities affect the total factor productivity (TFP) of a country in their sample which consists of 21 OECD countries plus Israel for the 1971-90 period. Utilising the data on TFP, domestic stocks of R&D, and foreign

stocks of R&D constructed by weighting the R&D stocks of the trade partners of each country by their trade shares, they estimate equations that are cointegrated. The following results emerge from their study: A country's TFP depends on both its own R&D capital stock and R&D capital stock of its trade partners. The more open a country is to international trade, the more beneficial may be foreign R&D to domestic productivity. In larger countries, the elasticity of TFP with respect to domestic R&D is larger, while it is the opposite case for smaller countries. In terms of both domestic output and international spillovers, the rate of return on R&D capital stock is very high.

The results of Coe and Helpman (1995) are important in emphasising the role of R&D in growth process, since DFI is seen as the source of technology and knowledge spillovers from TNCs which are the centers of R&D activities on the world-scale.

Kathuria (1998) disaggregates the spillovers from foreign affiliates into two: one from the mere existence of foreign firms in the domestic market, and the other from the disembodied technology imports. The study aims to test the hypothesis that the productivity of domestic firms increases with the amount of foreign firms operating in the market and with the increases in the disembodied technology imports.

Utilising a data set of 368 medium and large sized firms from Indian manufacturing sector for the 1975-76 to 1988-89 period, Kathuria (1998) estimates stochastic production frontiers to test the effects of both types of spillovers on multi factor productivity of firms, controlling for firm-specific variables.

When the estimations are done for the sample of non-DFI firms, the variable for the knowledge spillovers from sectoral presence of foreign firms turns out to be positive and significant where the variable for imported disembodied technology does not (Kathuria, 1998:15).

In order to get further insights on the sectoral differences; Kathuria (1998) reestimates the equations for scientific and non-scientific groups of non-DFI firms[12].

[12] Scientific group consists of firms in drugs and pharmaceuticals, chemicals, electronics industries etc. whereas non-scientific group consists of firms in automobiles, non-electrical machinery, metal products etc. (Kathuria, 1998:15).

Irrespective of the two subgroups, there exists knowledge spillovers to domestic firms from the presence of foreign firms in their sectors. As regards the effect of disembodied technology imports, only the firms investing in R&D in non-scientific subgroup can benefit, implying a threshold of R&D expenditures to benefit from knowledge spillovers emanating from the available stock of foreign technology imports (Kathuria, 1998:16).

However, when the technological gap variable (GAP)[13] is included in the analysis in order to account for the catching-up hypothesis, the significance of the knowledge spillover variable vanishes for the non-scientific subgroup indicating that the increased productivity of the firms in this subgroup cannot be attributed to any knowledge spillovers, but rather to increased capacity utilisation, disembodied technology imports, and the firm's outward orientation. Thus, positive spillovers from the presence of foreign firms is only valid for firms in the scientific group, irrespective of their distance from the technology frontier (Kathuria, 1998:18-20).

In a study by Aitken and Harrison (1999), the existence of technology spillovers from foreign firms to domestic ones is tested for Venezuelan manufacturing firms. Along with this question, the authors also try to find the extent of any higher levels of productivity in joint ventures and wholly owned subsidiaries than their domestic counterparts.

Utilising annual survey data of over 4000 Venezuelan firms, the authors regressed the output for a plant on the input vector, foreign share in the plant, foreign share in the plant's sector and on the interaction of foreign share terms.

The sign of foreign share in the plant turns out to be positive and significant indicating productivity gains from foreign equity participation. However, in contrast with the results of Kathuria (1998) mentioned above, Aitken and Harrison (1999) find out that domestic firms in sectors with more foreign ownership are significantly less productive than the firms in those sectors with smaller foreign presence. Thus, Aitken and Harrison (1999) point out to negative productivity spillovers from DFI in Venezuela. Moreover, they find the interaction term positive and significant, indicating that positive spillovers from DFI is only valid for firms with foreign equity participation. However, when they control for firm size, it turns out that this result is

[13] GAP variable is defined as the difference between productivity of most productive firm in the sector and the own productivity of the firm (Kathuria, 1998:18).

robust only for small firms. As regards the large plants, they argue that foreign investors apparently invest in more productive plants.

In addition to the contradicting results of these two firm-level studies, the studies using sectoral data are also far from supporting the existence of productivity spillovers from DFI. For example, Kim and Hwang (2000) estimate a relationship between total factor productivity growth and the growth of sectoral stocks of DFI and royalties (as a proxy for imported technology) using data from Korean manufacturing subsectors. They conclude that the aggregate data do not show that DFI has a positive effect on productivity (Kim and Hwang, 2000:277).

Similarly, Konings (2000) finds no spillover effects from foreign firms to domestic ones, using firm-level data for Poland, Bulgaria and Romania. Indeed, he finds negative spillovers in Bulgaria and Romania, and no spillovers in Poland. As regards the comparative performance of foreign firms with respect to their domestic counterparts, he argues that only in Poland foreign firms perform better. This result may be due to the more advanced nature of Poland in the transition process as compared to Bulgaria and Romania, indicating that perhaps some more time in the transition process is required to reap the full benefits of foreign investment.

Although taking into account a partial productivity concept (ie. labour productivity), Kokko, Zejan and Tansini (2001) bring in further insights to the subject of spillovers by comparing the periods of import substitution (IS) and export orientation (EO) in Uruguay manufacturing sector. For this comparison they use the output share of the foreign firms established before and after 1973, the year of switch in the trade regime of Uruguay from import-substitution to export-orientation.

When the equation is estimated for the whole sample and the whole period, there appear to be significant positive productivity spillovers from the aggregate population of foreign firms. However, there appears to be large differences between the effects of foreign plants established in the IS and EO periods. For the IS period, the estimated coefficient of foreign share variable is positive and significant while for the EO period, it is significantly negative.

The authors argue that this interesting result may be due to the differences of technologies that foreign firms bring with them in different trade regimes. Thus, in the IS period, it can be expected that TNCs enter into domestic economies with technologies that are missing or weakly developed in the local industry. Hence, they

may exert more competitive pressures on domestic firms, creating more room for spillovers. On the other hand, export oriented TNCs deploy their strengths in international markets and distributional channels to utilise the competitive assets of the host countries, rather than bringing with them advanced technologies. Thus, the spillovers, if any, result from exporting activities rather than technology.

The reason that the empirical studies cannot find an exclusive positive spillover effect from the existence of foreign firms in domestic industries may be due to the requirement of some threshold of technology or human capital for the domestic firms to be able to absorb the technology spilled over by foreign firms. As the United Kingdom is one of the top R&D producers in the world and it receives substantial inflows of DFI, it is apparent to expect that the domestic UK firms have sufficient absorptive capacity to benefit from such spillovers.

Haskel, Pereira and Slaughter (2002) study the existence of productivity spillovers from DFI using plant-level panel data covering UK manufacturing from 1973 through 1992. They regress domestic plant-level output on domestic plant-level inputs, measures of foreign presence in the plant's industry and region, and other control regressors. The coefficient estimates of foreign presence are taken as evidence of spillovers from DFI to firm-level total factor productivity.

The estimations using the full sample show that there is positive and significant correlation between the TFP of a domestic plant and the foreign affiliate share of activity in that plant's industry. The foreign affiliate share of activity in the plant's region does not turn out to be significant. The positive correlation between TFP and industrial foreign presence, however, turns out to be valid for smaller, less technologically advanced and less skill intensive plants. This indicates that spillovers mainly accrue to technologically lagging firms, not to leading ones. When a variable controlling for this technological gap is included in the estimations, the spillover effect may vanish, though. But the authors did not perform such an estimation.

To recapitulate, empirical studies are far from being conclusive in finding spillovers to domestic firms from foreign presence in an industry. The very existence of such spillovers depends on the specific experience of different countries as well as the methods of estimation that various authors employ.

2.2.2 Export Performance of Foreign Affiliates and Export Spillovers

Theoretical Background

Among the ownership advantages of TNCs are their differential access to factor markets, international market linkages, well-functioning distribution channels, and different technological and organisational capabilities (Athukorala et al., 1995:112). Because of these advantages TNCs are generally accepted to have competitive advantage in exporting as compared to domestically owned firms. Moreover, as the TNCs provide information to the domestic producers about foreign tastes, foreign markets, foreign consumers, and the channels that the goods can be distributed internationally, there will be spillovers from TNC exporting to the export behaviour of domestic firms (Aitken et al., 1997:104).

Empirical Evidence

Using the firm-level data from Sri Lanka manufacturing sector for 1981, Athukorala et al. (1995) have estimated a two-equation model in order to test whether TNC affiliates are more export oriented than their domestic counterparts. There are two equations in the model, because the export decision is thought to be a two-step procedure: to export or not, and if yes, how much.

The two dependent variables are export decision (a binary variable as 0 for exporting, 1 for non-exporting firms) and the level of exports (the ratio of exports to total sales). Both equations comprise the same set of independent variables. These are capital intensity, firm size, anti-export incentive bias, and the dummies for the origin of the firm (whether it is an affiliate of a developed country TNC, or a Third World TNC, or domestic) and a dummy if the firm is in the garment industry or not.

The results of Athukorala et al. (1995) provide interesting insights as regards the role of different multinationals in the export performance of host countries. While there are no significant differences between domestic firms and the affiliates of developed country TNCs once controlled for other characteristics, the affiliates of Third World TNCs perform significantly better (Athukorala et al., 1995:120). According to the authors, this differentiation between TNCs in terms of export performance is due to the fact that Third World TNCs are equipped with technologies that are more appropriate to the conditions prevalent in developing countries. Thus, the familiarity of Third World TNCs with developing countries

place them in an advantageous position as compared to the developed country TNCs (Athukorala et al, 1995: 114, 120).

As the affiliates of TNCs may be more export oriented than local domestic firms, there may also be spillovers from export activity to the domestic firms. These spillovers may arise from two sources. Firstly, the overall export volume of a country may generate spillovers. Secondly, only the export activities of TNCs may generate spillovers to the domestic firms. Thus, a domestic firm is more likely to export either the larger the export volume of the host country or the larger the concentration of TNC exports in the host country (Aitken et al. 1997:104,106).

Using panel data of 2104 Mexican manufacturing plants over the period 1986-1990 (the period following Mexico's trade liberalization in 1985), Aitken et al (1997) estimate a simultaneous equation model of quantities domestically sold and exported, where the independent variables are vector of cost variables, prices for domestic sales and exports, the volume of total export activity, and the export activity of TNCs in the regional industry to which a firm belongs (Aitken et al, 1997:106-108).

The authors find out that the probability of exporting is positively correlated with the local concentration of TNC activity, but uncorrelated with the local concentration of overall export activity (Aitken et al, 1997:115). This result is achieved after controlling for the other variables that determine exports, thus the authors conclude foreign firms act as catalysts for domestic exporters (Aitken et al, 1997:128).

Another piece of evidence of export spillovers comes from Kokko, Zejan and Tansini (2001) in their study of Uruguay. The binary variable of export behaviour of domestic firms (1 if the domestic firm is an exporter, 0 otherwise) is regressed on the share of foreign firms in the industry controlling for sectoral export volume, capital intensity, labour quality, age and size of the firm.

The results of Kokko, Zejan and Tansini (2001) provide support to export spillovers to domestic firms from foreign presence once controlled for the other variables. A further insight appearing in their study is that, export spillovers are generated from TNCs that are established in the export oriented period, and they benefit mainly the domestic firms, which are also established in this period.

These empirical studies can be taken as conclusive in underscoring the beneficial role of foreign affiliates in stimulating the exports of domestic firms unlike the studies testing the existence of productivity spillovers.

2.3 DFI, Domestic Investment and Growth

In general, the effect of DFI on the growth of host economies is expected to work through total factor productivity increases, ie. the spillover effects elaborated above in section 2.2.1. However, there are two additional channels through which DFI can have an impact on growth and industrial development in host countries. The first one of these is the impact of DFI on domestic investment. If DFI crowds in domestic investment, the total investment in the host country will increase more than the mere sum of foreign and domestic investment. On the other hand, there are fears that DFI may actually crowd out domestic investment and overall investment level may actually decrease.

The second channel works through the backward and forward linkages that foreign affiliates establish with the domestic firms. If these linkages can be found and improved properly, there will be benefits for industrial development in host countries. In this section, we will review the studies that test these arguments empirically.

Borenzstein, Gregorio and Lee (1998) is a comprehensive study testing the effect of DFI on economic growth and domestic investment in that they employ DFI flows from industrial countries to 69 developing countries over the 1970-89 period.

They regress the GDP growth rate of a country on the following variables: DFI measured as a ratio to GDP, the stock of human capital, the interaction of DFI with the stock of human capital, initial GDP per capita, and the other variables that affect economic growth (government consumption, black market premium on foreign exchange, a measure of political rights, a proxy for financial development, the inflation rate, and a measure of quality of institutions).

The main result that emerges from this study is that DFI has a positive overall impact on economic growth. When DFI variable is interacted with the stock of human capital it turns out that the countries which have above average secondary school attainment benefit positively from DFI, where DFI affects growth negatively in countries with very low stock of human capital (Borenzstein, de Gregorio, Lee,

1998:125). The role of human capital stock acting as a threshold for DFI to contribute positively to economic growth indicates the importance of the absorptive capacity of the host countries (Borenzstein, de Gregorio, Lee, 1998:126).

The authors also estimate the effect of DFI on domestic investment. Although they find a positive impact of DFI on domestic investment indicating a crowding-in effect, their results are not robust to various specifications. Thus, they conclude that the growth effect of DFI mainly derives from efficiency gains rather than an overall higher level of induced investment (Borenzstein, de Gregorio, Lee, 1998:128).

Carkovic and Levine (2002), on the other hand, criticise the studies which find a positive impact of DFI on growth including the one cited above, arguing that they "*do not fully control for simultaneity bias, country-specific effects, and the routine use of lagged dependent variables in growth regressions*" (Carkovic and Levine, 2002 : 2).

Using GMM panel estimation technique, Carkovic and Levine (2002) reestimate the relationship of DFI and economic growth with the data sets of World Bank and the IMF for the 1960-95 period for 72 countries. The estimation is done after controlling for other growth determinants and the potential biases induced by endogeneity, country-specific effects, and the inclusion of initial income as a regressor. It is also examined whether the growth-effects of DFI depend on the level of educational attainment, and the level of economic and financial development of the recipient country, (Carkovic and Levine, 2002: 2,8).

The results of Carkovic and Levine (2002:9) show that DFI does not have an independent effect on economic growth of host countries. Moreover, in contrast with the results of Borenzstein, de Gregorio and Lee (1998), the lack of an impact of DFI on economic growth does not depend on the stock of human capital (Carkovic and Levine, 2002:10). Moreover, they find that this lack of impact on growth does not depend on per capita income, financial development, trade openness, and total factor productivity, either (Carkovic and Levine, 2002:10-11).

Carkovic and Levine does not argue that DFI is irrelevant for long-run economic growth, but it can be argued that their results do not support special tax breaks and subsidies to attract foreign capital. Rather, sound economic policies will both contribute to growth and attract DFI (Carkovic and Levine, 2002:4).

Apart from these cross-country studies, Chan (2000) tests whether DFI Granger-causes GDP growth in a single country framework, using two-digit manufacturing sector panel data over the 1973-94 period for Taiwan. Chan (2000:360-361) finds that, after controlling for human capital, fixed capital formation and exports, although DFI Granger causes neither exports nor fixed investment, DFI Granger causes GDP growth. His conclusion is that the effect of DFI on economic growth does not work through capital accumulation but through technology spillovers that increase TFP growth. However, the differences of results with the aforementioned studies most probably stem from the methodological differences.

Turning to the relationship of DFI with domestic investment, it should be born in mind that DFI is more likely to stimulate domestic investment only if DFI is deployed to the areas where domestic producers do not have the knowledge required to undertake those activities. That is, DFI will increase the overall investment level in the host countries as foreign investors introduce new goods together with the technologies and human capital to accompany such goods, without displacing the domestic investors (Agosin and Mayer, 2000:3).

Moreover, Agosin and Mayer (2000:4) argue that the positive contribution of DFI on domestic investment will depend on their respective sectoral distributions. Thus, DFI will be more beneficial when it has a substantially different sectoral distribution than the existing sectoral distribution of the capital stock in the host countries. This difference in the sectoral distribution also implies the difference in the technology that TNCs bring into the host countries.

With these premises in the background, Agosin and Mayer (2000) estimate seemingly unrelated regressions for 32 countries (12 in Africa, 8 in Asia, and 12 in Latin America) for the period 1970-96. The ratio of total investment to GDP is regressed on the lagged values of DFI/GDP ratio, lagged values of total investment to GDP ratio, and the lagged values of GDP growth for each of the three regions.

It turns out that, for the period 1970-96 as a whole, there is crowding out in Latin America and crowding-in in Asia. In Africa DFI increases investment one-for-one. The strong crowding-in effect in Asia may be attributed to heavy aggregate investment effort in this region in the period of study (Agosin and Mayer, 2000:10). All in all, we are far from concluding that DFI crowds in domestic investment.

As we have mentioned in the introduction, DFI will be beneficial to the host economy as it brings in scarce capital. However, if foreign affiliate firms borrow heavily from domestic markets, this will exacerbate the credit constraints of domestic firms, and thus will lead to 'financial crowding-out' (Harrison and McMillan, 2001:2).

Using firm-level data from the Ivory Coast, comprising 399 firms over the 1974-87 period, Harrison and McMillan (2001) test the effect of DFI on the credit constraints of domestic firms. That is, they shed light on the issue whether DFI eases or exacerbates the credit constraints of domestic firms.

The most important reason that the lenders prefer foreign firms to the domestic ones may be the higher profitability of foreign firms. However, even after controlling for profitability, Harrison and McMillan (2001) find out that the long-term borrowing of foreign affiliates from domestic markets exacerbates the credit constraints of domestic firms and does crowd them out of the market.

The interesting contribution of Harrison and McMillan (2001) is that, contrary to expectations, foreign firms may heavily borrow from domestic financial markets. The policy makers should be cautious in attracting DFI in order not to exacerbate the credit constraints of domestic firms.

As we have mentioned in introducing this section, DFI contributed to the industrial development of host countries as long as they establish linkages with domestic enterprises. Altomonte and Resmini (2001) test the existence of these linkages using a theoretical model developed by Markusen and Venables (1999). In the model, basically there are three firms (multinational, domestic, and foreign -ie. only exporting to local markets) and two sectors (consumption and intermediates). As TNCs enter into consumption industry and demand more intermediate goods, there will be a backward linkage to intermediates sector. On the other hand, the existence of DFI in the intermediates sector will decrease the prices in this sector thereby increasing the demand of consumption goods for intermediates – forward linkage effect. If these linkage effects do actually exist, DFI may act as a catalyst for industrial development of host countries (Altomonte and Resmini, 2001:6).

Using a panel data over 16 regions and 10 manufacturing industries over the 1995-98 period for Poland, Altomonte and Resmini (2001) estimate the above-mentioned model in a two-equation framework.

The results of Altomonte and Resmini (2001) indicate that TNCs can act as a catalyst for industrial development. As the concentration of TNCs increases in the consumption goods industry, this has a significant positive effect on the level of sales of domestic firms in the intermediate goods sector (backward linkage effect). The reverse (forward linkage effect) is also true for the performance of domestic firms in the consumption goods industry.

Of course, the findings may be case- and model-specific. Further empirical studies are required to test the existence of backward and forward linkages, which are essential for industrial development of host countries.

2.4 Labour Market Implications of DFI

If DFI crowds in domestic investment and establishes strong backward and forward linkages with domestic enterprises, it will positively contribute to employment growth in the host countries. This employment growth effect will be more pronounced if DFI takes the form especially of greenfield investments.

However, the more emphasised contribution of DFI on the labour market is in terms of human capital enhancement. The general level of educational attainment of the labour force in the host countries seems to be a prerequisite for the TNCs to enter with new investments. On the other hand, this education level needs to be complemented with sufficient level of economic and technological development in order for human capital spillovers from foreign presence to materialise (OECD, 2002:109-111).

By enterprise training programs, TNCs may raise the skills of their employees more than their domestic counterparts, and thus contribute to human capital enhancement in host countries. Of course, these training programs should be appropriate in terms of the needs of host country industries in that the domestic firms will benefit from the skills created as the workers migrate to other enterprises or create their own business. Additionally, DFI may contribute to preventing brain-drain from host countries as the skilled employees have the advantage to stay in their countries working for incoming TNCs rather than migrating abroad (OECD, 2002: 112-115).

Slaughter (2002) provides recent empirical evidence on DFI-skill upgrading link using a panel of manufacturing sector disaggregated into seven industries for 16

countries over the 1982-90 period. The DFI presence in host countries is measured by the share of total employment in an industry accounted for by the US affiliates. The skill intensity of each industry is measured by its share of total wage bill accounted for by non-production workers (which are assumed to be more skilled than production workers). Regressions of wage-bill shares are estimated on TNC presence controlling for capital and/or output per worker across time, countries and industries (Slaughter, 2002:22-24).

The main empirical finding of Slaughter (2002) is that there is a robust positive correlation between skill upgrading and the presence of US affiliates in developing countries. On the demand side, foreign affiliates increase the demand for more-skilled workers as they utilise their firm-specific knowledge assets and invest in physical capital. On the supply side, TNCs contribute to the increase in the supply of more skilled workers through enterprise training programs, and interactions with the education policies in the host countries (Slaughter, 2002:25-26).

The positive effect of TNCs on labour demand in host countries will also increase wages. Moreover, if there are productivity spillovers from TNCs, the overall wage level in host countries may rise. On the other hand, as the capital is internationally mobile and labour is not, DFI may increase the bargaining power of capital relative to labour, thus lowering wages (Braunstein and Epstein, 2002:16).

Braunstein and Epstein (2002) analyse the impact of DFI on wages and employment using panel data from Chinese provinces for the 1986-99 period. As regards the impact of DFI on wages, the authors regress the average annual provincial wage rate on total investment, DFI, total foreign trade (imports + exports), total available labour force, productivity, and the ratio of state sector output to all industrial output (as a proxy for liberalization).

The empirical findings of Braunstein and Epstein (2002) indicate that there is a robust positive and significant impact of DFI on wages. However, this impact of DFI on wages is much smaller than the impact of domestic investment and trade on wages. Furthermore, the authors argue that, while foreign affiliates pay higher wages than state firms, these higher wages are unevenly distributed among workers of different educational levels. Thus, when noncash benefits like housing are included, less educated workers earn less in foreign affiliates than in state enterprises, and more educated workers earn more (Braunstein and Epstein, 2002:19-20).

As regards the impact of DFI on employment, Braunstein and Epstein (2002) regress the total number of remunerated jobs at year-end in a particular province on per capita output, investment, DFI, total foreign trade, and the liberalization measure. In contrast to the case of wages, it turns out that DFI has no independent effect on employment creation. The only impact of DFI on employment may come from trade channel as DFI raises exports which, in turn, effects employment positively (Braunstein and Epstein, 2002: 23).

To recapitulate, DFI does not seem to have a direct impact on employment, but does pay higher wages, albeit not distributed very evenly. However, there may be spillovers to human capital enhancement in host countries as TNCs demand more skilled workers and contribute to skill upgrading through various training programs.

2.5 Previous Studies on Turkish DFI Experience

2.5.1 On the pre-1980 period

There is not much research investigating the effects of DFI on the Turkish economy. The most prominent studies covering the pre-1980 period are Tuncer (1968), Uras (1979), Alpar (1980) and Erdilek (1982).

Tuncer (1968) analyses the pattern of DFI in Turkey for the 1956-64 period. He argues that DFI would be beneficial in the development process in so far as it alleviates the savings gap and foreign exchange gap of the domestic economy, on the one hand, and it brings in advanced technologies and increases employment, on the other.

Analysing the contribution of foreign investments authorised under Law 6224 to the domestic economy, Tuncer (1968) finds that the share of DFI in total investments is not high (7.7% of private manufacturing investment in 1963-65), the share of value-added produced by foreign investors is low compared to the local firms (2.8 % of total and 5.7% of private manufacturing value-added in the 1961-64 period), and the taxes paid by foreign affiliates are low (about 4% of total corporate tax receipts). On the other hand, foreign firms are more profitable than the domestic ones; they have higher credit-to-capital ratio, and higher capital stock per worker.

Tuncer (1968) further argues that, while the technological contribution of foreign investments to the Turkish economy is far from being significant, there is a

negative impact on balance of payments as a significant portion of the profits are repatriated.

Tuncer (1968) concludes that DFI in Turkey does not help much to the development process; it should be domestic savings that should be counted on.

Uras (1979) was based on the surveys of direct foreign investment in Turkish manufacturing industry conducted in 1973, 1975 and 1976 by the Ministry of Trade. Uras (1979) reached the following conclusions:

- The volume of direct foreign investments in Turkey was very low.
- DFI was inward-oriented as a result of the protectionist trade regime and oligopolistic market structures.
- Foreign firms were heavily dependent on imported inputs and they could export only 3% of their production.
- As the foreign investors turned their operations towards areas other than the ones approved due to the vagueness in the legislation, and they were not monitored and not punished, the attitude of authorities to foreign investment became unfavourable.
- Turkey cannot benefit from DFI to solve its balance of payments problems. Rather, DFI should be directed to the projects that cannot be completed by the utilisation of domestic resources. Export orientation and transfer of technology and managerial skills should be the objects of DFI promotion.

Alpar (1980) was also not very optimistic about DFI in Turkey. He argues that DFI has a negative impact on the Turkish economy from two channels: The first one is the pressure on the balance of payments as the outgoing transfers exceed the inflows; and the other one is that Turkish economy becomes increasingly dependent to TNCs in terms of technology. Alpar (1980) argues that unless appropriate policies are designed and implemented to make DFI highly beneficial to the economic development of Turkey, Turkish economy will be under the influence of foreign corporations and will become highly sensitive to external economic conjunctures. This will restrict the Turkish industrialisation with factors that are not under the control of the domestic authorities.

Erdilek (1982) was based on a survey of 46 DFI firms in Turkey by way of extensive interviews and a questionnaire. Investigating the microeconomic causes and effects of DFI in Turkish manufacturing for the 1970-77 period on the basis of data compiled on ownership, financial and production structures, employment, sales, import and export activities of DFI firms, Erdilek reached the following conclusions (Erdilek, 1982: 231):

The primary motive for the foreign firms was to meet domestic demand as they were guaranteed oligopolistic, closed, sellers' markets by the government. They were pressured by the local government to increase the local content without any real concern for efficiency and international competitiveness. DFI firms were not motivated for reducing unit costs.

Describing this poor performance of DFI firms as a failure story of Turkey, Erdilek (1982: 228) has argued that this was the result of allocative inefficiencies created under the import substitution regime which, significantly reduced the role of the market mechanism and isolated the economy from the forces of international competition.

2.5.2 On the post-1980 period

Turkey switched to outward orientation in early 1980 and significant measures were taken to liberalise the economy both in domestic markets and in foreign trade through the implementation of stabilisation and structural adjustment program, based on orthodox policy instruments (Boratav and Yeldan, 2001: 4); liberalising commodity markets to increase exports as a first step. Several measures were also taken to make the DFI policy environment more favourable. In addition to these legal and institutional changes, country- and location-specific advantages of Turkey in attracting DFI have often been cited as contributory factors (e.g see Erdilek, 1986). These advantages are:

- The existence of a substantial industrial and infrastructural base and a large domestic market,
- proximity to the key markets for exports,
- natural endowments in tourism.

Erdilek (1986) has discussed the problems and prospects of Turkey's new open-door policy towards DFI in the post-1980 period, emphasising that new DFI

policy would not be effective unless necessary measures were taken to make the national economy much more open and outward looking coupled with political stability. Moreover, Turkish DFI policy should be more liberal as compared to other developing countries, and DFI should be promoted in *all* sectors of the economy to reap the full advantages of foreign capital and technology.

Kırım (1986) analysed the comparative performance of TNCs and local firms in terms of technological choices, marketing practices, products, prices, and the relative export performance in the Turkish pharmaceutical industry. He used three different data sets: The first of these was the 1983 survey of Istanbul Chamber of Industry (ICI) for 500 largest industrial firms of Turkey. The second one was the results of a questionnaire designed to get information from the firms in the pharmaceutical industry on technology choice, R&D intensity, import intensity of production, and export propensities. The third data set was the results of a survey undertaken by TPMA (Turkish Pharmaceuticals Manufacturers' Association). His sample size is 13 for the study of technological choice (the pharmaceutical industry firms whose data were available in 500 largest industrial firms of ICI in 1983), and 24 for others (surveyed firms). However, since all the large firms in the industry were included, the sample was considered as fairly representative of the industry.

He found no discernible differences between TNCs and domestic firms in terms of the mentioned practices, once the size and scale differences of the firms were controlled for. Basically, both local and DFI firms in Turkish pharmaceutical industry were following similar competitive strategies that were almost identical to the conventions of the pharmaceutical industry at the global level (Kırım, 1986:516). Moreover, as regards to product differentiation, domestic firms turned out to be more aggressive then their DFI counterparts. Although Kırım (1986) found statistically significant difference in the emphasis domestic and DFI firms placed in particular therapeutic areas, he found out no discernible difference in the appropriateness of drugs that the firms produce and market. He argued that both domestic and DFI drug producers heavily relied on "the production of those drugs which do not provide cures for the major causes of mortality in the country" (Kırım, 1986:517). As a last point, although the general export performance of the industry was poor, domestic firms turned out to be better performers in terms of exporting than their DFI counterparts.

Demirbağ et al (1995) designed and implemented a survey of 47 multinational parent firms which have joint ventures in Turkish manufacturing industry. They found that "to acquire a direct share in the local market", "to establish a local entity" and "to ensure good-quality production" were some of the most frequently cited motives of foreign investors (*cited in* Tatoğlu and Gleister, 2001:35).

Taymaz (1999) found that, in the 1980-93 period, the presence of DFI as measured by the market share of foreign establishments, does not have any effect on the employment generation of Turkish manufacturing industry.

Aslanoğlu (2000) represents the first attempt to measure the spillover effects of DFI in Turkish manufacturing industry. Employing the Istanbul Chamber of Industry data set for the largest 500 industrial firms of Turkey for 1988 and 1993, Aslanoğlu (2000) estimates 5 different equations in an effort to settle the following issues: (i) The spillover effects of the presence of DFI firms on the productivity and competitiveness of domestic firms (ii) The impact of technology gap between domestic and DFI firms on the productivity and market growth of domestic firms (iii) The impact of initial technology gap on the change in technology gap over time.

The findings of Aslanoğlu (2000: 1117-1127) have indicated that there was no significant productivity spillovers from DFI firms to domestic firms. However, this study has also found that, as the share of DFI firms in an industry rises, the intensity of competition and efficiency of the firms increase. Another important finding of this study is that the smaller the initial technology gap between domestic and DFI firms, the higher the growth of domestic firms' market share, indicating the competitive process between DFI and domestic firms.

Tatoğlu and Gleister (2001) examine foreign investment in Turkey from a managerial perspective. They analyse the main facets of Western foreign equity venture formation activities in all sectors of the Turkish economy in terms of location-specific influences, strategic motives, ownership, location, and internalisation determinants, partner selection criteria, control and performance (Tatoğlu and Gleister, 2001:6). They do not deal with the microeconomic and macroeconomic impact of DFI and its effect on the long-run growth of the economy.

A study on technological development and innovation process in Turkish manufacturing industries by Taymaz (2001) has found that DFI firms had a higher technical efficiency level than their domestic counterparts. However, DFI was

increasingly attracted by those sectors in which Turkey already had a competitive advantage. In other words, DFI was increasingly attracted to those sectors which had a lower import ratio indicating that these sectors were not technologically dynamic. Thus DFI did not have a positive impact on technological development process of Turkish manufacturing industry. Moreover, based on the innovation survey results of 1995-97, held by the State Institute of Statistics, he found that labour productivity in DFI firms was lower than that of domestic firms. On the other hand, DFI firms had higher export intensity than domestic firms. For the 1993-97 period, DFI firms had a higher tendency of employment generation than domestic firms.

Erdilek (2003) analysed outward investments of three largest industrial groups in Turkey based on the information in their web sites, arguing that outward DFI from Turkey is partly a reaction to some of the problems of investment climate in Turkey.

Göver (2004) analysed export and import performances of DFI firms in Turkey in terms of country and sectoral distribution and with respect to OECD technology classification for the 1996-2002 period.

Özler and Taymaz (2004) shed light on the effects of DFI on Turkish economy through the analysis of entry, exit and survival characteristics of DFI and Turkish firms. Their data source is the State Institute of Statistics (SIS) Longitudinal Database that covers all public and private establishments employing more than 25 people for the 1983-1996 period.

Özler and Taymaz (2004) test 7 hypothesis regarding the size of the DFI and domestic firms at the stage of entry, the survival probabilities of DFI and domestic firms, and several factors that affect the survival probabilities of DFI and domestic firms (Özler and Taymaz, 2004:5-9), reaching the following conclusions:

Firstly, at the stage of entry, DFI firms are characterised by being more capital intensive, more profitable, and more export-oriented, paying higher wages, and having better access to formal sources of funding than their domestic counterparts. Secondly, although DFI firms have a higher probability of survival than domestic firms, this is not because of foreign ownership or foreign presence in their industry. DFI firms are less likely to go bankrupt than domestic firms, because of their initial size and other firm characteristics such as growth rate of the firm, quality of labour force, cost of external funding and profitability. On the other hand, DFI firms seem

to achieve higher growth rates in their early years even after controlling for other firm characteristics (Özler and Taymaz, 2004:12-19).

Lenger (2004) compared the technological and innovative capability of DFI and domestic firms in Turkish manufacturing industry and analysed the extent of spillovers from DFI to domestic firms utilizing the data set of SIS for the 1983-2000 period and the SIS Innovation Surveys of 1995-97 and 1998-2000. He has found that DFI firms have higher labour productivity and pay higher wages than their domestic counterparts. Moreover, DFI firms turned out to be more innovative in high-tech industries, to have higher research and development expenditures and tend to have more technological cooperation with domestic technology-related organizations (Lenger, 2004:144). However, he has found no evidence for positive spillovers from DFI to domestic firms, and no evidence of positive impact of backward linkages (Lenger, 2004:146). But, Lenger (2004:93-94) has found some evidence of knowledge spillovers from DFI to domestic firms through labour mobility.

Yılmaz and Özler (2004) estimated the productivity spillovers of DFI firms for the 1990-1996 period by employing the same data set of SIS as Özler and Taymaz (2004). First of all, even after controlling for the plant level characteristics other than ownership, and accounting for size, region, year and industry effects, the study finds that DFI firms have higher total productivity (TFP) levels then their domestic counterparts (Yılmaz and Özler, 2004:16). On the other hand, this significantly higher TFP level for DFI firms is observed only in DFI firms where foreigners hold a majority share.

Secondly, Yılmaz and Özler (2004:17-18) have estimated the industry-based horizontal productivity spillovers. Using the output shares of DFI firms as a measure of horizontal linkages, the study finds that there are significant horizontal spillovers from DFI firms to domestic firms operating in the same industry. Interestingly, this spillover effect is larger for DFI firms with minority foreign share than DFI firms with majority foreign share.

Thirdly, the study has estimated the existence of vertical productivity spillovers. Although it turns out that there are significant productivity spillovers from DFI firms to domestic firms through backward and forward linkages, the backward linkage measure becomes insignificant when horizontal linkage measure is also included in the regressions. Moreover, when other chemicals (ISIC 352) sector is

dropped out of the sample, forward linkage measure becomes statistically insignificant.

Lastly, turning from industry-based measures to product-based measures, Yılmaz and Özler (2004:19-20) find no statistically significant productivity spillovers through forward and horizontal linkages. The backward linkage measure indicates the existence of statistically significant productivity spillovers when used alone or together with forward linkage measure. However, its impact is quite small economically.

2.6 Conclusion

In this chapter, we have briefly surveyed the impact of DFI on host countries in terms of productivity and export spillovers, interactions with domestic investment, linkages, growth, and labour market implications.

In line with the lack of a comprehensive theory of DFI showing the impacts on host countries, the empirical studies on the subject do not lead to conclusive results either. As regards productivity spillovers, various firm-level studies for different countries reach contradicting results. Sectoral studies in general do not find positive spillovers. Even if they do, they are criticised for not accounting for the fact that TNCs prefer more productive sectors.

The studies that we have surveyed, however, do find positive spillovers from foreign presence as regards to the export performance of domestic firms. It seems that more than bringing in new technologies and upgrading the technological base of host countries, TNCs usually deploy their well-established distribution channels and marketing knowledge and experience in the host countries. This facilitates for domestic firms to enter in world markets for exports.

The results on the impact of DFI on growth are also blurred. Cross-country studies reach again contradicting results, emanating mainly from the differences in the methodologies they employ. The studies that find a positive impact of DFI on growth argue that this impact works not through the increase in accumulation, but through the increase in total factor productivity. But, the lack of conclusive evidence on productivity spillovers casts doubt on the robustness of this productivity channel of growth impact. The export growth channel seems more appropriate.

While in some countries DFI crowds in domestic investment, crowding out comes out as a prevalent outcome in others. In addition to this, when TNCs finance themselves by borrowing from domestic markets, the credit constraints of domestic firms are aggravated leading to crowding out. The apparent argument that DFI will be most beneficial for host countries when backward and forward linkages are established is supported for Poland. However, further empirical studies are required to reach more conclusive results on this issue.

Turning to the labour market, the empirical studies show that TNCs contribute to skill upgrading of employees in host countries, as they demand skilled labour and they emphasise enterprise training more than their domestic counterparts. It is also true that TNCs pay higher wages; however, this does not automatically lead to an increase in the wage-level of all employees in host countries. The empirical studies do not find a positive contribution of DFI to employment, either. As far as the studies on Turkish DFI experience indicate, the impact of DFI on Turkish economy is not promising either.

The empirical findings reviewed in this chapter show that the benefits of DFI do not accrue automatically. That is, one should not expect that the technological base of host countries will be upgraded, productivity will increase, more investment will be made, higher growth rates will be achieved with more employment, just after DFI comes in.

The specific context of a country will determine the impact of DFI inflows. However, as OECD (2002:25) argues, the level of general education and health, the technological level of host countries, insufficient openness to trade, weak competition and inadequate regulatory frameworks are the general factors that hold back a country from reaping the full benefits of DFI. Thus, in order to attract more DFI, host countries should take the necessary measures first. It is apparent that DFI may contribute to growth in the long run, but for this to be realised, the measures to attain a minimum level of development should already be taken.

CHAPTER 3

INVESTMENT CLIMATE OF TURKEY IN INTERNATIONAL PERSPECTIVE

3.1 Introduction

The ultimate goal of economic policies is to maximise the welfare of individuals in a society. Regarding the developing countries, this objective turns out to be linked to industrialisation and development in order to catch up with the developed countries. Until the late 1970s, during the golden age of capitalism, this objective was pursued under the leadership of the state utilising a set of trade and industrial policies embedded in a broad development strategy. DFI policies were also a part of this broad development strategy. The legislative framework of DFI was designed such that the inflows of DFI and the activities of TNCs in the host countries were often tailored to development objectives. In other words, the governments in developing countries designed the legislative framework and implemented policies within a broad development strategy in order to maximise the benefits from and minimise the costs of DFI. The interesting thing is that, this was exactly the case for the developed countries as well. That is, the activities of TNCs in developed countries were also tailored to specific needs of these developed countries. Because the DFI inflows and TNC activities were steered through development objectives, the relevant legislative frameworks were called "restrictive", in retrospect.

As discussed in detail in Chapter 1, as capital increased its supremacy in the 1980s, much of the blame for the turbulence of the 1970s was put on the government's role in the economy, and hence on trade and industrialization policies. On the one hand, trade and industrialization policies were condemned for misallocating resources in the economy. Hence they were restricted through structural adjustment agreements with the World Bank and more recently agreements

within the framework of GATT, especially with TRIMs agreement.[14] Local content requirements, trade balancing measures and foreign exchange balancing requirements are examples of previous policies that were to be eliminated under the TRIMs agreement, after a transition period by all developing countries accepting the rules of the WTO. On the other hand, as development objectives such as industrialization faded out of the agenda, a new term came on stage: "Investment Climate".[15]

Investment Climate was coined to define all features of an environment, including legislative framework, business environment, and in fact macroeconomic environment, favourable for the private sector, which is envisaged as the sole engine of economic growth and development.[16] A favourable environment in this sense is the one in which all frictions for the investment and profit-making decisions of the private sector are removed by the government. Within this framework, the development objectives of the state were considered to be redundant. Moreover, the policy tools for attaining these development objectives were taken out of the hands of governments. Thus, it is argued, when a favourable investment and business environment is created for the private sector, be it domestic or foreign, the growth and development process becomes automatic. Thus, there is no need for an active policy design for the government to achieve high growth rates and catch up with the developed countries. It will only suffice to stick to the aim of creating and maintaining a sound investment climate as well as a stable macroeconomic and political environment. The importance of this process as far as our study is concerned is that DFI policies were also embedded in investment climate discussions.

The pre-occupation of development agenda by investment climate discussions has just coincided with the process of globalisation beginning from early 1980s, and especially with the upsurge of DFI flows during the 1990-2000 period. Thus, as

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[14] Trade Related Investment Measures (TRIMs) agreement was put in effect on January 1st, 1995 as part of the Uruguay Round negotiations of the World Trade Organization. See the web page of WTO for a summary of TRIMs : http://www.wto.org.

[15] We can date the introduction of the term "Investment Climate" from the establishment of Foreign Investment Advisory Service (FIAS) in 1985 as a joint service of International Finance Corporation and the World Bank. Since its establishment, FIAS assisted more than 125 countries to achieve a "sound investment climate". See http://www.fias.net .

[16] See WDR (2005) and http://www.worldbank.org/investmentclimate for further information.

agenda a sound investment climate characterised by a stable macroeconomic environment has emerged as the major factor for attracting DFI and benefiting from it. The resolution of investment disputes through international arbitration turned out to be another area where the ability of territorial nation-states to conduct independent policies in this sphere was impaired. All of these measures were part and parcel of the neo-liberal agenda, which Turkey has pursued very eagerly since early 1980.

In this chapter, the countries that have attracted the highest portion of DFI inflows among developing countries in the post-1980 period are selected and the following questions are asked: Do these countries attract high DFI inflows just because they have a sound investment climate and a stable macroeconomic environment? Are the legislative frameworks of DFI in these countries without any restrictions? Do they have any measures directed specifically towards the operations of TNCs within their territories? Do they have any performance requirements to benefit from DFI inflows and how do these measures relate to the volume of DFI inflows? Are developed countries really different from developing countries in this respect, i.e. are developing countries backward just because, in contrast to the developed countries, they have many regulations and restrictions on private corporations in general and TNCs in particular? Does the level of DFI inflows to developing countries have something to do with the labour costs and macroeconomic, development and competitiveness indicators of these countries? Other than providing and maintaining a sound investment climate and a stable macroeconomic environment, do these high DFI attracting countries have any kind of special trade and industrial policies directed towards development objectives to which DFI policies were subordinated? In summary, are there special factors responsible for their good performance in attracting high DFI inflows?

How can the situation of Turkey be linked to the picture that will emerge out of the answers to the questions above? Is the underperformance of Turkey in terms of attracting DFI due to absence of a sound investment climate and a stable macroeconomic environment or due to the lack of trade and industrial policies in the post-1980 period delineating a broad development strategy?

This chapter is organised as follows: The selected set of countries and the justification for their selection is given in Section 3.2. Section 3.3 discusses the investment climate of high performers of DFI utilising the data sets of World Bank.

Section 3.4 discusses DFI regimes in a comparative perspective. Macroeconomic, development and competitiveness indicators of the selected countries are given in Section 3.5 and Section 3.6. Section 3.7 discusses the role of regional integration and privatization in attracting high amounts of DFI inflows by the selected countries. 3.8 discusses the DFI position of Turkey in historical perspective. Section 3.9 concludes.

3.2 DFI Inflows to Developing Countries: The High Performers

Table 3.1 gives the global DFI inflows and the shares of developed and developing countries in DFI inflows for the 1980-2003 period. While global DFI inflows increased more than 10-fold from 1980 to 2003, attaining its peak with USD 1,388 billion in 2000, DFI inflows to developing countries increased more than 20 times in the same period. By the help of this increase, the share of developing countries in global DFI inflows increased from 15.4% in 1980 to 34.5% in 2003. However, the bulk of DFI inflows still go to developed countries, which have a share of 65.5% as of 2003.

Table 3.1 DFI Inflows: Global and by Group of Countries (1980-2003)

DFI Inflows (million USD)	1980	1990	1995	2000	2001	2002	2003
World	54,986	208,646	335,734	1,387,953	817,574	678,751	559,576
Developed countries	46,530	171,109	204,426	1,107,987	571,483	489,907	366,573
Developing countries	8,456	37,537	131,309	279,967	246,091	188,844	193,003

Shares in DFI Inflows (%)	1980	1990	1995	2000	2001	2002	2003
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	84.6	82.0	60.9	79.8	69.9	72.2	65.5
Developing countries	15.4	18.0	39.1	20.2	30.1	27.8	34.5

Source: UNCTAD On-line Database.

Among the developing countries, 15 countries that are the high-performers in terms of attracting DFI inflows are selected (See Table 3.2 below). Among the 15 top destinations of DFI are China, Hong Kong (China), Singapore, Republic of Korea, Malaysia, Thailand and India from Asia; Argentina, Brazil, Mexico, Venezuela and Chile from Latin America; and Czech Republic, Poland and Hungary from Eastern

Europe. These 15 countries were selected as high-performers, because in almost every year after 1995, at least 12 of them appeared as one of the top 15 countries in terms of attracting the highest DFI inflows among developing countries. 2000 is the year when the inflows of DFI attained their peak globally and also in the developing world. That is why; the countries were classified according to their shares in 2000 in Table 3.2. In 2000, these 15 countries attracted 80.1% of DFI inflows to the developing countries. In the rest of the chapter, the answers to the questions stated in the introduction section of this chapter are searched within the framework of these countries.

Table 3.2 DFI Inflows to High Performing Countries and Turkey (1980-2003)

DFI Inflows (million USD)	1980	1990	1995	2000	2001	2002	2003
Hong Kong, China	710	3,275	6,213	61,939	23,775	9,682	13,561
China	57	3,487	37,521	40,715	46,878	52,743	53,505
Brazil	1,910	989	4,405	32,779	22,457	16,590	10,144
Singapore	1,236	5,575	11,591	17,217	15,038	5,730	11,409
Mexico	2,090	2,633	9,655	16,586	26,776	14,745	10,783
Argentina	678	1,836	5,609	10,418	2,166	785	478
Poland	10	89	3,659	9,341	5,713	4,131	4,225
Korea, Republic of	17	759	1,249	8,572	3,683	2,941	3,752
Czech Republic	0	72	2,568	4,984	5,639	8,483	2,583
Chile	287	661	2,956	4,860	4,200	1,888	2,982
Venezuela	80	451	985	4,701	3,683	779	2,531
Malaysia	934	2,611	5,815	3,788	554	3,203	2,474
Thailand	189	2,575	2,070	3,350	3,813	1,068	1,802
Hungary	1	311	5,103	2,764	3,936	2,845	2,470
India	79	237	2,151	2,319	3,403	3,449	4,269
Turkey	18	684	885	982	3,266	1,038	575
Share in Developing Countires' Total Excluding Turkey (%)	**97.9**	**68.1**	**77.3**	**80.1**	**69.8**	**68.3**	**65.8**

Source: UNCTAD On-line Database.

3.3 Investment Climates of the High Performers and Turkey

The following words of a Senior Vice President and Chief Economist of the World Bank, are a good summary, of what is meant by a good investment climate, from the point of view of the World Bank:

> "The first pillar of a strategy for development is the creation of a good investment climate – one that encourages firms, both large and small, to increase productivity. The private sector is not only the engine of the aggregate growth, it is also the main provider of economic activity and opportunity for poor people. "[17]

The last part of the quote, that is seeing private sector as the main provider of the opportunity for poor people is of course rather naive. It is naive, because this approach ignores the fact that an uncontrolled rapid growth process in the leadership of the private sector has led to massive poverty in the first era of globalisation in the 19th century. On the other hand, this approach has a unifying attitude of the variety of experiences of different countries and ignores the role of different political factors in providing or preventing opportunities for poor people (See Şenses (2001:281-292)). However, the concept of investment climate has become the main subject of development in the mainstream economics under the leadership of the World Bank. This is so much so that the most recent World Development Report of the World Bank published in 2004 is titled "A Better Investment Climate for Everyone". In WDR (2005:2), the first pillar of the development strategy of World Bank is defined as improving the investment climate.

Investment climate is, then, an enabling environment for private enterprise to facilitate private investment and business operations, which are allegedly the main engines of economic growth and development. This enabling environment consists of:

> - "a sound macroeconomic framework, a sound legal, judicial and regulatory framework that promotes competition between private enterprises, a good governance without administrative barriers and bureaucratic inefficiencies, and an improved access to financial and infrastructure services"[18].

In other words, a good investment climate is a transparent regime in which the rights of investors regarding property and ownership; the regulations as regards to tax, incentives and competition, are clearly defined and not expected to be changed in a short period of time. Moreover, there are no administrative barriers or corruption in governance structures. Besides, there should be macroeconomic

[17] http://www.worldbank.org/html/fpd/privatesector/ic

[18] http://www.worldbank.org/html/fpd/privatesector/ic

stability, a developed financial system, improved infrastructure facilities and a skilled labour force to make the business environment facilitate private investments, both domestic and foreign.

The World Bank has been undertaking firm-level Investment Climate and Business Environment Surveys in developing countries. In this section, based on the results of these surveys, the investment climates of the selected will be compared. It will be investigated whether the ordering of the countries in terms of attracting DFI really has a relation with their respective investment climates and business environments. As the primary concern of this study is why Turkey has not received higher DFI inflows, these countries will also be compared with Turkey.

3.3.1 The Results of World Bank Doing Business Surveys

First, the results of Doing Business Surveys of the World Bank will be discussed. In these surveys, in order to make the results comparable across countries, the typical business is assumed to be a 100% domestically and privately owned (no foreign or state ownership) limited liability company, employing 50 employees, located in a peri-urban area of the most populous city, and operating in general commercial activities. The survey measures seven factors of investment climate: Starting a business, registering property, enforcing contracts, protecting investors, getting credit, hiring and firing, and closing a business.

'Starting a business' measures the cost and time incurred to start a business and the required amount of minimum paid-in capital.

'Registering a property' measures the cost and time incurred to transfer the rights of a property from the seller to the buyer when a business purchases land or a building.

'Enforcing contracts' measures the efficiency of judicial system in the collection of overdue debt in terms of time and cost incurred and the number of procedures involved.

'Protecting investors' captures the protection of investors through a disclosure index. On a 0-7 scale, the disclosure index measures whether laws and regulations require reporting family ownership, indirect ownership, beneficial ownership, disclosing information on voting agreements between shareholders, audit committees

reporting to the board of directors, use of external auditors, and whether ownership and financial information is publicly available.

'Getting credit' measures the efficiency of credit information sharing and the legal rights of borrowers and lenders.

'Hiring and firing' measures the regulations on hiring and firing of workers and the rigidity of working hours.

'Closing a business' measures the cost and time of insolvency procedures involving domestic enterprises.

Actually, the figures for Turkey are fairly below the average (ie. Turkey performs better than the average of the countries in the sample) for starting a business, registering a property, enforcing contracts, and closing a business except for the cost of starting a business and registering a property and the number of procedures in registering a property. That is, it does not take much time in Turkey to start a business, register a property, close a business and enforce the contracts. It is only that it seems a little bit more costly to start a business and register a property in Turkey. However, the cost of starting a business is also higher than average in Hungary, India, Poland and Malaysia. Regarding the length of time of registering a property, it is much higher in the Czech Republic, Republic of Korea and Mexico. Thus, these aspects of investment climate in Turkey do not seem to be much of a problem in terms of attracting DFI (See Table 3.3).

Turning to the indicators on protecting investors, hiring and firing difficulties, and getting credit, Turkey performs rather poorly (See Table I3.4 below). For example, regarding the protection of investors, Turkey attains 2 points out of 7 in the disclosure index, of which higher values show a transparent legal regime which protects investors' rights. If Venezuela is left aside, investors protection seems to be a serious problem in attracting DFI, since the grades of the rest of the countries are above 4 out of 7.

As regards to hiring and firing procedures, Turkish labour market seems rather rigid. However, it is also the case in Brazil and Mexico in terms of all of the five indicators of hiring and firing. India is also above average in terms of difficulty of firing index, rigidity of employment index, and firing costs. Venezuela is above the average except for difficulty of firing index.

Table 3.3 Investment Climate Indicators I: DFI High Performers and Turkey

	Starting a Business				Registering a Property			Enforcing Contracts			Closing a Business		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(1)	(2)	(3)	(2)	(3)	(5)
Argentina	15,0	32,0	15,7	8,1	5	44	8,8	33	520	15	2,8	18	23,5
Brazil	17,0	152,0	11,7	0,0	14	42	2	25	566	15,5	10	8	0,2
Chile	9,0	27,0	10,0	0,0	6	31	1,4	28	305	10,4	5,6	18	19,3
China	12,0	41,0	14,5	1.104,2	3	32	3,1	25	241	25,5	2,4	18	35,2
Czech Republic	10,0	40,0	10,8	44,5	4	122	3	22	300	9,6	9,2	18	16,8
Hong Kong, China	5,0	11,0	3,4	0,0	3	56	2	16	211	12,9	1,1	8	82,3
Hungary	6,0	52,0	22,9	86,4	4	79	6,8	21	365	8,1	2	23	30,8
India	11,0	89,0	49,5	0,0	6	67	13,9	40	425	43,1	10	8	12,5
Korea, Rep.	12,0	22,0	17,7	332,0	4	143	2,2	29	75	5,4	1,5	4	81,1
Malaysia	9,0	30,0	25,1	0,0	5	74	5,3	31	300	20,2	2,3	18	35,4
Mexico	8,0	58,0	16,7	15,5	7	204	1,6	37	421	20	1,8	18	64,5
Poland	10,0	31,0	20,6	237,9	3	9	1,5	41	1000	8,7	1,4	18	68,2
Singapore	7,0	8,0	1,2	0,0	2	2	6,3	23	69	9	0,8	1	91,3
Thailand	8,0	33,0	6,7	0,0	8	9	3,3	26	390	13,4	2,6	38	42
Turkey	8,0	9,0	26,4	0,0	7	11	6,3	22	330	12,5	2,9	8	25,7
Venezuela	13,0	116,0	15,0	0,0	8	34	1,8	41	445	28,7	4	38	4,9
Average	10,0	46,9	16,7	114,3	5,6	59,9	4,3	28,8	372,7	16,1	3,8	16,4	39,6
Standard Deviation	3,2	40,0	11,3	281,3	2,9	55,3	3,4	7,8	216,7	9,7	3,2	10,5	29,0

Notes: (1): Number of procedures.
(2): Time (days)
(3): Cost measured as % GNI per capita in starting a business, as % of property per capita in registering a property, as % of debt in enforcing contracts, and as % of estate in closing a business.
(4): Minimum paid in capital required as % GNI per capita.
(5): Recovery rate as cents on the dollar.

Source: World Bank Doing Business Surveys

Table 3.4 Investment Climate Indicators II: DFI High Performers and Turkey

	Protecting Investors	Hiring and Firing					Getting Credit		
	Disclosure Index	Difficulty of Hiring Index	Rigidity of Hours Index	Difficulty of Firing Index	Rigidity of Employment Index	Firing Costs (weeks)	Cost to Create Collateral	Legal Rights Index	Credit Inform. Index
Argentina	5	44	80	30	51	94	21,3	3	6
Brazil	5	67	80	70	72	165	21,4	2	6
Chile	6	17	20	20	19	51	5,3	4	6
China	4	11	40	40	30	90	0	2	3
Czech Republic	6	44	20	20	28	22	0,6	6	5
Hong Kong, China	6	0	0	0	0	13	0,2	10	4
Hungary	5	11	80	30	40	34	13,5	5	3
India	4	33	20	90	48	79	11,3	4	0
Korea, Rep.	6	11	60	30	34	90	8,1	6	5
Malaysia	5	0	0	10	3	74	3,2	8	6
Mexico	5	67	60	90	72	83	25,7	2	6
Poland	4	11	60	30	34	25	1,2	2	4
Singapore	5	0	0	0	0	4	0,3	10	4
Thailand	6	67	40	20	42	47	1,1	5	5
Turkey	2	44	80	40	55	112	19,9	1	4
Venezuela	1	78	80	10	56	83	7,7	4	4
Average	4,7	31,6	45,0	33,1	36,5	66,6	8,8	4,6	4,4
Standard Deviation	1,4	27,4	31,4	28,0	22,9	42,1	9,0	2,8	1,6

Source: World Bank Doing Business Surveys

Regarding the problems of getting credit, Turkey performs poorly in terms of collateral cost and legal rights index. However, Turkey is again not alone in these

problems. In terms of the cost of creating capital, Argentina, Brazil, Mexico, Hungary and India also perform poorly. In terms of the legal rights index, Argentina, Brazil, Mexico, China and Poland are among the poor performers.

Considering all of the seven aspects of investment climate, only Chile, Singapore and Hong Kong perform well in terms of all the criteria. The rest of the countries perform well in some but poorly in others. Singapore and Hong Kong can be left aside for they are city-states, which enable them to solve the bureaucratic and legal problems more easily. Likewise, Chile is not among the top receivers of DFI as far as the 15 countries in our list are concerned. Then, it can be argued that the rest of the 12 countries attract the highest DFI although they do not have a "perfect" investment climate as long as the criteria of the Doing Business Surveys are considered.

3.3.2 The Results of World Bank Investment Climate Surveys

The results of Investment Climate Surveys are available for only Brazil, China, Czech Republic, Hungary, India, Malaysia, and Poland among the selected countries (WDR, 2005:246-247). Investment Climate Surveys have indicators about regulation and tax administration, finance, electricity, labour, policy uncertainty, corruption, courts and crime. The indicators show whether the firms surveyed see each indicator as a major constraint in performing their businesses or not. As the data are the averages of responses, it is not true to rank the countries according to these results for significant variations are observed across the firms within a country, as WDR (2005:247) clearly notes. With this caution in mind, the figures for Turkey are compared with DFI high performers and the average of the sample (Table 3.5).

Table 3.5 Investment Climate Indicators III: DFI High Performers and

Category	Brazil	China	Czech Rep.	Hungary	India	Malaysia	Poland	Turkey	Sample Avg.
Tax rate as major constraint (%)	84.5	36.8	25.6	30.2	27.9	21.7	64.7	38.1	41.2
Tax administration as major constraint (%)	66.1	26.7	19.8	13.7	26.4	13.3	41.0	33.1	30.0
Licensing as major constraint (%)	29.8	21.3	10.2	3.3	13.4	10.9	13.5	5.8	13.5
Management time dealing with officals (% of management time)	9.4	19.0	5.5	8.7	15.3	10.2	12.3	8.0	11.1
Average days to clear customs (days)	13.8	7.9	4.4	4.3	6.7	3.6	3.1	3.7	5.9
Finance as major constraint (%)	71.7	22.3	23.1	20.2	19.2	17.8	42.6	23.2	30.0
Electricity as major constraint (%)	20.3	29.7	5.3	1.2	28.9	14.8	5.8	17.3	15.4
Firms reporting outages (%)	40.1	38.0	n.a.	n.a.	69.2	40.6	18.5	n.a.	41.3
Skills as major constraint (%)	39.6	30.7	9.1	12.5	12.5	25.0	12.2	12.8	19.3
Labour regulations as major constraint (%)	56.9	20.7	3.5	7.3	16.7	14.5	25.2	8.7	19.2
Policy uncertainty as major constraint (%)	75.9	32.9	20.2	21.1	20.9	22.4	59.1	53.8	38.3
Unpredictable interpretation of regulations (%)	66.0	33.7	56.0	42.7	64.1	n.a.	68.0	40.6	53.0
Corruption as major constraint (%)	67.2	27.3	12.5	8.8	37.4	14.5	27.6	23.7	27.4
Report bribes are paid (%)	51.0	55.0	55.5	60.4	n.a.	n.a.	52.4	71.8	57.7
Courts as major constraint (%)	32.8	n.a.	11.1	4.5	n.a.	n.a.	27.0	11.9	17.5
Lack confidence courts uphold propery rights (%)	39.6	17.5	47.1	40.3	29.4	19.1	46.2	33.1	34.0
Crime as major constraint (%)	52.2	20.0	14.3	4.9	15.6	11.4	24.9	12.9	19.5
Average losses from crime (% of sales)	22.7	10.4	33.6	33.6	n.a.	19.1	31.6	5.8	22.4

Note: n.a. indicates data is not available.

Source: World Development Report (2005:246-247)

Among the 18 indicators selected, Turkey is above average only in tax administration, electricity outrages, policy uncertainty, and bribes, which are seen as major constraints in conducting business. Actually, in tax administration indicator, Turkey, with 33.1%, is fairly close to the sample average of 30.0%. However, the firms that report that policy is seen as a major constraint, and that bribes are paid in conducting a business in Turkey are above the average of our sample. On the other hand, the percentage of firms in Brazil and Poland reporting that tax administration and political uncertainty are major constraints are higher than both the figure of Turkey and the average. The percentage of firms reporting that bribes are paid in conducting a business in Hungary is higher than in Turkey. Moreover, while Turkey is above average in 4 out of 18 criteria, Brazil is above average in 15 out of 18; Poland is above average in 12 out of 18; and China is above average in 7 out of 18; and India is above average in 6 out of 18. Only Malaysia seems to be performing well regarding these criteria of the investment climate, reporting only skill shortage as a major constraint.

Thus, every country has problems regarding their investment climate but these problems do not seem to be of much importance for the activities of TNCs. Then,

there must be something more to attract DFI than a favourable investment climate for the private sector. This merits a detailed discussion of the DFI regimes of the countries concerned.

3.4 DFI Regimes

The DFI regime is one of the most important factors that determines the position of host countries vis-à-vis foreign investors. That is, a foreign investment regime that will facilitate the developmental objectives will be designed if the host country has more bargaining power vis-à-vis TNCs. However, if the host country does not have a bargaining power in terms of*, inter alia*, a sound macroeconomic framework, a developed infrastructure, and well-educated and highly skilled work force, the regime for foreign investment has to be highly liberal in order to attract DFI.

In the 1960s and 1970s when import-substituting industrialisation was the prevalent development model, DFI in most developing countries was directed to domestic markets, especially the extracting industries. Furthermore, the availability of debt financing to developing countries from international donors decreased the role of DFI as a source of finance. As a result, due to their locational advantages, the developing countries were in a strong position to restrict and direct foreign enterprises to make inward investments tailored to their developmental needs. The restrictions included equity restrictions, exclusion of foreign enterprises from broad sectors of the economy, and expropriation of foreign assets (Wint, 1992:1516).

This balance of power between the host countries and the TNCs in the developing world shifted against host countries in the 1980s due to several factors. First, with the debt crisis of the late 1970s and the early 1980s, the debt financing from international donors almost stopped. This required developing countries to find alternative ways of complementing their deficiency in capital. Second, the TNCs have become more integrated globally, and international investment moved towards export-oriented investment and away from extraction industries and domestic markets. Third, the development paradigm for the developing countries shifted from import substituting planned economies to export-oriented and market-based economies. As a result of these changes, the bargaining power of host countries vis-

à-vis the foreign investors decreased considerably which forced host countries to liberalise their investment regimes (Wint, 1992:1516-1517).

Wint (1992) studied the changes in foreign investment legislation in the 1980-89 period in a sample of 10 developing countries. 8 of the 10 countries studied, the Dominican Republic, Kenya, South Korea, Ghana, Mexico, the Philippines, Thailand, and Turkey, adopted more favourable policies toward foreign investment during the 1980s. The other two countries, Singapore and Brazil, maintained their very favourable policies toward foreign investment (Wint, 1992:1518).

The new legislation was similar in their liberalization attempts, comprising issues like an official welcome to all kinds of foreign investment to all sectors of the economy except the ones listed in negative lists. Equity restrictions were also abolished (Wint, 1992:1519).

More recently, each year in the 1991-2003 period, 62 countries on average have made changes in their DFI legislations. In this period, the average number of changes in legislation annually is 145, of which 136 were more favourable to DFI (WIR, 2004:8).

The liberalizations in DFI legislations were in fact an integral part of a general shift in the development paradigm towards a liberal international economic order. Under the auspices of International Monetary Fund and the World Bank, the new paradigm of development comprised a heavy commitment to free markets both domestic and external, private property and individual incentives, and a circumscribed role for government (Gore, 2000:791-794; Taylor, 1997:146-147).

The key question to be dealt with is whether the top receivers have fairly liberal regimes towards DFI or not. The DFI regime of Turkey will be evaluated in international perspective against the background of this question. Based on the categorizations in Japanese Bank for International Cooperation (JBIC) (2002) and in investment climate assessments of US Embassies in various countries, DFI regimes

of the selected countries are evaluated based on the following 6 categories[19]: Screening, national treatment, negative list, performance requirements, investment incentives and dispute settlement.

Screening refers to registration and/or approval procedures for DFI. National treatment refers to the commitment of host country to treat foreign affiliated enterprises operating in its territory no less favourably than domestic enterprises in similar situations (OECD, 2004:5). Negative list is the list of sectors that are restricted for DFI. Performance requirements refer to the measures imposed by host governments on foreign investors, requiring them to meet certain targets in their operations in the host countries (UNCTAD, 2003:2). Dispute settlement pertains to openness to international arbitration practices for foreign investors.

3.4.1 Screening

In Hong Kong, the formalities for company incorporation and business registration are minimal, and foreign and domestic companies register under the same rules. Similarly, in Argentina, no approvals or paperwork of any kind are required to materialise foreign investments as with no requirements for registration of foreign investment. In Poland, Czech Republic and Hungary, there are no permission or prior approval requirements except for the sectors in the negative list.

Registration requirements for DFI are in force only in Brazil, Chile and Venezuela. Foreign investments in Brazil are required to register with the Department of Foreign Capital of the Central Bank of Brazil within 30 days of entering the country, to provide for the return of capital and the remittance of profits.

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[19] Unless otherwise stated, the country information in Section 3.4 are collected from the following sources:
Hong Kong: US Consulate General Hong Kong's 1999 Investment Climate Report, http://www.usconsulate.org.hk/ep/hkicr99.htm; Singapore: Investment Climate Report, July 2002, http://www.usembassysinbgapore.org.sg/ep/2002/Incli2002.html; Malaysia: Kiat (1999) and http://www.thailawforum/.com/articles/lawandinvestment1.html; China: China(2002); Republic of Korea: http://english.mofe.go.kr/library;
Thailand: http://www.thailawforum.com/articles/lawaninvestment5.html; India: JBIC(2002);
Argentina: http://alca/ftaa.iadb.org/eng/invest/ARG~1.HTM;
Brazil: http://alca-ftaa.iadb.org/eng/invest/BRA~1.HTM;
Mexico: http://alca-ftaa.iadb.org/eng/invest/MEX~1.HTM;
Chile: http://alca-ftaa.iadb.org/eng/invest/CHI~1.HTM;
Venezuela: http://alca-ftaa.iadb.org/eng/invest/VEN~1.HTM;
Poland: UNIDO (2000); Czech Republic: CzechInvest (2002);
Hungary: http://www.buyusa.gov/hungary/en/ccg_investment_climate.html.

In Chile, foreign capital must register with the Foreign Investment Committee of the Central Bank of Chile. In Venezuela, foreign investments must be registered with the Superintendency of Foreign Investment.

Singapore also has a fairly liberal DFI regime. However, the distinguished feature of Singapore is the leading role of the government in planning the economy with the objective of economic development relying heavily on industrial policy. The industrial policy of Singapore is based on climbing the technology ladder by attracting foreign investment to sectors with a high value-added component. As the public sector in Singapore is an active investor as well as a catalyst for development in a market environment, foreign investments are screened for tax incentives within the framework of industrial policy.

Malaysia has a more restrictive foreign investment regime. Each foreign investment project is evaluated against the guidelines set forth in the Industrial Master Plan and by the Foreign Investment Committee. The approval of the project depends on export orientation, local equity participation, source of financing and the potential for technological diffusion[20].

China turns out to be an interesting case in that, despite the fact that foreign investment is subject to examination and approval of Chinese authorities requiring foreign investment to be beneficial for Chinese economy[21], this country is the top receiver of foreign investment among developing countries[22]. The application procedure for foreign investment in China is full of formalities. Prior to filling an application form, a detailed report is submitted to the local government. If the report is answered affirmatively within 30 days, an application form is submitted to the approval committee together with many other documents. The approval committee responds within 90 days.

When the application for the establishment of an enterprise with foreign capital is approved, the foreign investor shall, within 30 days from the date of receiving the

[20] See http://www.state.gov/www/about_state/business/com_guides/2001/malaysia_ccg2001.pdf for the guidelines for project evaluation in Malaysia.

[21] As it will be shown below, this type of wording was highly criticised in the Turkish case (see Erdilek (1982:13-15)) on grounds that it may cause to discretionary practices in approving DFI. Thus, this requirement is abolished with the new law of foreign investment in Turkey, which came into force in June 2003.

[22] Annual average DFI growth rate in China for 1986-2000 is above 30 %; and it is 15 % in 2001 and 12.5 % in 2002 (UNCTAD, 2002: 10; and UNCTAD on-line DFI database).

certificate of approval, apply to the administrative department for industry and commerce for registration in order to obtain a business licence.

An enterprise with foreign capital shall make investments in China within the period approved by the authorities in charge of examination and approval. If it fails to do so, the administrative department for industry and commerce shall have the power to cancel its business license. The administrative department for industry and commerce shall inspect and supervise the situation of an enterprise with foreign capital. The screening procedures in China have been analysed in more detail, because it is a good example of the fact that if foreign investors observe profitable opportunities in a host country, bureaucratic procedures do not hinder them from investing in that country.

In the Republic of Korea, foreign investors first apply to the Ministry of Commerce, Industry and Energy to undertake an investment. The Ministry answers the application within a stipulated time period. There is a one-stop service for DFI in Korea in order to decrease the burden of administrative procedures. Korea Investment Service Center provides various supports for foreign investors including application procedures, feasibility studies, consulting, matching the potential Korean firms with mergers and acquisitions partners.

The DFI regime of Thailand is delineated by the Investment Promotion Act of 1977 and the Alien Business Act of 1972. In the 1977 Act, the Board of Investment (BOI) is given a wide range of discretionary powers to encourage investment in the areas considered to be most beneficial for Thailand's economic and social development. The Thai government encourages DFI particularly in the industries where Thai expertise is lacking, industries in remote areas, and industries that are important and beneficial to the country's economic and social development and to national security. In the pre-1980 period, a significant volume of DFI was attracted to import-substitution industries. After 1980, as improving the foreign exchange position of the country has gained prominence, DFI activities were directed to labour-intensive export industries. In the 1990s, the policy shifted towards industrial deepening and broadening. As the imports of capital goods, intermediate goods and raw materials increased with the increase of DFI in export industries in the 1980s, the government attempted to encourage the use of domestic inputs, particularly in export industries. Then, DFI was actively encouraged in high value-added and high

technology industries. Two important objectives of the government were to improve industrial linkages and industrial decentralisation. The second objective was achieved through incentives to both local and foreign investors to conduct their business in remoter areas of Thailand.

In India, the approvals are granted by the Foreign Investment Promotion Board under the Ministry of Commerce and Industry. For the foreign investments exceeding USD 171 million, the approvals are granted by the Cabinet Committee on Foreign Investment.

In Mexico, General Directorate of Foreign Investment and National Foreign Investment Registry are the institutions that regulate, screen, review, approve and authorise foreign investments. The general policy on foreign investment in Mexico is also formulated by these institutions. In the approval process, foreign investment projects are screened for their impact on employment and worker training, contribution to technology, compliance with the environmental provisions in the relevant ecological ordinances, and the contribution to increasing the competitiveness of the country.

3.4.2 National Treatment

In Hong Kong, Republic of Korea, Thailand, Argentina, Brazil, Mexico, Venezuela, Chile, Poland, Czech Republic and Hungary, there is no distinction between foreign and domestic investors. In Singapore, foreign banks operating in retail banking sector are not granted national treatment.

Malaysia, on the other hand, does not grant national treatment to foreign investors due to the country's *bumiputras* policy. That is, Malaysia has a national social policy objective to redistribute wealth in favour of ethnic Malays and other indigenous people known as *bumiputras*. According to this policy, a residual equity in a foreign affiliate should be reserved for bumiputras. Only when this residual equity is not taken up by *bumiputras*, it can be allocated to *non-bumiputras*[23].

In India, the sectors where foreign and domestic investors are not treated on equal terms are banking, insurance, civil aviation and airport infrastructure, telecommunications, petroleum, drugs and pharmaceuticals, and trading. In China, national treatment is denied in practice in almost all service and most industrial

[23] www.iisd.org/pdf/2004/investment_ country_report_malaysia.pdf.

sectors. However, in the context in its accession to the World Trade Organisation (WTO), China has committed itself to granting unconditional national treatment under the Dec.11 2001 GATT signature, until December 11, 2007.

3.4.3 Negative List

Argentina has probably the most liberal foreign investment regime in the world. There are no sector restrictions – investments are allowed even in sensitive areas like oil, mass media (broadcasting, cable, newspapers and magazines), nuclear power generation and nuclear mineral mining.

The only restriction in Hong Kong is the limitation of foreign ownership in the broadcasting sector to 49%. In Singapore, broadcasting, cable and newspaper sectors are effectively closed to foreign investors. Moreover, there are significant restrictions for foreign banks operating in retail banking sector. In Chile, there are also no sector restrictions except for public land located within 10 kilometres of the border, coastwise maritime, river and lake transportation, fishing and fish farming, television broadcasting, and air transport activities.

In Malaysia, there are no sector restrictions for foreign investment except those that produce supporting parts and components. These include plastic packaging material; plastic compound/masterbatch; plastic injection moulded components and parts for the electrical, electronics and telecommunications industry; paper packaging products; metal fabrication and electroplating; metal stamping; wire harness, printing, steel service centre; and foundry products. Foreign equity ownership is limited in the following sectors: commercial banking (30%), insurance companies (51%), telecommunications (61%), and shipping companies (70%).

In China, foreign investment is not allowed in telecommunications, news, media and television. In the other sectors, foreign investment is required to be beneficial to the Chinese economy.

In the Republic of Korea, foreign investment is restricted only when national security, civil order, national sanitation, environmental preservation, social morals and customs are threatened.

In Thailand, if a foreign investment produces for the domestic market, then at least 51% of the shares must be owned by the locals. This requirement is not valid if the enterprise is located in Zone III, which is a special industrial zone with various

exemptions to promote industrial development in the remote areas of Thailand. Moreover, if the enterprise exports at least 50% of its products, majority foreign share is allowed; if exports are more than 80% of the sales, 100% foreign ownership is allowed. In agriculture, animal husbandry, fishing, mining, mineral exploration or services industries, foreign ownership is limited to 49%. However, if the initial investment exceeds 1 million Baht, initial foreign ownership may be 100% provided that the Thai nationals own at least 51% of the shares in a five-year period. In commercial banking, finance and security business, life insurance, vessel operating, and recruitment agency sectors, there are conditions of majority ownership and management for nationals. Generally, foreigners are not allowed to own land unless promoted by the Board of Investment.

In India, there is a ceiling of 24% foreign ownership in small-scale manufacturing. Moreover, strategic defence industries as well as agriculture, rail and postal services, housing and real estate are closed to foreign investment.

In Brazil, foreign investment is prohibited in health care, broadcasting, and services for the safeguarding and transport of valuables. Foreign investment in air transportation and freight agency services, mineral exploration, oil prospecting and refining, agriculture and forestry, maritime, river, and lake transport and coastwise shipping, insurance and telecommunications require prior authorization from the relevant ministries. Foreign investment is restricted to no more than 20% of capital stock with voting rights in highway freight transport.

There are more sectoral restrictions for foreign investors in Mexico. The following areas are reserved exclusively for the State of Mexico, and hence closed to foreign investment: Oil and hydrocarbons, with the exception of natural gas; basic petrochemicals; electricity; nuclear energy production; radioactive minerals; telegraphy and postal services; satellite communication; issuing banknotes and minting coins; and control, supervision, and surveillance of ports, airports, and heliports.

Apart from the areas of activity exclusively reserved for the state, there are also activities reserved for Mexican nationals only. These are broadcasting and other radio and television services, other than cable television; national land transportation of passengers, and cargo, not including messenger and package delivery services; retailing of gasoline and distribution of liquid petroleum gas; credit unions;

development banking institutions; and provision of professional and technical services, expressly indicated in the applicable legal provisions.

There are also activities where foreign investment is limited. Foreign investment cannot exceed 10% in production cooperatives; 25% in national air transportation; air-taxi transportation and specialised air transportation; 30% in companies controlling financial groups, multiple banking credit institutions, brokerage houses, and stock market specialists; 49% in insurance institutions, general deposit warehouses, trust companies, exchange bureaus, financial leasing agencies, financial factoring enterprises, manufacturing and marketing of explosives, firearms, cartridges and munitions, printing and publication of newspapers for exclusive circulation within the national territory, cable television, basic telephone services, freshwater fishing, coastal fishing, and fishing in the exclusive economic zone, excluding fish farming, integrated port management, port services piloting ships for internal navigation operations, services related to the railway sector, supplies of fuel and lubricants for ships, aircraft and rolling stock. However, with the approval of the Foreign Investment Commission, foreign investment may constitute more than 49% of capital in the following areas: port services to ships conducting their internal navigation operations; shipping companies that use ships exclusively for traffic on the high seas; management of air terminals; private pre-school, primary, secondary, mid-higher, and combined education services; legal services, credit information firms; securities rating institutions; insurance agents; cellular phones; construction of pipelines for oil and oil derivatives; and drilling oil and gas wells.

In Venezuela, there are no sectoral restrictions for foreign investment except for the sectors reserved exclusively for the state and the sectors where there are share restrictions for foreign investors. Firearms and explosives, petroleum and petroleum derivatives, natural gas and hydrocarbons, mining, postal and telegraph services, rail transport services, port and waterway operations, air traffic control service and navigation aid services are exclusively reserved for the state. There are nationality requirements for the following sectors: Radio and television (80%), customs and tax services (100%), dairy products (60%), maritime transport (80%), air transport (100%), specialised air services (51%), vacation camps (100% or foreigners with 5-year uninterrupted residence in Venezuela), security and defence (100%), bus terminal services (100%), professional services (100%).

In Poland, there are certain sectors that an investor, both domestic and foreign, requires the approval of the relevant authorities. These sectors are mineral extraction, processing of and trading in precious metals, production of spirit and bottling of vodka, manufacturing of tobacco products, air transport, trading in arms and explosives. In broadcasting, foreign share cannot exceed 33% of the capital, and the majority members of the executive and supervisory boards must be Polish citizens. Foreign investment is not allowed in games of chance and mutual betting.

In the Czech Republic, all sectors are open to foreign investment without prior approval. The only exceptions are licensing requirements for broadcasting, and registration requirement for satellite and mass media, and screening process for foreign investment projects in petrochemical, telecommunication and brewery industries.

In Hungary, nearly all sectors are open to foreign investment up to 100% with no requirement of prior approval process. Only in some defence-related industries and the national airline Malev, there are foreign share restrictions. Foreign-owned enterprises operating in Hungary can own real estate, with the exception of agricultural land.

3.4.4 Employment Restrictions

In Malaysia, the employment of foreign personnel is regulated through imposing an annual levy on foreign workers to ensure that foreign labour is employed only when necessary. The employment of Malay workers in proportions reflecting the ethnic composition of Malaysia is encouraged. Indeed, until the 1990s, employment and training requirements for Malaysian nationals were mandatory.

The Labour Law of Brazil requires that two thirds of the employees in a foreign investment must be nationals. A larger number of foreign employees are permitted only when the number of national specialists is insufficient.

In Mexico, employers in every enterprise must ensure that at least 90% of employees are Mexican. In addition, workers in technical and professional fields must be Mexican. Employers may hire foreign workers not exceeding 10% of the staff with the particular specialisation when no Mexicans can be found with that specialisation. However, this provision is not applicable to directors, board members or general managers.

In Chile, at least 85% of the employees of a particular enterprise must be Chilean nationals, with the exception of companies employing less than 25 employees. Similarly, in Venezuela, the foreign employees in a company that employ at least 10 or more workers cannot exceed 10 % of the total workforce.

3.4.5 Performance Requirements

There are no performance requirements for DFI in Hong Kong, Argentina, Chile and Hungary. In Singapore, Malaysia, Poland and Czech Republic, performance requirements are linked to investment incentives. For example, in Poland, investors are eligible to have incentives if their investment exceeds a certain amount, if they generate new employment in a certain time period, and if investment introduces new or environment-friendly technology. In the Czech Republic, investors are granted incentives if they invest in high-tech industries or some percentage of their investment is in high-tech machinery. Incentives are also granted for employment generation, employee training and exports exceeding a certain level.

In China, there are export, local content, technology transfer and local worker requirements. The incidence of local content requirements and other performance requirements are very high as compared to the other developing countries. For example, according to a study by the European Round Table of private industries cited in UNCTAD (2003: 14-15), on a 0-6 scale, the incidence of performance requirements were 4 in 1992. This fell to only 3.5 in 1999.

There are local content and other performance requirements in the Republic of Korea (UNCTAD, 2003:13). As in China and the Republic of Korea, there are also local content requirements as well as other performance requirements in Thailand in the automotive industry and in other industries. The incidence of performance requirements in Thailand is among the highest in the countries in the sample of countries considered here (UNCTAD, 2003:13 and 17).

India was inclined to use more mandatory requirements. Local content requirements, export obligations, dividend balancing or foreign exchange neutrality were obligatory, but they were phased out in 2000. Thus, there is also a tendency in India to link performance requirements to incentive schemes.

In Venezuela, there are performance (local content) requirements only for the automotive sector. In Brazil and Mexico, there are local content requirements in other industries as well as the automotive industry (UNCTAD, 2003:13).

3.4.6 Investment Incentives

In Hong Kong, there are no direct incentives for foreign investors[24]. In Argentina and Venezuela, there are no incentives specifically designed for foreign investors. Investment incentives are equal for both domestic and foreign investors.

On the other hand, in Singapore, investors, and especially the foreign ones, are directed to knowledge-based industries through a set of investment incentives. These incentives take the form of tax incentives and apply to domestic as well as foreign investors. The eligibility criteria are that the investment should contribute to the goal of making Singapore a knowledge-based economy. The company's track record, the amount of investment, and the contribution of investment to the above-mentioned goal become important in determining whether investments are eligible for tax incentives or not.

In Malaysia, without discriminating among foreign and domestic investors, various incentive schemes are available, usually linked to performance criteria, such as export targets, local content and technology transfer. Non-fiscal export incentives consist of an export credit re-financing facility, an infrastructure allowance, and various investment allowances[25]. In addition, exporting firms and firms located in the Multimedia Super Corridor face no restrictions on recruitment of expatriates, are exempt from all capital controls and can apply to government funding for R&D.

In China, there are tax rebates and tax benefits for foreign investors based on the amount of investment and the years of operation[26]. The export commodities produced by a foreign-capital enterprise, except those whose exportation is restricted

[24] http://www.actetsme.org/hong/ipihong.htm

[25] See http://www.mida.gov.my/policy/chapter3.html

[26] http://www.jxedz.com/en/invest_02.asp

by China, shall be granted a tax reduction, tax exemption or tax refund in accordance with the relevant provisions of the tax law of China

As mentioned before, the Thai government encourages DFI particularly in the industries where Thai expertise is lacking, industries in remote areas, and industries that are important and beneficial to the country's economic and social development and to national security. Investment incentives in Thailand include tax holidays, tariff exemptions and various non-tax privileges like guarantees, special privileges, services, etc.[27]

In the Republic of Korea, various tax exemptions and reductions are in effect for foreign investors. In target industries for DFI, corporate and income taxes are exempted or reduced. There are also exemptions from local taxes from 8 to 15 years at the discretion of local or provincial governments. Moreover, there are tax exemptions or reductions for small and medium sized industries.[28] In India, the states offer various incentives to attract DFI in the form of various tax concessions, capital and interest subsidies, and reduced power tariff.[29]

In Brazil, the federal government is responsible in particular for the incentive schemes designed for the automotive industry. The states are also involved in incentives for automotive and other industries. However, incentives offered by the states are more concerned with regional development. Although, there is no formal distinction between domestic and foreign investors in the allocation of incentives, in practice, there is a tendency to favour foreign investors than domestic investors, to attract DFI. The incentives include tax holidays and exemptions, provision and preparation of project site and buildings, along with the infrastructure, and equity participation of the state in a project (Christiansen et al, 2003:15-17).

In Mexico, there are certain fiscal incentives for foreign investors in particular within the framework of export promotion. These incentives include tax-free temporary imports, simpler customs procedures, and tax refunds for exporters.

In Chile, although there are no major incentives for foreign or domestic investors, there may be certain VAT exemptions on capital goods forming part of a

[27] For more details of incentives in Thailand, see http://strategis.ic.gc.ca/epic/internet/inimrri.nsf/en/gr122375e.html

[28] For details, see http://www.austrade.or.kr/services/i_incentives.html.

[29] http://www.tidco.com/india_policies/fdi_policy/readyreckoner.asp.

foreign investment approved by the government. Foreign investment projects of over USD 50 million for developing industrial or extractive activities may also benefit from some incentives like the possibility of having long contracts for up to 20 years, fixed tax arrangements, and authorisation to hold abroad foreign exchange from export earnings. Moreover, foreign investors have the option to resort to a fixed tax regime in which case they are subject to an unchanged rate of 42% (instead of the regular regime of 35%) for a maximum period of 20 years. Investors opting for this benefit have a one-time opportunity to voluntarily withdraw and be governed by the regular regime. In addition, profits remitted abroad are charged an additional tax of 35%. This rate also applies to withdrawn or distributed profits. Reinvested profits are not taxable.

In Poland, foreign investors are entitled to investment grants under certain eligibility criteria based on the amount of investment, and employment creation and technology prospects of the project. Investment grants include covering up to a percentage of investment outlays, employment grants, training grants and grants for infrastructure development.

In the Czech Republic, there are investment incentives for DFI linked to performance criteria. Tax-relief on corporate tax, job-creation and re-training grants, and provision of low-cost land are the incentives offered to investors with the eligibility criteria aimed to channel foreign investments into high-tech manufacturing sectors and to areas where unemployment is high. In order to be eligible for the incentives, the investment must be made into manufacturing, either into high-tech sectors listed in the Investment Incentives Act or into other manufacturing sectors provided that the production line consists of machinery listed on a government approved list of high-tech machinery. Moreover, subsidies are also offered for R&D, knowledge and technology-based projects that aim to improve human capital and knowledge stock and technological level of the Czech Republic. Investment in new machinery and technology is further encouraged through 10-15% deductions of the cost of new machinery or technology from corporate tax base provided that the investors must be the first owners. Machinery and equipment which are not domestically produced and exceeding the value of CZK 10 million can be imported duty free, provided that they are not older than 1 year and they will be used by the same investor at least for 4 years. Switching from coal or oil to gas, electricity or

other alternative sources of energy makes the investors eligible for a 5-year real estate tax relief. If DFI firms create new employment in regions where unemployment is high, they receive CZK 80,000 per employee.

In Hungary, there are investment incentives available to both domestic and foreign investors. Based on the volume of investment and the number of jobs created, Hungarian government grants 5-year or ten-year tax holidays. There are also Research and Development incentives and some investment allowances to promote DFI.

3.4.7 International Arbitration

International arbitration attributes the settlement of disputes among foreign investors and the government to an international arbitration council rather than to national jurisdiction (Altıntaş, 1998:1). The primary advantage of international arbitration is its confidentiality[30]. That is, as the only participants in the arbitration process are the parties in dispute, it is easier to preserve reputation and maintain confidentiality in arbitration mechanism than settlement in courts. Secondly, the parties involved can customise the arbitration process to suit their needs so that the decision process can be more flexible to save time and cost of the parties. Thirdly, the investors prefer international arbitration because it is a peaceful process. That is, as the continuation of commercial relations is the basic principle of international arbitration, the process is generally ended with compromise.

The lack of international arbitration was seen as the primary obstacle in the implementations of privatisation program and build-operate-transfer (BOT) projects in Turkey[31]. Thus, in 1999, the necessary amendments were made in the Constitution to recognise the decisions made in international arbitration. Then, international arbitration was regulated by Law 4686 enacted on June 21, 2001. And the new Foreign Investment Law No. 4875, which came into force in June 2003, refers to that law in dispute settlement with foreign investors.

The advantages of international arbitration mentioned above are more inclined to favour private investors than the governments of host countries. For example, the

[30] See Balcı (1999:4-5) and Ernst and Young (2002:18-19) for the advantages of international arbitration.

[31] See Letter of Intent (1999) and Altıntaş (1998:1).

governments may not be able to regulate foreign investments to promote backward and forward linkages in the domestic economies and to impose restrictions on investors for environmental, safety and health concerns[32]. Therefore, the host countries were generally reluctant participants in international arbitration until the 1990s.

For example, although China enacted its arbitration law in 1995, the percentage of commercial disputes settled with resort to international arbitration was less than 20% in the 1990s. Moreover, the arbitration law of China has no mechanism for the enforcement of arbitral awards, which makes the actual enforcement of these awards "virtually impossible"[33] (Kusuma-Atmadja, 2004:18).

In Thailand, the Working of Aliens act prohibits foreigners to take part as arbitrators in dispute settlement. The impossibility of foreign lawyers to take part in the arbitration process makes international arbitration unattractive for foreign investors in Thailand (Kusuma-Atmadja, 2004:15).

Latin American countries were historically reluctant to accept international arbitration practices. With the exception of Chile, the use of both domestic and international arbitration was very rare in Latin America (Kleinheisterkamp, 2002:668). For example, Brazil had long been very reluctant to offer greater rights to foreign investors and permit investment disputes to go to international arbitration (Investment Watch, 2003). Although Argentina, Chile, Mexico and Venezuela, among others, ratified the New York Convention as of November 2000, Brazil was not among these countries. Brazil has also not ratified Washington Convention, unlike Argentina, Chile and Venezuela (Frutos-Peterson, 2000; Investment Watch, 2003). Although Brazil, Mexico and Venezuela have their own arbitration

[32] See Durbin (1997) for a discussion of these issues within the framework of Multilateral Agreement on Investment.

[33] Due to burdensome, time consuming and frustrating procedures to enforce an arbitral award in China, the results are often unsuccessful (Kusuma-Atmadja, 2004:18).

legislations, none of them "has gone as far as to recognise arbitration as a method of dispute settlement in their national Constitutions" (Frutos-Peterson, 2000).

3.5 Macroeconomic Indicators

As far as the macroeconomic indicators are concerned, a common regular pattern does not emerge among the top DFI-receiving countries (Table 3.6a and 3.6b). The population of countries range from 4.3 million in Singapore to 1,288.4 million in China. In terms of population size, Turkey ranks fifth among 15 countries, following Mexico. GDP ranges from 72 billion USD in Chile to 1,400 billion USD in China. The annual average growth rate of GDP in 1990-2003 period ranges from 0.5% for Venezuela to 9.5% for China. Per capita gross national income, adjusted for purchasing power parity or not, also has a large variance. There is also considerable variation among countries in terms of the share in GDP of household final consumption expenditure, government final consumption expenditure and gross fixed capital formation. External balance in goods and services and domestic credit provided by the banking sector also vary considerably among countries. However, all countries in the sample, except for India, China and Argentina turn out to have very low share of agricultural value added in GDP. Turkey follows these three countries in the relatively high share of agricultural value added in GDP. The share of industrial value added in GDP is also among the lowest in Turkey, just after Brazil and Hong Kong, China. Moreover, except for Brazil, Venezuela and Turkey, inflation, based on the implicit GDP deflator for 1990-2003 is rather low.

As far as labour cost per hour is concerned, the average of the sample was 3 USD in 2002. If Hong Kong, Singapore and Republic of Korea are left aside, as their labour cost per hour is fairly above the rest of the countries in the sample, the average is USD 1.9. This is still higher than the labour cost per hour in Turkey, which stood at USD 1.4. Thus, labour cost does not seem to be a problem that should hinder DFI inflows to Turkey.

Actually, it may be the case that low labour costs may be accompanied by low labour productivity; hence "efficiency wage" may not be low[34]. Efficiency wage is a unit-free concept, which is equal to labour cost divided by labour productivity, which turns out to be the ratio of total labour cost to value added. In order to take labour

[34] Chunlai (1997:31) makes a similar argument on this point.

productivity into account, "efficiency wage" is calculated for each country in the sample for the 1995-99 period, based on the data in World Development Indicators (WDI) (2000:58-60). The comparison of efficiency wages in high DFI performers and in Turkey shows that efficiency wage in Turkey is one of the lowest among the countries in our sample. Thus, even corrected for labour productivity, labour cost does not turn out to be a factor that should hinder DFI inflows to Turkey.

To recapitulate, the indicators for Turkey do not go much further than the values in the sample. Since the values for Turkey fairly lie within the boundaries of the indicators of countries in our sample, it seems that DFI inflows cannot be easily related to the given macroeconomic indicators.

Table 3.6a Macroeconomic Indicators: DFI High Performers and Turkey

						Value added as % of GDP		
	Population (million)	GDP (million USD)	GDP (avg. annual growth)	per capita GNI (USD)	per capita GNI (PPP) (USD)	Agriculture	Industry	Services
	2003	2003	1990-2003	2003	2003	2003	2003	2003
Argentina	38.4	129,735	2.3	3,650	10,920	11	35	54
Brazil	176.6	492,338	2.6	2,710	7,480	6	21	73
Chile	15.8	72,416	5.6	4,390	9,810	9	34	57
China	1288.4	1,409,852	9.5	1,100	4,990	15	53	32
Czech Republic	10.2	85,438	1.4	6,740	15,650	4	40	57
Hong Kong, China	6.8	158,596	3.7	25,430	28,810	0	12	88
Hungary	10.1	82,805	2.4	6,330	13,780	4	31	65
India	1064.4	598,966	5.8	530	2,880	23	26	52
Korea, Republic o	47.9	605,331	5.5	12,020	17,930	3	35	62
Malaysia	24.8	103,161	5.9	3,780	8,940	9	49	42
Mexico	102.3	626,080	3.0	6,230	8,950	4	26	70
Poland	38.2	209,563	4.7	5,270	11,450	3	31	66
Singapore	4.3	91,342	6.3	21,230	24,180	0	35	65
Thailand	62	143,163	3.7	2,190	7,450	9	41	50
Venezuela	25.5	84,793	0.5	2,493	4,740	3	43	54
Turkey	70.7	237,972	3.1	2,790	6,690	13	22	65

Source: World Development Indicators (2005)

Table 3.6b Macroeconomic Indicators: DFI High Performers and Turkey

	Household final cons. expenditure % of GDP	General gov't. final cons. expenditure % of GDP	Gross capital formation % of GDP	External balance of goods and services % of GDP	GDP implicit deflator Avg. annual % growth	Domestic credit provided by banking sector % of GDP	Labour cost per hour (USD)	Efficiency Wage
	2003	2003	2003	2003	1990-2003	2002	2002	1995-99
Argentina	63	11	15	11	4.9	62.4	1.4	0.2
Brazil	58	20	20	2	118.9	63.6	2.6	0.2
Chile	63	11	22	3	7	73.9	2.0	0.2
China	44	13	42	1	4.9	168.4	0.8	0.3
Czech Republic	53	21	28	-2	9.2	45.8	2.7	0.4
Hong Kong, China	57	11	23	9	1.8	144.5	5.0	0.7
Hungary	67	11	24	-2	16.4	53.8	2.5	0.5
India	65	13	24	-2	6.8	58.5	0.7	0.4
Korea, Republic of	55	13	29	3	4.8	101.9	9.2	0.3
Malaysia	46	14	22	18	3.4	154.2	2.2	0.3
Mexico	69	13	20	-2	16.5	38	1.8	0.3
Poland	70	16	19	-5	17.7	35.8	2.9	0.2
Singapore	41	12	13	33	0.6	83.5	7.8	0.5
Thailand	62	9	23	6	3.4	116	1.1	0.1
Venezuela	70	6	12	12	39.5	15	2.5	0.2
Turkey	67	14	23	-3	68.7	59.1	1.4	0.2

Source: World Development Indicators (2005)
Labour cost per hour from Economist Intelligence Unit: www.economist.com/countries.
Efficiency wage is calculated as labour cost per worker divided by value added per worker, using data in WDI (2000:58-60).

3.6 Competitiveness Indicators

World Economic Forum (2002) includes detailed survey results from 75 countries for 140 variables on the following subjects: Macroeconomic environment, technological innovation and diffusion, information and communications technology, general infrastructure, public institutions (contracts, law and corruption), domestic competition, cluster development, company operations and strategy, and environmental policy. We have selected 17 out of these 140 variables, for which Turkey performs as the poorest[35] among our sample countries. These variables cover the following subjects: Macroeconomic environment (recession expectations for the next year, soundness of banks, expected exchange rate volatility over the next two years, venture capital availability), technological innovation and diffusion (technological sophistication, firm-level innovation, government prioritisation of information and communications technologies (ICT), government success in ICT), public institutions (the burden of administrative regulations, tax evasion), cluster development (product and process development in collaboration with local suppliers,

[35] Poorest in the sense that the value of Turkey is the lowest in the sample.

customers and research institutions), company operations and strategy (capacity for innovation, reliance on professional management, efficacy of corporate boards, and internet effects on business). The variable, average years of schooling for adults, was added to this set, and results for all 17 variables are presented in Table 3.7 below.

For all the variables in Table 3.7, except for burden of regulation, the value for Turkey is more than one standard deviation below the sample average excluding Turkey. Moreover, for firm-level innovation, DFI and technology transfer, government prioritisation of information and communications technology, electricity prices, and extent of product and process collaboration, the value for Turkey is more than two standard deviations below the sample average excluding Turkey.

It turns out that the main problem of Turkey seems to be the lack of sufficient technological capacity and low level of education of the adults. Macroeconomic instability and high-energy costs come out as the next problematic factors in the ordering, and then comes administrative burdens and tax evasion.

Table 3.7 Competitiveness Indicators: DFI High Performers and Turkey

Variable	Description	Argentina	Brazil	Chile	China	Czech Republic	Hong Kong SAR	Hungary	India	Korea	Malaysia	Mexico	Poland	Singapore	Thailand	Venezuela	Sample Mean	Turkey
Schooling	Average years of schooling of adults as of 2001	8,8	4,9	7,5	6,4	9,5	9,4	9,1	5,1	10,8	6,8	7,2	9,8	8,6	6,5	6,6	**7,8**	5,3
Recession Expectations	The likelihood of your country's economy being in a recession next year is (1=highly likely, 7=not likely) [Question asked in February-April 2001]	3,9	6,0	4,7	5,5	4,9	5,7	6,3	4,8	3,9	4,6	4,7	5,0	5,2	4,1	4,3	**4,9**	3,5
Soundness of Banks	Banks in your country are (1=insolvent and may require government bailout, 7=generally healthy with sound balance sheets)	5,6	5,8	6,5	3,5	2,9	6,7	5,1	4,2	3,1	4,5	3,0	5,4	6,5	3,3	4,3	**4,7**	2,9
Expected Exchange Rate Volatility	Over the next two years, your country's exchange rate will be (1=very volatile, 7=very stable) [Question asked in February-April 2001]	6,0	4,6	4,4	4,5	5,0	6,3	5,1	4,3	4,2	5,0	4,3	4,1	5,7	4,4	4,4	**4,8**	3,9
Venture Capital Availability	Entrepreneurs with innovative but risky projects can generally find venture capital in your country (1=not true, 7=true)	2,2	3,7	2,9	2,8	3,2	4,5	3,6	3,8	4,1	3,0	2,3	3,0	4,5	2,7	2,0	**3,2**	2,0
Technological Sophistication	Your country's position in technology (1=generally lags behind most countries, 7= is among the world's leaders)	3,6	4,1	4,6	3,7	4,7	5,0	4,5	4,5	4,9	3,8	3,5	3,9	5,9	3,8	3,5	**4,3**	3,3
Firm-Level Innovation	In your business, continuous innovation plays a major role in generating revenue (1=not true, 7=true)	5,5	5,5	5,6	5,3	5,7	5,6	5,0	5,4	5,1	5,8	5,4	5,5	6,2	4,8	5,2	**5,4**	4,5
FDI and Technology Transfer	Foreign direct investment in your country (1=brings little new technology, 7=is an important source of new technology)	5,2	5,7	5,4	4,8	6,0	5,6	6,2	5,3	4,9	6,1	5,6	5,8	6,3	5,3	5,4	**5,6**	4,6
Government Prioritization of ICT	Information and communications technologies are an overall government priority (1=strongly disagree, 7=strongly agree)	4,2	5,0	5,2	5,3	4,3	5,6	4,9	5,3	5,0	5,4	4,7	3,4	6,4	4,6	4,3	**4,9**	3,4
Government Success in ICT Promotion	Government programs promoting the use of ICT are (1=not very successful, 7=highly successful)	3,6	4,5	4,1	4,5	3,7	4,9	4,3	4,9	4,8	4,2	3,8	3,3	6,0	3,9	3,7	**4,3**	3,3
Electricity Prices	The price of electricity per kilowatt-hour in your country compared to international standards is (1=much higher, 7=among the world's lowest)	4,6	4,3	4,4	3,9	4,9	4,5	4,3	3,1	4,5	4,8	3,9	4,6	3,7	4,5	3,3	**4,2**	3,0
Burden of Regulation	Administrative regulations in your country are (1=burdensome, 7=not burdensome)	2,9	2,5	3,3	3,0	3,4	5,9	3,7	2,9	2,9	3,1	2,4	3,3	5,6	3,1	2,5	**3,4**	2,4
Tax Evasion	Tax evasion in your country is (1=rampant, 7=minimal)	2,0	2,4	5,3	3,0	2,6	6,1	3,4	2,7	3,3	4,6	2,0	3,0	6,3	3,1	2,3	**3,5**	2,0
Extent of Product and Process Collaboration	Product and process development in your country is conducted (1=within companies or with foreign suppliers, 7=in collaboration with local suppliers, customers & research institutions)	3,3	4,3	3,9	4,2	4,2	4,2	3,9	3,9	4,3	3,0	3,4	4,0	4,1	3,6	3,2	**3,8**	2,8
Capacity for Innovation	Companies obtain technology (1=exclusively from foreign companies, 7=by pioneering their own new products or processes)	2,8	3,6	3,6	4,5	3,3	3,7	3,3	3,6	4,4	2,7	3,1	3,8	4,2	2,9	2,9	**3,5**	2,5
Reliance on Professional Management	Senior management positions in your country (1=are often held by relatives, 7=go only to skilled professionals)	4,7	5,3	4,9	4,6	4,5	4,9	5,1	4,6	3,9	5,0	4,2	4,6	5,8	4,0	4,1	**4,7**	3,9
Efficacy of Corporate Boards	Corporate boards in your country are (1=controlled by management, 7=powerful and represent outside shareholders)	4,0	3,5	4,5	3,3	3,2	3,9	4,7	3,5	3,5	3,7	3,5	4,7	4,8	3,9	3,3	**3,9**	2,8
Internet Effects on Business	To what extent has the Internet improved your firm's ability to coordinate with customers and suppliers to reduce inventory costs (1=no change, 7=huge improvement)	3,5	3,6	3,8	3,3	4,2	4,3	3,3	3,2	4,5	3,6	3,7	3,7	4,6	3,7	3,3	**3,8**	2,9

Sources:

(1) Average years of schooling of adults for all countries except for Czech Republic: World Bank EdStats http://devtata.worldbank.org/edstats/cdl.asp

(2) For Czech Republic, average years of schooling (as of 2000) from Human Development Report 2001 http://www.undp.org/hdr2001/indicator/cty_f_CZE.html

(3) The rest of the variables from World Economic Forum (2002)

3.7 The Role of Privatisation and Regional Integration in DFI Inflows

The wave of privatisation of state owned enterprises in the 1990s, especially in Latin America and Central and Eastern Europe, has been an integral part of DFI inflows to countries in these regions. For example, privatisation-related DFI inflows accounted for 40.9% of total DFI inflows to Argentina between 1990 and 1997 (Pereiro, 1999:14); and 38.7% of total DFI inflows to Brazil between 1991 and 1999[36]. On the other hand, the ratio of privatisation related DFI inflows to total DFI inflows was around 90% in the Czech Republic in the 1991-92 period, and around 50% in Poland in 1992 and Hungary in 1993 (Schwartz and Haggard, 1997:2).

In the 1988-93 period alone, Latin American countries accounted for one-fourth of worldwide privatisations (Megginson, 2000). However, as the privatisation of state owned enterprises is a one-off process, DFI inflows also came down in recent years after attaining their peak in 2000, especially in Argentina, Brazil, Chile and Venezuela. In a press release on 13 June 2004, UNCTAD attributes this decrease to the normalization process in DFI inflows to the region[37]. According to UNCTAD, following the year 2000, DFI inflows to the Latin American countries returned to their patterns preceding the boom of 1990s, which was driven by privatisation, especially in the services sector.

Apart from the impact of privatisation on DFI inflows, another critical factor in attracting DFI inflows has been regional integration agreements (RIAs). In the last 15 years, the world has witnessed the increased role of RIAs like MERCOSUR, NAFTA, ASEAN, EU, and APEC. Of course, the effects of a regional integration on DFI inflows will depend on both the characteristics of the RIA, on the one hand, and the characteristics of DFI, like being horizontal or vertical, export-oriented or domestic market oriented, on the other hand[38]. However, RIAs are often formed with the following expectations: The growth rates of countries forming RIAs will increase through the formation of larger markets, increasing competition, more efficient resource allocation, and various externalities (Blomström and Kokko, 1997:2). Moreover, as the trade and investment restrictions are reduced or totally removed by

[36] Author's calculation based on Macedo (2000:11) and UNCTAD on line database.

[37] See **http://www.unctadxi.org/templates/Press 542.aspx.**

[38] See Blomström and Kokko (1997) and Yeyati, Stein and Daude (2003) for an elaboration on these issues.

RIAs, DFI inflows to these countries are expected to increase (Blomström and Kokko, 1997:3).

In this chapter, examples of MERCOSUR and NAFTA are given as gaces where DFI inflows to the member countries increased substantially after the formation of these RIAs. MERCOSUR was officially created in 1995 among Argentina, Brazil, Uruguay and Paraguay in order to form a customs union. While annual DFI inflows to these countries were around USD 1.6 billion in 1984-89, they increased to around USD 40 billion in 1997-99, where Argentina and Brazil took the lead in these inflows (Chudnovsky and Lopez, 2004:637-8). Of course, this increase in DFI inflows to the region cannot be solely attributed to the creation of MERCOSUR. Some part of DFI inflows were due to privatisations and some were due to modernisation or expansion investments of existing DFI firms in the region. Moreover, some amount of these investments would have happened anyway in the absence of MERCOSUR. Nevertheless, the role of MERCOSUR could not be denied in attracting DFI inflow to the region.

First of all, MERCOSUR helped the member countries to be seen as important economic actors in the world. Secondly, it offered a liberalised and expanded market to international investors increasing their confidence in the region that investment and trade liberalization would be permanent. Thus, the existing TNCs re-organised their production on a regional basis in MERCOSUR and new TNCs entered, as they saw MERCOSUR as an export base to the other Latin American countries and to the rest of the world (Reid, 2002:3-4).

North American Free Trade Agreement (NAFTA) was formed in 1992 among the United States, Canada and Mexico. This RIA has had a substantial impact on DFI inflows to Mexico. As shown in Table 3.2, DFI inflows to this country increased from USD 2.6 billion in 1990, to USD 9.7 billion in 1995, USD 16.6 billion in 2000 and USD 26.8 billion in 2001. The impact of NAFTA on DFI inflows to Mexico can be attributed to the following factors: First of all, with NAFTA, TNCs had the impression that the changes in the institutional framework and the ongoing liberalization in Mexico that coincided with the formation of NAFTA would be permanent. Secondly, Mexico offered a vast number of commercial opportunities for the investors in United States and Canada with its abundant supply of cheap labour in a liberalised economic environment. As investors outside the NAFTA region have

also perceived these commercial opportunities, DFI inflows to Mexico have increased substantially (Blomström and Kokko, 1997:41).

3.8 The Investment Climate and DFI Regime of Turkey in Historical Perspective

3.8.1 The Background

The history of legislation of DFI in the Turkish economy goes back to the late 1940s when the liberalization attempts took off, as Turkey became a member of the World Bank and the IMF, in 1947. According to Kazgan (1999:97), the willingness of powerful classes to open the Turkish economy to foreign capital along with the elimination of statist economic order then in force was first and overtly declared in an economics congress organised by the Association of Traders in Istanbul, in 1948. In this congress, the gradual elimination of statism, and opening the Turkish economy to foreign capital in order to ease the foreign exchange constraint in development were set as the pre-conditions for development of Turkey. This view of development through liberal economic policies and by the contribution of foreign capital were also reflected in the reports on Turkey by the United States government in 1946 and the World Bank in 1949 (Kazgan, 1999:97). According to these reports, Turkey should give priority to agriculture, eliminate state activities in the economy, and encourage foreign capital.

In the liberal environment of the early 1950s, the first law on DFI (Law No. 5583) was enacted in Turkey on March 1, 1950. According to Erdilek (1982:11), this law was not designed specifically to promote foreign investment in Turkey, but it can only be taken as a starting point for the encouragement of foreign capital. It guaranteed the capital and profit transfers of foreign investors under certain unspecified conditions.

After the Democrat Party came to power in May 1950, liberalization attempts were accelerated, and a new law superseding Law 5583 was enacted, with the objective of promoting DFI. The following provisions of Law 5821, enacted on August 1, 1951, needs to be noted (Erdilek, 1982:11-12):

(1) All sectors of the economy except agriculture and commerce were opened to DFI subject to examination by an inter-ministerial committee, chaired by the Governor of the Central Bank, and authorisation by the Council of Ministers.

(2) DFI was allowed to enter in three forms: foreign exchange; plant and equipment, construction materials, spare parts, etc.; intangible rights such as patents, know-how and trademarks.

(3) Remittances of interest and dividends abroad by foreign investors were restricted to 10% only. Full repatriation of capital was allowed after 3 years for those in the form of foreign exchange, and after 5 years for those in the form of intangible rights.

(4) The foreign and local investors were treated equally in all sectors of the economy open to foreign investment.

(5) Some of the existing restrictions on the employment of foreigners in Turkey by foreign investors were relaxed.

(6) The application procedures for DFI were specified.

Although Law 5821 was enacted for promoting DFI in Turkey, the expectations were not realised. This failure of realisation of the expectations was attributed to the restrictive character of the law, probably to those restrictions on capital transfers and profit repatriations. Thus, a more liberal law was prepared with the aid of an American expert, C. B. Randall, following an invitation from the Turkish government (Erdilek, 1982:12).

3.8.2 Law No. 6224

Law No. 6224, enacted on January 18, 1954, superseded Law No. 5821. Law No. 6224 was perceived as fairly liberal both then and now, and it contained the following noteworthy provisions (GDFI, 1999:17-23):

(1) All sectors of the economy where Turkish private enterprise can operate are open to foreign investors provided that foreign investment project is beneficial to the economic development of the country. However, the foreign capital imported into Turkey cannot acquire the majority share of institutions, which act as a monopoly within the country.

(2) In addition to the forms of entrance cited in Law No. 5821, portions of profit converted into and integrated with investment capital are also accepted as imports of foreign capital. Additionally, the value of the imported capital as well as the necessity and appropriateness for the approved enterprise are determined by experts to be appointed by the Committee for the Encouragement of Foreign Capital,

which is chaired by the Governor of the Central Bank, and consists of the Undersecretary of the Treasury, General Director of Internal Trade, General Director of Industry, Head of Department of Research and Planning of Ministry of State Administrations and the General Secretary of the Union of Chambers of Commerce and Industry and Commodity Exchanges.

(3) Subject to the decision of the Committee and in accordance with the tax laws in force, the share of profits accruing in favour of principal foreign capital investors may be added, in whole or in part, to the principal foreign capital or reinvested in another enterprise qualified as foreign investment.

(4) Subject to the permission of the Ministry of Finance, net profits calculated in accordance with tax laws, sales of proceeds from foreign capital invested and interest payments, may be transferred abroad and capital may be repatriated. If deemed necessary, Ministry of Finance or the Committee may order an examination of the accounting books and tax declarations of DFI firms in order to determine the amount available for transfer or whether the sales of capital are in accordance with general goodwill.

(5) Foreign investors may employ foreigners without being subject to the restrictions on employment of foreigners in Turkey. Foreign employees working for the said foreign enterprises may freely remit their earnings abroad.

(6) The Committee screens the applications of foreign investment within 15 days of their submission. The parties may raise their appeals against the decision of the Committee within 30 days of the announcement of decision to themselves. The appeals shall be directed to the Ministry of Finance, the Ministry of Economy and Commerce, and Ministry of State Administrations. The decisions of these organs are final.

(7) Foreign capital and foreign enterprises are entitled to the same rights, exemptions, privileges and facilities recognised for domestic capital and domestic enterprises engaged in comparable fields of business.

3.8.3 The Criticisms of Law No. 6224

Law No. 6224, being a fairly liberal one when compared with the investment regimes of some of the top DFI-receiving countries, could not realise the expected surge in the inflows of foreign investment in Turkey. According to Erdilek (1982),

the fundamental reason of the Law No. 6224 not being successful is the vagueness of the Law. That is, although being liberal in its wording, it has lent itself to wide-ranging interpretations in its implementation by the bureaucracy. For example, it was stated in the Law that a foreign investment project to be approved should be beneficial to the Turkish economy. But, Erdilek (1982:13) argues that this condition was open to any kind of interpretation for it does not define the conditions of being beneficial to the Turkish economy. Erdilek (1982:13) asks that "according to which criteria and to what extent" should the DFI project be beneficial? Erdilek (1982:13) argues that a DFI project could be easily accepted or rejected on subjective grounds, as there was no objective yardstick in the law on which approval decisions that the DFI project was beneficial or not could be based. In other words, the law did not provide an overtly stated code of implementation. As a result, the foreign investors were uncomfortable with the arbitrariness in the implementation of the Law (Erdilek, 1982:14).

The complaints of foreign investors were based on the following points: They accused the bureaucracy of "not allowing the capitalisation of intangible rights, reducing and even stopping royalty payments, and discriminating against DFI firms in the implementation of investment credit incentive measures" (Erdilek, 1982:14). Against these accusations, the bureaucracy was defending itself that their position was not an ideological offence to foreign investment, but on the contrary, they were just trying to maximise the benefits of DFI accruing to Turkey. According to Erdilek (1982:14), the bureaucracy was taking one of the provisions of the Law No. 6224, ie. to be beneficial to the Turkish economy, as superior to the rest of the provisions of the Law.

Another important criticism of the pre-1980 DFI regime of Turkey was the absence of a central and unified authority to deal with the problems of foreign investors. According to Erdilek (1982:15), the government authority was split among the Ministry of Commerce, the State Planning Organisation, the Ministry of Finance, and the Ministry of Industry and Technology, without there being any coordination and cooperation among them. It was argued that this lack of a central authority prevented the effective implementation of DFI policies, as there was neither a unified regulatory framework nor a unified enforcement of the existing regulations (Erdilek, 1982:17). Moreover, this split character of the bureaucracy was one of the reasons

for the delays in the approval process (Erdilek, 1982:22-23). Actually, the DFI approval, capital increase, and any kind of change in the line of activity of the foreign enterprise, all required the decision of the Council of Ministers in the pre-1980 period, which made the implementation of the Law practically difficult (SPO, 1990:4). Moreover, DFI in the Law No. 6224 was interpreted as only greenfield investments, and DFI projects solely for trading purposes were not approved (SPO, 1990:4).

Among the complaints of the foreign investors in Turkey were the export commitment and local content requirements[39]. Moreover, Turkish authorities demanded changes on the financing of DFI projects in order to minimise the dependence of DFI projects on domestic credits (Erdilek, 1982:22). Although Erdilek (1982) cites these factors as the major obstacles[40] to the activities of DFI firms in Turkey, they were among the policies of all top DFI-receiving countries, as seen in Section 3.4. It is reasonable to ask DFI firms to decrease their domestic credit requirements to prevent DFI to crowd-out domestic investment. On the other hand, export commitment and local content requirements were policies designed and implemented worldwide in order to maximise the benefits of DFI accruing to the host countries.

Another policy criticised by DFI firms was that, government officials were inclined not to allow DFI firms to import used machinery and equipment and to include them as a foreign participation in the equity of the DFI firm (Erdilek, 1982:70-71). Government officials defended their position claiming that used machinery and equipment would be overvalued to overstate the parent firm's equity participation. Moreover, importing used machinery and equipment would weaken the competitive level of DFI firms and of Turkey through the utilisation of obsolete technologies. On the other hand, DFI firms evaluated the position of government officials as dogmatic and unreasonable. They claimed that they were losing the chance of obtaining still up-to-date foreign used machinery that would have had long physical and economic lives in their operations.

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[39] See Erdilek (1982:188-193) for the respective positions of DFI firms and government officials on local content and export requirements imposed on DFI firms.

[40] Erdilek (1982:22) states that "most of the DFI firms interviewed complained that the Turkish government had become too rigid and unreasonable in its demand on export commitment and local content requirements".

The Turkish government also requested the existing DFI firms to increase their local share, or decrease their foreign share, to put it differently. However, this request also turned out to be a major criticism of the DFI regime in Turkey (Erdilek, 1982:22). This policy resembles the case of Thailand where DFI projects exceeding 1 million baht in some agricultural sectors were allowed 100% foreign ownership provided that foreign share would be decreased to 49% in five years. The problem in the Turkish case is probably due to the lack of any sectoral and/or time specification f the requirement.

High unit labour costs of the 1960s and 1970s, and the strength of the labour class vis-à-vis the employers in Turkey were cited among important factors explaining the unrealisation of the expectations from Law No. 6224. Erdilek (1982:18) argues that "especially for the export-oriented DFI, seeking the relatively low unit costs of a disciplined and docile labour force without the right to strike, as in South Korea and Taiwan, Turkey was totally unattractive". High labour costs in Turkey, as compared to South Korea and Taiwan, in that time should not be seen as a problem hindering DFI inflows, as the volume of DFI in Turkey was not very different from that of South Korea or Taiwan in that time.[41]

3.8.4 Institutional Changes in the Post-1980 Period

As part of the liberalization attempts in Turkey starting in 1980, foreign investment regime has also undergone some important changes. First of all, in order to unify the authority for foreign investment, which had been split and diffused earlier among several bodies, Foreign Investment Office (FIO) within the Prime Ministry was formed on January 14, 1980. In the same year, FIO was transferred to SPO from the Prime Ministry (Erdilek, 1982:239).

In addition, to unify the functions of granting incentives to industrial projects in a single authority, Encouragement and Implementation Department was created within the SPO (Erdilek, 1982:239).

Thirdly, a basic decree was enacted in 1980, which set forth the following conditions for DFI in Turkey (Erdilek, 1982:240):

[41] See Table 3.2 above.

1) The basic conditions set in the first article of Law No. 6224, which stated that foreign investment should be beneficial to the Turkish economy and should not acquire majority share in monopoly institutions, were maintained.

2) The total fixed capital of any enterprise in which foreign capital could participate had to be between USD 2 million and USD 50 million.

3) The equity participation of DFI had to be between 10% and 49%.

4) The DFI project had to fall within one of the specified sectors in agriculture, mining or manufacturing. For several sectors, there were export requirements ranging from 25% for trucks (transport vehicles sector) to 60% for furniture (forestry products sector). In aircraft and helicopters, diesel engines, machine tools, steam or water or gas turbines, electrical machinery, and electronics sectors, DFI project had to be a joint venture with a State Economic Enterprise.

5) Any DFI application would receive a preferential treatment if its DFI sources included one of the following:

(i) International institutions such as the International Finance Corporation and the Islamic Bank,

(ii) The Middle Eastern Countries of Saudi Arabia, Libya, Iran, Iraq, Kuwait, United Arab Emirates, Bahrain, and Qatar,

(iii) Turkish citizens employed abroad by foreign firms (the collective equity share had to be at least 25% for preferential treatment).

If the DFI application contained one of these sources, minimum or maximum equity share, financial size and areas of activity conditions would be relaxed.

The performance requirements became more flexible just after the liberalization measures taken in the early 1980 (Erdilek, 1986:188). The opposition of the SPO to the imports of used machinery and equipment was removed for export-oriented firms in January 1981 (Erdilek, 1982:71). From 1983 on, foreign technology imports were treated more flexibly for all DFI firms. There were also major revisions at the end of 1983. DFI was allowed to all commercial and services sectors. Foreign portfolio equity investment in Turkish firms was made easier. The restrictions on employment of foreign personnel in DFI firms were reduced (Erdilek, 1986:175).

As another institutional change, free trade zones were formed in 1985, with the objective of encouraging export-oriented DFI in Turkey by granting numerous exemptions to foreign firms located in these areas. Foreign firms were exempted from the provisions of foreign investment regime applied to foreign firms outside of these zones. They also benefited from 100% exemption from corporate and income taxes for an unlimited period, and exemption from Turkish labour law for 10 years (Öniş, 1994:96; Balasubramanyam, 1996:124).

As a result of liberalization attempts in the early 1980s, the discriminatory measures in export requirements and tax policies, and minimum equity participation by Turkish nationals were all eliminated. In this way, 100% ownership by foreign investors in all sectors of the economy became feasible in 1986. In the same year, the Foreign Investment Department of SPO was authorised to approve foreign investment projects up to USD 50 million. The projects exceeding this figure were subject to approval by the Council of Ministers (Öniş, 1994: 97).

Another measure implemented to attract foreign investment in Turkey was the Built-Operate-Transfer (BOT) scheme designed to give public sector infrastructural investments with high capital and technology requirement to foreign investors. The current law on BOT Model is Law 3996 dated June 13, 1994, with several subsequent amendments. This law guides the principles of appointing foreign investors to build, operate, and transfer bridges, tunnels, dams, irrigation channels, potable and non-potable water purifying plants, sewerage systems, communication systems, mines, factories, environmental pollution protection systems, motorways and railways, car parks, seaports and airports, and similar investments.

After the investor earns the investment's value including the profit accrued, and the credit used for investment, it will transfer the investment and services to the relevant administration at no cost, in well-kept and working condition. The total period of the BOT contract cannot exceed 49 years. However, the BOT model could not realise the expected inflow of DFI after 1980. One of the reasons of this failure was argued to be the lack of international arbitration, as discussed above in Section 3.4.7, which was also seen as the main obstacle in front of privatisation operations involving foreign buyers (See Letter of Intent, 1999: para.13).

Some adjustments were also made in tax and foreign exchange regulations in the 1980s. In the pre-1980 period there were extra 20% tax obligations on the income

of foreign shareholders. This tax, involving unequal treatment of foreign investors with domestic investors, was argued to deter DFI and was abolished in 1985. In the same year, incomes of foreign shareholders were included in the framework of investment allowance scheme. In 1988, that part of the income of foreign shareholders, accruing from the sales of shares, accounted by foreign exchange differences was exempted from tax obligations. In 1989, non-resident investors were entitled to purchase the stocks of domestic firms traded in the stock exchange in Turkey (SPO, 1990:5-6).

In the 1983-86 period, 233 license and technical support agreements were signed. In the 1987-89 period, the number of these agreements signed was 220. In 1987, Turkey became a member of International Centre for Settlement of Investment Disputes (ICSID) and Multilateral Investment Guarantee Agency (MIGA) (SPO, 1987:5 and SPO, 1990:6,9).

3.8.5 DFI Regime in the 1990s

The main principles of the Turkish DFI regime in the 1990s were as follows: There is equal treatment of foreign and domestic investors. There is no restriction in the percentage of foreign shares nor in the employment of foreign personnel. The transfers of capital abroad and profit repatriations are totally free. The expectations from DFI are formulated more explicitly: DFI was expected to contribute to value-added, employment, exports, capital accumulation, and advanced production and management techniques (Foreign Investment Report, 1990-92:2).

Foreign Investment Directorate was reorganised as the General Directorate of Foreign Investment under the Undersecretariat of Foreign Trade in 1991. 174 license, technical assistance and management agreements were signed during the 1990-92 period. The New York Convention and Geneva Convention were signed in 1991. By these conventions, the decisions of international arbitrators were recognised.

In 1995, foreign investors were allowed to deposit their capital brought from abroad as foreign exchange without being required to convert them into domestic currency. Moreover, the approval requirement for the license, know-how, and technical assistance and management agreements were removed in 1995. In the early 1990s, the automotive sector was given priority in the allocation of incentives, and

DFI was encouraged in this sector. The investment of Toyota in Turkey took place during this period.

3.8.6 More Recent Developments

Although there were some institutional changes through various communiques and decrees in the implementation of the Law No. 6224 through 1980s and 1990s, the basic Law No. 6224 was not changed. After the economic crisis of 2001, the need for restructuring the Turkish economy has emerged. This restructuring would be implemented through improving the "investment climate" of Turkey. In the Letter of Intent, submitted to the IMF by the Turkish government on January 18, 2002, it was stated that "to increase the role of the private sector in the economy, privatisation of the state enterprises will be accelerated, business environment will be improved and direct foreign investments will be encouraged."

As an initial step towards the improvement of the Turkish investment climate, Foreign Investment Advisory Service (FIAS) of the World Bank conducted a study on the administrative barriers to investment in Turkey and published a report in June 2001 (see FIAS, 2001). Based on FIAS (2001), a decree on "The Reform Program for Improving the Investment Climate in Turkey" was accepted by the Council of Ministers in December 2001. According to this reform program, "Coordination Committee for the Improvement of Investment Climate (YOİKK, Turkish acronym)" began its work in March 2002 (Akın, 2004:6).

YOİKK is an advisory committee to the Council of Ministers for making necessary changes to achieve a "better investment climate" in Turkey. YOİKK is chaired by the Minister of State and has 10 technical committees on the key reform areas (Akın, 2004:8).

Mainly based on the reports of FIAS, and through the studies of YOİKK, the new law on direct foreign investment in Turkey was prepared and enacted on June 5, 2003. The main motivation of the new law is that, the underperformance of Turkey in terms of attracting DFI is believed to be due to the inability of governments to see DFI as the primary constituent of development strategy. In the general motives of the new law, DFI is seen as playing the key role in development finance and decreasing the debt-burden of developing countries. It is argued that, in order to maximise the benefits (in terms of technology, employment, know-how, managerial skills,

marketing and export possibilities) of DFI, a rational balance has to be set up between the interests of foreign investors and the host country, and strategic policies should be designed towards this aim. In other words, it is argued that the reason that Turkey was not successful in attracting DFI was due to subordination of investor interests under the interests of the host country. Hence, the balance of interests should be adjusted[42]. It is argued in the general motivations of the Law 4875 that, although the previous Law No. 6224 was liberal, it was not able to cover the newly emerged concepts and practices regarding DFI and it was deficient in preventing the interest and rights of foreign investors in an international setting.

The new Law 4875 has the following striking amendments on the previous law: a) Article 1 of Law No.6224 is abolished completely. That is, the requirements for foreign investments to be beneficial to Turkish economy and that foreign investors cannot acquire majority shares of institutions that consist of monopoly in Turkey are no longer valid.

b) The permission/approval system for foreign investment is abolished and it is replaced with a notification system.

c) The equity purchases outside the stock exchange and more than 10% ownership of equities quoted in the stock exchange are also defined as direct foreign investment.

d) The definition of foreign investor is extended to include the Turkish workers residing abroad as well as once Turkish citizens that have another citizenship now and want to invest in Turkey.

e) The minimum capital requirement of USD 50,000 is abolished.

With the Law 4875, foreign investors are no more required to obtain any approvals form GDFI. A DFI firm is subject to equal requirements in establishing a business as with a Turkish private firm. According to Turkish Trade Legislation, the minimum capital requirement is TL 5 billion for a limited liability company, and TL 50 billion for a joint stock company, regardless of the company being domestic or foreign. The requirement for the approval of GDFI on the following areas was abolished: The assessment of in kind capital brought in by foreign investors, the changes in foreign participation, the transfers of shares among domestic and foreign shareholders, the transfers of shares among foreign shareholders, the agreements of

[42] See the general motivations of Law 4875: www.tbmm.gov.tr.

license, know-how, technical support, and franchising. As the approval process is abolished, foreign investors are only required to submit data to the Undersecretariat of Treasury for statistical purposes.

In addition to foreign nationals, Turkish citizens resident abroad are also accepted as foreign investors. The concept of foreign investment is expanded to include corporate securities other than government bonds; the profit, revenue, cash receivables, and other financial rights related to investment that are earned domestically and re-invested; and the rights related to natural resources.

Another important adjustment in the foreign investment regime is that foreigners would have the same rights as with the locals in the acquisition of land and real estate[43]. Moreover, the foreign share can be more than 50% in the enterprises having monopoly situation.

As a more recent development, on March 15th, 2004, the inaugural meeting of the Investment Advisory Council for Turkey was held in Istanbul, and was chaired by the Prime Minister of Turkey. The meeting brought together the chief executives of 19 international companies, the country's four leading business associations[44], the World Bank Group and the International Monetary Fund.

The following priority issues were raised at the meeting by the members of the Council: Removal of bureaucratic barriers, improvement of taxation system and incentives, access to land for foreign investors, further improvement in infrastructure and education and support for small and medium sized enterprises (IAC, 2005b: 1).

Since then, many actions have been taken on these issues raised at the meeting. Among these actions, the most important are as follows: To reduce bureaucratic red tape in the mining sector, the pre-licensing requirement was abolished by a legal amendment in June 2004. Moreover, the taxation on mining production was reduced by 50%. The time required to obtain an Environmental Impact Assessment Report has been reduced to 33 days from the earlier 6-7 months. A new law has been drafted to implement a one-stop shop for start-up permits. The corporate tax rate has been lowered by 3 percentage points to 30%, effective from January 1st, 2005. With a new

[43] However, this regulation was cancelled by the Constitutional Court, as published in the Official Gazette on April 26, 2005.

[44] Union of Chambers of Commerce and Industry-TOBB, Association of Turkish Industralists and Businessmen-TÜSİAD, Association of Foreign Investment-YASED, and Assembly of Turkish Exporters-TİM.

legislation that went into effect on July 31st, 2004, taxpayers were allowed to deduct 40% of in-house R&D expenses directed exclusively at new technologies and knowledge from their income declared in the annual financial statements[45].

Apart from these issues, a law on the working-permits of foreigners in Turkey was enacted on February 27th, 2003. By this Law No. 4817, the working permit procedures are centralized at the Ministry of Labour. Previously, foreigners were required to apply to the representatives of Turkey in foreign countries for working visas. The eligible applicants were granted a working visa after a mandatory waiting period of 35 days. By the new Law, this mandatory waiting period has been decreased to 20 days, and visa and permit procedures were unified. Moreover, working permits are now granted after coordination among the related ministries is achieved.

The Ministry of Labour grants working permits to foreigners by considering the structure of unemployment in Turkey, the justification of the application, the contribution of the foreigner to be permitted to the firm under consideration and to Turkey, the references of the applicant, the considerations of related institutions in Turkey, and the characteristics of the firm to hire the foreigner[46]. The Law states that an application for working permit or extension thereof, will be refused in the case of availability of a person in Turkish nationality having equal qualifications for the work applied within 4 weeks. However, this clause is not valid for the employees to be employed in DFI firms to be established as per Law No.4875 (the new foreign investment law). Moreover, Law 4817 preserves the occupations stated in other laws as forbidden to foreigners.

As the basic limit for capital required to establish a DFI firm in Turkey is abolished by Law No. 4875, it is stated that the number of applications to start up a business increased substantially since 2003, especially from citizens of Turkic Republics, Iraq and Syria. Between 2003 and early 2005, about 8600 foreigners applied for working permits to the Ministry of Labour and about 3000 of these applications were refused. It is argued that applications for working permits should

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[45] See IAC (2005a) for the details of the measures taken on the issues raised in the inaugural meeting of YOİKK.

[46] See http://www.ozelokullardernegi.org.tr/yabanci-izinleri.doc for the details of Law No. 4817.

be scrutinised further from security and employment viewpoints (Tamer, 2005a and 2005b).

As the most recent development, the Law No. 5317, enacted on March 15th, 2005, removed the restrictions for DFI in national radio and television companies[47]. By this law, foreign investment is allowed to have shares in national broadcasting companies without any limit. The only restriction is that, the number of national radio and televisions with more than 50% foreign share cannot exceed 25% of total radio and televisions broadcasting nationally. On the other hand, foreign investment in radios and televisions broadcasting locally or regionally are not allowed by the Law. This last legislation is a very liberal attempt, because broadcasting is restricted for foreign investment in most of the countries in our sample as seen in Section 3.4.3. In Singapore, China, Brazil, and Mexico broadcasting is closed to foreign investors. In the Czech Republic, foreign investment in broadcasting is subject to licensing requirements. In Hong Kong, Venezuela and Poland, there are upper-limits for foreign shares. Foreign shares cannot exceed 49% in Hong Kong, 33% in Poland, and 80% in Venezuela.

3.9 Conclusion

In this chapter, investment climates and DFI regimes of DFI high-performers and Turkey were examined. The most important conclusion that derives from the experiences of DFI high performers is that policies are not uniform and there is considerable variation across countries in terms of investment climate and DFI regime. On the one hand, all countries except Hong Kong, Singapore and Chile have problems in one way or the other in their investment climates according to World Bank surveys. That is Turkey is not alone in not having a "perfect" investment climate. Thus, it cannot be stated that DFI high performers exclusively have a sound investment climate. Hence, the inability of Turkey in attracting sufficiently high DFI inflows cannot be easily attributed to the problems of the investment climate in Turkey.

On the other hand, there is also considerable variation among the legislative frameworks for DFI in different countries. While some countries have fairly liberal

[47] This Law was not approved by the President at the time of writing, and was returned back to the National Assembly on March 31, 2005.

DFI regimes, there are various restrictions in others to tailor DFI policy for their developmental needs. Singapore, Thailand and Malaysia are distinguished with their industrial strategies in which DFI policies are embedded. In China, there are various bureaucratic procedures in the screening stage. Moreover, there are sectoral restrictions for DFI in most of the countries. In some countries there are performance requirements for DFI, in others these performance requirements are linked to incentives for DFI. In particular in the Czech Republic and Poland, DFI incentives are linked to performance criteria to maximise the benefits from DFI accruing to these countries by improving high technology and high value added industries. Last but not least, international arbitration is not practised exclusively by the high performers. In China, Thailand, and Latin America, international arbitration is a topic, which is not viewed very sympathetically.

Macroeconomic indicators of high performing countries are also not uniform. Moreover, there is not a significant difference between Turkey and high performing countries in terms of macroeconomic indicators and labour costs. However, regarding competitiveness indicators of the World Economic Forum, Turkey seems to be performing poorly in terms of technological capacity, educational attainment of the labour force, macroeconomic stability, energy costs and tax evasion. Although being below the average of the sample in terms of competitiveness indicators, it cannot be argued that Turkey is alone in performing poorly in terms of these indicators.

It turns out that, a country having best characteristics cannot be singled out, as far as investment climate, DFI regime, and macroeconomic and competitiveness indicators are concerned, in terms of attracting DFI inflows. There is a variety of country experiences on these issues, and we cannot obtain a benchmark country to assess the problems of Turkey for not being able to attract a sufficient level of DFI inflows. However, the role of privatisation and regional integration in DFI inflows, especially for Latin American and Eastern European countries, cannot be underestimated. A substantial portion of DFI inflows to these countries was attracted through privatisations of state economic enterprises, especially in the services sector. On the other hand, regional integrations like MERCOSUR and NAFTA seem to have contributed to high DFI inflows to Latin American countries. It can be the case that

DFI inflows to these countries increased more than the initial effect of privatisation and regional integration by the help of agglomeration effect of DFI projects.

Against this background, the investment climate and legislative and institutional DFI framework of Turkey was analysed in historical perspective. Turkey has been increasingly liberalising its DFI regime. However, unlike the experiences of other countries, Turkey neither formed a broad industrial strategy and embedded its DFI policy in this strategy, nor designed an incentive structure linked to performance criteria to make Turkey a knowledge-based, high technology country. As the variety of experiences of high performer countries has shown, a liberal DFI regime and a frictionless investment climate do not emerge as the sole factors attracting DFI inflows. Rather, countries seem to have their own institutional structure in which they design specific policies for DFI according to their specific needs. Thus, instead of liberalizing eagerly her DFI regime, it seems better for Turkey to subsume DFI policies in a broader set of development strategy based on industrial, trade and technology policies.

CHAPTER 4

DFI INFLOWS TO AND OUTFLOWS FROM TURKEY

4.1 Introduction

In this chapter, DFI statistics in Turkey as regards to inflows and outflows will be examined. First, the data sources will be described in Section 4.2. In Section 4.3, the performance of Turkey will be assessed as regards to DFI inflows in comparison with the domestic investment performance of Turkey. Then, the DFI inflows will be analysed with respect to their pace and evolution, type of investment, sectoral distribution, and geographical distribution of the home countries. In analysing the types of DFI inflows, emphasis will be on the mergers and acquisitions from the general inflows of DFI in Turkey in Section 4.4. In Section 4.5 the contribution of privatization to DFI inflows will be analysed. Then, DFI outflows from Turkey will be discussed, and the net contribution of DFI flows to Turkish economy will be assessed in Section 4.6. Section 4.7 concludes this chapter.

4.2 Data Sources

4.2.1 The Data on DFI Approvals

There are two kinds of DFI data in Turkey regarding inflows. One comes from the General Directorate of Foreign Investment (GDFI) of the Undersecretariat of Treasury. As GDFI has been the authority for DFI approvals under Law 6224, it has compiled and published the approval data for DFI inflows[48]. On the other hand, the data on the realizations of DFI inflows is compiled by the Statistics Department of the Central Bank of Turkey, and the realization data is published under balance of payments statistics.

The GDFI data set available on the web site of the Undersecretariat of the Treasury includes information on DFI approvals from 1980 to June 2003. Firstly, the

[48] As Law No.4875 was enacted on June 17, 2003, approval procedures by the GDFI were abolished. Therefore, approval statistics will not be published from June 30, 2003.

data set gives the annual cumulative number of DFI firms[49] in Turkey, amount of annual and monthly approvals, and annual actual inflows of DFI. Secondly, the data set presents annual DFI approvals based on sectoral distribution of approvals with respect to agriculture, manufacturing, mining and services. Thirdly, the home country distribution of DFI approvals is given annually for 1991-2003, as well as the cumulative figure for 1980-90. Fourthly, with respect to sectors and home countries, the amount of present foreign capital, the share of that sector or country in total foreign capital, total capital of the companies in that sector or from that country, and the share of foreign capital in total capital are given in the same data set.

Moreover, in the annual foreign investment reports of GDFI, data is available on the sectoral distribution of the types of DFI approvals. DFI approvals are classified in four groups[50]. New investment, expansion investment, capital increase and participation investment. New investment pertains to greenfield investment[51], while expansion and capital investment are those kinds of investments pertaining to the investments of existing DFI firms. On the other hand, participation investment is the approved amount of foreign capital pertaining to a foreign investor buying shares of an existing foreign or domestic company. Based on this classification, we have data on types of investments for the 1983-2003 period.

4.2.2 The Data on Realized Inflows

The data on DFI realizations are available for the 1963-2003 period. However, the CBRT publishes disaggregated data of realized DFI inflows on a sectoral basis only after 1992. Thus, while total realized DFI inflows are available for 1963-1991, realized DFI inflows disaggregated with respect to agriculture, mining, manufacturing and services are only available for the 1992-2003 period[52].

[49] A DFI firm is defined in Turkey as having any positive amount of foreign capital.

[50] Definitions are taken from GDFI (2002:11).

[51] Greenfield investment is that kind of DFI in which a foreign investor adds additional new productive capacity to the economy by making a totally new investment.

[52] The data on realized inflows for the period 1963-1979 is available from GDFI (1987:10).

4.2.3 The Data on DFI Outflows

The data on the outflows of DFI from Turkey is available on the web site of the Undersecretariat of the Treasury. This data set includes DFI outflows from 1998 to June 30, 2004. The figures for the pre-1998 period are given cumulatively. Annually for 1998-2004 and cumulatively for the period before 1998, the number of firms and the exported amount of capital are given for each country of destination. On the other hand, the sectoral distribution of outward DFI, with respect to banking, other financial services, insurance, manufacturing, mining, energy, construction, tourism, trade, transport, telecommunications, and other sectors, is given only for the cumulative figures for each country of destination.

4.2.4 The Data on Privatization

The unpublished data of the Privatization Administration of the Prime Ministry includes the figures of privatization to foreign investors[53]. The data set includes the name of the public enterprise privatised, the date of privatization, the percentage of public shares sold, the name of the foreign company / persons that purchased the enterprise, and the amount of privatization in Turkish lira and US dollars.

4.2.5 The Data on Mergers and Acquisitions by Foreign Investors

Actually, there is no published data on mergers and acquisitions by foreign investors in Turkey. However, there is unpublished data of GDFI, which includes those firms in which foreign investors acquired majority share in 2001 and 2002. Obviously, this data set does not cover all mergers and acquisitions by foreign investors, as it covers only those firms in which majority ownership (more than 50%) was taken over by foreign investors. In other words, it is not possible to make a comprehensive analysis on foreign mergers and acquisitions. But, it is still possible to shed some light on the subject matter with this limited data set. In this data set, along with the name of company and foreign investor, there is data on the sector of the company, country of the foreign investor, and the amount and share of foreign capital.

[53] We thank Tülay Aktaş of the Privatisation Administration for providing us the data.

4.3 The Evolution of DFI Inflows in Comparison with the Domestic Investment Performance

4.3.1 The General Picture

The actual inflows of DFI to Turkey in comparison with formal approvals have historically been rather low. As of 2003, although USD 35,203 million DFI was approved, only USD 20,240 million was actually realized. In other words, only 51.5% of DFI approvals were realized. On the other hand, while there were only 78 DFI firms in 1980, the number of DFI firms was 6,511 as of June 30, 2003. However, the bulk of the DFI firms in Turkey are small companies with very little capital, established for trade purposes[54]. For example, there were 1,458 DFI firms in Turkish manufacturing industry as of 2001. However, according to SIS data set, the number of DFI firms in Turkish manufacturing industry, employing more than 10 employees in the same year was only 439[55]. As seen from Figure 4.1, there is an inverse relationship between annual number of DFI firms approved, and annual actual DFI inflows. In other words, actual DFI inflows pertain to only a small number of firms. The rest of the firms are small personal firms, which cannot be counted as international investors.

[54] Arıman (2000:130 and 133) makes a similar point.

[55] One should keep in mind that SIS and GDFI data sets are not directly comparable. Firstly, SIS compiles data on establishment level whereas GDFI data is at firm-level. Secondly, SIS data may not cover all DFI establishments in Turkish manufacturing industry. However, having in mind that the majority of firms in Turkish manufacturing industry are single establishment firms, and assuming that errors of omission in the SIS data set would be not so high, there still remains a difference, albeit less that that observed at first sight, between the number of firms in GDFI and SIS data sets.

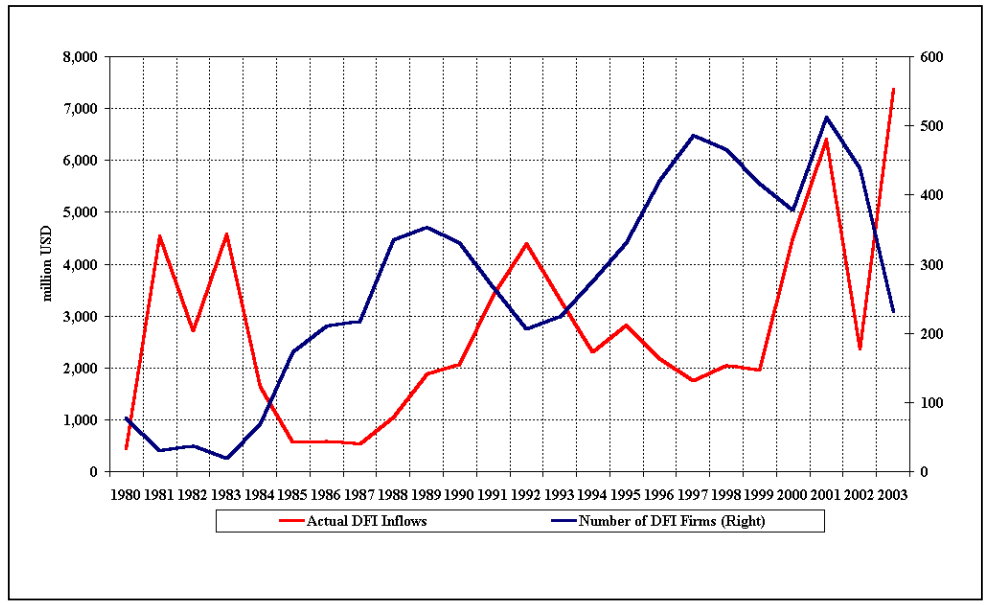

Figure 4.1 Annual Actual DFI Inflows and Annual Number of DFI Firms Approved

Source: GDFI and CBRT.

Annual average of DFI flows were only USD 8.6 million for 1954-79 (SPO, 1987:10). Figure 4.2 shows the evolution of DFI approvals and actual inflows for 1980-2003.

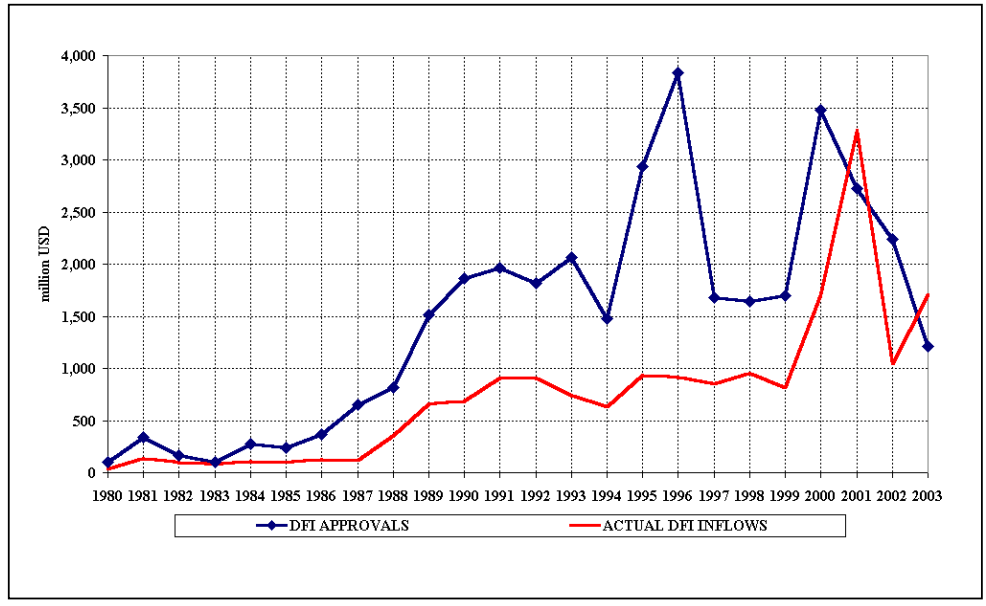

Figure 4.2 DFI Approvals and Actual DFI Inflows

Source: GDFI and CBRT.

As seen from Figure 4.2, one can divide the 1980-2003 period into three sub-periods. While DFI realizations were constant at around USD 372 million during 1980-87, it jumped to an average of USD 819 million in 1989-1999. In the post-2000 period, there is a jump in 2001 to USD 3,044 million thanks to the investment of İş-Tim Telecommunication Services Inc. of amount USD 2,023 million, of which USD 1,4 billion is the credit provided by the foreign partner. Actually, until 2001, the short and long term credits supplied by the foreign investors to DFI firms were only counted as DFI inflows as long as that credit was added to the capital of the firm, otherwise it was recorded as an increase in external debt, rather than as DFI. Therefore, with this new practice, which will continue from 2001 on, DFI realizations were more than the amount of DFI approvals in 2001. In 2003, DFI realizations exceeded DFI approvals due to the fact that DFI approvals cover only the first six months of 2003. Moreover, USD 987 million of the realizations in 2003 is due to real estate investments of foreigners, which is recorded as DFI (CBRT, 2004). When this amount of real estate investments is subtracted from the 2003 total, the actual inflows of DFI in 2003 drops to USD 715 million.

Another interesting year is 1996, where the discrepancy between approvals and realizations is significant. The high level of DFI approvals in 1996 is due to a construction project undertaken by French investors for the Istanbul Metropolitan Municipality to the amount of USD 2,4 billion. However, the project was abandoned and that amount of DFI could not be realized (GDFI, 1997).

When the years 1996, 2001 and 2003 are left aside, on the average, 44.9% of approvals were realized. There are several reasons for the discrepancy between figures for approvals and realizations. Withdrawal of the foreign investors from the initial project is one reason as cited above. Secondly, the realization of an investment takes several years, that is the foreign investor realizes his/her investment within a time period, which is apparently more than one year. Thus, the realization will be less than the approved amount in the year when the investment is approved. Thirdly, while approvals were recorded by GDFI based on the information submitted by DFI firms, realisations are recorded by the CBRT based on balance of payments statistics. Hence, the discrepancy between approvals and realizations may be due to the lack of a perfect coordination between these institutions, a matter, which is being improved by coordinated studies by the related institutions. Fourthly, approvals, and in

particular approvals for capital expansion, included capital-in-kind, undistributed profits, and revaluation funds for fixed assets, which did not lead to actual inflows of foreign capital from abroad[56] (See Onaner, 2000:44).

4.3.2 DFI and Domestic Investment Performance

While DFI inflows as a proportion of total gross fixed capital formation (GFCF) increased from 0.3% during 1963-79 to 0.8% during 1980-88, further to 2.1% during1989-1999, and 6.5% during 2000-2002. Actually, this increase in the ratio of DFI inflows to total GFCF is due to the continuous decline in the annual average growth rate of GFCF in Turkey. While annual average increase of GFCF in Turkey was 15.4% in 1963-79, it fell to 4.7% in 1980-88 before slightly increasing to 5.1% in 1989-99. In the 2000-2002 period, average annual growth rate of GFCF was even negative with -11.4%.

The low performance of DFI inflows in Turkey may have something to do with this gradual decline in the rate of growth of total GFCF in Turkey. As seen from Figure 4.3, there is a close relationship between the pace of private and public GFCF and DFI inflows[57]. İsmihan, Metin-Özcan and Tansel (2002:17-18) found evidence to the complementarity between public and private investment in short and medium run by applying impulse response analysis for the period 1963-99. The complementarity is valid until the late 1980s. But after the late 1980s, chronic and increasing macroeconomic instability seems to "shatter or even reverse the complementarity between public and private investment in the long run"[58]. On the other hand, Attar and Temel (2002:118) found that although a crowding out effect of public investments was observed in the current period, government investment had positive spillover effects on private investment in the following period.

Although DFI inflows increased sharply in 1980, thanks to the liberalization policies implemented in the same year, the stable DFI inflows until 1988 seems to be

[56] The author thanks Tuğrul Göver of GDFI for reminding this last point.

[57] In Figure 4.3, we converted the values for total GFCF and public GFCF at current Turkish liras to USD using the average annual exchange rate of USD/TL.

[58]Metin-Özcan, Voyvoda and Yeldan (1999) is another study that found evidence to the complementarity between public and private investments.

due to the continuous decrease in total GFCF in 1979-1985. The gradual increase in DFI inflows in 1987-1992 goes alongside with the continuous increase in total GFCF in 1985-1993. The volatility in 1994-2002 in total GFCF due to the crises of 1994, 1999 and 2001, led also to the volatility of DFI inflows during the same period. The correlation between realized FDI inflows and one-period lagged public investment is 0.67[59]. It seems that public GFCF and DFI inflows may also be complementary. Calderon et al (2002:13-14) found that in developing countries, domestic investment and economic growth precedes and have a positive impact on greenfield DFI. On the other hand, DFI inflows do not seem to have an effect on domestic investment or growth in developing countries. Calderon et al (2002:15) argue that it seems to be the case that a rise in domestic investment may send a positive signal to foreign investors as the emergence of profitable opportunities in the economy. Thus, the complementarity of public and private investments on the one hand, and the precedence of domestic investments in relation to DFI in developing countries on the other hand, lead us to argue that the low performance of DFI inflows in Turkey may be attributed to the low performance of public and domestic private investment.

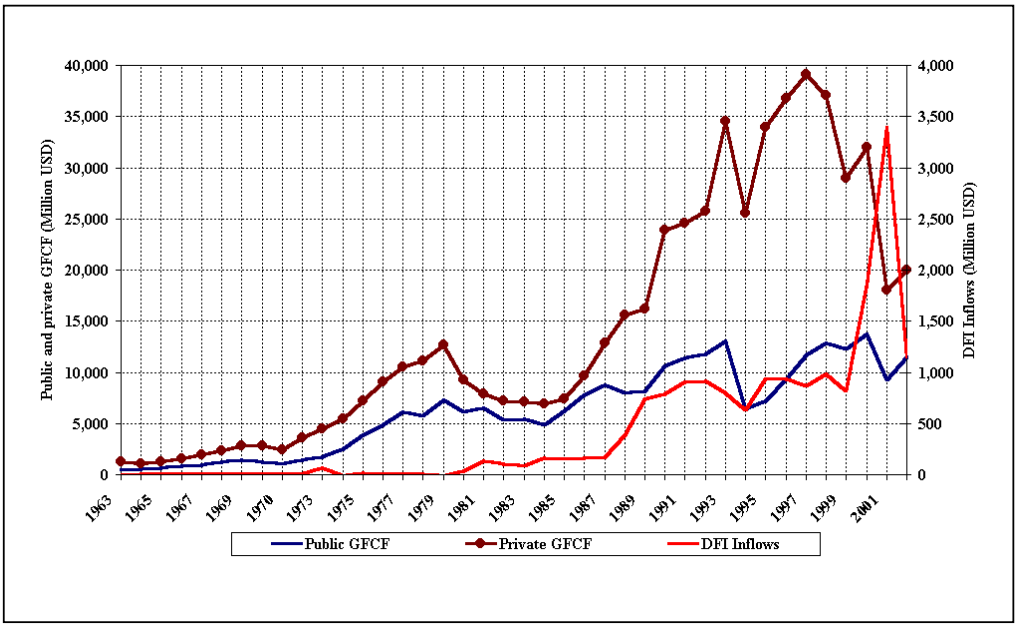

Figure 4.3 DFI Inflows and Public and Private Gross Fixed Capital Formation: 1983-2002

Source: SPO, GDFI, CBRT, and author's calculations.

[59] The correlation is significant at 1% (two-tailed test).

4.3.3 The Sectoral Distribution

Figure 4.4 depicts the sectoral distribution of actual DFI inflows for 1980-2003. The data for sectoral distribution of actual DFI inflows is derived as follows: For the period 1992-2003, the sectoral distribution is available from the balance of payments statistics. However, for 2002 and 2003, foreign capital inflows in the form of credit provided by foreign partners was classified as other capital (net) and not distributed among sectors. These figures were distributed for 2002 and 2003 based on the shares of respective sectors in total inflows in 2002 and 2003, and the DFI flows to real estate sector were included in services for 2003. On the other hand, the total DFI inflows in 1980-1991 were distributed into sectors, based on the sectoral shares of DFI approvals during that period.

The following interesting results emerge from Figure 4.4. Firstly, the bulk of DFI inflows goes to services and manufacturing industry. These two sectors make 97.6% of DFI inflows on average. Although very small in share, DFI inflows to agriculture were concentrated in the 1984-1990 period, and DFI inflows to mining are concentrated in the 1990-1999 period. The shares of manufacturing and services in DFI inflows are symmetrical. While there is a decreasing trend in the share of manufacturing, there is an increasing trend in the share of services. While the share of manufacturing in DFI inflows decreased from 77.5% in 1980-83 to 29.9% in 2000-2003, the share of services increased from 21.9% in 1980-83 to 69.6% in 2000-2003. This tendency of decrease in manufacturing share and increase in services share in DFI flows is in parallel with fixed capital investment preferences in Turkey and DFI inflows in the world[60]. The share of global DFI stock in services increased from only a quarter in the early 1970s to about 60% in 2002. The share of manufacturing decreased from 42% to 34% during the same period. This period also witnessed the rise of the importance of services in GDP of developed and developing economies. As most of the services are not tradable, the principal way of bringing services to foreign markets have been through DFI. Thus, DFI in services accelerated as more countries liberalised their DFI regimes regarding services sector (UNCTAD, 2004b:xx-xxi). The rise of the fixed investments in services sector in Turkey

[60] See Figure 4.5 below for Turkey and UNCTAD (2004:xvii-xxii) for the global trends.

especially after 1980 was due to the increase in the relative prices of non-tradable sector vis-à-vis tradable sectors as a consequence of trade liberalization[61].

In Figure 4.5, it is observed that GFCF in manufacturing in Turkey declined continuously between 1975 and 1990, while GFCF in services increased continuously in the same period. While manufacturing GFCF showed a volatile pattern around a constant trend after 1990, the services GFCF was in a decreasing trend, while still having a much higher share than manufacturing. Especially after 1995, there was an increase in the shares of energy and transportation investments.

When the cumulative approval figures of 1983-2003 period are analysed in terms of subsectors, one can see that automotive industry; food, chemicals, cement, and transport related industries are the top five sectors in manufacturing that attracted the highest DFI inflows. These 5 sectors attracted 57% of a total of 18,2 billion USD of DFI during 1983-2003. Then came machinery, electronics, iron and steel, textile and apparel, industrial chemicals, tire, and tobacco, and other manufacturing. With these 8 additional subsectors, the leading 13 sectors have attracted 89% of the cumulative inflows to the manufacturing industry during 1983-2003.

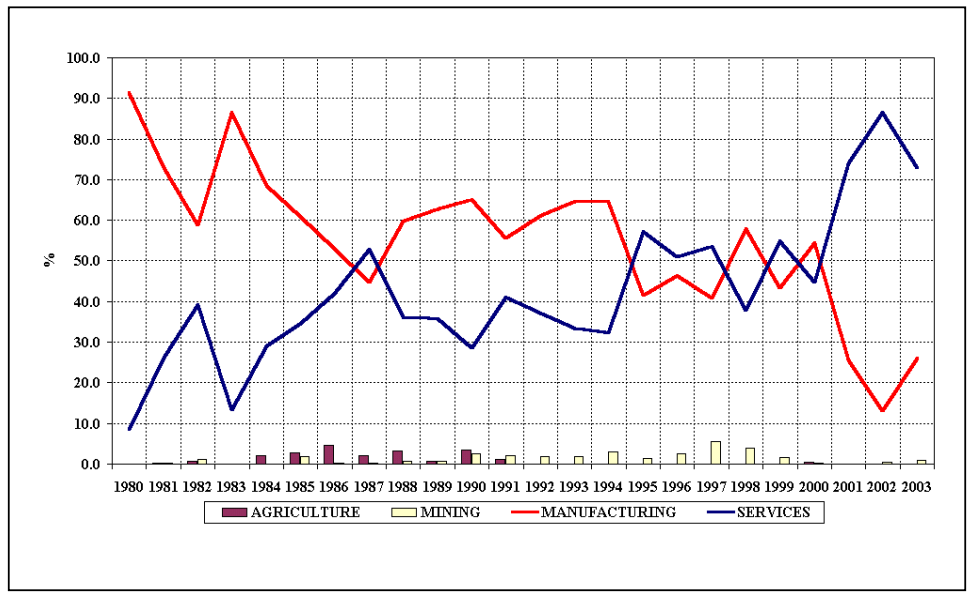

Figure 4.4 Sectoral Distribution of Actual DFI Inflows

Source: GDFI and CBRT.

[61] See Yentürk (2003a; 2003b) for the analysis of the pattern of investment in Turkey within the framework of tradable sectors vs. non-tradable sectors.

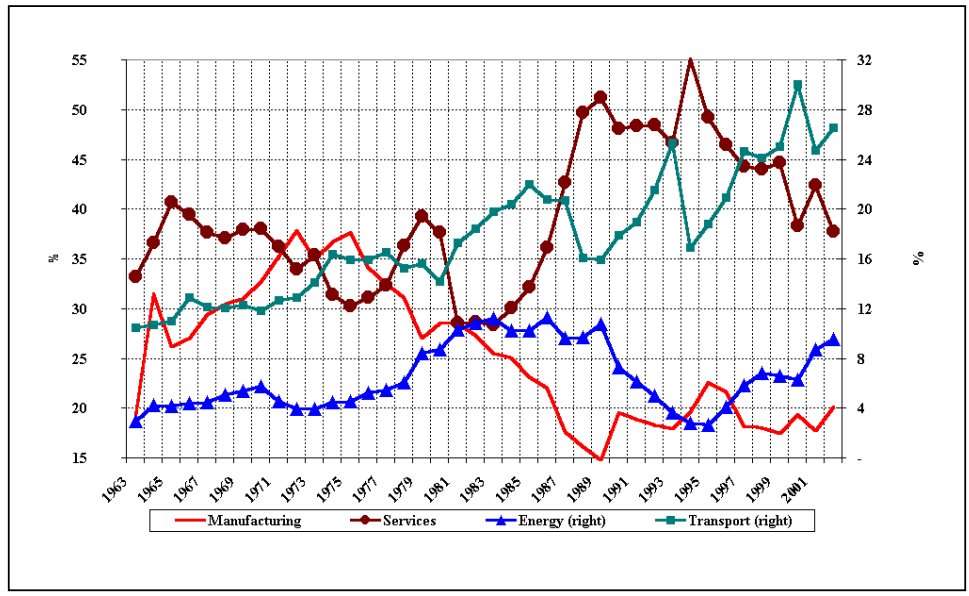

Figure 4.5 Sectoral Gross Fixed Capital Formation Shares

Source: SPO and CBRT

4.3.3.1 Distribution by Manufacturing Activity

The sectoral distribution of DFI inflows in manufacturing has actually diversified since 1983. While 90% of inflows in manufacturing have gone to only 6 subsectors in 1983, it went to 14 subsectors of manufacturing in 2003. On the other hand, while there were only 14 subsectors of manufacturing approved for DFI in 1983, this number increased to 27 in 2003.

As it was mentioned above in Section 4.2.1, the majority of DFI firms operating in Turkey are very small firms. The number of DFI firms operating in manufacturing industry was 1,458 in 2001. However, according to SIS statistics, the number of DFI firms operating in manufacturing industry decrease to 439 in 2001. As it is mentioned in footnote 8 above, although GDFI and SIS data are not directly comparable, there still seems to be considerable difference between these two datasets in terms of the number of DFI firms, which can be taken as an indicator of the fact that large DFI firms account for only a small share in total number of DFI firms. In Table 4.1 below, the number of DFI firms operating in Turkey is presented by manufacturing activity as of June 30, 2003 and in 2001 according to GDFI statistics and compared with the number of DFI firms according to SIS and ICI statistics in 2001. The reason that the number of DFI firms among the 500 largest

industrial firms of Turkey in 2001 is also presented is that these 500 largest industrial firms accounted for 53,1% of total manufacturing value added in 2001[62]. Thus, it is aimed to show that the number of DFI firms operating in Turkish manufacturing industry and producing high value added are actually very few in number as compared to total number of DFI firms.

1,667 of the existing 6,511 DFI firms in Turkey as of June 30, 2003 were operating in manufacturing industry, which made 25.6% of the total number of DFI firms, according to GDFI statistics[63]. This ratio was 25.0% in 2001. However, those DFI firms employing more than 10 persons accounted for only 7.5% of all DFI firms in 2001[64]. Moreover, only 120 of 1,458 DFI firms were among the 500 largest industrial firms in 2001. Thus, it turns out that only 8.2% of DFI firms operating in manufacturing industry produce high amounts of value added. One can argue from this result that those DFI firms employing less than 10 persons, which account for the majority of DFI firms, also produce very low levels of value added. Keeping in mind that 500 largest firms accounted for 85.2% of DFI exports in 2001, one can also argue that the majority of DFI firms operating in manufacturing industry are producing mainly for the domestic market. In terms of individual manufacturing industries, the highest number of DFI firms are in wearing apparel (322), electrical machinery (383), transport equipment, (384) food manufacturing (311-312) other chemical products (352), and other manufacturing industries (390). However, the largest DFI firms turn out to be in transport equipment, food manufacturing, other chemical products, electrical machinery, textiles, non-electrical machinery, other non-metallic mineral products, and iron and steel. In particular, wearing apparel, and other manufacturing industries account for the majority of DFI firms with low employment and low value added. On the other hand, although there are very few DFI firms as compared to total number of DFI firms in printing, tobacco, furniture, rubber, petroleum and coal products, and beverage industries, they turn out to be large DFI firms.

[62] The ratio of value added produced by 500 largest industrial firms to total manufacturing value added was 45.3% in 1995, 53.1% in 2001 and 61.1% in 2003 (Türkan, 2005:10).

[63] We should remind that GDFI statistics treat all firms with any foreign participation as DFI firms.

[64] This should be interpreted in the light of the argument made above in footnote 55.

The above observation is also supported by the figures in Table 4.2. In Table 4.2, the distribution of present stock of foreign capital is given by manufacturing activity. It turns out that, transport equipment, other chemical products, food manufacturing, electrical machinery, tobacco products and wearing apparel accounted for 78.0 % of present stock of foreign capital in Turkish manufacturing industry as of June 30, 2003. Actually, 59.4% of present stock of foreign capital in Turkish manufacturing industry is accounted for by only three sectors namely transport equipment, other chemical products, and food manufacturing. It can safely be argued that, although the number of DFI firms operating in Turkish manufacturing industry is very high and diversified by sector, large DFI firms with large contributions to employment, exports and value added are concentrated in only a handful of manufacturing activities.

Table 4.1 The Number of DFI Firms by Manufacturing Activity

ISIC Code	Manufacturing Activity	GDFI (2003)	GDFI (2001)	SIS (2001)	ICI (2001)
322	Wearing Apparel	224	201	23	1
383	Electrical Machinery	215	183	44	11
384	Transport Equipment	169	153	41	21
311-312	Food Manufacturing	168	146	56	19
352	Other Chemical Products	142	131	46	17
390	Other Manufacturing Industries	132	123	7	-
356	Plastics	82	67	23	-
321	Textiles	74	64	28	7
351	Industrial Chemicals	67	56	13	2
382	Non Electrical Machinery	53	43	25	7
323	Leather and Leather Products	46	29	0	-
381	Fabricated Metal Products	46	41	36	2
372	Non-Ferrous Metals	30	25	3	-
342	Printing	22	19	1	1
361	Ceramics, Clay and Cement Products	22	21	1	-
341	Paper	21	14	14	5
369	Other Non-Metallic Minerals	21	17	27	7
371	Iron and Steel	20	15	8	6
331	Forestry Products	19	19	2	-
385	Measuring, Controlling, Optical Equipment	15	15	6	-
314	Tobacco Products	14	12	6	4
362	Glassware	14	13	6	-
332	Furnitures	13	9	3	1
355	Rubber	12	10	6	3
353-354	Other Petroleum and Coal Products	11	10	9	4
324	Footwear	10	10	0	-
313	Beverage Industries	5	12	5	2
3	TOTAL	1,667	1,458	439	120

Notes:
GDFI (2003): The number of DFI firms as of June 30, 2003 based on GDFI Database.
GDFI (2001): The number of DFI firms as of December 31, 2001 based on GDFI Database.
SIS (2001): The number of DFI firms employing more than 10 persons as of 2001 based on SIS database.
ICI (2001): The number of DFI firms in the Largest 500 Industrial Firms of Turkey in 2001 published by Istanbul Chamber of Industry.
Sources: GDFI, SIS and ICI Database.

Table 4.2 The Present Foreign Capital by Manufacturing Activity as of June 30, 2003

ISIC Code	Manufacturing Activity	%
384	Transport Equipment	22.4
352	Other Chemical Products	22.3
311-312	Food Manufacturing	14.7
383	Electrical Machinery	10.2
314	Tobacco Products	4.4
322	Wearing Apparel	4.0
371	Iron and Steel	3.4
355	Rubber	3.4
390	Other Manufacturing Industries	2.9
369	Other Non-Metallic Minerals	2.6
356	Plastics	2.1
351	Industrial Chemicals	2.0
353-354	Other Petroleum and Coal Products	1.9
361-362	Manufacture of pottery, china, earthenware and	0.6
341-342	Paper and printing	0.6
321	Textiles	0.5
313	Beverage Industries	0.5
372	Non-Ferrous Metals	0.4
382	Non Electrical Machinery	0.4
381	Fabricated Metal Products	0.2
385	Measuring, Controlling, Optical Equipment	0.2
323-324	Leather and Leather Products	0.1
331-332	Forestry Products	0.1
3	**MANUFACTURING TOTAL**	**100.0**

Source: GDFI Database.

4.3.3.2 Distribution by Service Activity

Turning to service activities, it is observed in Table 4.3 below that 69.7% of DFI firms in Turkey are actually operating in service activities. Moreover, wholesale and retail trade account for more than half of DFI firms operating in service activities. Actually, 37,9% of total DFI firms are operating in wholesale and retail trade in Turkey. Together with wholesale and retail trade, hotels and restaurants, and other service activities, n.e.s. account for 82.6% of DFI firms operating in service activities. In Table 4.4, average labour productivity and wage levels for the 1998-2001 period are presented for these three service activities in which DFI firms are concentrated. The corresponding figures for manufacturing industry are also presented for comparison purposes. It turns out that, these three service activities in which DFI firms are concentrated have very low levels of labour productivity and pay very low wages as compared to manufacturing industry during 1998-2001 period.

Table 4.3 The Number of Firms by Service Activity as of June 30, 2003

Wholesale and retail trade	2,470
Hotels and restaurants	655
Other Services, n.e.s.	639
Transportation	310
Construction	200
Activities of Financial Intermediaries	147
Health Services	48
Communication	45
Research and Development Activities	15
Cinema & Entertainment Facilities	12
SERVICES	**4,541**

Memo:

MANUFACTURING TOTAL	1,667
AGRICULTURE	151
MINIG	101
ENERGY	51
G R A N D T O T A L	**6,511**

Source: GDFI Database.

Table 4.4 Average Labour Productivity and Wages in Selected Service Activities: 1998-2001 (million TL at 1994 prices)

Service Activity	**Labour Productivitiy (*)**	**Wages (**)**
Wholesale and retail trade	742	66
Hotels and restaurants	321	54
Other services, n.e.s	237	76
Memo:		
Manufacturing Industry	**943**	**150**

Notes:

(*) Labour productivity is calculated as value added per employee.

(**) Payments made to wage earners divided by the number of employees.

Source: Author's calculations from SIS Database and SIS (2003).

As seen from Table 4.5, the bulk of present stock of foreign capital in service industries is accounted by financial intermediary activities and communication services as of June 30, 2003. These two service industries account for 55.0% of present foreign capital .in service industries. The above mentioned three service activities, namely wholesale and retail trade, hotels and restaurants, and other social services n.e.s., which are low wage, low productivity service activities, account for

40.4% of present foreign capital in service activities. It turns out that, both in terms of number of firms and the stock of capital, DFI in Turkish services activities is concentrated in low productivity, low wage activities.

Table 4.5 The present Foreign Capital by Service Activity as of June 2003

Service Activity	**%**
Activities of Financial Intermediaries	36.1
Communication	18.9
Other Services, n.e.s.	16.7
Wholesale and retail trade	13.1
Hotels and restaurants	10.6
Services Related with Transportation	2.0
Construction	1.2
Health Services	1.2
Research and Development Activities	0.1
Cinema & Entertainment Facilities	0.1
Services Total	**100.0**

Source: GDFI Database.

4.3.4 Types of DFI Inflows

The bulk of DFI inflows to Turkey are attracted by the existing DFI firms. In other words, totally new (greenfield) investments make only a small portion of total DFI approvals, especially in the manufacturing sector. In the 1983-2003 period, only 33.1% of cumulative DFI approvals were new investment. 44.5% of cumulative DFI approvals were capital increase and expansion investment of the existing DFI firms in the same period. The participation investment by DFI firms was 22.4% of the cumulative DFI approvals in 1983-2003. As regards the manufacturing sector, the performance of DFI inflows in terms of new investments was even worse. Only 21.4% of cumulative DFI approvals to manufacturing industry in the 1983-2003 period consisted of new investment, while 53.8% involved capital increase and expansion investment of existing DFI firms, and 24.8% was participation investment. On the other hand, the share of new DFI approvals increased to 48.8% for services during the same period. For services, the share of capital increase and participation investment was 30.9% and 20.3%, respectively. Since new DFI investment involves

newly created capital assets, it will contribute to economic growth through increased physical assets in the economy. Expansion and modernisation investments may also pertain to creation of new physical assets, and thus they can be also counted as productive investments. However, capital increase and participation investments pertain to the increase of foreign capital in existing firms. Thus, these two types of investments will contribute to growth, if at all, through productivity increases (See Calderon et al. (2002:3)).

Assuming that the same ratios of investment types are valid for the actual inflows, and that the share of manufacturing in DFI approvals is valid for the share of manufacturing in actual DFI inflows, we can estimate that only 4,4 billion USD of new (including expansion) DFI was actually realized in the manufacturing sector during the whole of the 1980-2003 period. In other words, the contribution of DFI through creation of new physical assets in Turkish manufacturing industry was less than a quarter of total cumulative DFI inflows in the 1980-2003 period. Moreover, in manufacturing industry, it is not the case that the top recipient sectors of DFI approvals are the top receivers of new DFI. In fact, the situation is just the reverse. That is, the sectors having small shares in DFI approvals have higher shares in new DFI approvals. The Spearman's rank correlation between the ordering of subsectors according to total DFI approvals and according to new DFI approvals is only –0.2 and is not significant at conventional levels. In other words, top-recipient manufacturing activities are receiving DFI for the existing firms, while new DFI goes in small amounts to those manufacturing activities, which account for low levels of DFI stock in Turkish manufacturing industry.

Figure 4.6 shows the trend values of the types of DFI for manufacturing and services, as percentage shares in total, obtained by Hodrick-Prescott filtering method. In the figure, the variables read as follows:

MNEW_HP: Trend value of new DFI in manufacturing.

SNEW_HP: Trend value of new DFI in services.

MECI_HP: Trend value of expansion and capital increase DFI in manufacturing.

SECI_HP: Trend value of expansion and capital increase DFI in services.

MPART_HP: Trend value of participation DFI in manufacturing.

SPART_HP: Trend value of participation DFI in services.

As seen from Figure 4.7, new DFI in both manufacturing and services have a constant decreasing trend in 1983-2002. On the other hand, capital increase and participation DFI in both manufacturing and services have an increasing trend. In particular, capital increase and expansion DFI for manufacturing, and participation DFI in services have increasing trends with increasing slopes. That is, the increase in cumulative DFI in manufacturing is driven by DFI inflows for the existing manufacturing firms. On the other hand, DFI increase in services is driven by mergers and acquisitions by foreign investors. Although having a decreasing slope, the increase in the trend of participation DFI in manufacturing, and capital increase DFI in services are also important.

As it was seen in Figure 4.6 below, the share of services in DFI inflows has a rising trend in contrast to the share of manufacturing activities. It turns out that this rising trend in the share of services is due to the rising trend of DFI inflows attracted by existing DFI firms through capital increase and expansion, and by existing domestic firms through participation DFI. That is, the increasing share of services in DFI inflows does not indicate an increase of newly created physical assets through DFI inflows. On the contrary, it indicates that DFI in services is attracted by already existing DFI firms[65] or by domestic firms in which DFI firms participate through mergers or acquisitions.

This situation is also valid for manufacturing activities. In manufacturing, it is also the case that DFI inflows do not contribute much to the creation of new physical assets. In fact, as with services, DFI inflows that create new physical assets have a decreasing trend. In manufacturing industry too, the bulk of DFI inflows are attracted, with an increasing trend, by existing DFI or domestic firms, through capital increase, expansion[66] or participation. As the contribution of DFI inflows to the creation of new physical assets is very low and have a decreasing trend in both manufacturing and services, DFI will be beneficial to Turkish economy only if DFI brings in new technology, better management and organisational techniques and

[65] Expansion DFI in services may pertain to creation of new physical assets through modernisation and investment, though.

[66] As in the case of services, expansion DFI in manufacturing can also be productive physical investment due to modernisation or capacity increasing activities.

access to new export markets to the existing firms[67].

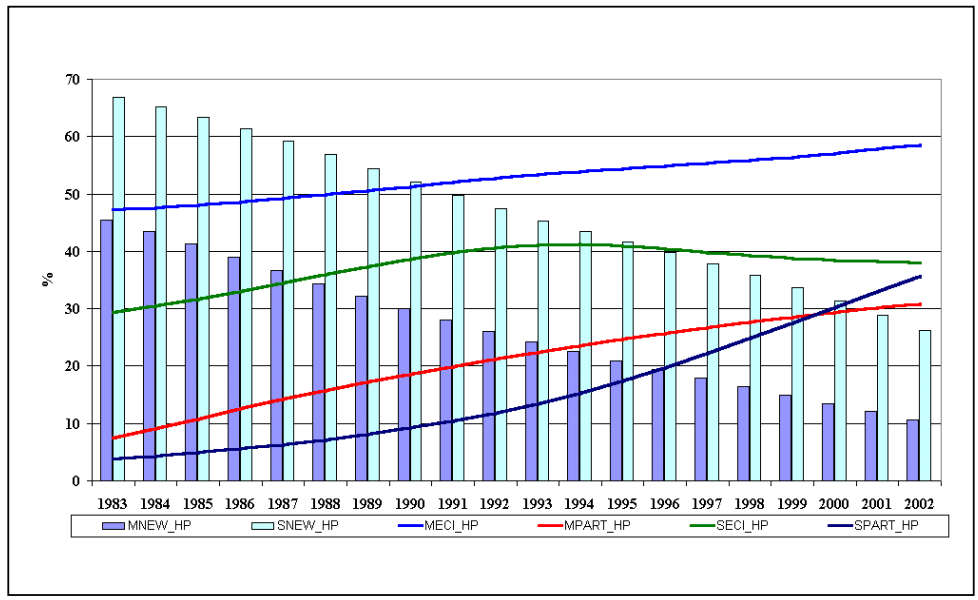

Figure 4. 6 Type of DFI Approvals (Percentage Share in Total): HP Filter – Trend Values

Source: GDFI Annual Reports.

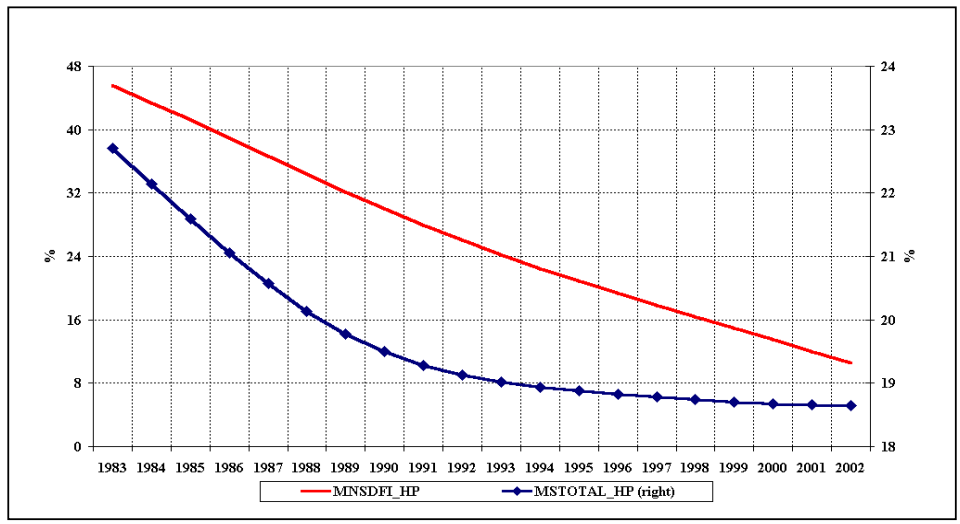

Figure 4.7 Share of Manufacturing in Total Investments and in DFI Approvals HP Filter- Trend Values

Source: SPO and GDFI.

[67] See Hausman and Fernandez-Arias (2000:13).

Figure 4.7 shows Hodrick–Prescott trend values for the share of manufacturing in gross fixed capital formation, and in new DFI approvals. The constant decrease in the share of new DFI approvals in total DFI approvals for manufacturing is in line with the decreasing trend of the share of manufacturing in gross fixed capital formation in Turkish economy during 1983-2002. Thus, the decreasing trend of new DFI approvals is in line with the investment preferences in Turkish economy in the post-1980 economy. As domestic investors do not see profitable opportunities in manufacturing industry, and hence do not add much to the physical capital stock, foreign investors behave in a similar fashion. In other words, it is not meaningful that greenfield DFI inflows will be attracted to the manufacturing industry, in which domestic investors do not undertake much new investment.

4.3.5 The Geographical Distribution of DFI Approvals with respect to Home Countries

The first eight countries having the highest share in cumulative DFI approvals in 1980-2003 accounted for 80.9% of the total DFI stock in Turkey as of June 30, 2003. These first eight home countries are the Netherlands, Germany, the United Kingdom, the United States, Switzerland, France, Italy, and Japan. Actually, these 8 countries are among the major trade partners of Turkey representing the highest shares in Turkish imports and exports. Their average shares in total imports and exports of Turkey were, respectively, 51.3% and 50.8% in the 1996-2002 period.

In terms of number of firms, these eight countries accounted for 48.5% of total DFI firms as of June 30, 2003. Expressed differently, about 100 countries that account for only 19.1% of DFI stock in Turkey own 51.5% of DFI firms operating in Turkey. That is, more than one half of DFI firms account for less than one-fifth of DFI stock and are fairly diversified in terms of home countries. On the other hand, the other half of DFI stock is accounted by one half of DFI firms only from 8 countries.

4.4 The Role of Foreign Mergers and Acquisitions in DFI Inflows to Turkey

In this section, the amount of participation DFI will be utilised from the DFI approval data given in the GDFI annual reports. Participation DFI is that type of DFI

in which a foreign company or legal person participates in an existing company in Turkey. In other words, one can read participation DFI figures as the amount of mergers and acquisitions (M&A) by foreign investors of the firms operating in Turkey, whether they are domestic or DFI firms.

Figure 4.8 gives the evolution of the amounts of participation DFI in services and manufacturing for the 1983-2002 period. One can observe that participation DFI has an increasing trend after 1987. In particular, a sharp increase for services is observed after 1996. For manufacturing, one can argue that participation DFI rose sharply in 1988-89, 1992, 1995 and 2000. It is interesting to note that 1989, 1991, 1994 and 1999 represent years of troughs in the post-1985 Turkish economy. Thus, in trough years or just in the year following a trough, there is a sharp increase in participation DFI in manufacturing. On the other hand, for services, the years in which there was a sharp increase were 1990, 1996 and 2001. There seems to be a lag of one year between the sharp increase in participation DFI in manufacturing and participation DFI in services. Moreover, not only do participation approvals register a sharp increase for manufacturing and services in the years mentioned above, but also participation investments become diversified in terms of manufacturing and service activities in these years[68]. Then, both the increased amount and sectoral diversification of participation DFI approvals in crisis periods may be an indication of "fire-sale" DFI as Krugman (2001) has argued to be the case after the Asian crisis. Krugman (2001:2) argued that, following the collapse in asset prices in the aftermath of the Asian crisis, financial situation of firms were worsened in all industries. Thus, mergers and acquisitions of Asian firms by foreign investors were not just a reflection of managerial and technological advantage of foreigners to operate those firms vis-à-vis domestic owners. Instead, it was the case that the value of Asian firms declined so much that it was very profitable for foreigners to buy them at "fire-sale" prices.

Hausmann and Fernandez-Arias (2000:17-18) put forward a similar argument to explain the sale of domestic enterprises to foreign investors in turbulent times. That is, under crisis conditions domestic firms may find it difficult to finance themselves, not only because they are in a bad condition, but also because the credit

[68] Sectoral diversification is measured in terms of an increase in the specialisation index, defined as Σs_i where s_i is the sectoral share of participation approval.

rating of the country is low due to high debt stock of the government. Then, in turbulent times when access to finance seems to be difficult for domestic owners for the foreseeable future, domestic owners will have a lower net present value for the future cash flows of the firm due to either lower growth projections of cash flows or to a higher discount factor. On the other hand, foreign investors know that they do not have to rely on inefficient domestic markets or volatile international markets to finance themselves, and they will have a higher net present value for future cash flows of the firm under consideration. Thus, in crisis times, it is meaningful to expect that local capital constrained domestic owners will sell their firms, or parts of the shares of their firms, to foreign investors with better access to capital. In such situations, it will be highly probable that domestic firms will be sold to foreigners under their market values, hence the term "fire-sale" DFI.

One can argue that after years of recession in the Turkish economy, "fire-sale" DFI increases in both manufacturing and services, as domestic firms are financially constrained in crisis periods, and they are sold to foreign investors below their market values.

Figure 4.9 shows the annual share of participation DFI in total DFI in manufacturing and services. While the share of participation DFI in manufacturing DFI was only 7.7% annually in the 1983-87 period, it jumped to 27.5% and 37.8% in 1988 and 1989, respectively. In the 1990-2000 period, this share in manufacturing showed a gradual increase from 8.0% to 53.0%. In 2001 and 2002, it fell back to 18.6% and 22.3%, respectively.

On the other hand, the share of participation DFI in services had an average value of 7.7% until 1996, except for a sharp increase in 1990 to 22.1%. However, in 1997-2002 period, the average share of participation DFI in services jumped to 33.8%, with its maximum reached in 2001 with 44.1%. It is apparent that participation DFI in services became much more significant than in manufacturing in recent years, except for 2000. This rise in the shares of services in participation DFI approvals is in line with the rise of M&A activity in nontradable sectors in Mexico following the Tequila Crisis in 1994 and the Asian Crisis in 1997. At times of crisis, when domestic demand is compressed and firms face finance difficulties, tradeable sectors have an advantage to shift their sales to export markets to compensate for crisis-led difficulties. However, the collapse of local demand together with credit

rationing in financial markets force those firms in non-tradable sectors to liquidation and bankruptcy more easily than their counterparts in tradable sectors. That is why M&As in services sector increases more than in manufacturing in crises periods[69]. That seems to be what happened in the Turkish economy in the post-1990 period when the frequency of economic crisis has increased.

Now the analysis of participation DFI in 2001 and 2002 is in order, utilizing the unpublished data set of GDFI. The unpublished data set of GDFI for 2001 and 2002 contains the data on those firms whose majority shares have shifted to foreigners by participation DFI in these two years. In 2001, in 112 firms majority owners became foreigners. Of these 112 firms, 78 were in services, 32 were in manufacturing, one in agriculture and one in the energy sector. The total amount of approved DFI for these 112 firms was USD 509.4 million. 78.9% of this amount (USD 401.9 million) went to services for 78 firms (69.6% of total number of firms in the list), 21.1% to manufacturing (USD 107.4 million) for 32 firms (28.6% of the total number of firms in the list). Actually, the bulk of participation DFI approvals in services came from the sale of Demirbank to the British HSBC Bank for USD 350 million. Leaving this amount aside, the average amount of DFI approval for one firm in services was only USD 665 thousand. On the other hand, in manufacturing, the average amount of DFI approval per one firm was USD 3.4 million. The bulk of participation DFI in manufacturing in 2001 was in paper and printing (3 firms) and electrical machinery (2 firms) (See Table 4.6).

In terms of home countries, Germany, Netherlands and United Kingdom are the top three countries with 15, 14 and 10 firms, respectively. These three countries represented 34.8% of all firms in the list. In manufacturing, 43.8% of firms were owned, with majority shares by Germany, Netherlands, France and Greece. In services 61.5% of the firms were owned with majority by Germany, Netherlands, United Kingdom, United States, Iran, Russian Federation, and Azerbaijan (See Table 4.7).

In 2002, the number of firms whose majority share has shifted to foreigners was a little lower with 89. Of these 89 firms, 75 were in services, 11 were in manufacturing, 2 in mining, and one in agriculture. Total DFI approval for these 89 firms was USD 305 million, of which USD 206.6 million was in services, and

[69] See Kamaly (2003:6-7) for arguments along these lines.

USD 98.4 million was in manufacturing. While the number of firms was 20.5% less compared to 2001, the amount of approved DFI decreased by 40.1%. The bulk of participation DFI approvals in 2002 were in banking and other financial services (4 firms) and food manufacturing (3 firms). On the other hand, the majority of firms were wholesale and retail trade firms (53 firms) (See Table 4.8). Turning to the distribution of home countries in participation DFI in 2002, Netherlands, United Kingdom and Germany were again the top three countries as in 2001 (See Table 4.9).

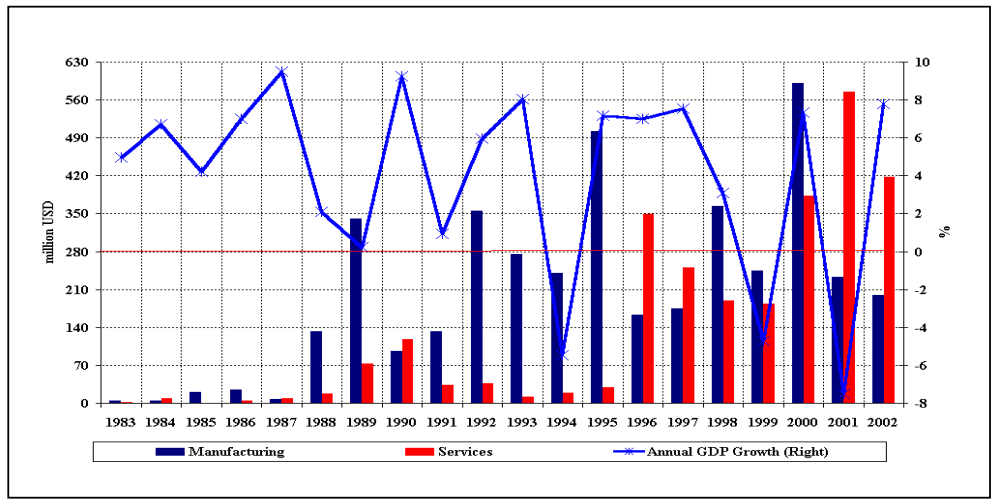

Figure 4.8 Participation DFI Approvals in Manufacturing and Services
Source: GDFI Annual Reports and SPO Main Economic Indicators.

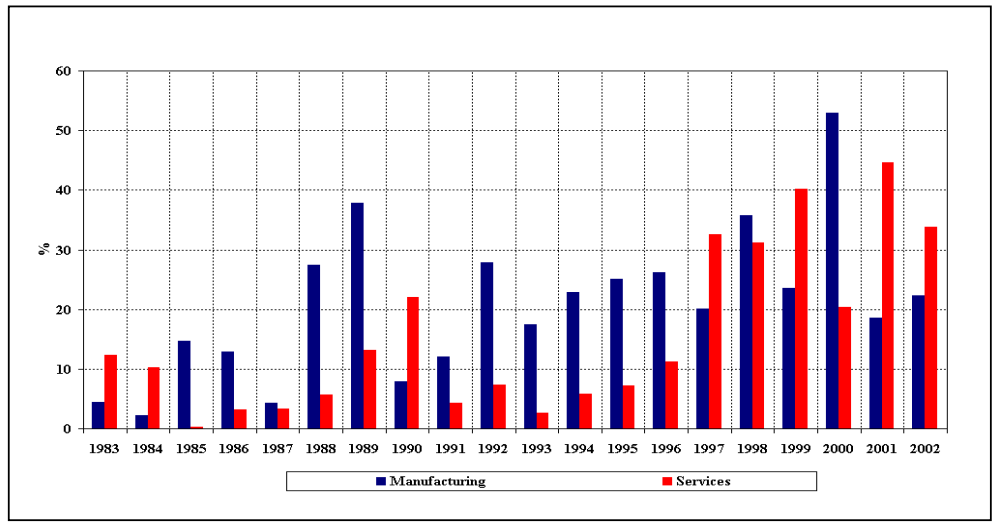

Figure 4.9 Annual Share of Participation DFI Approvals in Total DFI in Manufacturing and Services
Source: GDFI Annual Reports

Table 4.6 Sectoral Distribution of the DFI Firms Whose Majority Ownership Has Shifted to Foreigners in 2001

SECTOR	NUMBER OF FIRMS	AVERAGE PARTICIPATION SHARE	APPROVED FOREIGN CAPITAL (USD)
Agriculture	**1**	**100.0**	**55,172**
Fishery	1	100.0	55,172
Energy	**1**	**80.0**	**56,251**
Electricity	1	80.0	56,251
Manufacturing Industry	**32**	**57.7**	**107,350,807**
Food	5	95.1	1,888,531
Textiles, Apparel and Knitted Products	6	64.4	350,865
Leather and Leather Products	2	74.7	106,738
Paper and Printing	3	75.4	64,882,555
Cement	1	52.1	4,055,375
Chemicals	1	73.5	2,757,375
Industrial Chemical Products	4	51.7	883,226
Other Chemical Products	1	100.0	164,384
Plastics	1	83.5	86,032
Machinery	1	50.0	100,000
Electrical Machinery	2	50.0	26,023,084
Electronics	2	70.5	125,395
Transport Related Industries	1	50.0	54,412
Other Manufacturing	2	50.0	5,872,877
Services	**78**	**92.5**	**401,896,326**
Trade	33	81.9	3,412,153
Banking and Other Financial Services	1	100.0	350,000,000
Hotels	16	74.2	27,810,516
Restaurants and Cafes	5	83.9	274,111
Construction	10	88.3	12,993,012
Maritime Transport	1	51.0	1,821,429
Air transport	1	50.0	54,545
Private education	1	50.0	102,941
Health services	1	90.0	48,846
Other services (Advertisement)	1	77.8	41,776
Other social services	8	57.3	5,336,997
Total	**112**	**88.5**	**509,358,556**

Source: GDFI Database

Table 4.7 Home Country Distribution of the Firms Whose Majority Ownership Has Shifted to Foreigners in 2001

COUNTRY	NUMBER OF FIRMS				
	Manufacturing	Services	Energy	Agriculture	Total
Germany	4	10	1		**15**
Netherlands	4	9		1	**14**
United Kingdom	2	8			**10**
United States	1	6			7
Iran	2	5			7
Russian Federation	1	5			**6**
Azerbaijan		5			**5**
France	3	1			**4**
Greece	3	1			**4**
Iraq		3			**3**
Israel	1	2			**3**
United Arab Emirates	1	1			**2**
China	1	1			**2**
South Korea		2			**2**
Luxembourg	1	1			**2**
Jordan		2			**2**
Austria	1				**1**
Bulgaria		1			**1**
Gibraltar		1			**1**
Algeria	1				**1**
Denmark	1				**1**
Georgia		1			**1**
India		1			**1**
Spain		1			**1**
Sweden	1				**1**
Switzerland		1			**1**
Italy		1			**1**
Mixed		1			**1**
Kyrgyzstan		1			**1**
Libya		1			**1**
Liechtenstein		1			**1**
Lebenon		1			**1**
Malta		1			**1**
Egypt		1			**1**
Panama	1				**1**
Romania	1				**1**
Saudi Arabia		1			**1**
Syria	1				**1**
Thailand		1			**1**
Turkmenistan	1				**1**
TOTAL	**32**	**78**	**1**	**1**	**112**

Source: GDFI Database.

Table 4.8 Sectoral Distribution of the DFI Firms Whose Majority Ownership Has Shifted to Foreigners in 2002

SECTOR	NUMBER OF FIRMS	AVERAGE PARTICIPATION SHARE	APPROVED FOREIGN CAPITAL (USD)
Agriculture	**1**	**86,0**	**16.222**
Fishery	1	86,0	16.222
Mining	**2**	**62,1**	**112.033**
Mining	2	62,1	112.033
Manufacturing Industry	**11**	**74,6**	**98.352.887**
Food	3	51,3	92.658.285
Textiles, Apparel and Knitted Products	2	93,7	2.154.057
Leather and Leather Products	1	60,0	55.901
Iron and Steel	1	50,0	75.758
Machinery	1	97,2	52.380
Electronics	2	96,2	3.311.475
Transport Equipment	1	72,5	45.031
Services	**75**	**52,5**	**206.570.197**
Wholesale and Retail Trade	53	74,8	11.763.000
Banking and Other Financial Services	4	51,8	191.773.368
Hotels	6	89,6	647.378
Construction	1	93,3	54.983
Other Transport	3	80,6	311.604
Other Activities	3	82,1	512.495
Other social services	5	77,6	1.507.369
Total	**89**	**53,9**	**305.051.339**

Source: GDFI Database

Table 4.9 Home Country Distribution of the Firms Whose Majority Ownership Has Shifted to Foreigners in 2002

COUNTRY	NUMBER OF FIRMS				
	Manufacturing	Services	Energy	Agriculture	Total
Netherlands	4	9			13
United Kingdom	3	9			12
Germany		7			7
United States		4	1		5
Iraq		5			5
Italy		5			5
Iran		4			4
Israel	2	2			4
Greece		4			4
Virgin Islands		3			3
Spain		3			3
Jordan		3			3
Austria	1	1			2
Azerbaijan		2			2
Ireland		2			2
Switzerland	1	1			2
Mixed		1		1	2
Luxembourg		2			2
Belgium			1		1
Bulgaria		1			1
China		1			1
Palestine		1			1
Guernsey Islands		1			1
South Korea		1			1
Sweden		1			1
Mauritus		1			1
Syria		1			1
TOTAL	11	75	2	1	89

Source: GDFI Database

4.5 The Contribution of Privatisation to DFI Inflows

The total amount of DFI inflows through privatisation is rather low in Turkey. In the 1988-2004 period, the total amount of privatisation to foreign investors is only USD 1.4 billion. This amount is 7.3% of total DFI inflows in the 1988-2003 period, and 6.9% of DFI inflows in the post-1980 period as a whole. The detail of privatisation to foreign investors is given in Table 4.10.

Only in three years, namely in 1994, 1998 and 2000, the share of privatisation in DFI inflows became significant. In 1994, due to the sale of 16.7% public sector share in TOFAŞ Türk Otomobil Fabrikaları A.Ş., the share of privatisation income in DFI inflows in that year reached 40.5%. In 1998, the share of privatisation income in DFI inflows was 40.2%, due to the sale of 7.4% public sector share in Türkiye İş Bankası A.Ş. In 2000, although small as compared to 1994 and 1998, the share of privatisation income in DFI inflows was 16.0%, due to the sale of 6.8% public sector share in TÜPRAŞ (See Figure 4.10). Actually, these three privatisations make 70.4% of total privatisation income from foreign investors during the 1988-2004 period.

As we have above mentioned in Chapter 3, privatisation-related DFI inflows accounted for about 40% of total DFI inflows in the 1990s in Argentina and Brazil, about 90% in the Czech Republic in the early 1990s, and about 50% in Poland and Hungary again in the early 1990s. Thus, as compared to these international experiences, DFI inflows related to privatisation in Turkey turned out to be very low.

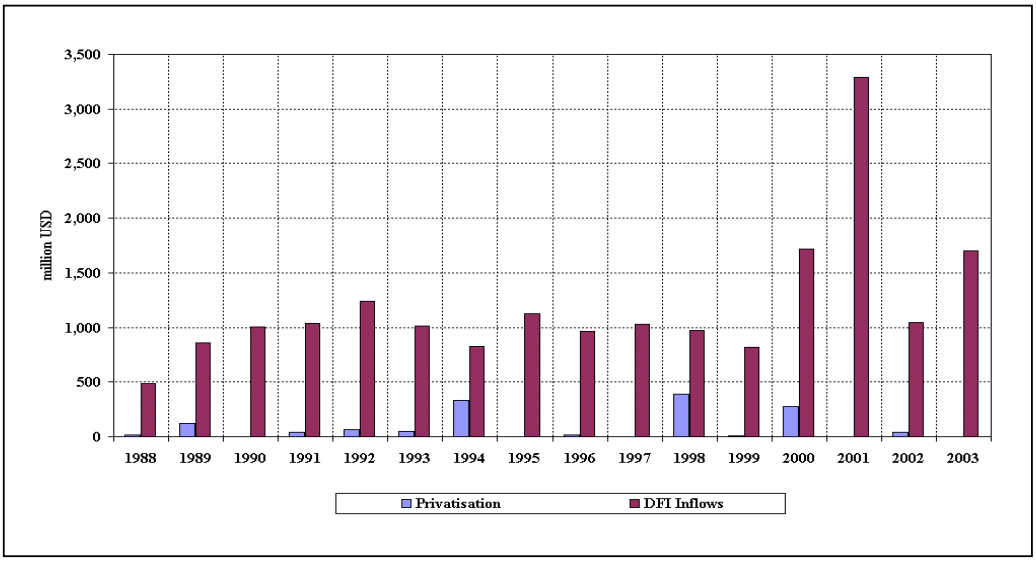

Figure 4.10 Privatization to Foreign Investors and DFI Inflows: 1988-2003
Source: Privatization Administration, GDFI and CBRT.

Table 4.10 Privatisation to Foreign Investors: 1988-2004

Name of Enterprise	Public Share (%)	Date of Sale	Sold Share	Method of Sale	Purchasing Company	Revenue ($)
ANSAN Ankara Meşrubat San. Tic. A.Ş.	88.32	18.11.1988	88.33	Block Sale	Atlantic Industries Ltd. / USA	12,250,000
MEDA Meşrubat Dağıtım ve Ticaret A.Ş.	88.00	18.11.1988	88.00	Block Sale	Atlantic Industries Ltd. / USA	750,000
					1988 Total	13,000,000
USAŞ Uçak Servisi A.Ş.	100.00	11.08.1989	70.00	Block Sale	SAS Service Partner A/S / Denmark	14,450,000
Afyon Çimento Sanayii T.A.Ş.	99.60	08.09.1989	51.00	Block Sale	Ciments Français S.A. / France	13,000,000
Ankara Çimento Sanayii T.A.Ş.	99.30	08.09.1989	99.30	Block Sale	Ciments Français S.A. / France	33,000,000
Balıkesir Çimento Sanayii T.A.Ş.	98.30	08.09.1989	98.30	Block Sale	Ciments Français S.A. / France	23,000,000
Söke Çimento Sanayii T.A.Ş.	99.60	08.09.1989	99.60	Block Sale	Ciments Français S.A. / France	11,000,000
Trakya (Pınarhisar) Çimento San. T.A.Ş.	99.90	08.09.1989	99.90	Block Sale	Ciments Français S.A. / France	25,000,000
					1989 Total	119,450,000
Tofaş Oto Ticaret A.Ş.	39.02	22.02.1991	16.00	Block Sale	Fiat Auto S.p.A. / Italy	13,203,441
Türkkablo A.Ş.	38.00	17.05.1991	38.00	Block Sale	Nokia Int. / İsviçre - Finnish Fund / Finland.	11,000,000
Güneş Sigorta A.Ş.	30.00	01.07.1991	30.00	Block Sale	Gan International / France	18,900,000
					1991 Total	43,103,441
İPRAGAZ A.Ş.	49.33	27.01.1992	49.33	Block Sale	Compagnie des Gaz de Petrole / France	64,066,776
MEYSU Meyve Suyu ve Gıda Sanayi A.Ş.	96.15	16.07.1992	22.00	Block Sale	H. REİL - T. SZABADOU / Germany	281,412
					1992 Total	64,348,188
NETAŞ Northern Elekt. Telekom. A.Ş.	49.00	01.03.1993	20.00	Block Sale	NTL Northern Telecom Ltd / UK	26,000,000
TELETAŞ Telekom. End. Tic. A.Ş.	40.00	19.08.1993	18.00	Block Sale	ALCATEL Holding B.V. / Netherlands	21,002,400
AEG-ETİ Elektrik Endüstrisi A.Ş.	38.96	10.12.1993	11.11	Block Sale	AEG Aktiengesellschaft / Germany	2,199,542
					1993 Total	49,201,942
TOFAŞ Türk Otomobil Fabrikaları A.Ş.	23.37	07.03.1994	16.67	International public offering	Foreign Institutional Investors	330,000,000
AEG-ETİ Elektrik Endüstrisi A.Ş.		21.06.1994	27.85	Block Sale	AEG Aktiengesellschaft / Germany	5,871,330
					1994 Total	335,871,330
TESTAŞ T. Elektronik San. Tic. A.Ş.		20.12.1995	Aydın plants		Taiwan Firstohm Aydın Elektronik San. A.Ş.	1,150,000
					1995 Total	1,150,000
ÇİNKUR Çinko Kurşun Metal San. A.Ş.	98.80	22.05.1996	98.80	Block Sale	K.M.M. Kayseri Maden Metal Tic. A.Ş.	14,000,000
					1996 Total	14,000,000
Türkiye İş Bankası A.Ş.	12.39	13.05.1998	7.40	International public offering	Foreign Institutional Investors	391,949,083
					1998 Total	391,949,083
BASF Türk Kimya Sanayi ve Tic. A.Ş.	39.997	15.11.1999	39.995	Block Sale	BASF AG / BASF Handels Exp. / Germany	7,137,821
					1999 Total	7,137,821
TÜPRAŞ T. Petrol Rafinerileri A.Ş.	100.00	07.04.2000	6.77	International public offering	Foreign Institutional Investors	265,491,985
AYMAR Yağ Sanayi A.Ş.	11.06	31.08.2000	11.06	Block Sale	UNILEVER San. ve Tic. Türk A.Ş.	905,000
Toros Gübre ve Kimya Endüstrisi A.Ş.	14.48	09.10.2000	14.48	Block Sale	TEKFEN Sanayi Yatırım A.Ş.	8,500,000
					2000 Total	274,896,985
Petrol Ofisi A.Ş.	100.00	15.03.2002	3.50	International public offering	Foreign Institutional Investors	38,891,914
					2002 Total	38,891,914
ÇBİ Çayeli Bakır İşletmeleri A.Ş.	45.00	23.09.2004	45.00	Block Sale	Inmet Madencilik A.Ş.	49,250,000
					2004 Total	49,250,000
					Grand Total	**1,402,250,704**

Source: Privatization Administration.

4.6 Outward DFI Flows From Turkey

4.6.1 A Comparison of Outward and Inward DFI

As of June 30, 2004, the total stock of outward DFI from Turkey was USD 6.5 billion[70]. While the cumulative stock as of December 31, 1997 was only USD 1.8 billion, the total amount of outward DFI in the last six and a half years reached USD 4.7 billion. Thus, if we assume that the cumulative stock as of 1997 spans at least the period since 1980, it turns out that there is a sharp increase in the amount of outward DFI flows in recent years. That is, while 17 years' average was USD 103.3 million, the six and a half years' average was USD 723.1 million. Annual DFI outflows seem to have increased 7-fold in 1998-2003 as compared to 1980-1997. On the other hand, the annual averages for inward DFI during the 1980-1997 and 1998-2003 periods were USD 594 million, and USD 1.594 million, respectively. Thus, in the same respective periods, the annual average DFI inflows have risen only 2.7 times. While outward DFI stock was 20.3% of inward DFI stock as of 1997, it increased to 34.2% as of 2004.

Table 4.11 gives DFI outflows, inflows and net DFI flows in Turkey in the 1997-2004 period. While inward DFI stock was USD 18,885 million as of 2004, the net inflows were actually USD 12,429.1 million. In 1999, DFI outflows were actually 82.6% of DFI inflows. In 2000, this ratio was 69.6%. The ratio of DFI outflows to DFI inflows, being in the range of 40-50% in 1998, 2001 and 2002, dropped to 23.4% in 2003, and further to 11.9% in 2004[71]. However, keeping in mind the fact that 58.0% (USD 987 million) of DFI inflows in 2003 was actually due to real estate purchases of foreigners in Turkey, outward DFI from Turkey actually exceeded DFI inflows to Turkey in this particular year, excluding real estate-related DFI inflows: The ratio of DFI outflows to DFI inflows (excluding real estate

[70] This figure is from the website of the Undersecretariat of Treasury. In the balance of payments statistics of CBRT, however, the cumulative outward DFI as of 2003 is only USD 4.2 billion, and the discrepancy continues in the annual figures, too. While Statistics Department of CBRT compiles the outward DFI data based on bank receipts, the General Directorate of Banking and Exchange of the Undersecretariat of Treasury, in addition to bank receipts, relies on the information notices submitted directly by firms making outward investments as well customs data for information on exports of capital in kind. Thus, the discrepancy is due to the fact that bank receipts due not cover all the information on outward DFI, as some parts of outward DFI may seem to be just remittance transfers in banks' records.

[71] The figures for 2004 are as of June 30, 2004.

purchases) was 125.6%. Moreover, the real estate DFI inflows in the first half of 2004 were USD 668 million. Thus, excluding this amount, net DFI inflows in the first half of 2004 actually turn out to be again negative (USD -19.4 million).

Table 4.11 Outward, Inward and Net DFI Flows for Turkey: 1997-2004

	OUTWARD DFI	INWARD DFI	NET DFI INFLOWS
1997 (*)	1,756.1	8,644.0	6,887.9
1998	396.3	953.0	556.7
1999	671.8	813.0	141.2
2000	1,187.9	1,707.0	519.1
2001	1,458.7	3,288.0	1,829.3
2002	499.6	1,042.0	542.4
2003	398.1	1,702.0	1,303.9
2004 (**)	87.4	736.0	648.6
TOTAL	**6,455.9**	**18,885.0**	**12,429.1**

Notes:

(*) The stock figure as of December 31, 1997.
(*) As of June 20, 2003.

Sources: Under secretariat of Treasury and the CBRT.

Both inward and outward DFI flows have reached their maximum levels in 2001. The average annual rate of increase from 1998 to 2001 is 0.5% for both outward and inward DFI. On the other hand, from 2001 to 2003, while the average annual rate of decrease for outward DFI is 0.5%, it is only 0.3% for inward DFI. In other words, while outward DFI increased more quickly than inward DFI in the 1998-2001 period, it also decreased more quickly in the 2001-2003 period. However, the rates of changes are not much different from each other, and Figure 4.11 shows that outward and inward DFI tend to move in the same directions in the 1998-2004 period.

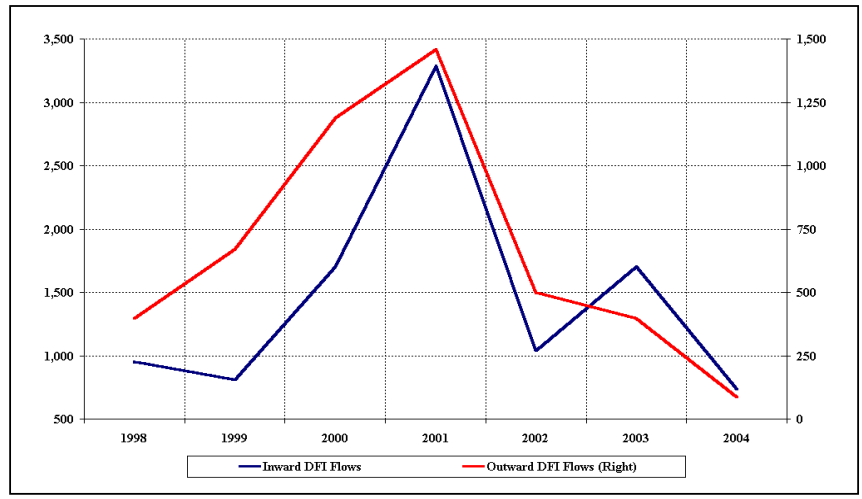

Figure 4.11 Outward and Inward DFI Flows

Source: Undersecretariat of Treasury and CBRT.

4.6.2 Country Distribution of Outward DFI

As of June 30, 2004, there are 1,398 Turkish firms in 79 countries engaged in DFI. Table 4.12 gives the top 26 countries together with the existing number of Turkish DFI firms and their capital. The countries are ranked according to the number of Turkish DFI firms operating in each country. The first 26 countries represent 88.4% of the firms, and 94.5% of Turkish outward DFI stock. The remaining 53 countries represent only 11.6% of the firms, and 5.5% of the outward DFI stock. In each one of the top-4 countries, namely Germany, Turkish Republic of Northern Cyprus, Romania and Azerbaijan, there are more than 100 Turkish DFI firms. The next 6 countries have between 50-99 firms each; and the next 16 countries have between 10-49 firms each. In the last 53 countries, there are less than 10 Turkish DFI firms.

Actually, just two countries, namely Netherlands and Azerbaijan, have 49.3% of total outward DFI stock, although they account only for 13.7% of the total number of firms. When we add the United Kingdom, Germany, Kazakhstan and Luxembourg to these countries, the percentage of total outward DFI stock increases to 75.6% and the number of firms to 33.8%. In other words, the bulk of the outward DFI goes to only a small number of countries through a small number of firms. The remaining 24.4% of outward DFI stock is dispersed to 74 countries.

Table 4.13 gives the distribution of outward and inward DFI stocks with respect to selected regions and countries. First of all, the Netherlands turns out to be the country having the highest share in outward DFI stock as it was the case in the inward DFI stock of Turkey. As a group, EU-15 countries also rank top both in the outward and inward DFI stock, with shares of 56.3% and 69.0%, respectively. Among the EU-15 countries, while Germany and the United Kingdom rank second and third both in inward and outward DFI stocks, the situation is different for Italy and France. While these two countries have a total share of 12.0% in inward DFI stock, their share in outward DFI stock is only 1.5%. This difference in the shares of countries in inward and outward DFI is also valid for the USA, Japan and Switzerland. The total share of these three countries in inward DFI stock is 19.0%, but their share in outward DFI stock is only 4.1%.

Table 4.12 Country Distribution of Outward DFI Stock as of June 30, 2004

COUNTRY	NUMBER OF FIRMS	OUTWARD DFI STOCK (Million USD)
Germany	135	492
TRN Cyprus	135	81
Romania	121	131
Azerbaijan	114	1,041
Netherlands	77	2,141
Russian Federation	75	168
USA	70	179
Kazakhstan	70	433
UK	59	525
Uzbekistan	57	20
Bulgaria	43	58
Switzerland	36	85
Ukraine	33	9
France	31	93
Turkmenistan	25	57
Ireland	18	33
Luxembourg	18	249
Belgium	16	52
Georgia	16	31
Italy	16	2
Kyrgyzstan	15	24
Malta	12	26
Bahrain	11	39
Poland	11	4
Egypt	10	7
Virgin Islands	10	119
Remaining 53 countries	164	357
Total	**1,398**	**6,456**

Source: Undersecretariat of Treasury.

Table 4.13 Country and Regional Distribution of Outward and Inward DFI Stock

	Percentage Distirbution of	
COUNTRY	Outward DFI Stock* (%)	Inward DFI Stock** (%)
EU - 15	56.3	69.0
COMMONWEALTH OF INDEPENDENT STATES	27.6	0.4
USA	2.8	7.7
MIDDLE EAST	2.5	2.4
ROMANIA	2.0	0.1
SWITZERLAND	1.3	7.1
CZECH REPUBLIC	1.3	0.0
BULGARIA	0.9	0.1
NORTH AFRICA	0.8	0.2
HUNGARY	0.7	0.0
POLAND	0.1	0.0
OTHER ISLAMIC COUNTRIES	0.1	0.1
SOUTHEAST ASIAN COUNTRIES	0.1	0.2
JAPAN	0.0	4.1
OTHER COUNTRIES	3.5	8.6
TOTAL	**100.0**	**100.0**

Notes:

(*) As of June 30, 2004.
(**) As of June 30, 2003.

Source: Undersecretariat of Treasury

Another striking difference in this context can be observed from the Commonwealth of Independent States (CIS). While the share of these countries is only 0.4% in inward DFI stock, their share in outward DFI stock is 27.4%. Among the countries in the CIS, the bulk of outward DFI goes to Azerbaijan (16.1%), Kazakhstan (6.7%) and Russian Federation (2.6%). Then come Turkmenistan (0.9%), Georgia (0.5%), Kyrgyzstan (0.4%), Uzbekistan (0.3%) and Ukraine (0.1%). This case of discrepancy between inward and outward DFI stocks is also valid for Romania, Czech Republic, Bulgaria, Poland and North African Countries. While this group of countries have a share of only 0.5% in inward DFI stock, their share in outward DFI stock is 5.7%.

To recapitulate, leaving aside the Netherlands, Germany and United Kingdom with the highest shares both in inward and outward DFI stocks, outward DFI from Turkey is directed more towards Turkic states of the CIS, Eastern European and North African countries.

4.6.3 Sectoral Distribution of Outward DFI Stock

Figure 4.13 shows the sectoral distribution of outward DFI stock as of June 30, 2004. The first 5 sectors are manufacturing, banking, energy, other financial services and trade. Then come telecommunications, tourism and construction. Although manufacturing seems to be the sector representing the highest amount of outward DFI, financial services turn out to be the top sector if we aggregate banking, other financial services and insurance under this heading, accounting for 37.3% of outward DFI stock.

The share of manufacturing, energy and trade are 22.0%, 20.2% and 13.5%, respectively. Thus, 93.0% of outward DFI stock is in financial services, manufacturing, energy and trade.

The most diversified sector in terms of country distribution is trade. There are outward DFI firms operating in 58 countries. However, 78.9% of outward DFI in trade is only in 8 countries: United Kingdom, Netherlands and Luxembourg are the first three countries attracting 47.9% of investment in trade from Turkey. Then come the Czech Republic, the USA, Belgium, Russian Federation and Virgin Islands in that order. The high shares of Luxembourg and Virgin Islands raise the question of capital flight due to tax evasion considerations.

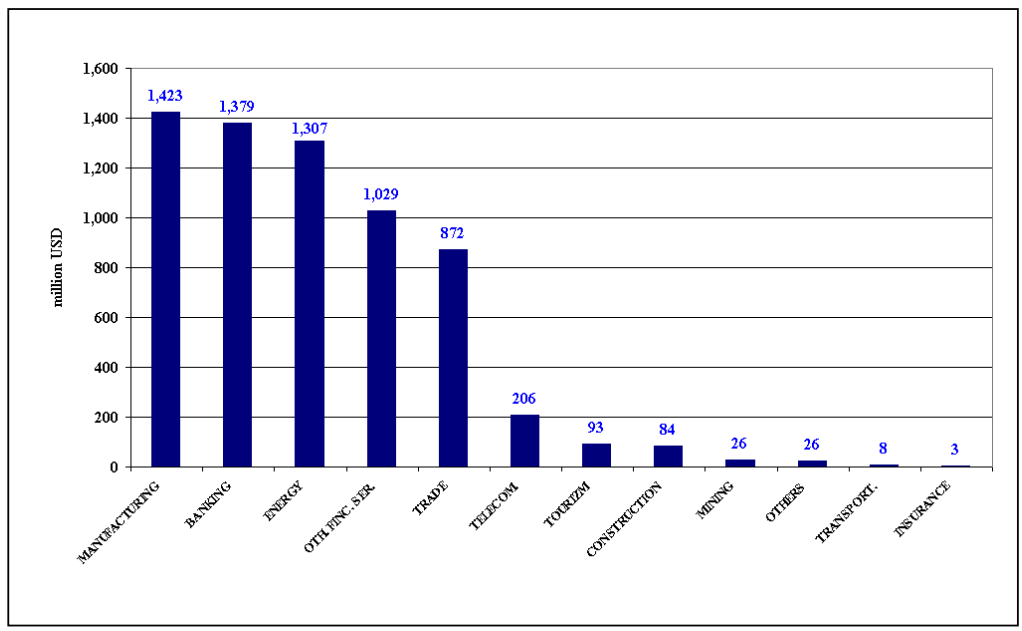

Figure 4.12 Sectoral Distribution of Outward DFI as of June 30, 2004

Source: Undersecretariat of Treasury.

The most concentrated sectors in terms of host countries are mining, energy, telecom and transportation with 7, 8, 13 and 17 countries, respectively. 96.6% of energy investments go to Azerbaijan and Kazakhstan, where Azerbaijan attracts 74.6% of total energy DFI from Turkey on its own. Mining investments are concentrated mainly in four countries: Romania, Turkmenistan, South Africa and Azerbaijan. These four countries attract 99.7% of total mining investment from Turkey. Telecom DFI is concentrated in Netherlands (30.8%), France (27.5%), and Azerbaijan (11.2%), with Jordan, Georgia, Kazakhstan, and Monaco following these countries, attracting together 28.5% of total telecom outward DFI from Turkey. On the other hand, transportation DFI from Turkey is concentrated in Kazakhstan, Malta, Liberia and France, representing 82.5% of the total.

The second most diversified sector in terms of the destination of Turkish outward DFI is manufacturing with 45 countries. Financial services, construction and tourism lie in between, in terms of country diversification, with 29, 25, and 21 countries, respectively. In manufacturing, Netherlands on its own accounts for 52.0% of outward DFI stock. The United Kingdom follows the Netherlands by attracting 14.8% of total manufacturing outward DFI. Romania comes third, but its share is only 5.0%. These three countries represent 71.8% of manufacturing outward DFI from Turkey. Following these three countries are the USA, Germany, Turkmenistan, Russian Federation, Hungary, Azerbaijan, and Kyrgyzstan, attracting together a total of 21.4% of manufacturing DFI from Turkey with the remaining 33 countries account for only 6.8% of the total.

With regards to financial services, the Netherlands attracts 49.8% of outward DFI from Turkey. Actually, the share of the Netherlands is 85.1% in other financial services and 28.3% in banking. Germany comes second in financial services with a share of 16.3%. Then come the UK, Luxembourg, Russian Federation, TRN Cyprus, Virgin Islands, the USA, and Switzerland with a total share of 23.6%. The other 20 countries have a share of only 10.3% in financial services.

Construction DFI is mainly attracted by Germany (25.5%), Switzerland (15.6%), Luxembourg (13.9%) and Libya (11.2%). After these countries come Russian Federation (8.9%), the USA (6.9%), Saudi Arabia (4.8%), and Romania (3.5%). The remaining 17 countries attract 9.7% of construction DFI from Turkey. On the other hand, tourism investment mainly goes to two countries: Kazakhstan

(41.5%) and Germany (17.0%). The following seven countries are Virgin Islands (7.6%), Romania (7.6%), Netherlands (5.9%), TRN Cyprus (5.9%), France (4%), the United Kingdom (3.2%), and Turkmenistan (3.0%). The other 12 countries represent 4.1% of tourism DFI from Turkey. The country distribution of outward DFI stock with respect to main sectors is given in Table 4.13.

Table 4.14 Country Distribution of Outward DFI Stock in Main Sectors

TRADE		MANUFACTURING		BANKING, OTHER FIN. SER. AND INSURANCE		BANKING		CONSTRUCTION		TOURISM		TRANSPORTATION	
COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)
ENGLAND	19.5	NEDHERLANDS	52.0	NEDHERLANDS	49.8	GERMANY	28.3	GERMANY	25.5	KAZAKSTAN	41.5	KAZAKSTAN	38.5
NEDHERLANDS	14.4	ENGLAND	14.8	GERMANY	16.3	NEDHERLANDS	23.5	SWITZERLAND	15.6	GERMANY	17.0	MALTA	19.2
LUXEMBOURG	14.0	ROMANIA	5.0	ENGLAND	4.9	ENGLAND	8.1	LUXEMBOURG	13.9	VIRGIN ISLANDS	7.6	LIBERIA	14.1
CZECH REPUBLIC	9.6	U.S.A.	3.9	LUXEMBOURG	4.8	LUXEMBOURG	6.5	LIBYA	11.2	ROMANIA	7.6	FRANCE	10.7
U.S.A.	5.7	GERMANY	2.9	RUSSIAN FED.	3.1	RUSSIAN FED.	5.4	RUSSIAN FED.	8.9	NEDHERLANDS	5.9	U.S.A.	6.4
BELGIUM	5.4	TURKMENISTAN	2.9	T.R.N. CYPRUS	3.0	T.R.N. CYPRUS	4.9	U.S.A.	6.9	T.R.N. CYPRUS	5.9	GERMANY	2.7
RUSSIAN FED.	5.2	RUSSIAN FED.	2.9	VIRGIN ISLANDS	2.7	U.S.A.	4.6	SAUDI ARABIA	4.8	FRANCE	4.0	GREECE	2.4
VIRGIN ISLANDS	5.1	HUNGARY	2.8	U.S.A.	2.6	SWITZERLAND	3.8	ROMANIA	3.5	ENGLAND	3.2	BELGIUM	2.0
ROMANIA	2.8	KAZAKSTAN	2.8	SWITZERLAND	2.5	BAHRAIN	2.8	IRELAND	2.5	TURKMENISTAN	3.0	ITALY	1.7
BULGARIA	2.7	AZERBAIJAN	2.0	BAHRAIN	1.6	AUSTRIA	2.5	VIRGIN ISLANDS	2.1	BELGIUM	1.8	T.R.N. CYPRUS	0.8
GERMANY	2.3	KYRGYSTAN	1.2	AUSTRIA	1.5	KAZAKSTAN	2.3	KAZAKSTAN	2.0	U.S.A.	1.0	ENGLAND	0.6
KAZAKSTAN	1.9	ARGENTINA	0.8	KAZAKSTAN	1.4	BULGARIA	1.7	TURKMENISTAN	1.2	CZECH REPUBLIC	0.3	SWITZERLAND	0.5
FRANCE	1.7	BULGARIA	0.8	IRELAND	1.1	FRANCE	1.3	GEORGIA	0.7	NEDHERLANDS ANTILLS	0.3	ALGERIA	0.3
MALTA	1.6	UZBEKISTAN	0.8	BULGARIA	1.0	BOSNIA AND HERZ.	1.1	NIGERIA	0.5	BULGARIA	0.2	ROMANIA	0.1
AZERBAIJAN	1.2	GEORGIA	0.7	FRANCE	0.7	MAKEDONIA	0.9	BOSNIA AND HERZ.	0.2	IRELAND	0.2	UZBEKISTAN	0.1
SWITZERLAND	1.2	IRAN	0.6	BOSNIA AND HERZ.	0.6	ROMANIA	0.7	ALGERIA	0.1	RUSSIAN FED.	0.1	BULGARIA	0.1
SOUTH AFRICA	0.9	EGYPT	0.4	MAKEDONIA	0.5	ALBANIA	0.4	T.R.N. CYPRUS	0.1	JAPAN	0.1		
UZBEKISTAN	0.8	IRELAND	0.3	ROMANIA	0.5	GEORGIA	0.3	BULGARIA	0.1	UZBEKISTAN	0.1		
KYRGYSTAN	0.6	TUNUSSIA	0.3	MALTA	0.5	TURKMENISTAN	0.2	MOROCCO	0.1	SINGAPORE	0.1		
UCRAINA	0.4	DENMARK	0.3	ALBANIA	0.2	HUNGARY	0.2	QATAR	0.1				
KUWAIT	0.3	BELGIUM	0.2	GEORGIA	0.2	UZBEKISTAN	0.2	UCRAINA	0.1				
AUSTRIA	0.3	UCRAINA	0.2	TURKMENISTAN	0.1	KYRGYSTAN	0.1	MAKEDONIA	0.1				
SYRIA	0.3	POLAND	0.2	HUNGARY	0.1	AZERBAIJAN	0.1						
P.R.OF CHINA	0.2	BRAZIL	0.2	AZERBAIJAN	0.1								
SLOVAK REP.	0.2	AUSTRIA	0.2	UZBEKISTAN	0.1								
ISLANDS OF JERSEY	0.2	LITHUANIA	0.1	KYRGYSTAN	0.1								
SUDAN	0.2	NIGERIA	0.1										
MOROCCO	0.2	INDONESIA	0.1										
NEDHERLANDS ANTILLS	0.1	T.R.N. CYPRUS	0.1										
ITALY	0.1												
TUNUSSIA	0.1												
T.R.N. CYPRUS	0.1												
EGYPT	0.1												
U.A. EMIRATES	0.1												
HONG KONG	0.1												
TURKMENISTAN	0.1												
MEXICO	0.1												

OTH. FINC. SER.		TELECOMMUNICATIONS		ENERGY		MINING		INSURANCE		OTHERS	
COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)	COUNTRY	SHARE (%)
NEDHERLANDS	85.1	NEDHERLANDS	30.8	AZERBAIJAN	74.6	ROMANIA	47.9	T.R.N. CYPRUS	43.0	ENGLAND	86.6
VIRGIN ISLANDS	6.3	FRANCE	27.5	KAZAKSTAN	22.0	TURKMENISTAN	32.5	GERMANY	35.8	U.S.A.	6.8
IRELAND	2.5	AZERBAIJAN	11.2	ALGERIA	2.0	SOUTH AFRICA	11.5	AZERBAIJAN	17.0	CANADA	3.3
LUXEMBOURG	2.5	JORDAN	9.2	GIBRALTAR	0.8	AZERBAIJAN	7.9	ROMANIA	3.0	PAKISTAN	1.7
MALTA	1.1	GEORGIA	8.1	NEDHERLANDS	0.5	T.R.N. CYPRUS	0.1	SWITZERLAND	1.1	ITALY	0.4
SWITZERLAND	0.9	KAZAKSTAN	6.2	UCRAINA	0.2	ALBANIA	0.1			GERMANY	0.3
ENGLAND	0.7	MONACO	4.9							UCRAINA	0.2
T.R.N. CYPRUS	0.2	T.R.N. CYPRUS	1.0							SWITZERLAND	0.2
ROMANIA	0.2	U.S.A.	0.7							NEDHERLANDS	0.1
BAHRAIN	0.1	NEDHERLANDS ANTILLS	0.1							ROMANIA	0.1
ISLANDS OF CAYMAN	0.1	MOLDOVA	0.0							T.R.N. CYPRUS	0.1
ISLANDS OF JERSEY	0.1										
KAZAKSTAN	0.1										

Source: Undersecretariat of Treasury.

4.7 Conclusion

DFI inflows to Turkey have been very low both historically and as compared to other developing countries.[72] As of 2003, the DFI stock in Turkey is USD 20.2 billion. The number of firms that can be counted as international investors are actually very low in Turkey. For example, although there are 6,511 DFI firms operating in Turkey as of June 30, 2003, 37.9% of these firms are trade firms. Moreover, 70% of DFI firms in Turkish manufacturing industry are very small companies, employing less than 10 persons, contributing very little to the economy, and probably established only to get residence permits from Turkey for their owners.

The bulk of DFI inflows to Turkey are directed to services and manufacturing industry. Manufacturing has a decreasing trend in attracting DFI, while services has an increasing trend. Moreover, in the last one-and-a-half years, between January 1, 2003 and June 30, 2004, 54.2% of total DFI inflows consist of real estate investment. In contrast to other developing countries like Argentina, privatisation has not played a significant role in DFI inflows.

In the 1983-2003 period, we observe a close relationship between DFI inflows and gross fixed capital formation (GFCF) in Turkey in terms of both total and public investment figures. In other words, historical evolution of DFI closely resembles the evolution of both total GFCF and public GFCF in Turkey. The complementarity of public and private investments in Turkish economy at least until the late 1980s on the one hand, and the fact that domestic investments in fact precede DFI in developing countries as stated by Calderon et al (2002:13-14) on the other hand, lead us to argue that the low performance of DFI inflows in Turkey may be attributed to the low level of public and domestic private investment. The shift in the sectoral distribution of DFI from manufacturing to services mirrors itself in a parallel shift of sectoral distribution of GFCF in the post-1980 period.

The bulk of DFI inflows are attracted by the existing DFI firms in Turkey. In other words, totally new (greenfield) investments make only a small portion of total DFI approvals, especially in the manufacturing sector. Totally new DFI in both manufacturing and services has a steadily decreasing trend in the 1983-2002 period. On the other hand, capital increase and participation DFI in both manufacturing and

[72] See Table 3.2 in Chapter 3 for a comparison of DFI inflows to Turkey with those to top-recipient developing countries in the 1980-2003 period.

services have an increasing trend. The steady decrease in the share of new DFI approvals for manufacturing in total DFI approvals is in parallel with the decreasing trend of the share of manufacturing in gross fixed capital formation in Turkey during the 1983-2002 period.

With regards to the home country distribution of DFI inflows, the first eight home countries are France, the Netherlands, Germany, the United States, the United Kingdom, Switzerland, Italy, and Japan, which constitute 82.1% of the cumulative total DFI approvals. Actually, these 8 countries are among the top-12 exporters to Turkey, and their average share in total imports of Turkey was 51.3% during the 1996-2003 period. 69.0% of DFI firms operating in Turkey are from EU-15 countries. Among EU-15 countries, Netherlands, Germany, the UK, France, Italy, Luxembourg, and Belgium have the highest share in the existing DFI stock in Turkey. After EU-15 countries come the USA, Switzerland and Japan with a total share of 19.0%.

When the data on the number of firms and foreign capital are considered together, it turns out that the developed countries like France, Italy, Switzerland, and especially Japan operate in Turkey with a relatively few DFI firms, with high amounts of foreign capital. On the other hand, there are many DFI firms in Turkey, originating from countries such as Iran, Russian Federation, Iraq, Syria, China, Azerbaijan, Austria, Saudi Arabia, Belgium, Greece, Israel, and Jordan. However, these DFI firms operate with small amounts of foreign capital.

As far as mergers and acquisitions through DFI are concerned, the participation DFI has an increasing trend after 1987. In particular, a sharp increase for services is observed after 1996. For manufacturing, we can argue that participation DFI jumped in 1988-89, 1992, 1995 and 2000. It is interesting to note that 1989, 1991, 1994 and 1999 are years of troughs in the post-1985 Turkish economy. Thus, in trough years or just in the year following a trough, participation DFI in manufacturing registers a sharp increase. On the other hand, for services, the years in which there was a big increase are 1990, 1996 and 2001. There seems to be a lag of one year between the sharp increase in participation DFI in manufacturing and participation DFI in services. We can argue that after the recession years in the Turkish economy, “fire-sale” DFI increases in both manufacturing and services.

As of June 30, 2004, the total stock of outward DFI from Turkey was USD 6.5 million. While outward DFI stock was 20.3% of inward DFI stock as of 1997, it increased to 34.2% as of 2004. Leaving the Netherlands, Germany and United Kingdom aside, which have the highest shares in both inward and outward DFI stocks, outward DFI from Turkey is directed more towards Turkic states of the CIS, Eastern Europe, and Northern Africa countries. The first five sectors in outward DFI are manufacturing, banking, energy, other financial services and trade, followed by telecommunications, tourism and construction. The last three sectors, on the other hand, are other sectors n.e.s, transportation and insurance.

The outward and inward DFI tend to move in the same direction during the 1998-2004 period, for which we have comparable data for both outward and inward DFI flows. Moreover, keeping in mind the fact that 58.0% of DFI inflows in 2003 was actually for real estate purchases by foreigners, outward DFI from Turkey exceeds DFI inflows to Turkey (excluding real estate-related DFI inflows) in this particular year. Indeed, excluding the real estate purchases of foreigners in the first half of 2004, net DFI inflows actually turn out to be negative, also in the first half of 2004.

CHAPTER 5

EXPORT STRUCTURE AND LABOUR MARKET PERFORMANCE OF DFI FIRMS IN TURKEY

5.1 Introduction

A detailed analysis of export structure and labour market performance of DFI firms in comparison with domestic firms in Turkish economy has so far been absent in the literature. In this chapter, the behaviour of DFI firms in Turkish economy will be analysed in terms of their contribution to exports and employment. As regards to exports, a detailed analysis of DFI exports will be conducted in comparison with domestic exports. The distribution of DFI and domestic exports will be analysed with respect to regional and sectoral distributions, broad economic categories and OECD technology classification. It will be investigated whether there is a regular pattern between the country of origin of DFI firms and the destination of their exports. In doing this, it is aimed to detect whether foreign firms use Turkey as a jump-base for their exports, and if so to which markets.

In addition to exports, DFI and domestic firms will be compared and contrasted on the basis of their employment generation performance, wages and labour productivity. In analysing export structure and labour market performances of DFI firms, the criterion employed in conventional definitions of DFI, that is the 10% rule, will also be challenged. That is, it will be investigated how the performance of DFI firms change as the foreign share, and hence the definition of DFI, changes. However, unless otherwise noted, the standard definition will be employed in defining a 'DFI firm'.

Three different data sets will be employed in this chapter. The first data set includes annual export figures (in US Dollars) of all DFI firms operating in Turkey for the 1996-2002 period[73]. Recall that there is no percentage rule for the definition of DFI in Turkey, thus any positive percentage of foreign share suffices for that firm

[73] The data set is confined to 1996-2002, because it was prepared specially and confidentially for a specialist's thesis in GDFI in 2003. The present author has managed to obtain only the aggregated version of the data set, and thus did not have the chance to extend the period of analysis.

to be accepted as DFI. Hence, export figures of DFI firms include a wide range of firms from 100% foreign ownership to only a small positive percentage of foreign participation. Thus, when the figures of DFI and domestics firms are compared, one actually compares purely domestic firms with those firms that have any positive share of foreign capital. Moreover, in the GDFI database, it is the ownership of the exporter, not of the producer, that identifies a firm as DFI or domestic. That is, for example, when a DFI manufacturer sells its produce to a domestic firm rather than exporting it directly, and when this amount is exported by a domestic export firm, it is treated as domestic export rather than DFI export in the GDFI database. Of course, the converse situation is also valid. Then, analysis of DFI exports should be interpreted with this caution in mind.

Although the data set is from the GDFI database, it is a separate database, which is not integrated yet to the general database of GDFI. Therefore, until the integration of databases is completed by GDFI, the relationship between foreign share and foreign trade volume shall wait to be answered. However, this problem is solved partly, by utilising the Istanbul Chamber of Industry (ICI) data sets covering 500 largest industrial firms in Turkey. Utilising ICI data sets in this respect is justified, because most DFI exports are accounted by approximately 106 DFI firms in the 500 largest firms of Turkey[74]. For example, while the largest 81 DFI firms accounted for 61.5% of total DFI exports in 1996, the share of largest 124 DFI firms in total DFI exports was 83.8% in 2002. As the largest DFI firms can be taken as fairly representative of total DFI population in Turkey in terms of exports, the figures of these firms in the ICI data sets will be employed to analyse the relationship between foreign share and exports. However, this is a partial solution to the problem, because one can only analyse the relationship between foreign share and DFI exports in terms of the total export figures. That is, it is not possible to decompose the DFI exports into regional, sectoral, technology or broad economic classifications with respect to different levels of foreign share.

Regarding the analysis of labour market performance, the SIS database will be utilised for the manufacturing industry for the 1992-2001 period, which is categorised in terms of both the sub-sectors of the manufacturing industry and 10

[74] The present author has defined a DFI firm in the ICI data set according to the 10% rule.

percentage points increments in foreign share[75]. However, as the number of firms in a foreign share category for a specific sub-sector falls below three, the data for that category is not given. Moreover, if a specific sub-sector is divided only in two foreign share categories, and the number of firms is less than three for one category, the data for the rest of the firms are also not available. Due to these confidentiality restrictions, more aggregated data in terms of sectors had to be used in order to analyse the employment performance at a finer level of detail of foreign share categories. Thus, 5 sub-sectors of the manufacturing industry were chosen in 2-digit ISIC Rev.2 classification, which have the most continuous data series for the 1992-2001 period. The employment performance of DFI firms are analysed as compared to domestic firms in food, beverages and tobacco (31), textiles (32), chemicals, petroleum products, plastics and rubber (35), non-metallic mineral products (36), engineering industries (38), and the total manufacturing industry (3). With respect to each foreign share category, the performances of DFI firms and domestic firms are compared in terms of employment, wages and labour productivity.

This chapter is organised as follows: Section 2 analyses DFI exports in terms of regional and sectoral distribution, broad economic categories, and OECD technology classification. DFI exports are also compared with the most dynamic products in world trade. Section 3 analyses employment performance of DFI and domestic firms in terms of net employment generation, labour productivity and wages. The last section concludes.

5.2 The Export Structure of DFI and Domestic Firms

5.2.1 The General Picture

Exports by DFI and domestic firms in the 1996-2002 period are presented in Table 5.1. The total volume of exports of Turkish economy rose from 23.2 billion USD in 1996 to 36.1 billion USD in 2002, representing an increase of 55.3%. In the same period, while domestic exports increased by 43.3% from 19.4 billion USD to 27.7 billion USD, DFI exports more than doubled, rising from USD 3.7 billion to USD 8.3 billion. While annual average increase in domestic exports was 5.3% in the 1996-2002 period, the annual average increase in DFI exports was 11.6% in the same period. Thus, from 1996 to 2002, the share of DFI exports in total exports rose from

[75] That is, the data set is given in terms of foreign share categories as 0-10%, 10-20%, … , 90-100%.

16.7% to 23.1%. The average share of DFI exports in total exports was 19.0% during the 1996-2002 period. Thus, DFI firms account for around one-fifth of total exports of the Turkish economy.

Table 5.1 Exports by Domestic and DFI Firms in Turkey: 1996-2002

(Million USD)	DOMESTIC	DFI	LARGEST DFI FIRMS	DFI SHARE IN TOTAL (%)	LARGEST DFI SHARE IN TOTAL (%)
1996	19,356	3,869	2,380	16.7	10.2
1997	22,368	3,893	2,119	14.8	8.1
1998	23,033	3,941	3,077	14.6	11.4
1999	21,443	5,145	4,034	19.4	15.2
2000	22,267	5,508	2,312	19.8	8.3
2001	24,294	7,040	5,996	22.5	19.1
2002	27,739	8,320	6,973	23.1	19.3
Average (%)				**19.0**	**16.8**
Annual Average Increase (%)	**5.3**	**11.6**	**16.6**		

Note: Largest DFI Firms stand for DFI firms in the list of ICI 500 Largest Industrial Firms of Turkey

Source: Author's calculations from GDFI Database, ICI data sets, and Undersecretariat of Foreign Trade.

The DFI firms included among the 500 largest industrial firms of Turkey accounted for the majority of DFI exports. In the 1996-2002 period, there were on average 106 DFI firms in this category, which accounted for 74.8% of total DFI exports in the same period. While 81 largest DFI firms accounted for 61.5% of total DFI exports in 1996, 124 largest DFI firms accounted for 83.8% of total DFI exports in 2002[76]. As seen in Table 5.1, the export volume of the largest DFI firms almost tripled in the same period.

According to SIS data, the average number of DFI firms operating in the manufacturing sector during the 1996-2001 period was 364 which indicates that only a quarter of total DFI firms operating in Turkish manufacturing industry accounted for three quarters of total DFI exports in this period. In other words, approximately 75% of DFI firms operating in Turkey have very low shares in exports, producing

[76] The figures are calculated by the author using ICI data set.

mainly for the domestic market. This result is valid under the 10% rule. That is, when the definition of DFI firm is changed, the results change drastically, further pulling down the contribution of DFI exports to total exports as well as the percentage of export oriented DFI firms.

It is obvious that, if the 10% rule is employed to define a DFI firm, 90% of the DFI firms still owned by domestic shareholders. So, it may be more rational to count that firm as domestic rather than DFI, although the 10% rule is an internationally accepted definition. Then, the overall performance of DFI firms will change according to how a DFI firm is defined. Table 5.2 presents the average contribution of the exports of the largest DFI firms, weighted by export volumes, to total DFI exports in Turkey with respect to different DFI firm definitions. As seen in Table 5.1 above, the average share of the largest DFI firms' exports in total exports for the 1996-2002 period, weighted by annual export volumes, was 15.1% according to the conventional definition. However, if a DFI firm is defined as having foreign shares of more than or equal to 50%, the weighted average contribution of the largest DFI firms to total exports declines to 10.4%. Moreover, if a DFI firm is defined as having more than or equal to 90% foreign share, the weighted average contribution of the largest DFI firms to total exports decreases further to 3.7%. Thus, export performance of DFI firms is sensitive to how a DFI firm is defined, and it is actually overestimated by a wide margin under the 10% rule.

Table 5.2 Weighted Average Share of Largest DFI Firm Exports in Total DFI Exports According to Different DFI Definitions: 1996-2002

FOREIGN SHARE (%)	LARGEST DFI SHARE IN TOTAL(%)
10+	15.1
20+	14.5
30+	13.7
40+	12.0
50+	10.4
60+	6.1
70+	5.2
80+	4.9
90+	3.7
100	2.7

Source: Author's calculations from ICI data sets of the Largest 500 Industrial Firms of Turkey, 1996-2002 and Undersecretariat of Foreign Trade.

The export orientation of a DFI firm is also sensitive to how a DFI firm is defined. Figure 5.1 presents the percentage of export oriented firms in the largest 500 industrial firms of Turkey, categorised with respect to 10% increments in foreign share. A firm is defined as export oriented if the ratio of exports to sales is more than or equal to 25%. In Figure 5.1, it is observed that the percentage of export oriented firms is highest for those DFI firms having foreign share between 10-20%. 65.3% of DFI firms with foreign share in the range of 10-20% are export oriented, while only 42.2% of domestic firms according to the conventional definition are export-oriented. However, as foreign share increases, a decreasing trend is observed in the percentage of export oriented firms. In other words, as foreign share increases in a DFI firm, greater number of firms becomes oriented towards the domestic market.

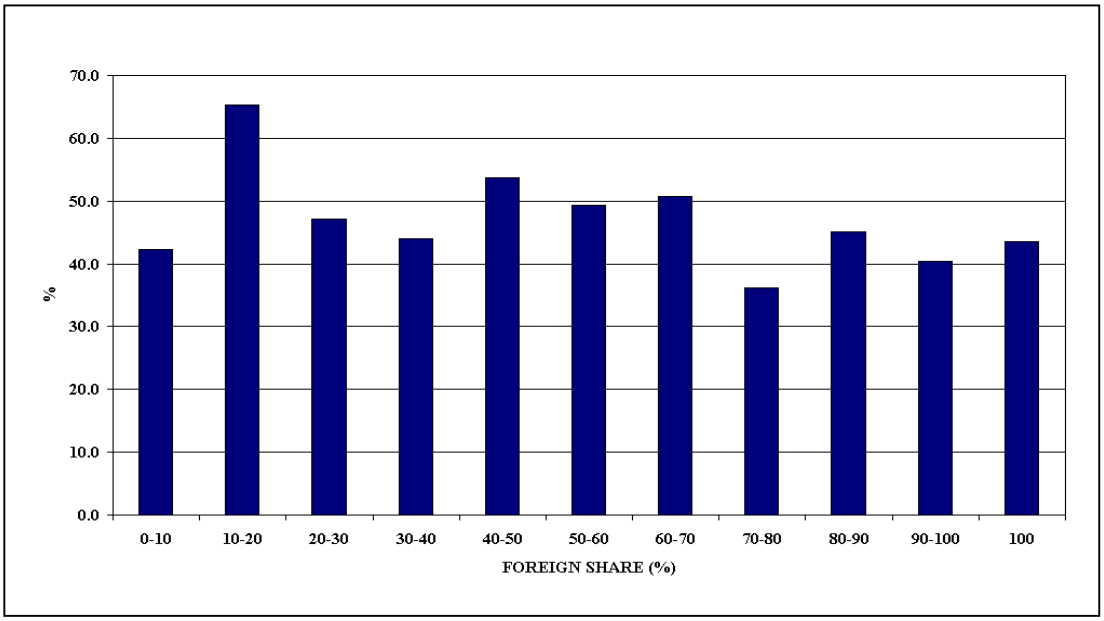

Figure 5.1 Average percentage of Export Oriented Firms with respect to Foreign Shares in Largest DFI Firms: 1996-2002

Source: ICI Data Sets, 1996-2002

5.2.2 Regional Distribution of DFI and Domestic Exports

In this section, the regional distribution of DFI exports will be analysed, and it will be compared with the regional distribution of domestic exports. Answers will be searched for the following questions: Do DFI exports significantly differ from domestic exports in terms of regional distribution? Do DFI firms prefer developed markets or developing markets to export? Are DFI exports concentrated in a number

of countries or are they diversified to a large number of countries? Do DFI firms concentrate in a region in their export markets? In other words, do DFI firms prefer to export to the Turkic Republics, the Middle East, Africa or Far East by using Turkey as an export base to any or all of these markets?

First, the percentage share of each country is calculated in the DFI exports and total exports, respectively, for the 1996-2002 period. Then the arithmetic averages of these percentage shares are calculated for seven years, for DFI exports and for total exports, respectively. Then, the average percentage share of each country is calculated in domestic exports for each year using the following formula:

$D_i = T_i * F_i * C_d * (1/F_i - 1)$, where

D_i = Percentage share of country *i* in domestic exports,

T_i = Percentage share of country *i* in total exports,

F_i = Contribution of DFI exports to total exports for country *i*,

C_d = The inverse of the ratio of domestic exports to total exports.

For comparison purposes, 92 countries have been selected, which cover 94.5% of DFI exports, and 99.3% of total exports[77]. The lower figure for DFI coverage is due to the fact that 4% (on average) of DFI exports are directed to the free trade zones of Turkey which provide significant tax advantages for DFI firms (see Göver (2002:63-64)). For each of these 92 countries, the above formula was applied to calculate the share of each country for domestic exports.

In Table 5.3, the distribution of domestic and DFI exports is presented in 11 regions. That is, 92 countries have been aggregated into 11 regions[78]. The column titled 0 in Table 5.3 gives the regional distribution of DFI stock in Turkey as of June 2003. Then, for each year in the 1996-2002 period, there are three columns titled 1, 2 and 3, which present respectively, the regional distribution of domestic exports, regional distribution of DFI exports, and the contribution of DFI exports to total exports in each region. The last three columns give the average figures for the period. The share of free trade zones in DFI exports is also shown separately in Table 5.3.

The regional distribution of DFI and domestic exports is almost the same in terms of average figures. Spearman's rank correlation between average regional

[77] The discrepancy is due to the difference in the number of countries covered in each sample. For DFI exports, the average number of countries covered is 166, while for total exports it is 96.

[78] The regional classification of countries is given in Appendix A.

distributions of DFI and domestic firms is 92.7% and significant at 1%. Moreover, Spearman's rank correlation is exclusively significant for every year in the 1996-2002 period. In other words, the geographical distribution of DFI exports almost exactly mimics the geographical distribution of domestic exports, and it is *not* the case that DFI exports penetrate those markets where domestic exports cannot.

15 European Union countries account for 53.5% of both domestic and DFI exports. Then comes Central and Eastern Europe as the biggest market for both domestic and DFI exports (11.4% and 11.2%, respectively). The only big difference between domestic and DFI exports is in the share of North America (the US and Canada). While the share of the US in domestic exports increased from 8.0% in 1996 to 12.1% in 2002, it decreased in DFI exports from 4.2% to 3.8% during the same period. Partly due to this change, the average share of North America in domestic exports is 11.4% as opposed to 5.1% for DFI exports. The rest of the regions in Table 5.3 have almost the same shares in both domestic and DFI exports, perhaps except for South, East and South East Asia. The share of South, East and South East Asia is larger for DFI exports (5.3%) as compared to domestic exports (3.2%).

The contribution of DFI exports to total exports is highest for Latin America (29.0%) and lowest for North America (9.8%). Keeping in mind that the weighted average contribution of DFI firms to total exports is 19.6%, DFI firms' contribution to total exports is above average in the case of Latin America, South, East and South East Asia and Other African countries. However, since these regions have very low shares in DFI exports, one cannot talk about a significant regional diversification of DFI exports. Moreover, the Turkic Republics of the Central Asia are not a relatively preferable destination for DFI exports. This result is contrary to the widespread expectations in Turkey that DFI firms would use Turkey as a jump base to export to Central Asia by utilising the close cultural relationships of Turkey with that region. If DFI firms are already using Turkey as a jump base for exports, it seems that they only jump to European Union, Central and Eastern Europe, and West Asia, the regions that are indeed the main export markets for domestic firms.

In order to test for whether there is a shift in regional distributions for domestic and DFI exports during 1996-2002, the first 3-year (1996-1998) average shares of each region is compared to the last 3-year (2000-2002) average shares. Regarding domestic exports, there is a slight increase in the share of EU-15 from 52.4% in the

first sub-period to 54.0% in the second sub-period. There is also an increase in the share of North America in domestic exports from 9.1% in the first sub-period to 13.7% in the second sub-period. These increases in the shares of EU-15 and North America in domestic exports are against the decreases in the shares of Central and Eastern Europe (from 13.4% in the first sub-period to 10.3% in the second sub-period), Central Asia (from 4.1% in the first sub-period to 2.7% in the second sub-period), North Africa (from 5.0% in the first sub-period to 4.1% in the second period), and West Asia (from 8.1% in the first sub-period to 7.6% in the second sub-period). Thus, there is a shift in domestic exports to EU-15 and North America from Central and Eastern Europe, Central Asia, West Asia and North Africa. On the other hand, regarding DFI exports, there is a strong shift to EU-15 and a slight shift to other developed countries from the rest of the regions. While the share of EU-15 in DFI exports was 45.1% in the first sub-period, it increased to 54.0% in the second sub-period. The share of Other Developed Countries increased form 1.8% in the first sub-period to 2.5% in the second sub-period. Against these increases, the largest decreases came from the shares of Central and Eastern Europe (from 14.8% to 9.4%), South, East and South East Asia (from 7.8% to 3.4%), West Asia (from 9.7% to 6.5%) and Central Asia (from 3.7% to 1.7%). The decrease in the shares of Russia and Singapore in DFI exports are effective in these steep decreases of Central and Eastern Europe and South, East and South East Asia in DFI exports. Thus, the shift to EU-15 countries is sharper for DFI exports than for domestic exports during the 1996-2002 period.

Turning to the relation between regional distribution of DFI exports and regional distribution of DFI stock, no significant correlation is obtained between these variables in terms of Spearman's rank correlation. Although EU-15 countries have the largest share in both DFI exports and DFI stock, the rest of the regions do not follow a parallel pattern for DFI exports and DFI stock. While EU-15, Other Western European countries, North America and Other Developed Countries account for 89.3% of existing DFI stock in Turkey, their share in DFI exports is only 62.0%. One can argue that multinationals from developed countries invest in Turkey in order to export to EU-15, Central and Eastern Europe, West Asia, East Asia, North America and North Africa.

Table 5.3 Regional Distribution of Domestic and DFI Exports: 1996-2002

		1996			1997			1998			1999			2000			2001			2002			AVERAGE		
%	(0)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
EU-15	69,0	52,9	45,6	15,3	50,4	41,9	13,3	53,8	47,8	13,9	55,3	62,4	22,4	54,5	58,4	22,2	53,6	60,3	26,4	54,0	57,8	26,1	53,5	53,5	19,9
Other Western Europe	7,9	1,7	1,2	12,7	1,9	1,8	15,1	1,5	1,6	15,9	1,7	1,4	17,2	1,5	1,4	19,1	1,3	1,3	24,2	1,6	1,6	25,1	1,6	1,5	18,5
North America	7,8	8,5	4,3	9,6	9,1	6,0	10,8	9,8	6,8	11,2	11,6	4,8	9,5	14,7	4,8	8,0	13,3	4,9	10,5	13,0	3,8	8,9	11,4	5,1	9,8
Other Developed Countries	4,6	2,3	1,7	13,3	2,6	1,9	12,3	2,8	1,8	10,7	3,5	1,6	10,2	4,0	1,9	11,3	3,9	2,4	16,2	3,3	3,3	24,4	3,2	2,1	14,0
West Asia	2,3	8,7	10,1	19,6	8,4	9,7	17,5	7,3	9,2	18,7	7,4	7,0	19,4	6,9	7,0	21,3	8,2	6,5	20,3	7,8	5,8	19,8	7,8	7,9	19,5
East Asia	0,9	4,3	9,7	32,2	3,8	10,2	33,2	2,3	3,5	21,5	3,0	3,7	24,0	2,8	3,4	24,5	2,7	3,3	28,0	3,7	3,4	23,5	3,2	5,3	26,7
Central and Eastern Europe	0,6	12,8	16,2	20,9	15,0	16,0	16,5	12,4	12,2	15,2	9,1	5,8	14,0	8,9	9,1	21,3	10,5	8,6	20,7	11,4	10,5	23,3	11,4	11,2	18,9
Other Africa	0,9	0,5	0,2	7,2	0,5	0,4	12,4	0,5	0,5	15,1	0,5	0,5	22,2	0,5	0,7	25,8	0,5	0,8	30,7	0,4	0,9	40,4	0,5	0,6	22,0
North Africa	0,2	4,7	3,3	12,8	4,0	4,1	15,7	6,2	5,2	13,4	5,7	4,4	16,4	4,3	4,3	20,9	4,2	3,9	22,8	3,8	4,4	27,6	4,7	4,2	18,5
Central Asia	0,2	3,8	4,1	18,6	4,6	3,2	11,6	4,0	3,6	14,2	3,1	1,5	10,9	2,8	2,2	17,4	2,7	1,6	16,2	2,5	1,3	15,1	3,3	2,5	14,8
Latin America	0	0,4	0,7	27,0	0,5	0,9	24,8	0,5	0,8	21,8	0,5	0,8	27,3	0,6	0,7	25,6	0,7	0,9	27,6	0,4	1,1	49,0	0,5	0,8	29,0
Free Trade Zones			1,3			3,0			4,6			5,6			4,2			4,6			4,9			4,0	

Notes:

(0) Regional distribution of DFI stock in Turkey as of June, 2003.
(1) Regional distribution of domestic exports.
(2) Regional distribution of DFI exports.
(3) Contribution of DFI exports to total exports.

Source: Author's calculations from GDFI database and the Undersecretariat of Foreign Trade.

5.2.3 Sectoral Distribution of DFI and Domestic Exports

In this section the sectoral distribution of DFI exports classified as SITC Rev.3 will be analysed. As the export data of DFI firms in Turkey is provided on the basis of 5 digit SITC Rev.3 classification from the GDFI database, the data has been re-classified to compare DFI exports with total exports of the Turkish economy.

Table 5.4 has three columns for each year: The first column shows the share of each sector in domestic exports. The second column shows the share of each sector in DFI exports. The third column shows the share of DFI exports in total exports for each sector.

As regards to three broad categories, which are agricultural products, mining products, and manufactures, the average distribution of both domestic and DFI exports are very similar in the 1996-2002 period. Agricultural products accounted for 16.8% of domestic exports and 16.6% of DFI exports; mining products accounted for 4.4% of domestic exports and 2.5% of DFI exports; and manufactures accounted for 78.5% of domestic exports and 80.8% of DFI exports. From 1996 to 2002, the share of agricultural products decreased and the share of manufactures increased in both domestic and DFI exports. The share of mining products, however, increased in domestic exports but decreased in DFI exports. The switch from agricultural products to manufactures from 1996 to 2002 is sharper in DFI exports than in domestic exports. As a result of this shift of DFI exports to manufactures, the share of DFI manufactured exports to total manufactured exports increased from 15.0% in 1996-1998 to 23.1% in 2000-2002.

While the average distribution with respect to broad sectors is almost the same for domestic and DFI firms, there are significant differences in average distribution with respect to sub-sectors. Regarding agricultural products, for example, while food and live animals have higher share in domestic exports, tobacco and tobacco manufactures have higher share in DFI exports. As regards to manufactures, while textiles and clothing, iron and steel, non-metallic mineral manufactures, manufactures of metals, office machines and telecommunications equipment and other consumer goods have higher shares in domestic exports, automotive products and other transport equipment, electrical machinery and apparatus, and chemicals have higher shares in DFI exports than in domestic exports.

Table 5.4 Sectoral Distribution of Domestic and DFI Exports: 1996-2002

SECTOR	1996			1997			1998			1999			2000			2001			2002			AVERAGE		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
1- AGRICULTURAL PRODUCTS	**21.0**	**23.1**	**18.0**	**20.4**	**23.4**	**16.6**	**18.4**	**20.9**	**16.3**	**17.0**	**15.4**	**17.8**	**14.0**	**13.5**	**19.3**	**14.8**	**10.5**	**17.1**	**11.9**	**9.1**	**18.7**	**16.8**	**16.6**	**17.7**
2- MINING PRODUCTS	**4.4**	**3.6**	**13.9**	**3.7**	**4.3**	**16.8**	**3.9**	**3.4**	**13.2**	**4.5**	**2.1**	**10.0**	**4.8**	**1.6**	**7.5**	**4.8**	**1.0**	**5.5**	**5.0**	**1.3**	**7.4**	**4.4**	**2.5**	**10.6**
3- MANUFACTURES	**74.5**	**73.1**	**16.4**	**75.8**	**72.1**	**14.2**	**77.7**	**75.5**	**14.3**	**78.2**	**82.5**	**20.2**	**80.9**	**84.9**	**20.6**	**80.0**	**88.3**	**24.2**	**82.5**	**89.0**	**24.4**	**78.5**	**80.8**	**19.2**
i-Iron and steel (67)	8.3	8.5	17.1	8.7	7.5	13.0	7.1	4.6	9.9	6.8	5.3	15.7	7.3	4.5	13.2	8.7	5.3	15.0	8.9	4.2	12.4	8.0	5.7	13.8
ii-Chemicals	4.1	11.8	36.4	3.8	15.1	40.6	3.5	16.9	45.0	3.8	12.6	44.5	3.8	13.9	47.4	3.5	13.8	53.5	3.6	12.4	50.8	3.7	13.8	45.5
(57, 58, 62) Plastics and Rubber manufactures n.e.s.	0.7	8.0	69.5	0.5	10.4	78.6	0.4	12.0	82.6	0.5	9.3	81.6	0.6	9.8	80.0	0.6	9.8	82.6	0.7	8.8	79.8	0.6	9.7	79.2
(54) Pharmaceutical products	0.3	0.9	35.7	0.3	1.3	43.1	0.3	1.4	46.7	0.4	0.9	35.3	0.3	1.3	47.7	0.3	1.3	60.2	0.3	0.9	43.7	0.3	1.1	44.6
(51, 52, 53, 55, 56, 59) Other chemicals	3.1	2.8	15.5	3.1	3.5	16.6	2.8	3.5	17.4	2.9	2.4	16.8	2.9	2.9	19.9	2.6	2.7	23.0	2.6	2.8	24.3	2.9	2.9	19.1
iii-Other semi-manufactures	6.2	4.1	11.8	6.2	5.5	13.4	6.4	5.9	13.6	6.9	4.5	13.4	7.5	4.5	13.0	7.6	4.8	15.5	8.1	4.7	14.8	7.0	4.8	13.7
(61) Leather, leather manufactures, n.e.s. and dressed furskins	0.2	0.1	4.5	0.3	0.1	4.3	0.3	0.0	2.1	0.2	0.0	2.5	0.2	0.0	1.3	0.2	0.0	0.7	0.2	0.0	1.3	0.2	0.0	2.4
(63) Cork and wood manufactures	0.2	0.2	18.5	0.2	0.1	10.0	0.2	0.1	8.2	0.2	0.1	9.0	0.2	0.1	13.4	0.2	0.1	14.2	0.3	0.1	13.5	0.2	0.1	12.4
(64) Paper and paperboard and articles of paper-pulp, of paper	0.6	0.4	12.7	0.6	0.8	20.8	0.5	0.9	22.4	0.5	0.7	24.5	0.6	0.7	24.1	0.7	1.0	29.4	0.8	1.1	29.0	0.6	0.8	23.3
(66) Non-metallic mineral manufactures, n.e.s.	3.2	2.1	11.8	3.3	2.7	12.3	3.3	2.1	9.8	3.6	1.7	10.1	4.1	1.8	10.0	4.0	1.9	12.2	4.2	1.8	11.2	3.7	2.0	11.1
(661) Lime, cement and fabricated construction materials	0.8	1.8	31.8	0.9	2.2	30.8	0.9	1.7	23.9	1.0	1.4	24.4	1.3	1.5	22.8	1.3	1.6	25.0	1.6	1.4	20.5	1.1	1.6	25.6
(664, 665) Glass and glassware	1.3	0.1	1.6	1.4	0.2	2.4	1.4	0.2	3.0	1.4	0.2	3.7	1.6	0.2	3.3	1.5	0.2	4.5	1.4	0.2	4.9	1.4	0.2	3.3
(66-(661+664+665)) Others	1.1	0.2	3.3	1.0	0.2	4.1	1.0	0.2	3.3	1.2	0.1	2.1	1.2	0.1	1.7	1.1	0.1	2.7	1.2	0.1	3.4	1.1	0.2	2.9
(69) Manufactures of metals, n.e.s.	2.0	1.3	11.6	1.9	1.8	14.4	2.2	2.8	18.1	2.4	2.0	16.5	2.4	1.8	15.8	2.4	1.7	17.2	2.7	1.7	16.0	2.3	1.9	15.6
iv- Machinery and transport equipment	9.2	31.7	40.7	10.1	28.6	33.0	12.1	33.0	31.8	11.7	49.3	50.4	13.4	50.2	48.2	13.9	53.6	52.7	14.2	56.4	54.4	12.1	43.3	44.5
(781, 782, 783, 784, 7132, 7783, 79, 785, 786, 7131, 7133, 7138, 7139) Automotive products and Other transport equipment	2.7	15.3	52.7	3.2	12.1	39.9	3.5	14.1	40.9	2.6	35.5	76.9	3.0	35.6	74.7	3.1	40.2	79.0	1.6	44.2	89.3	2.8	28.2	64.8
(75, 76, 776) Office machines and telecommunications equipment	1.3	1.8	21.1	1.9	1.5	12.2	3.4	2.7	12.0	3.5	1.4	8.8	4.3	1.2	6.6	4.0	1.1	7.6	5.5	0.8	4.4	3.4	1.5	10.4
Other machinery	6.4	16.7	34.4	6.9	16.9	29.9	7.1	19.5	32.0	9.1	16.2	30.0	9.4	20.0	34.6	10.7	16.8	31.3	9.0	16.3	35.2	8.3	17.5	32.5
(71-713) Power generating machinery	0.3	0.8	33.5	0.3	1.3	46.0	0.5	1.3	33.3	0.4	1.0	37.9	0.4	1.1	41.2	0.5	1.2	41.5	0.4	1.0	46.4	0.4	1.1	40.0
(72, 73, 74) Other non-electrical machinery	2.2	2.2	16.9	2.3	2.6	16.5	2.5	2.7	16.0	2.9	2.4	16.9	3.0	3.0	19.8	3.2	2.5	18.4	3.2	2.8	20.9	2.7	2.6	17.9
(77- (776+7783)) Electrical machinery and aparatus	2.6	11.6	46.7	2.4	11.0	44.3	2.3	12.1	47.6	2.4	9.0	47.8	2.7	9.2	46.0	3.1	8.6	44.2	3.6	7.5	38.8	2.7	9.8	45.0
v- Textiles (65)	13.1	5.0	7.1	14.1	4.8	5.6	14.6	5.1	5.7	15.3	3.6	5.4	15.5	4.7	7.0	14.9	4.7	8.4	13.9	5.0	9.8	14.5	4.7	7.0
vi- Clothing (84)	29.6	9.2	5.8	28.4	8.8	5.1	29.4	7.8	4.3	29.2	5.0	4.0	28.3	5.1	4.2	26.3	3.9	4.1	28.0	3.9	4.0	28.5	6.2	4.5
(848.1, 848.3) Articles of apparel, clothing access.	1.7	0.3	3.6	1.8	0.3	3.0	1.5	0.3	2.9	1.4	0.2	2.9	1.5	0.2	2.8	1.5	0.1	2.2	1.4	0.1	2.4	1.5	0.2	2.8
(84-(848.1, 848.3)) Other clothing apparels	27.8	8.8	6.0	26.6	8.5	5.2	27.9	7.5	4.4	27.8	4.9	4.0	26.8	4.9	4.3	24.8	3.7	4.2	26.6	3.8	4.1	26.9	6.0	4.6
vii - Other consumer goods (81, 82, 83, 85, 87, 88, 89 (-891))	4.2	2.9	12.1	4.4	1.9	6.8	4.5	2.3	7.9	4.5	2.1	10.0	5.2	2.1	8.9	5.2	2.2	10.8	5.8	2.3	10.8	4.8	2.2	9.6
(81) Prefabricated buildings; sanitary plumbing, heating and lighting fixtures	0.7	0.2	4.6	0.6	0.2	6.5	0.6	0.3	6.7	0.7	0.2	7.0	0.7	0.3	9.1	0.7	0.3	11.1	0.8	0.5	15.1	0.7	0.3	8.6
(82) Furniture and parts thereof	0.4	0.3	15.4	0.3	0.3	14.3	0.4	0.5	16.1	0.5	0.7	23.9	0.6	0.8	23.8	0.6	0.7	24.9	0.8	0.8	21.6	0.5	0.6	20.0
(83) Travel goods, handbags and similar containers	0.2	0.1	13.9	0.2	0.0	4.1	0.2	0.0	2.9	0.1	0.1	8.6	0.2	0.0	1.6	0.2	0.0	1.6	0.2	0.0	1.6	0.2	0.0	4.9
(85) Footwear	0.6	1.1	28.0	0.9	0.3	4.8	0.8	0.2	4.6	0.5	0.0	1.9	0.5	0.0	2.4	0.5	0.2	9.2	0.5	0.1	4.8	0.6	0.3	7.9
(87) Professional, scientific and controlling instruments and apparatus	0.1	0.3	29.6	0.1	0.3	29.6	0.2	0.4	29.7	0.2	0.2	26.1	0.2	0.2	22.8	0.2	0.2	20.6	0.2	0.2	26.8	0.2	0.3	26.5
(88, 89-(891)) Other manufactured articles	2.3	0.8	6.9	2.3	0.7	4.8	2.4	0.9	6.0	2.6	0.9	7.8	3.1	0.7	5.6	3.1	0.8	7.3	3.4	0.8	6.7	2.7	0.8	6.4
4- OTHER PRODUCTS (9+891)	**0.1**	**0.3**	**34.9**	**0.1**	**0.2**	**23.6**	**0.1**	**0.1**	**16.1**	**0.2**	**0.0**	**0.1**	**0.3**	**0.0**	**0.2**	**0.3**	**0.2**	**18.6**	**0.6**	**0.6**	**22.3**	**0.2**	**0.2**	**16.6**
TOTAL	**100.0**	**100.0**	**16.7**	**100.0**	**100.0**	**14.8**	**100.0**	**100.0**	**14.6**	**100.0**	**100.0**	**19.4**	**100.0**	**100.0**	**19.8**	**100.0**	**100.0**	**22.5**	**100.0**	**100.0**	**23.1**	**100.0**	**100.0**	**18.7**

Notes: SITC codes of sectors are in parenthesis.

(1) Distribution of domestic exports.

(2) Distribution of DFI exports.

(3) Contribution of DFI exports to total exports.

Source: Author's calculations from GDFI database and the Undersecretariat of Foreign Trade.

The sharp rise in the share of DFI manufactured exports in total exports is due to the increase in the share of DFI exports in chemicals and automotive products and other transport equipment. While the share of automotive products and other transport equipment in domestic exports decreased from 3.6% in 1996-1998 to 2.6% in 2000-2002, the share of this sector in DFI exports increased sharply from 13.9% in 1996-1998 to 40.0% in 2000-2002. As a result, the share of DFI exports in total exports of this sector increased from 44.5% in 1996-1998 to 81.0% in 2000-2002. The average number of domestic firms and DFI firms in ISIC 384-Transport Equipment sector were, respectively, 422 and 31 in the 1996-1998 period. The average number of domestic firms in this industry increased to 440, and the average number of DFI firms increased to 43 in the 2000-2002 period[79]. Thus, the majority of exports in the automotive products and other transport equipment are accounted for by DFI firms, which are very few in number as compared to domestic firms. It turns out that, the number of domestic firms in this sector, which are producing mainly for the domestic market, is very high as compared to DFI firms.

It also does not seem to be the case that these domestic firms operate as suppliers to exporting DFI firms. In a speech on September 16, 2004, the general secretary of the Association of Transport Equipment Parts Industrialists (TAYSAD) reported that "the products of domestic secondary industries are not used much in exported automotive products. In the exports of automotive industry, imported materials are heavily used. Moreover, in exported automobiles, imported parts are used. The trade deficit of spare parts and components industry is estimated to represent 14% of total foreign trade deficit of Turkey in 2004"[80]. That is, while the majority of domestic firms in automotive industry cannot export directly to the world markets, they also cannot sell their products to automotive exporting DFI firms. In other words, anecdotal evidence indicates that backward linkages do not seem to have been established and operating from DFI to domestic firms, at least for the sector under consideration.

While the share of DFI exports rose in automotive products, an opposite development has occurred in office machines and telecommunications equipment.

[79] The numbers of firms are taken from SIS Longitudinal Database of Manufacturing Industry, 1991-2002.

[80] See http://www.ntvmsnbc.com/news/287112.asp?0m=-29B.

The share of this sector in domestic exports rose from 2.2% in 1996-1998 to 4.6% in 2000-2002, while it decreased from 2.0% to 1.1% in DFI exports. As a result, the share of DFI exports in total exports for office machines and telecommunications equipment decreased from 15.1% to 6.2% in the same period.

The sectors, which have exclusively higher than average DFI share in total manufactured exports in the 1996-2002 period are the following: Plastics and rubber manufactures, pharmaceutical products, automotive products and other transport equipment, power generating machinery, and electrical machinery and apparatus. On the other hand, in office machines and telecommunications equipment, leather and leather manufactures, textiles and clothing, footwear, travel goods, handbags and similar containers, and other manufactured articles, the share of DFI exports in total manufactured exports is exclusively lower than the average throughout the 1996-2002 period. In paper and paper products, the share of DFI exports are higher than average throughout the 1997-2002 period; and in lime, cement and fabricated construction materials, the share of DFI exports are higher than average throughout 1996-2001. On the other hand, in iron and steel and cork and wood manufactures, the share of DFI exports in total exports is lower than the average throughout 1997-2002; and in manufacture of metals, the share of DFI exports is lower than the average throughout the 1996-2002 period except for 1998. There is a shift in the share of DFI exports in total exports only in two sectors: other non-metallic minerals and prefabricated buildings. While until 1999, the share of DFI exports in total exports was higher than average in other non-metallic minerals, it turned the other way round since 1999. For prefabricated buildings, this shift occurred in 2000.

From this analysis, one can argue that the structure of manufactured exports as classified by domestic versus DFI firms and in terms of sub-sectors is quite rigid, at least as far as the period of analysis is concerned. That is, one cannot observe a structural change in the export behaviour of DFI firms except in only one sector: furniture products. DFI firms are increasing their share in total exports in those sectors in which they have had a significant share from the beginning of the period.

5.2.4 Comparison of the Most Dynamic Products in World Exports with DFI Exports

In this section, the most dynamic export products in world trade are compared with the most dynamic products in DFI exports from Turkey. Export dynamism is defined in Akyüz (2003:3-4) as having the highest average annual growth rate in world exports. Akyüz (2003:51-55) gives the list of 225 products, which have the highest average annual growth rate in world exports between 1980 and 1998, in three digit SITC categories. The first 20 of these products were taken and compared with the first 20 products in DFI exports in Turkey, which had the highest average annual growth rate in the 1996-2002 period[81]. Tables 5.5 and 5.6, respectively, give the most dynamic products in world exports and in Turkish DFI exports. Together with the average growth rates in world exports and Turkish DFI exports, the ranks in world exports and Turkish DFI exports are also given in the tables. By comparing the respective ranks of products in world exports and Turkish DFI exports, it is aimed to examine whether the exports of DFI firms in Turkey are in line with the most dynamic exports products in world trade.

Table 5.5 The Most Dynamic Products in World Exports

SITC Rev.3 Code	CATEGORY	Rank in World Exports	Rank in Turkish DFI Exports	Average Annual Growth Rate in World Exports (1980-1998) %	Average Annual Growth Rate in Turkish DFI Expports Exports (1996-2002) %
776	Thermionic, cold and photo-cathode valves, tubes and parts	1	90	16,3	17,3
752	Automatic data processing machines and units thereof	2	152	15,0	3,8
759	Parts and accessories suitable for office machines and automatic data processing machines	3	190	14,6	-9,5
871	Optical instruments and apparatus	4	200	14,1	-14,3
553	Perfumery, cosmeticsand toilet preperations	5	108	13,3	13,1
261	Silk	6	na	13,2	na
846	Undergarments, knitted or crocheted	7	204	13,1	-17,5
893	Articles of materials in fruit preserves and fruit preparations	8	69	13,1	23,6
771	Electric power machinery, and parts thereof	9	146	12,9	4,8
898	Musical instruments, parts and accessories	10	216	12,6	-28,1
612	Manufactures of leather or of composition leather, n.e.s.	11	206	12,4	-18,0
111	Non-alcoholic beverages, n.e.s.	12	221	12,2	-32,3
872	Medical instruments and appliances	13	130	12,1	7,4
773	Equipment for distributing electricity	14	159	12,0	-0,7
764	Telecommunications equipment and parts	15	173	11,9	-4,0
844	Undergarments of textile fabrics	16	191	11,9	-9,9
048	Cereal preperations and preperations of flour or starch of fruits or vegetables	17	182	11,9	-7,3
655	Knitted or crocheted fabrics	18	102	11,7	14,9
541	Medicinal and pharmaceutical products	19	209	11,6	-19,0
778	Electrical machinery and apparatus, n.e.s.	20	72	11,5	22,5

Source: Akyüz (2003:51-55) and author's calculations from GDFI database.

[81] Here it is assumed that the ranking of the most dynamic products in 1980-1998 was also valid for 1996-2002.

Table 5.6 The Most Dynamic Products in Turkish DFI Exports

SITC Rev.3 Code	CATEGORY	Rank in Turkish DFI Exports	Rank in World Exports	Average Annual Growth Rate in Turkish DFI Expports Exports (1996-2002) %	Average Annual Growth Rate in World Exports (1980-1998) %
593	Explosives, igniters, and fuses and capsules thereof	1	na	236,8	na
896	Works of art, collectors' pieces and antiques	2	153	151,8	6,0
722	Tractors fitted or not with power take-offs	3	196	121,6	3,0
782	Motor vehicles for transport of goods materials	4	157	113,5	5,7
511	Hydrocarbons, n.e.s., and their halogenated or derivatives	5	180	102,8	4,4
674	Universals, plates and sheets, of iron or steel	6	136	94,1	6,8
761	Television receivers	7	29	90,7	10,7
266	Synthetic fibres suitable for spinning	8	177	82,8	4,4
024	Cheese and curd	9	123	82,6	7,3
231	Natural rubber	10	na	78,1	na
422	Fixed vegetable fats and oils, crude, refined or fractionated, other than "soft"	11	na	75,4	na
047	Other cereal meals and flours	12	189	75,2	3,6
061	Sugar and honey	13	200	66,4	2,6
785	Motorcycles, motor scooters and invalid carriages	14	98	61,6	8,3
731	Machine tools working by removing metal or other material	15	na	61,5	na
712	Steam and other vapour power units, steam engines	16	181	57,9	4,2
675	Flat-rolled products of alloy steel	17	na	57,2	na
513	Carboxylic acids, and their anhydrides, halides, and derivatives	18	94	55,9	8,4
223	Oil-seeds and aleaginous fruit, whole or broken (non-defatted flours and merals)	19	188	55,5	3,7
811	Prefabricated buildings	20	na	55,2	na

Source: Akyüz (2003:51-55) and author's calculations from GDFI database.

In Table 5.6, it is observed that the most dynamic products in world exports have very low ranking in Turkish DFI exports, although some products in DFI exports have higher annual average growth rates than those in world exports. In terms of SITC codes, products 776, 893, 655 and 778 have higher annual average growth rates in DFI exports than in world exports. However, 11 of the most dynamic 20 products in world exports have even negative average annual growth rates in exports of DFI firms in Turkey. These products are SITC 759, 871, 846, 898, 612, 111, 773, 764, 844, 048 and 541. The closest categories in Turkish DFI exports to the most dynamic products in world exports are articles of materials in fruit preserves and fruit preparations, electrical machinery and apparatus, and thermionic, cold and photo-cathode valves, tubes and parts. Moreover, it is observed in Table 5.6 that, 6 of the most dynamic 20 products in Turkish DFI exports are not included in the ranking of the most dynamic 225 products in world exports[82]. Only 3 products among the most dynamic 20 products in Turkish DFI exports can enter the list of the most dynamic 100 products in world exports. These are television receivers (29th in world

[82] These products are shown as "na" (i.e. not available) in the column for the rank in world exports in Table 5.6.

exports), carboxylic acids, and their anhydrides, alides, and derivatives (94th in world exports), and motorcycles, motor scooters and invalid carriages (98th in world exports). The rest of the most dynamic 20 products in Turkish DFI exports lie somewhere between 100th and 200th among the most dynamic products in world exports. Thus, it turns out that the most dynamic products in Turkish DFI exports are far from being in line with the most dynamic products in world exports.

5.2.5 Distribution of DFI and Domestic Exports with respect to Broad Economic Categories

The DFI export data from GDFI database have been re-classified into Broad Economic Categories (BEC) of the System of National Accounts (SNA) of the United Nations (UN), using the correspondence table of UN from SITC Rev.3 to BEC Rev.3. as given by the State Institute of Statistics (SIS). Subtracting the DFI exports classified in BEC from total export figures published in BEC, the export figures were obtained for domestic firms in BEC.

Table 5.7 has three columns for each year. The first column gives the distribution of domestic exports according to BEC, the second column gives the same distribution for DFI exports, and the last column gives the share of DFI exports in total exports for each category. It was preferred to report the figures for passenger cars, motor spirit and goods not elsewhere specified (n.e.s) under the heading of "Others", for they cannot be clearly identified as capital, consumption, or intermediate goods. Since there seemed to be a discrepancy in the figures for the passenger car exports of DFI firms in the GDFI data set as compared to the total exports of passenger cars in SIS data set, it is assumed that all exports of passenger cars are made by DFI firms. This assumption is justified by the fact that all major car manufacturers in Turkey are DFI firms. When the average figures for the period of 1996-2002 are compared, one observes that, capital goods, intermediate goods and passenger cars have a higher share in DFI exports than in domestic exports. Domestic exports are more focused to consumption goods. When the figures are examined in further detail, it turns out that higher share of capital goods and intermediate goods in DFI exports is almost due to industrial transport equipment and parts and accessories of transport equipment. Industrial transport equipment, parts and accessories of transport equipment, and passenger cars make 37.1% of DFI

exports on average. On the other hand, the higher share of consumer goods in domestic exports is due to semi-durable consumer goods (footwear, jackets, dresses, skirts, etc., 23.5%), non-durable consumer goods (medicaments, perfumery, cosmetics, soap, cleaning and polishing preparations, books, newspapers etc., 12.8%) and durable consumer goods (refrigerators, washing machines, furniture, and musical instruments etc., 7.8%), which together represent 44.1% of domestic exports.

While the share of consumption goods in domestic exports is almost constant at around 56% throughout the 1996-2002 period, its share in DFI exports decreased from 30.5% in 1996-1998 to 19.1% in 2000-2002. The categories that have a significant role in this decrease are primary and processed food and beverages for household consumption, and semi-durable consumer goods. However, the contribution of DFI exports of consumption goods to total exports of consumption goods did not change much throughout the period: it only decreased from 8.9% in 1996-1998 to 8.8% in 2000-2002. This is due to the significant increase in DFI exports of passenger cars and industrial transport equipment, whereas both DFI and domestic exports of consumption goods increased only modestly by 10% from 1996-1998 to 2000-2002. While DFI exports of passenger cars increased almost nine-fold from 1996-1998 to 2000-2002; DFI exports of industrial transport equipment increased almost three-fold during the same period.

As in the case of consumption goods, the share of intermediate goods in domestic exports was constant at around 40% throughout the 1996-2002 period. On the other hand, the share of intermediate goods in DFI exports decreased from 55.7% in 1996-1998 to 45.5% in 2000-2002. The decrease in the share of primary and processed industrial supplies was effective in this decrease. Within intermediate goods, DFI exports switched from these categories to parts and accessories of transport equipment from 1996-1998 to 2000-2002.

The decrease in the shares of consumer goods and intermediate goods in DFI exports was compensated by the increases in the shares of industrial transport equipment and especially passenger cars. The share of industrial transport equipment increased from 4.4% in 1996-1998 to 9.5% in 2000-2002. In passenger cars, the increase was very sharp: The share of passenger cars in DFI exports rose from 4.0% in 1996-1998 to 21.8% in 2000-2002. As noted in Chapter 3, beginning from the early 1990s, new investments in the automotive industry was encouraged to

Table 5.7 Domestic and DFI Exports Classified as Broad Economic Categories, 1996-2002

	EXPORT CATEGORY	1996			1997			1998			1999			2000			2001			2002			1996-2002 AVERAGE		
		(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	Capital Goods	**3.6**	**10.5**	**36.7**	**4.1**	**8.8**	**27.1**	**4.1**	**9.5**	**28.2**	**6.3**	**8.5**	**24.4**	**6.5**	**12.5**	**32.2**	**7.2**	**12.5**	**33.5**	**5.1**	**15.8**	**47.9**	**5.3**	**11.2**	**32.9**
41	Capital goods (except transport equipment)	2.4	5.0	29.0	2.5	5.1	26.2	2.7	5.4	25.4	3.0	4.1	24.5	3.3	4.5	24.9	3.8	3.8	22.3	3.4	4.1	26.7	3.0	4.6	25.6
521	Industrial Transport Equipment	1.2	5.5	48.2	1.6	3.7	28.5	1.4	4.0	33.2	3.3	4.4	24.3	3.2	8.0	38.3	3.4	8.7	42.8	1.7	11.6	66.6	2.3	6.6	40.3
	Intermediate Goods	**39.9**	**52.3**	**20.8**	**39.4**	**56.9**	**20.1**	**38.5**	**57.9**	**20.5**	**39.7**	**45.4**	**21.6**	**40.2**	**47.5**	**22.6**	**41.4**	**47.5**	**24.9**	**40.3**	**41.5**	**23.6**	**39.9**	**49.9**	**22.0**
111	Primary food and beverages, mainly for industry	0.5	1.3	36.5	0.6	1.4	29.6	1.4	0.7	7.4	1.2	0.2	4.2	1.1	0.1	2.2	0.9	0.1	3.6	0.4	0.1	4.6	0.9	0.6	12.6
121	Processed food and beverages, mainly for industry	2.1	0.9	8.2	2.4	0.7	5.0	1.5	0.5	5.2	1.1	0.4	8.3	1.0	0.9	18.5	0.8	0.5	16.6	0.8	0.5	16.5	1.4	0.6	11.2
21	Primary industrial supplies not elsewhere specified	5.0	7.1	22.2	4.0	9.2	28.7	3.6	9.0	30.2	3.7	7.0	31.0	3.2	5.4	29.2	3.1	2.9	21.4	3.1	1.5	12.8	3.7	6.0	25.1
22	Processed industrial supplies, not elsewhere specified	28.4	29.6	17.2	29.5	28.2	14.3	28.2	25.3	13.3	29.3	20.0	14.1	30.6	21.6	14.9	32.3	22.5	16.8	31.4	19.6	15.8	29.9	23.8	15.2
31	Primary fuels and lubricants	0.0	0.0	2.2	0.0	0.0	0.5	0.0	0.0	3.4	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
322	Processed fuels and lubricants (other than motor spirit)	1.4	0.1	1.0	0.8	0.1	1.4	1.1	0.2	2.6	1.4	0.2	2.9	1.3	0.1	1.8	1.7	0.2	3.0	1.6	0.2	4.3	1.3	0.1	2.4
42	Parts and accessories of capital goods (except transport equipment)	1.4	2.3	25.1	1.3	2.8	27.3	1.6	4.5	32.3	1.8	2.5	25.2	1.8	2.7	26.3	1.8	2.6	29.2	1.8	2.4	28.1	1.7	2.8	27.6
53	Parts and accessories of transport equipment	1.2	11.0	64.0	0.9	14.5	73.3	1.2	17.8	72.4	1.1	15.1	76.9	1.1	16.8	78.3	0.8	18.6	86.7	1.2	17.2	81.2	1.1	15.9	76.1
	Consumption Goods	**56.1**	**31.5**	**10.1**	**56.4**	**31.0**	**8.7**	**57.3**	**29.2**	**8.0**	**56.4**	**21.3**	**8.3**	**55.1**	**20.1**	**8.3**	**53.6**	**17.8**	**8.8**	**55.6**	**19.2**	**9.4**	**55.8**	**24.3**	**8.8**
112	Primary food and beverages, mainly for household consumption	7.6	5.0	11.7	7.5	5.5	11.3	6.9	4.8	10.6	6.7	3.1	10.1	5.5	2.3	9.4	6.2	2.1	8.9	5.4	1.7	8.5	6.5	3.5	10.1
122	Processed food and beverages, mainly for household consumption	6.5	9.2	22.0	6.4	7.5	17.0	5.3	6.8	17.8	5.1	4.8	18.3	4.1	4.0	19.2	4.6	4.0	20.0	2.6	6.0	40.9	5.0	6.0	22.2
522	Non-industrial transport equipment	0.1	0.2	27.4	0.3	0.1	5.1	0.4	0.2	9.7	0.1	0.1	29.8	0.1	0.2	40.7	0.1	0.3	47.8	0.1	0.2	47.7	0.2	0.2	29.7
61	Durable consumer goods, not elswhere specified	4.9	1.2	4.6	5.6	1.4	4.1	7.3	1.9	4.2	7.7	1.9	5.6	9.1	1.7	4.4	8.8	1.6	5.0	11.5	2.0	5.1	7.8	1.7	4.7
62	Semi-durable consumer goods, not elswhere specified	24.0	10.2	7.8	23.4	8.5	6.0	24.0	8.6	5.7	23.9	5.7	5.4	23.4	5.4	5.4	22.4	4.4	5.4	23.5	4.9	5.9	23.5	6.8	6.0
63	Non-durable consumer goods, not elswhere specified	13.0	5.7	8.0	13.1	7.9	9.5	13.4	7.0	8.2	13.0	5.7	9.5	12.9	6.6	11.2	11.5	5.5	12.1	12.6	4.4	9.4	12.8	6.1	9.7
	Other	**0.1**	**5.8**	**94.8**	**0.1**	**3.3**	**83.9**	**0.1**	**3.4**	**89.6**	**0.3**	**24.7**	**90.9**	**0.3**	**19.9**	**91.3**	**0.2**	**22.1**	**94.3**	**1.3**	**23.5**	**77.8**	**0.3**	**14.7**	**89.0**
51	Passenger Cars	0.0	5.5	100.0	0.0	3.2	100.0	0.0	3.3	100.0	0.0	24.7	100.0	0.0	19.9	100.0	0.0	22.1	100.0	0.0	23.5	100.0	0.0	14.6	100.0
321	Motor Spirit	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.8	0.0	0.0	0.1	0.0	0.0
7	Goods not elsewhere specified	0.0	0.3	54.9	0.1	0.2	27.9	0.1	0.1	23.4	0.3	0.0	0.1	0.2	0.0	0.3	0.2	0.0	3.9	0.5	0.0	1.6	0.2	0.1	16.0
	TOTAL	**100.0**	**100.0**	**16.7**	**100.0**	**100.0**	**14.8**	**100.0**	**100.0**	**14.6**	**100.0**	**100.0**	**19.4**	**100.0**	**100.0**	**19.8**	**100.0**	**100.0**	**22.5**	**100.0**	**100.0**	**23.1**	**100.0**	**100.0**	**18.7**

Notes: (1) Distribution of domestic exports.
(2) Distribution of DFI exports.
(3) Contribution of DFI exports to total exports.
Source: Author's calculations from GDFI database and the Undersecretariat of Foreign Trade.

produce new and up-top-date models. The automotive industry was designated as the preferential industry in giving investment incentives, and the importation of technology as well as DFI was facilitated and supported beginning from the early 1990s. For example, the inve-stment of Toyota in Turkey was realized in this period. All these measures directed at the automotive industry have coincided with the accelerated demand in Turkey and in the world for automobiles in the early 1990s, which brought increased investments made in terms of capacity expansion, modernization and research and development in both main and secondary industries (ICI 2002:5). Thus, as DFI firms in the passenger cars category invested in Turkey for exporting purposes throughout the 1990s, the level of exports increased sharply from 1999 onwards.

The interesting result is that, although DFI exports demonstrate a structural change from consumption goods towards intermediate and capital goods with the help of the increase in the exports of automotive industry, the structure of domestic exports was virtually rigid throughout the period. Domestic exports were rooted in consumption and intermediate goods, and there was only a slight increase in the share of capital goods from 3.6% in 1996-1998 to 5.1% in 2000-2002. It can be argued that there were no spillovers from DFI exports to domestic exports, in terms of a switch to higher-value added exports, during the period. However, this argument depends on how a DFI firm is defined. Since the DFI export figures from GDFI database include all firms with any positive foreign share, they also include domestic firms if a DFI firm is re-defined as having more than 10% or even more than 50% foreign share. Then, one can perhaps talk about a structural shift also in domestic exports. Moreover, as will be seen below, there is a tendency in domestic exports in shifting through to the upper levels of the technology ladder.

5.2.6 Structure of DFI and Domestic Exports with respect to OECD Technology Classification

In this section, the structure of DFI exports is analysed using OECD technology classification, and compared with the structure of domestic exports. In OECD technology classification, manufacturing industries are classified as high, medium-high, medium-low and low technology industries according to two, three

and four-digit ISIC Rev.3 codes. Actually, four-digit ISIC code is used only for pharmaceuticals (2423), which is treated as high-technology, and three-digit codes are used for other transport industry, sub-sectors of which are distributed among high, medium-high, and medium-low technologies. Using the UN correspondence table from SITC Rev.3 to ISIC Rev.3, it was possible to obtain two, three and four-digit ISIC codes for DFI exports and the exact OECD technology classification. However, the total export figures that were obtained from SIS were only in two-digit ISIC Rev.3 codes. To make a comparison between domestic and DFI data possible, three- and four-digit ISIC Rev.3 sectors were excluded. Thus, pharmaceuticals industry was included in the chemicals industry, and all other transport industries were aggregated into one single sector and was shown separately as "other transport" (See Table 5.8). This "other transport" industry makes on average 2.3% of domestic exports and 1.9% of DFI exports. On the other hand, as it was done in the previous sections, all exports of motor vehicles, trailers and semi-trailers were assumed to come from DFI firms.

Talking about the average figures for the 1996-2002 period, it is observed that the bulk of domestic exports come from low-technology industries (60.6%), and 48.6% of domestic exports is textiles, textile products, leather and footwear. Medium-low and low technology industries together make 81.0% of domestic exports on. On the other hand, the bulk of DFI exports come from medium-high technologies (52.3%), and 32.7% of DFI exports are motor vehicles, trailers, and semi-trailers. For DFI exports, the medium-high and high technology exports (54.2%) are more than medium-low and low technology exports (43.9%).

In DFI exports, the share of high and medium-high technology industries increased from 47.6% in 1996-1998 to 60.4% in 2000-2002; where the share of medium-low and low technology industries decreased from 51.3% in 1996-1998 to 37.0% in 2000-2002. In this structural change, the increase in the share of motor vehicles, trailers and semi-trailers from 24.4% to 39.8% was prominent. Another factor contributing to this structural change was the decrease in the shares of food products, beverages and tobacco from 11.8% to 6.7%; and of textiles from 14.2% to 8.4%. However, as regards to high-technology industries, there was not much

Table 5.8 Domestic and DFI Exports According to OECD Technology Classification

Category	ISIC Rev. 3	1996			1997			1998			1999			2000			2001			2002			AVERAGE		
		(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
High and medium-high-technology industries		**14,8**	**47,2**	**42,3**	**14,6**	**45,6**	**37,3**	**16,0**	**50,0**	**37,8**	**16,6**	**55,6**	**44,2**	**17,9**	**56,1**	**51,0**	**17,6**	**61,1**	**50,4**	**19,6**	**63,9**	**50,4**	**16,7**	**54,2**	**44,8**
High-technology industries		**1,9**	**2,3**	**21,9**	**2,5**	**2,1**	**13,8**	**4,3**	**3,3**	**13,0**	**4,2**	**1,9**	**7,3**	**5,0**	**1,6**	**8,3**	**4,7**	**1,4**	**5,4**	**6,3**	**1,2**	**5,4**	**4,1**	**2,0**	**10,7**
Office, accounting and computing machinery	**30**	0,1	0,2	36,4	0,1	0,2	31,1	0,1	0,3	31,6	0,3	0,3	10,5	0,3	0,1	11,1	0,2	0,1	18,7	0,1	0,1	18,7	0,2	0,2	22,6
Radio, television and communications equipment	**32**	1,5	1,7	19,9	2,1	1,4	11,2	3,8	2,4	11,1	3,7	1,4	6,3	4,5	1,2	7,4	4,2	1,1	4,0	5,9	0,8	4,0	3,7	1,4	9,1
Medical, precision and optical instruments	**33**	0,2	0,4	28,0	0,2	0,4	25,4	0,3	0,5	24,6	0,3	0,3	18,0	0,3	0,3	18,2	0,3	0,2	25,4	0,3	0,3	25,4	0,3	0,3	23,6
Medium-high-technology industries		**12,9**	**44,9**	**44,4**	**12,2**	**43,5**	**40,6**	**11,8**	**46,7**	**43,6**	**12,3**	**53,7**	**51,7**	**12,9**	**54,5**	**58,1**	**12,9**	**59,7**	**59,5**	**13,3**	**62,7**	**59,5**	**12,6**	**52,3**	**51,1**
Electrical machinery and apparatus, n.e.s.	**31**	2,0	11,5	56,9	1,6	11,4	57,0	1,5	11,8	61,0	1,4	9,2	56,7	1,8	9,1	53,9	2,2	8,5	50,5	2,0	6,7	50,5	1,8	9,8	55,2
Motor vehicles, trailers and semi-trailers	**34**	0,0	25,7	100,0	0,0	22,4	100,0	0,0	25,3	100,0	0,0	35,7	100,0	0,0	34,2	100,0	0,0	40,2	100,0	0,0	45,1	100,0	0,0	32,7	100,0
Chemicals	**24**	6,5	4,6	14,0	5,9	5,7	15,6	5,3	5,4	16,4	5,4	4,2	22,9	5,3	6,3	30,2	4,7	6,8	29,4	4,4	5,8	29,4	5,4	5,5	22,6
Machinery and equipment, n.e.sc.	**29**	4,5	3,2	14,0	4,6	3,9	14,0	4,9	4,2	14,2	5,5	4,6	17,7	5,8	4,9	17,5	6,1	4,3	18,9	6,9	5,1	18,9	5,5	4,3	16,4
Medium-low and low-technology industries		**84,4**	**51,9**	**12,4**	**83,7**	**53,4**	**10,8**	**82,3**	**48,6**	**10,3**	**79,9**	**42,4**	**11,2**	**78,9**	**39,2**	**12,4**	**78,6**	**37,2**	**12,1**	**78,8**	**34,6**	**12,1**	**81,0**	**43,9**	**11,6**
Medium-low-technology industries		**20,5**	**21,6**	**19,5**	**19,9**	**25,4**	**19,5**	**18,9**	**23,3**	**19,4**	**18,8**	**21,6**	**20,0**	**20,0**	**19,8**	**22,1**	**21,8**	**20,6**	**20,2**	**22,8**	**18,4**	**20,2**	**20,4**	**21,5**	**20,1**
Coke, refined petroleum products and nuclear fuel	**23**	1,6	0,1	0,8	0,9	0,0	1,0	1,2	0,1	2,0	1,6	0,2	1,2	1,5	0,1	2,5	1,8	0,2	2,6	2,6	0,2	2,6	1,6	0,1	1,8
Rubber and plastic products	**25**	1,2	8,2	61,3	1,1	11,0	65,7	1,0	12,4	70,3	0,9	10,8	70,0	1,2	10,7	73,9	1,1	10,5	69,1	1,3	9,4	69,1	1,1	10,4	68,5
Other non-metallic mineral products	**26**	4,2	2,3	11,0	4,2	3,0	11,8	4,3	2,3	9,6	4,5	2,1	9,8	5,0	2,1	11,7	4,9	2,2	10,9	5,1	2,0	10,9	4,6	2,3	10,8
Basic metals	**27**	11,4	9,7	16,4	11,7	9,3	13,1	10,1	5,6	9,8	9,4	6,3	11,1	9,9	4,9	13,6	11,4	6,0	12,6	11,1	5,1	12,6	10,7	6,7	12,7
Fabricated metal products, except machinery and equipment	**28**	2,1	1,3	12,5	2,0	2,0	16,6	2,4	2,9	19,3	2,4	2,3	16,8	2,5	2,0	17,6	2,5	1,8	16,4	2,7	1,7	16,4	2,4	2,0	16,5
Low-technology industries		**64,0**	**30,3**	**9,8**	**63,8**	**28,0**	**7,7**	**63,4**	**25,3**	**7,2**	**61,1**	**20,8**	**7,7**	**58,9**	**19,5**	**8,1**	**56,7**	**16,6**	**8,3**	**56,0**	**16,2**	**8,3**	**60,6**	**22,4**	**8,2**
Manufacturing, n.e.c. and recycling	**36-37**	1,9	0,6	7,1	1,9	0,7	6,4	2,2	0,8	6,7	2,7	1,1	8,3	3,3	1,2	8,9	3,3	1,1	8,2	3,7	1,1	8,2	2,7	0,9	7,7
Wood, pulp, paper, paper products, printing and publishing	**20-22**	1,2	1,1	16,7	1,2	1,2	16,6	1,1	1,3	19,2	1,1	1,3	20,0	1,1	1,1	22,5	1,4	1,3	22,9	1,4	1,3	22,9	1,2	1,2	20,1
Food products, beverages and tobacco	**15-16**	10,8	13,4	22,2	11,0	11,9	17,1	8,8	10,1	18,3	7,6	8,6	24,2	6,3	8,0	22,7	6,6	6,4	25,8	5,1	5,6	25,8	8,0	9,1	22,3
Textiles, textile products, leather and footwear	**17-19**	50,1	15,2	6,5	49,8	14,2	5,2	51,4	13,1	4,7	49,7	9,8	4,6	48,2	9,3	4,9	45,5	7,8	5,3	45,8	8,2	5,3	48,6	11,1	5,2
Other transport	**35**	0,7	0,9	22,2	1,6	1,1	11,1	1,6	1,5	14,8	3,5	2,0	27,0	3,2	4,7	11,3	3,8	1,6	23,4	1,6	1,5	23,4	2,3	1,9	19,0
Total manufacturing	**15-37**	**100,0**	**100,0**	**18,7**	**100,0**	**100,0**	**16,0**	**100,0**	**100,0**	**16,3**	**100,0**	**100,0**	**20,2**	**100,0**	**100,0**	**23,1**	**100,0**	**100,0**	**23,8**	**100,0**	**100,0**	**23,8**	**100,0**	**100,0**	**20,3**

Notes:

(1) Distribution of domestic exports.
(2) Distribution of DFI exports.
(3) Contribution of DFI exports to total exports.

Source: Author's calculations from GDFI database and the Undersecretariat of Foreign Trade.

change in the structure of DFI exports. The share of high-technology DFI exports to total high-technology exports decreased from 16.2% in 1996-1998 to 6.4% in 2000-2002. This decrease in the share of high-technology products was due to the decrease in the shares of office, accounting and computing machinery from 33.0% to 16.2%, and of radio, television and communications equipment from 14.0% to 5.1%[83]. Actually the average share of high-technology industries in domestic exports is higher than that in DFI exports, especially thanks to radio, television and communications equipment, which accounted for 3.7% of domestic exports and 1.4% of DFI exports during the 1996-2002 period. The share of this sector in domestic exports increased from 2.5% in 1996-1998 to 4.9% in 2000-2002. Moreover, the contribution of DFI exports in the to total exports of this sector decreased from 14.0% to 5.1% during the same period.

The share of electrical machinery not elsewhere specified in DFI exports has also decreased from 11.6% in 1996-1998 to 8.1% in 2000-2002. The contribution of DFI exports to total exports in this sector has decreased from 58.3% to 51.6%. Another sector, the share of which decreased in DFI exports, is basic metals, which saw a fall in its share from 8.2% to 5.3%. In this sector, the contribution of DFI exports to total exports decreased from 13.1% to 12.9%. It turns out that, automotive industry seems to be the only sector, which steadily increased its share in DFI exports during this period. Although the contribution of DFI exports to total exports was also very high in rubber and plastic products (which increased from 65.8% to 70.7%), the share of this industry in DFI exports remained low at around 10.4% during this period.

In the case of domestic exports, one observes a movement towards upper levels of the technology ladder during the 1996-2002 period. While the share of low-technology exports decreased from 63.7% in 1996-1998 to 57.2% in 2000-2002, thanks to the decrease in food products, beverages and tobacco and textiles; the shares of medium-low, medium-high and high technology industries increased from 19.8% to 21.5%, from 12.3% to 13.0%, and from 2.9% to 5.4%, respectively. The

[83] However, it should be kept in mind that this decrease in the shares of high technology DFI exports may be due to the fact that GDFI data set is compiled on the basis of the identity of exporting firm, not the manufacturing firm. That is, it may well be the case that high technology DFI manufacturers sell their products first to domestic exporting firms, which is shown as domestic export in the GDFI data set.

following sectors were effective in this increase: Radio, television and communications equipment, machinery and equipment not elsewhere specified, coke and refined petroleum products, and other non-metallic mineral products.

5.2.7 Regional Distribution of DFI Exports with respect to ISIC Rev.3 Classification

After examining the distribution of DFI and domestic exports with respect to OECD technology classification in the previous section, now it is time to the analyse the regional distribution of DFI exports with respect to ISIC Rev.3. ISIC Rev.3 classification includes OECD technology classification as well as agricultural products, mining products and other transport categories. It is aimed to show whether there is a specific pattern in the regional distribution of DFI exports with respect to these categories. In Table 5.9, the regional distribution of categories is presented. For each category, the regional shares add up to 100%[84].

In Table 5.9, one observes that for most of the categories, the highest percentage of DFI exports were directed to EU-15 countries. DFI exports to EU-15 countries accounted for 68.8% of medium-high technology industries, 53.0% of low technology industries, 48.0% of medium-low technology industries, and 33.9% of high-technology industries, on average during the 1996-2002 period. Moreover, EU-15 countries accounted for 67.9% of exports of other mining and quarrying, 48.6% of exports of agricultural, hunting and other related activities, and 32.9% of mining of metal ores. Only for the DFI exports of other transports, North America had the highest share with 48.2%.

In some of the industries, however, EU-15 countries lose their leadership as being the prime destination for DFI exports. For example, Central Asia has the highest share in radio, television, and communications equipment (32.3%), Central and Eastern Europe has the highest shares in coke and refined petroleum products (30.1%) and wood, pulp and related products (22.2%), and South, East and South-East Asia has the highest share in basic metals (47.3%).

[84] In Table 5.9, the percentage figures are the averages of the 1996-2002 period. The figures for the total differ from those in Table 5.3, because only 92 countries are included and free trade zones are not included in Table 5.9, while in Table 5.3, regions were defined to include only 92 countries.

Regarding the geographical distribution of individual categories, the most diversified category is mining of metal ores. 83.5% of this sector is diversified into 6 different regions (EU-15, Central and Eastern Europe, West Asia, Central Asia, South, East and SouthEast Asia , Other Developed Countries and Other Western Europe). Then come wood, pulp, paper, paper products, printing and publishing; coke and refined petroleum products; chemicals; and radio, television and communications equipment. Approximately 80% of DFI exports of these sectors are diversified to 4 regions (EU-15, Central and Eastern Europe, West Asia and Central Asia). On the other hand, manufacturing n.e.s., motor vehicles, trailers, and semi-trailers, and electrical machinery and apparatus, n.e.s are the categories that are most concentrated in terms of regional distribution. For these three categories, approximately three-quarters of DFI exports are directed only to EU-15 countries.

So far, DFI exports have been analysed in comparison with domestic exports and their contribution to total Turkish exports. Now employment structure and labour market performance of DFI firms in Turkish manufacturing industry will be analysed in comparison with the performance of domestic firms.

Table 5.9 The Distribution of DFI Exports in ISIC Rev. 5.3 Categories with respect to Regions (Average Percentages of 1996-2002)

CATEGORY	ISIC Rev.3 Code	EU-15	CEE	WEST ASIA	SOUTH / EAST ASIA	NORTH AMERICA	NORTH AFRICA	CENTRAL ASIA	OTHER DEVELOPED COUNTRIES	OTHERN WESTERN EUROPE	OTHER AFRICA	LATIN AMERICA	TOTAL
Agriculture, Hunting and Related Service Activities	101	48,6	8,0	6,1	3,9	20,8	3,2	0,7	3,3	3,6	0,1	1,6	100,0
Mining of Metal Ores	313	32,9	22,3	0,0	15,2	1,5	0,0	0,2	14,8	12,9	0,2	0,0	100,0
Other Mining and Quarrying	314	67,9	7,6	2,9	5,7	4,8	4,2	0,2	2,1	1,4	1,0	2,2	100,0
High-technology industries		**33,9**	**17,2**	**11,5**	**6,1**	**3,0**	**1,5**	**24,1**	**1,2**	**0,8**	**0,3**	**0,6**	**100,0**
Office, accounting and computing machinery	430	64,8	5,9	15,0	3,4	1,7	0,4	5,4	0,5	2,7	0,1	0,0	100,0
Radio, television and communications equipment	432	23,9	18,6	11,3	7,0	3,3	1,6	32,3	1,3	0,5	0,1	0,2	100,0
Medical, precision and optical instruments	433	54,8	17,3	10,4	3,8	2,4	2,0	3,9	1,3	0,8	0,8	2,4	100,0
Medium-high-technology industries		**68,8**	**11,2**	**4,7**	**2,3**	**1,5**	**5,2**	**2,3**	**1,5**	**0,9**	**0,5**	**1,2**	**100,0**
Electrical machinery and apparatus, n.e.s.	431	72,5	3,9	7,4	6,2	1,6	2,7	2,1	1,0	0,2	0,4	2,1	100,0
Motor vehicles, trailers and semi-trailers	434	74,2	11,1	2,8	1,1	1,1	6,1	0,6	1,1	0,5	0,3	1,0	100,0
Chemicals	424	31,2	26,0	10,8	3,2	1,6	4,6	11,6	4,8	4,9	0,8	0,5	100,0
Machinery and equipment, n.e.s.	429	70,8	7,4	5,2	2,0	3,7	4,1	2,8	1,3	0,4	1,2	1,0	100,0
Medium-low-technology industries		**48,0**	**6,2**	**10,1**	**15,6**	**5,6**	**5,5**	**1,0**	**3,5**	**2,2**	**1,3**	**0,9**	**100,0**
Coke, refined petroleum products and nuclear fuel	423	18,8	30,1	17,3	3,7	0,6	5,3	15,2	2,9	5,8	0,1	0,3	100,0
Rubber and plastic products	425	67,2	7,6	8,4	1,6	2,9	3,9	0,8	3,3	1,7	1,5	1,1	100,0
Other non-metallic mineral products	426	46,6	4,0	6,5	0,2	26,1	3,4	0,9	7,6	1,8	2,6	0,2	100,0
Basic metals	427	19,1	1,8	14,9	47,3	3,3	6,6	0,2	2,4	3,0	0,6	0,8	100,0
Fabricated metal products, except machinery and equipment	428	46,8	14,5	7,2	2,7	4,2	12,0	3,8	3,6	2,8	1,4	1,1	100,0
Low-technology industries		**53,0**	**14,8**	**16,0**	**1,4**	**3,8**	**3,1**	**3,4**	**2,2**	**1,1**	**0,9**	**0,3**	**100,0**
Food products, beverages and tobacco	415-416	40,5	13,5	28,0	2,3	2,4	4,7	4,2	1,7	1,7	0,5	0,4	100,0
Textiles, textile products, leather and footwear	417-419	65,5	16,1	6,5	0,7	5,3	1,9	0,8	1,7	0,8	0,5	0,1	100,0
Wood, pulp, paper, paper products, printing and publishing	420-422	21,5	22,2	14,4	0,8	0,3	1,3	20,4	11,3	0,3	7,6	0,0	100,0
Manufacturing, n.e.s. and recycling	436-437	79,1	5,3	2,6	0,6	5,0	2,4	1,7	1,4	0,3	0,4	1,1	100,0
Other transport	435	**36,1**	**11,6**	**0,2**	**0,0**	**48,2**	**2,5**	**0,0**	**0,1**	**1,2**	**0,0**	**0,0**	**100,0**
TOTAL		**58,6**	**10,9**	**8,0**	**5,2**	**5,0**	**4,5**	**2,4**	**2,3**	**1,6**	**0,7**	**0,9**	**100,0**

Source: Author's calculations from GDFI database.

5.3 The Labour Market Performance of DFI Firms and Domestic Firms in Turkish Manufacturing Industry

In this section, the employment performance of DFI firms in Turkish manufacturing industry will be analysed in comparison to the performance of domestic firms, which is another hitherto unexplored subject in the literature. Employment performances of DFI and domestic firms will be discussed in two sub-sections. In 5.3.1, employment generation of DFI and domestic firms in Turkish manufacturing industry in the 1992-2001 period will be analysed. In 5.3.2, DFI and domestic firms will be compared in terms of labour productivity and wages.

5.3.1 Employment Generation

In 1992, the total number of workers in wage-employment in Turkish manufacturing industry was 979,098, with domestic and DFI firms accounting for, respectively, 90.2% and 9.8% of the total. From 1992 to 2001, a total of 116,520 new wage-employment was generated and total wage-employment in Turkish manufacturing industry reached 1,095,618 in 2001. In between these two years, the composition of total employment has shifted slightly towards DFI firms[85]. In 2001, while the share of domestic firms fell to 88.3%, the share of DFI firms increased to 11.7%. However, as was the case in exports, the share of DFI employment is also sensitive to the definition of the DFI firm. While the above figures were valid under the standard definition, when a DFI firm is defined as having foreign share above 50%, the share of DFI employment falls to 4.9% in 1992 and 6.0% in 2001. Moreover, if a DFI firm is defined as having above 90% foreign share, DFI employment share falls further to 1.8% in 1992 and to 4.4% in 2001.

Figure 5.2 presents the contribution to total employment generation in 1992-2001 by firms in each foreign share category. 72.3% of new wage-employment in 1992-2001 period was generated by domestic firms (in which foreign share is less than 10%), and 26.1% was generated by DFI firms in which foreign share is more than or equal to 90% (90+ DFI firms). As seen in Figure 5.2, the contribution of DFI firms having foreign share between 20% and 70% is negligible. The employment level in DFI firms with foreign share in the range of 10-20% even decreased in this

[85] At the time of writing, the SIS data set was available for 1992-2001. Although 2001 is a crisis year, in order to utilise all available information, it was preferred not to exclude 2001 from the analysis.

period. DFI firms having foreign share between 70-90%, on the other hand, accounted for 4.7% of new employment generation in the 1992-2001 period.

Figure 5.3 shows the evolution of the employment level in Turkish manufacturing industry with respect to domestic firms and DFI firms as well as total manufacturing industry. As 90+ DFI firms accounted for 26.1% of total employment generation in the 1992-2001 period, they were shown separately in Figure 5.3.

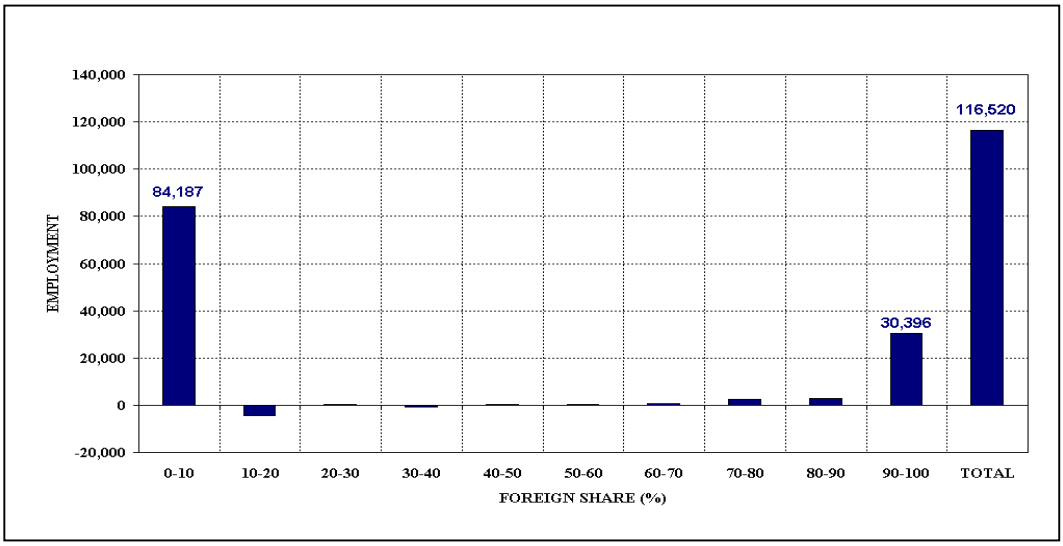

Figure 5.2 Employment Generation with respect to Foreign Share: 1992-2001
Source: Author's calculations from SIS database.

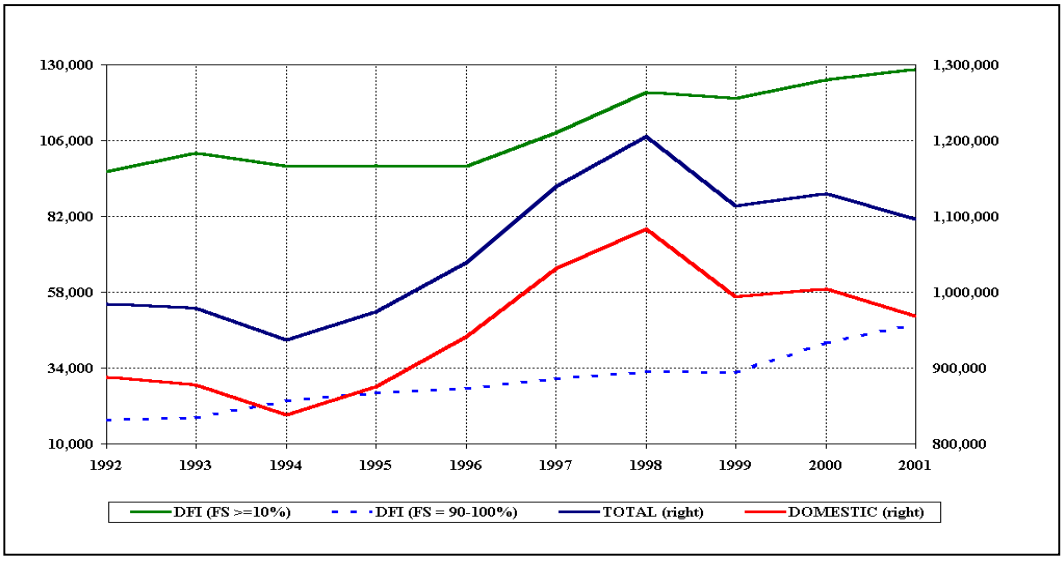

Figure 5.3 Employment Level in Turkish Manufacturing Industry: 1992-2001
Source: Author's calculations from SIS database.

One can identify three sub-periods as regards to the level of total employment: 1992-1994, 1994-1998 and 1998-2001. The first sub-period ends with the financial

crisis in 1994, and the third sub-period ends with the financial crisis in 2001. The second sub-period coincides with the growth path of Turkish economy based on short-term capital inflows. Thus, total employment increases in the 1994-1998 period, and decreases in 1992-1994 and 1998-2001.

Average annual growth rates of total employment in these three sub-periods are -1.6%, 5.2% and -2.3%, respectively[86]. One can observe from the figure that domestic employment mimics the behaviour of total employment. The simple correlation between total employment and employment in domestic firms is 0.995 and significant at 1%. Average annual growth figures for domestic employment are, respectively, -1.8%, 5.3% and -2.8%, for the three sub-periods. On the other hand, DFI employment rises continuously, especially after 1996. The growth figures for DFI employment are, respectively, 0.6%, 4.4% and 1.4%. Moreover, there is a continuous increase in the employment of 90+ DFI firms throughout the 1992-2001 period. The growth rates of employment in 90+ DFI firms are, respectively, 10.3%, 6.8% and 10.0%.

The increase in DFI employment is, as can be expected, highly correlated with the increases in the number of DFI firms. While the total number of firms in the manufacturing industry increased by 110 from 11,201 to 11,311 in the 1992-2001 period, the number of DFI firms increased by 184 from 228 to 412 and the number of domestic firms decreased by 74 from 10,973 to 10,899. 56.0% of the increase in the number of DFI firms was accounted for by 90+ DFI firms, as the number of 90+ DFI firms increased by 103 from 66 to 169. While Pearson correlation coefficients between the number of firms and employment generation are 0.870 and 0.843, respectively, for total and domestic firms; they are 0.944 and 0.959 for DFI and 90+ DFI firms, respectively,[87]. While the share of 90+ DFI firms was 28.9% in total number of DFI firms in 1992, this share increased to 41.0% in 2001.

Table 5.10 gives the percentage distribution of DFI employment with respect to foreign share categories in the 1992-2001 period. While DFI firms with foreign share between 10-50% and 50-100% had equal shares in total DFI employment in 1992, there has been a shift towards DFI firms with 50-100% foreign share during the

[86] As the first and third sub-periods end with crises, it is plausible that annual average growth in employment should be negative.

[87] All correlations are significant at 1% (two-tailed test).

1993-2001 period. While the share of DFI firms with 50-100% foreign share in total DFI employment increased from 50.0% in 1992 to 66.1% in 2001, and the share of DFI firms with 10-50% foreign share decreased from 50.0% to 33.9%. This shift towards DFI firms with majority foreign ownership in terms of employment is almost totally accounted for by the increase in the share of 90+ DFI firms in total DFI employment from 18.3% in 1992 to 37.3% in 2001.

Table 5.10 Distribution of DFI Employment in Turkish Manufacturing Industry with respect to Foreign Share Categories: 1992-2001

	FOREIGN SHARE CATEGORY (%)									
	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	TOTAL
1992	12.9	7.6	12.3	17.2	19.8	4.4	1.7	5.8	18.3	100.0
1993	9.6	10.2	10.2	18.7	21.5	0.9	6.3	4.6	18.0	100.0
1994	9.5	10.7	14.8	8.5	20.6	3.6	4.9	3.3	24.1	100.0
1995	8.3	6.9	14.6	8.2	16.2	8.1	8.4	2.7	26.7	100.0
1996	7.2	5.0	11.1	8.8	17.3	9.4	8.8	4.3	28.1	100.0
1997	7.8	7.0	11.3	9.0	18.6	9.8	7.4	1.0	28.1	100.0
1998	8.5	7.2	8.9	12.5	15.8	10.4	5.2	4.5	27.0	100.0
1999	9.3	7.6	8.6	11.2	20.3	5.7	5.9	4.1	27.2	100.0
2000	6.3	9.2	7.5	12.1	17.2	4.8	2.8	6.6	33.5	100.0
2001	6.3	6.0	8.7	13.0	15.1	3.9	3.3	6.5	37.3	100.0

Source: Author's calculations from SIS database.

As seen from Figure 5.4, the majority of employment generation is accounted by domestic firms in sector 32 (textiles and apparel). Then comes sector 38 (engineering industries) in which employment generation is accounted for by domestic and 90+ DFI firms. In sectors 31 (food and beverages) and 36 (non-metallic mineral products), employment generation of domestic firms is negative. Employment generation in sector 35 (chemicals) is positive for domestic firms, 90+ DFI firms and DFI firms with foreign share between 80-90% and 20-30%. It should be noted that 4 for 90+ DFI firms employment generation is positive for all sectors (Figure 5.4).

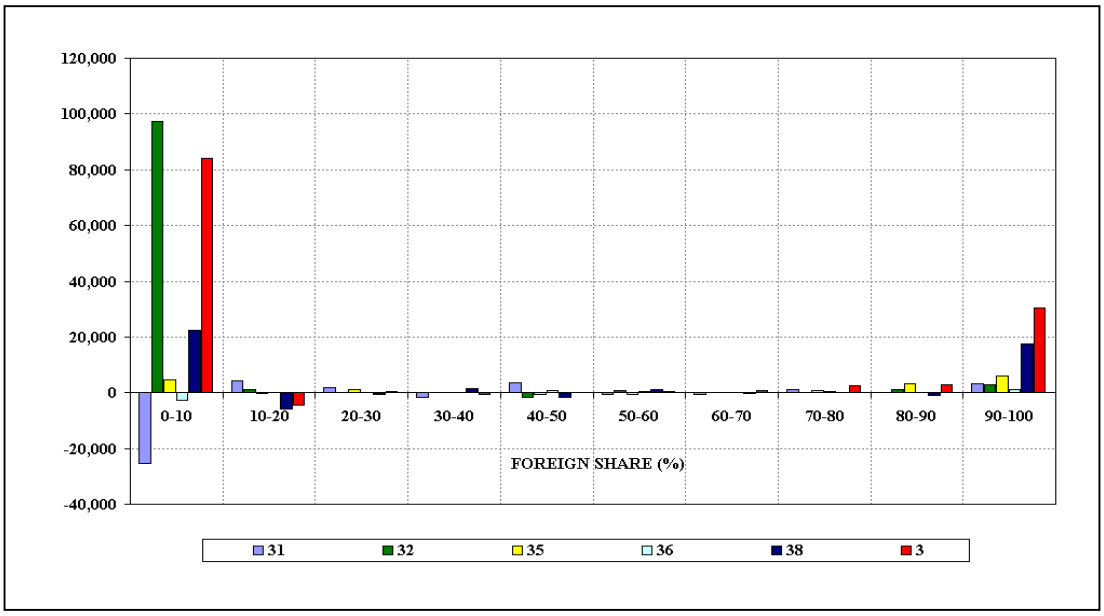

Figure 5.4 Sectoral Employment Generation with respect to Foreign Share Categories: 1992-2001

Source: Author's calculations from SIS database.

5.3.2 Labour Productivity

In this section, the level of and changes in labour productivity and wages in Turkish manufacturing industry in the 1992-2001 period are discussed with respect to different foreign share categories. Hourly labour productivity is defined as value added per man-hour worked. Value added is measured at 1994 prices, deflated by the Wholesale Price Index (WPI). As seen from Table 5.11 below, hourly labour productivity in domestic firms is exclusively below manufacturing industry average in the 1992-2001 period. Especially after 1994, DFI firms in all foreign share categories have higher hourly labour productivity levels than domestic firms. Moreover, Spearman rank correlation between foreign share and hourly labour productivity is significantly positive in the 1994-2001 period (Table 5.12). That is, in the 1994-2001 period, hourly labour productivity rises as foreign share rises in DFI firms.

Constructing an index of (hourly) labour productivity (1992=100), it is observed that, in all foreign share categories but 60-90%, the level of labour productivity falls during 1992-2001 period (Table 5.13). Average annual growth in hourly labour productivity in domestic firms and total manufacturing industry is

positive during 1992-1994 and negative during 1994-1998 and 1998-2001. As regards to DFI firms, however, the result is mixed. While the trend is similar for those DFI firms with foreign share between 10-20% and 30-70% (ie. positive during 1992-1994 and negative during 1994-2001), it is exclusively negative for those DFI firms with foreign share between 20-30% and 90-100%. On the other hand, for DFI firms with foreign share 70-80%, it is positive during 1992-1994 and 1998-2001. For DFI firms with foreign share between 80-90%, it is positive during 1992-1994 and 1994-1998. It should be noted that, none of the DFI firms in any foreign share category has exclusively positive annual average growth in labour productivity during the three sub-periods in the 1992-2001 period (Table 5.13).

Table 5.11 Hourly Labour Productivity with respect to Foreign Share Categories: 1992-2001

Foreign Share Category (%)	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
0-10	0,45	0,50	0,48	0,45	0,41	0,45	0,45	0,46	0,41	0,34
10-20	0,67	1,19	0,75	0,80	0,68	0,62	0,67	0,36	0,43	0,41
20-30	0,75	0,84	0,72	0,76	0,45	0,54	0,63	0,78	0,60	0,51
30-40	1,09	1,37	1,27	1,22	1,09	0,99	0,56	0,57	0,60	0,44
40-50	0,92	1,09	1,15	0,78	1,28	1,36	1,35	1,25	1,36	0,64
50-60	1,20	1,77	1,53	1,73	1,37	1,54	1,17	1,21	1,24	0,77
60-70	0,62	0,79	1,31	1,09	1,21	0,96	1,00	1,19	1,17	0,97
70-80	1,07	1,38	1,61	2,16	1,70	1,29	1,50	1,11	4,99	2,32
80-90	0,70	0,80	0,77	0,92	1,28	5,70	1,14	1,61	1,20	1,03
90-100	1,95	2,54	1,83	2,02	1,99	1,87	1,56	1,95	1,58	1,12
MANUFACTURING TOTAL	**0,50**	**0,59**	**0,55**	**0,54**	**0,49**	**0,52**	**0,51**	**0,53**	**0,50**	**0,40**

Source: Author's calculations from SIS database.

Table 5.12 Spearman's Rank Correlation between Foreign Share and Hourly Labour Productivity

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Correlation Coefficient	0,503	0,418	0.782**	0.733*	0.881**	0.842**	0.806**	0.855**	0.827**	0.952**
Sig. (2-tailed)	0,138	0,229	0,008	0,016	0,001	0,002	0,005	0,002	0,003	0,000
Nnumber of Observations	10	10	10	10	10	10	10	10	10	10

Notes:
** Correlation is significant at 1% level (2-tailed test).
* Correlation is significant at 5% level (2-tailed test).

Table 5.13 Labour Productivity Index and Average Annual Growth in Labour Productivity: 1992-2001

Foreign Share Category (%)	HOURLY LABOUR PRODUCTIVITY INDEX (1992=100)										ANNUAL AVERAGE GROWTH IN HOURLY LABOUR PRODUCTIVITY (%)		
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	1992-1994	1994-1998	1998-2001
0-10	100	111	107	101	93	101	100	102	92	75	2.3	-1.4	-6.8
10-20	100	179	113	120	102	93	101	54	64	62	4.0	-2.1	-11.5
20-30	100	112	96	102	60	72	84	104	81	68	-1.2	-2.6	-5.1
30-40	100	126	117	113	100	91	52	53	55	40	5.5	-15.1	-6.1
40-50	100	119	126	85	139	148	148	137	148	70	7.9	3.3	-17.1
50-60	100	148	128	145	115	129	97	101	104	65	8.5	-5.3	-9.7
60-70	100	128	211	175	195	155	161	191	188	156	28.2	-5.3	-0.7
70-80	100	129	151	202	159	121	140	104	468	217	14.7	-1.4	11.5
80-90	100	114	110	132	184	817	163	231	172	147	3.2	8.2	-2.5
90-100	100	130	94	104	102	96	80	100	81	57	-2.1	-3.2	-8.1
MANUFACTURING TOTAL	**100**	**117**	**110**	**107**	**98**	**104**	**101**	**106**	**99**	**79**	**3.3**	**-1.7**	**-6.0**

Source: Author's calculations from SIS database.

Regarding sectoral labour productivity, one observes that DFI firms have higher productivity levels than their domestic counterparts also at the sectoral level, but the magnitude of difference between domestic and DFI productivity levels differ with respect to sectors and the definition of DFI (see Table 5.14 below). Labour productivity is highest in chemicals sector (35) for both domestic and DFI firms, and it increases as foreign share increase in this sector. Moreover, the difference between the levels of labour productivity in domestic and DFI firms is also highest in this sector, at least during the 1992-1999 period. On the other hand, in textiles (32) for example, labour productivity levels for different definitions of DFI firm are very close to each other and to domestic firms. One interesting point to note is that, although DFI firms have higher productivity levels when DFI is defined as foreign share exceeding 10% or 50%, productivity level decreases for DFI firms having more than 90% foreign share. These DFI firms in the textiles sector have even lower productivity levels then their domestic counterparts. In engineering industries (38), DFI firms with more than 90% foreign share have exclusively lower labour productivity levels than DFI firms with foreign share more than 10% or more than 50% during 1992-2001. This is also the case in food, beverages and tobacco industry (31) in most of the years during 1992-2001. In other words, it seems that increase in the foreign share does not always and in every sector guarantee an increase in labour productivity.

Table 5.14 Sectoral Labour Productivity in Ownership Categories

		SECTORS				
	Ownership Category	**31**	**32**	**35**	**36**	**38**
1992	**Domestic**	0,5	0,2	1,4	0,4	0,4
	More than 10% foreign share	1,0	0,3	3,3	0,6	0,7
	More than 50% foreign share	1,2	0,3	3,6	0,6	0,8
	More than 90% foreign share	1,3	0,1	5,8	n.a.	0,6
1993	**Domestic**	0,5	0,3	1,6	0,5	0,4
	More than 10% foreign share	1,4	0,5	3,8	1,6	1,1
	More than 50% foreign share	1,8	0,7	4,3	1,6	1,3
	More than 90% foreign share	1,7	0,2	7,7	1,9	0,9
1994	**Domestic**	0,4	0,3	1,6	0,6	0,4
	More than 10% foreign share	1,2	0,5	3,5	1,0	1,0
	More than 50% foreign share	1,6	0,6	3,9	1,0	1,1
	More than 90% foreign share	1,5	0,1	5,6	1,1	0,8
1995	**Domestic**	0,4	0,2	1,5	0,6	0,4
	More than 10% foreign share	1,7	0,3	4,2	1,3	0,9
	More than 50% foreign share	2,2	0,3	4,5	1,3	1,1
	More than 90% foreign share	1,4	0,2	7,3	1,4	0,8
1996	**Domestic**	0,4	0,2	1,3	0,6	0,4
	More than 10% foreign share	1,1	0,3	3,5	0,9	1,0
	More than 50% foreign share	1,4	0,3	3,8	0,9	1,1
	More than 90% foreign share	1,2	0,2	7,0	n.a.	1,0
1997	**Domestic**	0,4	0,2	1,5	0,5	0,4
	More than 10% foreign share	1,2	0,3	3,3	1,5	1,2
	More than 50% foreign share	1,6	0,4	3,7	1,5	1,4
	More than 90% foreign share	1,3	0,1	6,4	2,0	1,0
1998	**Domestic**	0,4	0,2	1,7	0,5	0,4
	More than 10% foreign share	1,2	0,3	2,7	1,3	1,0
	More than 50% foreign share	1,6	0,3	3,0	1,3	1,1
	More than 90% foreign share	1,7	0,2	5,0	1,3	0,9
1999	**Domestic**	0,5	0,2	1,5	0,5	0,4
	More than 10% foreign share	1,2	0,3	3,2	1,3	1,0
	More than 50% foreign share	1,5	0,3	3,8	1,3	1,1
	More than 90% foreign share	1,4	0,3	6,0	2,6	0,6
2000	**Domestic**	0,5	0,2	1,2	0,5	0,4
	More than 10% foreign share	0,8	0,4	2,1	1,2	1,2
	More than 50% foreign share	1,2	0,3	2,3	1,2	1,3
	More than 90% foreign share	1,2	0,2	3,6	1,7	1,1
2001	**Domestic**	0,4	0,2	0,9	0,4	0,3
	More than 10% foreign share	1,3	0,4	1,3	1,2	0,8
	More than 50% foreign share	2,1	0,5	1,4	0,9	0,9
	More than 90% foreign share	1,4	0,2	1,7	1,1	0,7

Source: Author's calculations from SIS database.

5.3.3 Wages

As in the case of labour productivity, hourly real wages[88] are also higher in DFI firms. As shown in Table 5.15, Spearman rank correlation between foreign share and hourly real wages is significant at 5% for most of the years in the 1992-2001 period.

Table 5.15 Spearman's Rank Correlation between Foreign Share and Hourly Wages

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Correlation Coefficient	0,512	0.634*	0,584	0.701*	0.646*	0.738*	0.681*	0.699*	0.681*	0.744*
Sig. (2-tailed)	0,130	0,049	0,077	0,024	0,043	0,015	0,030	0,024	0,030	0,014
Nnumber of Observations	10	10	10	10	10	10	10	10	10	10

Note: * Correlation is significant at 5% level (2-tailed test).

Regarding total wage earnings, it is observed in Figure 5.5 below that annual average increase in total wage earnings tends to be higher, the higher the foreign share in DFI firms. In particular for +90 DFI firms, average annual change in total wage earnings is positive for all sectors under consideration for the 1992-2001 period. On the other hand, it is negative in all sectors for domestic firms as well as for total manufacturing industry.

One can decompose the change in wage earnings into employment effect and wage effect. That is, total wage earnings in an industry may decrease due to the decrease in employment, due to the decrease in wages, or both. When this decomposition formula[89] is applied to Turkish manufacturing industry for the 1992-2001 period, for domestic firms and total manufacturing industry, wage effect dominates the employment effect and pulls down wage earnings in the 1992-2001 period. In other words, although employment increased in domestic firms and in total manufacturing industry in the 1992-2001 period, wages decreased so much that total

[88] Hourly real wages are calculated by deflating nominal wages by the Consumer Price Index (1994=100).

[89] Total wage earnings are decomposed according to the following formula: $\Delta WE = E_0 (W_1 - W_o) + W_1 (E_1 - E_0)$, where ΔWE is the change in wage earnings, E_i and W_i are employment and wage levels in year i (i =0 for the initial year of the period, and i = 1 for the final year of the period).

wage earnings have also come down. On the other hand, for DFI firms having foreign share above 60%, employment effect dominates the wage effect, and total wage earnings rise in the 1992-2001 period. That is to say, although wages also decreased in DFI firms, they did not decrease as much as that in domestic firms, and the increase in employment of DFI firms, which was lower than employment increase in domestic firms, nevertheless pulled up the wage earnings in DFI firms.

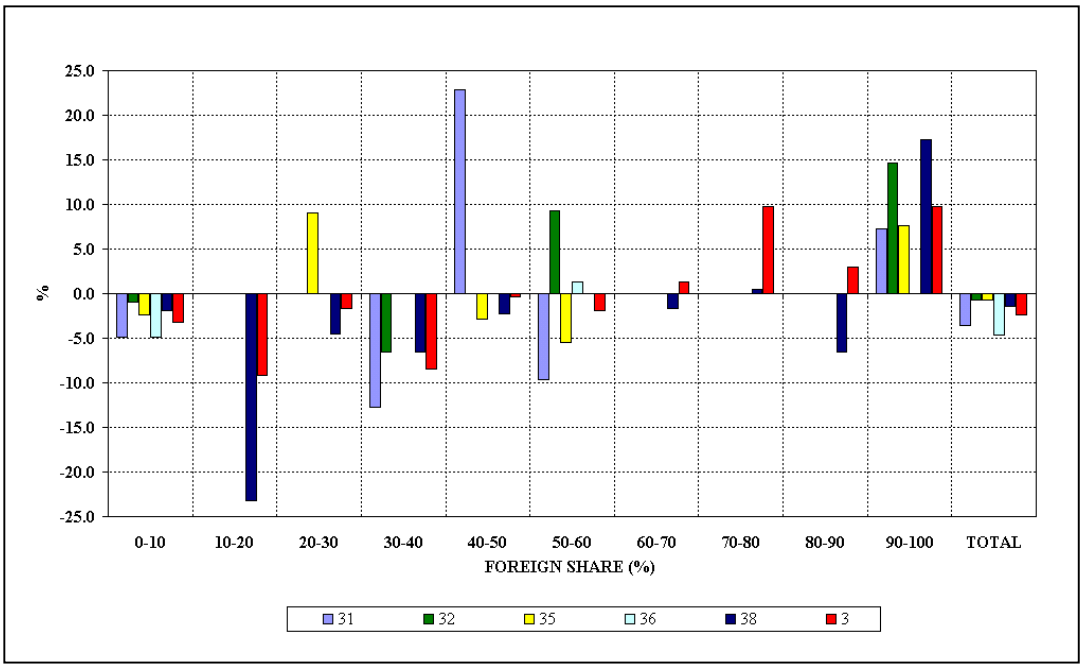

Figure 5.5 Average Annual Change in Wage Earnings with respect to Foreign Share Categories: 1992-2001

Source: Author's calculations from SIS database.

In Figure 5.6, hourly productivity and real wage indexes are presented with respect to domestic and DFI firms as well as total manufacturing industry. Indexes for +90 DFI firms and +50 DFI firms are also presented in separate panels in Figure 5.6. In both domestic and DFI firms, both indexes fell from 1992 to 2001. Only in 50+ DFI firms, labour productivity index was higher in 2001 than its 1992 level. Although real wage index was lower in 2001 than its 1992 level in both domestic and DFI firms, the decrease was less in DFI firms. While real wage index fell from 100 in 1992 to 50 in 2001 for domestic firms, it decreased to 57 for DFI firms (as defined by foreign share more than or equal to 10%), to 59 for 50+ DFI firms and to 60 for

90+ DFI firms. For 90+ firms, in particular, real wage index was above the labour productivity index in 2001. Moreover, the difference between labour productivity index and real wage index was smallest in 90+ DFI firms during the 1992-2001 period.

It was also the case that the average share of wages in value added was smallest in 90+ DFI firms in the 1992-2001 period. As Alfaro and Rodriguez-Clare (2004:116) note, if DFI firms that have higher productivity levels pay wages at market levels, the majority share of value added will be captured by DFI firms themselves, and national welfare will not be improved much. On the other hand, if they pay higher-than-average wages, some of their higher productivity will be shared by nationals, and this will contribute to national welfare. Although DFI firms pay higher wages than their domestic counterparts in Turkish manufacturing industry, the share of wage payments in value added is lower in DFI firms than their domestic counterparts. The average wage share in value added during 1992-2001 was 19.6% for domestic firms and 18.0% for DFI firms with foreign share exceeding 10%. The share of wage payments in value added decreased further in DFI firms with foreign share exceeding 90%. The average share of wage payments in value added for these DFI firms was only 11.5%. In other words, although DFI firms paid higher wages than their domestic counterparts in Turkish manufacturing industry, their contribution to national welfare was less than expected given their relatively higher productivity levels.

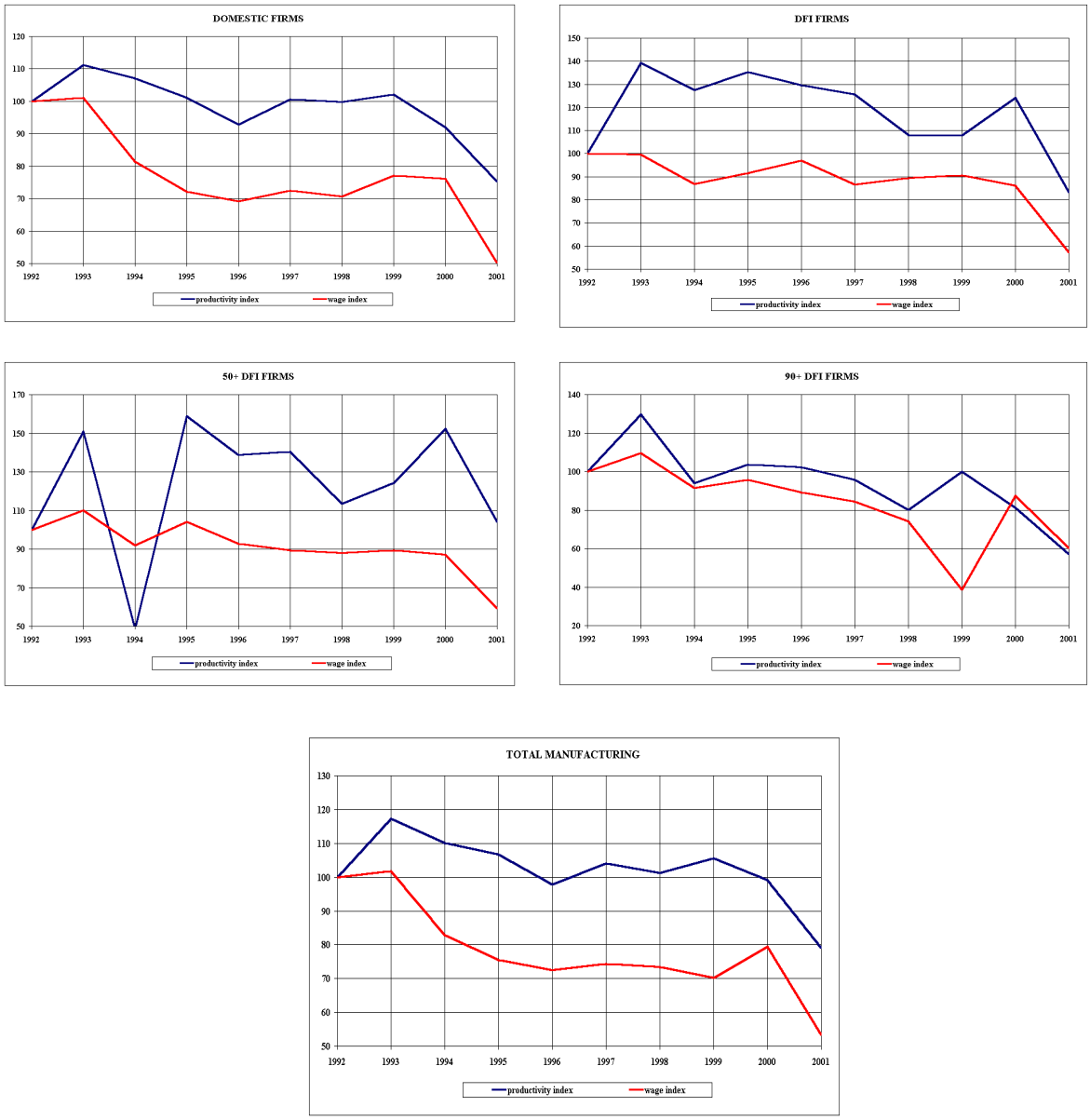

Figure 5.6 Hourly Labour Productivity and Real Wage indexes in Turkish Manufacturing Industry: 1992-2001

Source: Author's calculations from SIS Database.

5.4 Conclusion

In this chapter, export and employment structures of DFI and domestic firms in Turkish economy were analysed. On average, DFI firms account for one-fifth of Turkish exports. Actually, the bulk of DFI exports are accounted for by the largest

DFI firms in Turkey, that is by DFI firms among the largest 500 industrial firms in Turkey. In other words, about 75% of DFI firms operating in Turkish manufacturing industry are producing mainly for the domestic market.

The export performance of DFI firms is very sensitive to how a DFI firm is defined. When the definition of a DFI firm changes from any positive foreign share to majority foreign share the contribution of DFI firms to total exports decreases by more than 50%. That is, GDFI database actually overestimates the contribution of DFI firms to Turkish exports. Moreover, export orientation of DFI firms is also sensitive to the definition of DFI. In the 500 largest industrial firms of Turkey, while the number of export oriented firms among those DFI firms with foreign share less than 50% is higher than the number of export oriented firms among domestic firms, there is a tendency for the number of export oriented firms to decrease as foreign share increases.

As far as the regional distribution of exports is concerned, there is a significant positive correlation between DFI and domestic exports. That is, the largest share of both domestic and DFI exports is directed to EU-15 and Central and Eastern European countries, and West Asia. Contrary to the expectations that DFI firms will use Turkey as a jump base for their exports to Turkic Republics of Central Asia, Central Asian countries have very low shares in DFI exports.

Although manufacturing exports account for the largest share in both domestic and DFI exports, there are significant differences for individual manufacturing industries. While textiles and clothing, iron and steel, non-metallic mineral products, manufactures of metals, office machines and telecommunications equipment, and other consumer goods have higher shares in domestic exports; automotive products and other transport equipment, electrical machinery and apparatus, and chemicals have higher shares in DFI exports. In particular, DFI exports of automotive products and other transport equipment revealed a sharp rise in the 1996-2002 period, thanks to the policies that encouraged DFI in this sector in the early 1990s. The share of DFI exports in total exports of this sector increased from 13.9% in 1996-1998 to 40.0% in 2000-2002. However, one should mention that the structure of both DFI and domestic exports in Turkish manufacturing industry was quite rigid during the 1996-2002 period. That is, one cannot observe a structural change in the export behaviour

of DFI firms. DFI firms were increasing their share in total exports in those sectors where they have already had a significant share at the beginning of the period.

It is also the case that the most dynamic DFI exports in Turkish manufacturing industry are far from being in line with the most dynamic export products in world trade. The categories in Turkish DFI exports that come closest to the most dynamic products in world exports are articles of materials in fruit and fruit preparations (rank 8th in world exports but 69th in DFI exports), electrical machinery and apparatus (rank 20th in world exports but 72nd in DFI exports), and thermionic, cold and photo-cathode valves, tubes and parts (rank 1st in world exports but 90th in DFI exports). Moreover, only three products among the most dynamic 20 products in Turkish DFI exports can enter the list of the most dynamic 100 products in world exports. These products are television receivers, carboxylic acids and their anhydrides, halides and derivatives, and motorcycles, motor scooters and invalid carriages.

In terms of broad economic categories, while domestic exports are more focused on consumption goods, the share of intermediate and capital goods exports are higher in DFI exports. Moreover, DFI exports demonstrated a structural shift from consumption goods towards intermediate and capital goods with the help of the increase in the exports of automotive industry. However, domestic exports were rooted in consumption and intermediate goods and this structure did not change much during the 1996-2002 period. There were no spillovers from DFI exports to domestic exports, in terms of a switch to higher value added exports during the 1996-2002 period. However, this argument depends on how a DFI firm is defined. Since the DFI export figures from GDFI database include all firms with any positive foreign share, they also include domestic firms if a DFI firm is re-defined as having more than 10% or even more than 50% foreign share. Then, one can perhaps talk about a structural shift also in domestic exports.

Although the bulk of domestic exports came from medium-low and low technology exports, and the bulk of DFI exports came from medium-high technology exports, a shift in domestic exports through the upper levels of the technology ladder during 1996-2002 is observed. That is the share of low-technology domestic exports decreased and the share of medium-high and high technology domestic exports

increased during this period. It is even the case that the share of high technology exports in domestic exports was higher than that in DFI exports.

While the prime destination of DFI exports was EU-15 countries, the ranking of the other regions changed for different technology categories. Central Asia was the second prime destination for high-technology exports due to exports of radio, television, and communications equipment; Central and Eastern European was the second prime destination for medium-high technology exports due to exports of chemicals; South, East and South-East Asia was the second prime destination for medium-low technology exports due to exports of basic metals; and Central and Eastern Europe and West Asia were the second and third prime destinations for low-technology exports.

As compared to exports, the contribution of DFI firms to total employment in Turkish manufacturing industry was even lower. The average contribution of DFI employment in manufacturing employment was only 9.7% in the 1992-2001 period. Moreover, employment performance of DFI firms was also sensitive to the definition of DFI as was the case in exports. When a DFI firm is defined as having foreign share above 50%, the share of DFI employment falls to 4.9% in 1992 and 6.0% in 2001. And if a DFI firm is defined as having above 90% foreign share, DFI employment share falls further to 1.8% in 1992 and to 4.4% in 2001.

Although DFI firms accounted for very low levels of total employment during 1992-2001, they accounted for a significant share in employment generation from 1992 to 2001. Slightly more than a quarter of employment generation during 1992-2001 was accounted for by DFI firms having more than 90% foreign share. The contribution of employment generation of those DFI firms with foreign share between 20% and 70% was, on the other hand, negligible. This significantly high share of DFI firms with more than 90% foreign share in employment generation was due to the increase in the number of firms in this category during the same period. Because of this high contribution to employment generation, by 2001, DFI firms with more than 90% foreign share accounted for 37.3% of DFI employment in Turkish manufacturing industry. Moreover, DFI firms with more than 90% foreign share generated employment in all sectors in the 1992-2002 period, with engineering industries (ISIC 38) having the highest share.

Labour productivity and wages were also higher in DFI firms than in domestic firms, and labour productivity and wages rise as foreign share rises. However, DFI firms were also affected from the cyclical changes in the Turkish economy, in 2001 labour productivity and wages in DFI firms were below their 1992 levels, as in the case in domestic firms. On the other hand, the decrease in labour productivity and wages in DFI firms was lower than that in domestic firms. It should also be noted that, while employment generation was highest in DFI firms with more than 90% foreign share, the share of wages in value added was lowest in these very firms. Moreover, this share was exclusively lowest during the 1992-2001 period, and it was lower than that in domestic firms and that of the manufacturing industry average. In other words, for DFI firms having more than or equal to 90% foreign share, the contribution to national welfare was significantly less than it could have been.

CHAPTER 6

ANALYSIS OF THE SURVEY RESULTS

6.1 Introduction

This chapter is devoted to the analysis of the results of the surveys that have been implemented to DFI and domestic firms in Turkish manufacturing industry. As it has been done throughout this study, the problem of DFI is tackled in conjunction with the general investment performance of Turkish manufacturing industry. Thus, the performance and behaviour of DFI and domestic firms are evaluated in relation to each other.

There are four main objectives in implementing the surveys. The first one is to analyse the motivation of DFI firms in investing in Turkish manufacturing industry. Symmetrically, the motivation of Turkish domestic firms in investing abroad will also be analysed. Secondly, a qualitative analysis of the contribution of foreign mergers and acquisitions (M&A's) in Turkish manufacturing industry will be made. That is, it will be analysed whether DFI firms bring about any changes in domestic firms after they merge or acquire, in order to see whether these M&A's contribute to the efficiency of the existing firms through the implementation of better managerial and organisational techniques. Thirdly, the M&A's and DFI in general will be analysed from the point of view of domestic firms. That is, on the one hand, light will be shed on the reasons behind domestic firms' decisions to sell all or some part of their shares to foreign firms. On the other hand, the effects of the operations of DFI firms on domestic firms operating in the same industry will be analysed. Moreover, it will be analysed whether there are, if any, innovations that domestic firms implement by observing the operations of DFI firms in their industry. Fourthly, DFI and domestic firms will be compared and contrasted in terms of their evaluations of Turkish investment climate, employment performance, technology acquisition, exports, imports, and their responses to the establishment of customs union between

Turkey and the European Union (EU), and the financial crises Turkey has experienced during the past ten years or so.

The organisation of this chapter is as follows: The structure, design and implementation of the survey will be discussed in Section 2. Section 3 will be about the distribution of the respondents with respect to sub-sectors of the manufacturing industry, year of establishment and the home country distribution of DFI respondents and type of their initial investments. In Section 4, the expectations of DFI firms in investing in Turkish manufacturing industry will be discussed and compared with the expectations of domestic firms in investing abroad. Section 5 will discuss M&A's from the point of view of DFI and domestic firms as well as the effects of DFI on domestic firms. In Section 6, DFI and domestic firms will be compared and contrasted in terms of their evaluation of investment climate, employment, technology, exports and imports, and their responses to crises. Section 7 will conclude this chapter.

6.2 Survey Design

Two surveys have been prepared, one for DFI firms and one for domestic firms operating in Turkish manufacturing industry. The survey for DFI firms included 42 questions in 9 parts, and the survey for domestic firms included 46 questions in 10 parts. There were questions that were common to both surveys as well as questions designed for DFI and domestic firms separately. The common questions were on general information about the firm, investment motivations, investment climate, production, employment, technology, foreign trade and crises. The survey for DFI firms included questions on the structure of foreign shares, number of foreigners in the board of directors, type of investment, additional investments after the initial investment and the changes made in domestic firms if the investment is in the form of merger or acquisition. The survey for domestic firms included questions on the effects of DFI on domestic firms, the conditions that domestic firms seek before they merge with or sell their firms to foreign investors, and the motivations to invest abroad. Most of the questions were structured as closed-end with an open-ended option at the end of each question.

The surveys were first implemented to two DFI and two domestic firms as a pilot study in order to make a pre-test of the surveys. Adjustments were made in the ordering and wording of questions after these pre-test implementations in order to further clarify the questions and to increase the response rate to the surveys.

As the second step in the implementation of the surveys, the questionnaires were transferred to a web page hosted by the Middle East Technical University. The web page had an introductory page including the links to DFI and domestic firm questionnaires. A link to an English introductory page and to the English version of DFI questionnaire from thereof was also available. After filling in the surveys, the respondents were expected to click the submit button at the end of the web page, and the results were e-mailed to the e-mail address of the author. The respondents received a thank you page indicating that their answers were e-mailed after they click the submit button. Automatic thank you e-mail was also sent to the mail address of the respondents. Introductory pages are given in Appendix B.

Cover letters to DFI and domestic firms have been sent through e-mail[90]. The e-mail addresses of 458 DFI firms operating in Turkish manufacturing industry were obtained from the Central Bank of Turkey. These 458 manufacturing DFI firms were already including the largest DFI firms operating in Turkish manufacturing industry as listed in the first largest 500 industrial firms of Turkey by the Istanbul Chamber of Industry (ICI). The e-mail addresses of domestic firms were obtained from the first largest 500 and second largest 500 industrial firm lists of ICI. 545 valid e-mail addresses pertaining to domestic manufacturing firms were obtained from the ICI database. To each of these 458 DFI firms and 545 domestic firms, cover letters have been sent by e-mail 4 times consecutively at different time periods between February 2005-April 2005. 80 responses from DFI firms and 60 responses from domestic firms have been obtained. The response rates for DFI and domestic firms are, respectively, 17.5% and 11.0%.

6.3 Description of the Respondents

Both DFI and domestic respondents are concentrated in the Marmara region. The shares of DFI and domestic respondents from this region are, respectively,

[90] A sample of the cover letter is given in Appendix C.

72.5% and 53.3%. While 20% of DFI respondents are from the Agean region, and the remaining 7.5% are from the Mediterranean and the Mid-Anatolian regions, the remaining domestic respondents are more diversified geographically. 20% of domestic respondents are from the Mid-Anatolian region, 11.7% of them are from the Agean region, and 15% are from the Black Sea, Mediterranean, SouthEast and East Anatolian regions.

While 30% of DFI respondent firms were established before 1980, this ratio increased to 54.2% for domestic respondent firms. The percentages of DFI firms established in the 1980-89 and 1990-99 periods were, respectively, 25% and 40%. On the other hand, 22.0% of domestic respondent firms were established in the 1980-89 period, and 16.9% of them were established in the 1990-99 period. The percentages of DFI and domestic firm respondents established after 2000 were 5.0% and 6.8%, respectively.

Defining the firm size in terms of the level of employment, domestic respondents turned out to be larger than DFI respondents. While 50.0% of domestic respondents employed between 250 and 1000 employees, this ratio decreased to 31.6% for DFI firms. The percentage of domestic respondents that employed less than 250 employees was 38.3%, and this ratio increased to 55.7% for DFI respondents. The percentage of DFI and domestic respondents that employed more than 1000 employees are 12.7% and 11.7%, respectively.

55.3% of DFI respondents and 40.5% of domestic respondents turned out to be export oriented, with export orientation defined as the ratio of exports in total sales exceeding 25%. When export orientation is re-defined as the share of exports in total sales exceeding 50%, 25.0% of DFI respondents and 25.7% of domestic respondents turned out to be export-oriented.

Table 6.1 gives the distribution of DFI and domestic respondents by manufacturing activity. As was the case in the sectoral distribution of DFI firms in Turkey by manufacturing activity as of June 30, 2003 (See Table IV.1 in Chapter IV), the largest number of DFI firms are in chemicals, transport equipment, electrical machinery, food and textiles. Spearman's rank correlation between the sectoral distribution of DFI respondents and that of DFI firms in Turkish manufacturing industry as of June 2003 equals 68.5% and is significant at 1% (two-tailed test). On

the other hand, Spearman's rank correlation between the sectoral distribution of domestic respondents and the sectoral distribution of domestic manufacturing firms in 500 largest firms of Turkey in 2002 is 83.4%[91]. That is, the sectoral distribution of the respondents to the surveys fairly represent the sectoral distribution of DFI and domestic firms operating in Turkish manufacturing industry as far as the population of the study is concerned.

Table 6.1 The Number of Respondents by Manufacturing Activity

		Frequency		%	
ISIC Code	**Manufacturing Activity**	**DFI**	**Domestic**	**DFI**	**Domestic**
311-312	Food Manufacturing	7	7	8,8	11,7
313	Beverage Industries	2	1	2,5	1,7
314	Tobacco Products	1	-	1,3	-
321-322	Textiles and Wearing Apparel	8	11	10,0	18,3
331	Forestry Products	1	2	1,3	3,3
332	Furnitures	-	1	-	1,7
341	Paper	7	4	8,8	6,7
351-352	Chemicals	18	4	22,5	6,7
353-354	Other Petroleum and Coal Products	1	-	1,3	-
361	Ceramics, Clay and Cement Products	1	-	1,3	-
369	Other Non-Metallic Minerals	1	5	1,3	8,3
371	Iron and Steel	2	4	2,5	6,7
372	Non-Ferrous Metals	1	-	1,3	-
381	Fabricated Metal Products	2	1	2,5	1,7
382	Non Electrical Machinery	1	4	1,3	6,7
383	Electrical Machinery	8	5	10,0	8,3
384	Transport Equipment	17	11	21,3	18,3
390	Other Manufacturing Industries	2	-	2,5	-
	Total	80	60	100,0	100,0

Home country distribution of DFI respondents is given in Figure 6.1. 41.3% of DFI respondents have the Netherlands and Germany as their home countries. The USA, France, the UK and Italy follow these two countries. These six countries account for 71.3% of DFI respondents. Home country distribution of DFI respondents fairly represents the home country distribution of DFI firms operating in Turkish manufacturing industry as of June 2003. The Netherlands and Germany account for 41.2% of total DFI firms operating in Turkish manufacturing industry, while the Netherlands, Germany, the USA, France, the UK and Italy together account for 76.8% of total DFI firms operating in Turkish manufacturing industry as

[91] Two-tailed test is significant at 1%.

of June 2003. Spearman's rank correlation between home country distribution of DFI respondents and home country distribution of DFI firms operating in Turkish manufacturing industry as of June 2003 is 81.2% and is significant at 1%. In 74 of 80 DFI respondents, foreign partner is from one country only, in 6 of the respondents, foreign partners are from two different countries.

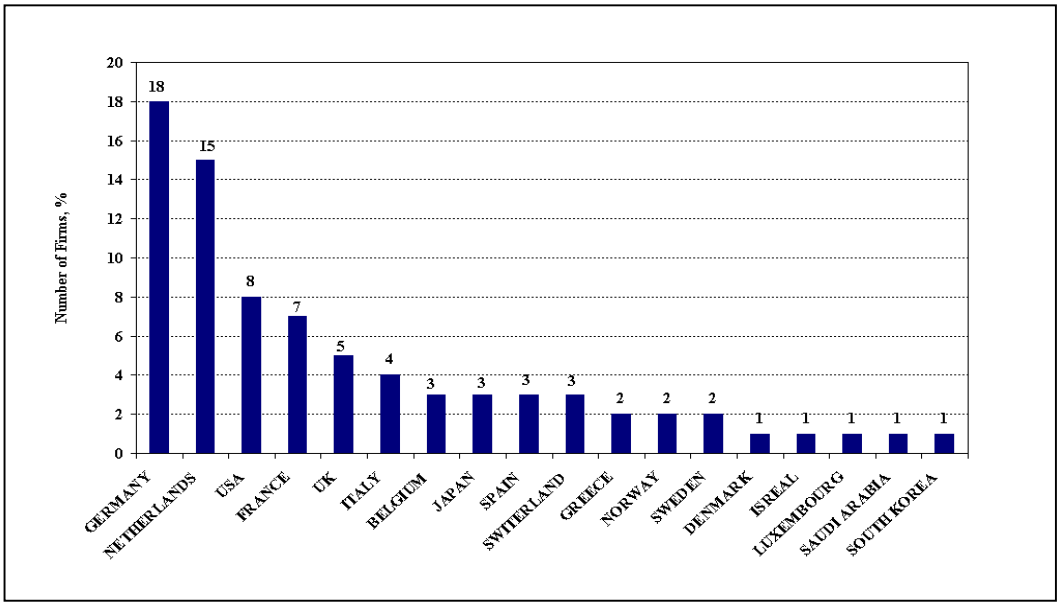

Figure 6.1 Home Country Distribution of DFI Respondents (%)

Table 6.2 gives the distribution of DFI respondents with respect to foreign share categories. Only one DFI respondent has a foreign share that equals 10%, and 40.5% of DFI respondents are 100% foreign. 79.7% of DFI respondents have 50% or more foreign shares. That is, most of the DFI respondents have majority foreign shares. When the distribution of DFI respondents and the distribution of DFI firms operating in Turkish manufacturing industry in 2001[92] are compared with respect to foreign share categories, it is found that Spearman's rank correlation equals 91.6% and is significant at 1%. Thus, the representativeness of DFI firms in terms of foreign share categories is also fairly high.

The average number of foreigners in the board of directors of DFI respondents is 2.7. Three of the respondents did not give information on the number of foreigners in the board of directors, and 4 of them mentioned that they do not have any foreign directors in their board of directors. 10 of the remaining 73 respondents have 1

[92] 2001 is the last available year in SIS database for the distribution of DFI firms operating in Turkish manufacturing industry with respect to foreign share categories.

foreign member in their board, and the rest have at least two foreigners in their board of directors. The number of foreign members in the board of directors ranges from 1 to 9.

Table 6.2 Distribution of DFI Respondents by Foreign Share

Foreign Share (%)	Number of Firms	%
10	1	1,3
10-20	3	3,8
20-30	3	3,8
30-40	4	5,1
40-50	5	6,3
50-60	15	19,0
60-70	2	2,5
70-80	-	-
80-90	2	2,5
90-100	12	15,2
100	32	40,5
Total	79	100,0
Missing	1	

Table 6.3 gives the number of firms classified with respect to the year of establishment of DFI respondents and the type of initial investment they have made. 12.5% of DFI respondents (10 firms) were established before 1980. More than half of the DFI respondents (66.3%) were established in the 1980-93 and 1996-2000 periods. 21.3% were established in the post-crises adjustment periods of 1994-95 and 2001-2003.

Regarding initial investment types of DFI respondents, it is observed that while 55.6% of DFI respondents that were established before 1980 and 44.4% of those established during 1980-89 involved greenfield investment, this ratio fell down gradually in the post-1989 period to 21.2% in 1990-93 and to 28.6% in 1996-2000. It fell down further in the post-crises adjustment periods to 11.1% in 1994-1995 and to 12.5% in 2001-2003. On the other hand, while only 22.2% of the DFI respondents established before 1980 reported that their initial investment was an M&A, this ratio increased gradually in the post-1980 period to 44.4% in 1980-89, 42.9% in 1990-93 and 38.1% in 1996-2000. It is interesting to note that, the ratio of mergers and acquisitions jumped in the crisis and post-crisis adjustment periods of 1994-1995 and

2001-2003, to 55.6% and 87.5%, respectively. The share of joint ventures as an initial DFI type also increased during the 1990-2000 period.

Table 6.3 Initial Investment Types of DFI Respondents with respect to Years of Establishment

Panel A. Number of Firms

Initial Investment Type	pre-1980	1980-89	1990-1993	1994-1995	1996-2000	2001-2003
Greenfield	5	8	3	1	6	1
Acquisition	0	2	-	1	4	3
Merger	2	6	6	4	4	4
Joint Venture	2	2	5	3	7	-
Total	9	18	14	9	21	8
Total (%)*	11,4	22,8	17,7	11,4	26,6	10,1

Panel B. Percentage Distribution of Initial Investment Types

Greenfield	55,6	44,4	21,4	11,1	28,6	12,5
M&A	22,2	44,4	42,9	55,6	38,1	87,5
Joint Venture	22,2	11,1	35,7	33,3	33,3	-
Total	100,0	100,0	100,0	100,0	100,0	100,0

6.4 Investment Motivations for Inward and Outward DFI

6.4.1 Investment Motivations for Inward DFI

Figure 6.2 presents the motivations of DFI respondents in investing in Turkey. 60.8% of the respondents reported that they invested in Turkey because of lower labour costs. This outcome is in compliance with the result that was reached in Chapter 3[93], where it has been shown that hourly labour costs in Turkey, even adjusted for productivity, is fairly below the average of hourly labour costs in the sample of developing countries selected as high DFI performers. Thus, low labour costs in Turkey turn out to be the most important motivation factor for DFI firms. The next motivation factor for DFI firms to invest in Turkish manufacturing industry is the high growth potential of the Turkish economy and increasing demand for the products of DFI firms, with an equal response rate (60.8%). To use Turkey as a jump base to export to third countries emerge as the third important motivation factor for DFI firms to invest in Turkey with a response rate of 48.1%. Taking these last two market-related factors together, it is apparent that the large Turkish domestic market

[93] See Table3.7.

and access to the markets of neighbouring countries turn out to be important motivation factors for market-seeking DFI.

These three motivational factors in attracting DFI in Turkey are followed by three ownership advantages of DFI firms. In other words, DFI respondents report that they invest in Turkey because they have product, technology or process variety, which do not exist in Turkey. The response rates for these three ownership advantages are, respectively, 40.5%, 31.6%, and 24.1%. The remaining four motivation factors for DFI firms in investing in Turkey are the availability of low raw material costs (17.7%), tariff-jumping (17.7%), low transportation and communication costs (12.7%) and low energy costs (10.1%).

To recapitulate, one can argue that DFI firms invest in Turkey primarily to take advantage of low labour costs in the availability of a large domestic market as well as to use Turkey as a jump-base for their exports. Then come their ownership advantages as pertaining to product, technology, and process variety. Low-cost raw materials, transportation, communication and energy costs, and tariff jumping turn out to be less important factors for DFI firms to invest in Turkey.

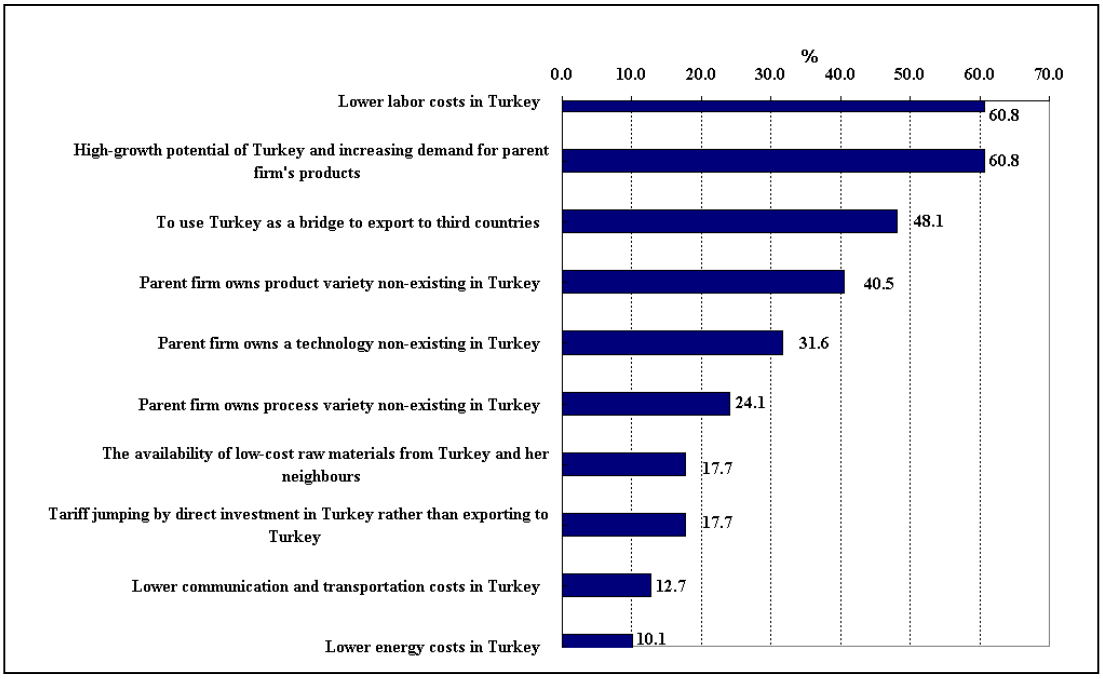

Figure 6.2 Motivations of DFI Firms in Investing in Turkey (%)

The ordering of motivations to invest does not change much due to the type of initial investment. Table 6.4 presents the response rates of investment motivations classified according to initial type of investments: Greenfield, joint venture and mergers and acquisitions (M&A). It is observed that the first three motivational factors, viz. low labour costs, high growth potential and to use Turkey as a bridge for exports, are relevant for all three-types of initial investment. In other words, regardless of the DFI firm being established as a greenfield investment, joint venture or through M&A, motivation of the DFI firms were fairly similar, except for slight differences in response rates. For example 75.0% of DFI firms established as greenfield investment responded that low labour costs in Turkey was the primary factor to invest in Turkey. However, this rate decreases to 55.6% if the firm was established as an M&A and to 52.6% if it was established as a joint venture. For those DFI firms established either as a joint venture or an M&A, high growth potential of Turkey and increasing demand for their products seem to be a more important factor than low labour costs in Turkey. While tariff-jumping DFI[94] is not a very important factor for joint venture and M&A investments, surprisingly, it turns out to be the fifth important factor for greenfield investments.

Table 6.4 Motivation to Invest by Initial Investment Type

	Initial Investment Type			
Motivation Factor	Greenfield	Joint Venture	M&A	$\chi 2(1)$
Lower labor costs in Turkey	75.0	52.6	55.6	2.977
High-growth potential of Turkey and increasing demand for parent firm's products	58.3	63.2	61.1	0.107
To use Turkey as a bridge to export to third countries	41.7	36.8	58.3	2.873
Parent firm owns product variety non-existing in Turkey	41.7	26.3	47.2	2.275
Parent firm owns a technology non-existing in Turkey	29.2	15.8	41.7	3.948
Parent firm owns process variety non-existing in Turkey	20.8	15.8	30.6	1.680
The availability of low-cost raw materials from Turkey and her neighbours	12.5	15.8	22.2	0.998
Tariff jumping by direct investment in Turkey rather than exporting to Turkey	33.3	5.3	13.9	6.397 *
Lower communication and transportation costs in Turkey	16.7	5.3	13.9	1.338
Lower energy costs in Turkey	16.7	0.0	11.1	3.307

Note: ***p<0.01; **p<0.05; *p<0.1

[94] Actually tariffs are no more important as an obstacle for international investments in a liberal international trade environment. However, this relatively high response rate by greenfield investors is probably due to the fact that 5 out of the 8 respondents that reported tariff-jumping DFI as a motivational factor were established between 1980-1991, when tariff rates were relatively higher than at present.

The difference between the ordering of motivations is not statistically significant for pre-1980 and post-1980 investments. There are only slight differences. For example, while high-growth in domestic market and to use Turkey as an export base to third countries were more important than low labour costs for those DFI firms established before 1980, low labour costs ranked as first above these two factors for those firms established after 1980. Moreover, availability of low cost raw materials reported to be a more important factor for those DFI firms established after 1980 than for those established before 1980.

Table 6.5 Motivation to Invest by Year of Investment

	Year of Investment		
Motivation Factor	**pre-1980**	**post-1980**	$\chi 2(1)$
Lower labor costs in Turkey	50,0	65,5	1,674
High-growth potential of Turkey and increasing demand for parent firm's products	70,8	56,4	1,467
To use Turkey as a bridge to export to third countries	58,3	43,6	1,446
Parent firm owns product variety non-existing in Turkey	37,5	41,8	0,129
Parent firm owns a technology non-existing in Turkey	41,7	27,3	1,600
Parent firm owns process variety non-existing in Turkey	29,2	21,8	0,129
The availability of low-cost raw materials from Turkey and her neighbours	4,2	23,6	4,344 **
Tariff jumping by direct investment in Turkey rather than exporting to Turkey	12,5	20,0	0,645
Lower communication and transportation costs in Turkey	12,5	12,7	0,001
Lower energy costs in Turkey	12,5	9,1	0,213

Note: ***p<0.01; **p<0.05; *p<0.1

11 DFI respondents made also specific comments about why they have engaged in a DFI project in Turkey. 6 of these 11 comments emphasised the high-growth potential of Turkey and increasing demand for their products. 2 of them reported that their parent firm has chosen to be closer to automotive producers. One respondent reported that they have chosen to merge to a foreign firm to grow instead of making new investments. Another respondent reported that the investment bank of the parent firm found it profitable to invest in Turkey. Lastly, one of the respondents reported that they acquired a domestic firm as it was an offer below its market value.

6.4.2 Investment Motivations for Outward DFI

17 of the 60 domestic respondents, which represent 28.3% of the total, reported that they have investments abroad. Of the 43 respondents that reported that they do

not have investments abroad, 13 reported that they plan to engage in outward DFI in the near future. Table 6.6 presents the outward DFI of domestic respondents by country and manufacturing activity. The total figure in Table 6.6 is greater than 17, because 4 domestic respondents have DFI in more than one country. Three respondents did not report their host countries.

Table 6.6 Outward DFI of domestic Respondents by Country and Manufacturing Activity

Country	Manufacturing Activity	Number of Firms
Bulgaria	Textiles (2), Wood products	3
Russian Federation	Chemicals (2), Wood Products	3
Romania	Transport Equipment, Wood Products	2
The Netherlands	Non-Metallic Mineral Products	1
Germany	Chemicals	1
Italy	Wood Products	1
Spain	Non-Metallic Mineral Products	1
Egypt	Chemicals	1
Azerbaijan	Food Manufacturing	1
Kazakhstan	Food Manufacturing	1
Bosnia-Herzergovina	Wood Products	1
Ukraine	Electrical Machinery	1
Argentina	Food Manufacturing	1
Tunisia	Chemicals	1
Iraq	Food Manufacturing	1
Total		20

8 of the 19 outward DFI firms are in Bulgaria, Russian Federation, and Romania. The remaining 11 outward DFI firms are distributed among 12 countries as seen in Table 6.6 above. The majority of outward DFI is from chemicals and wood products (5 firms each). Then comes food manufacturing with 4 firms. In textiles and non-metallic mineral products, there are two firms; and in electrical machinery and transport equipment, there is one firm each.

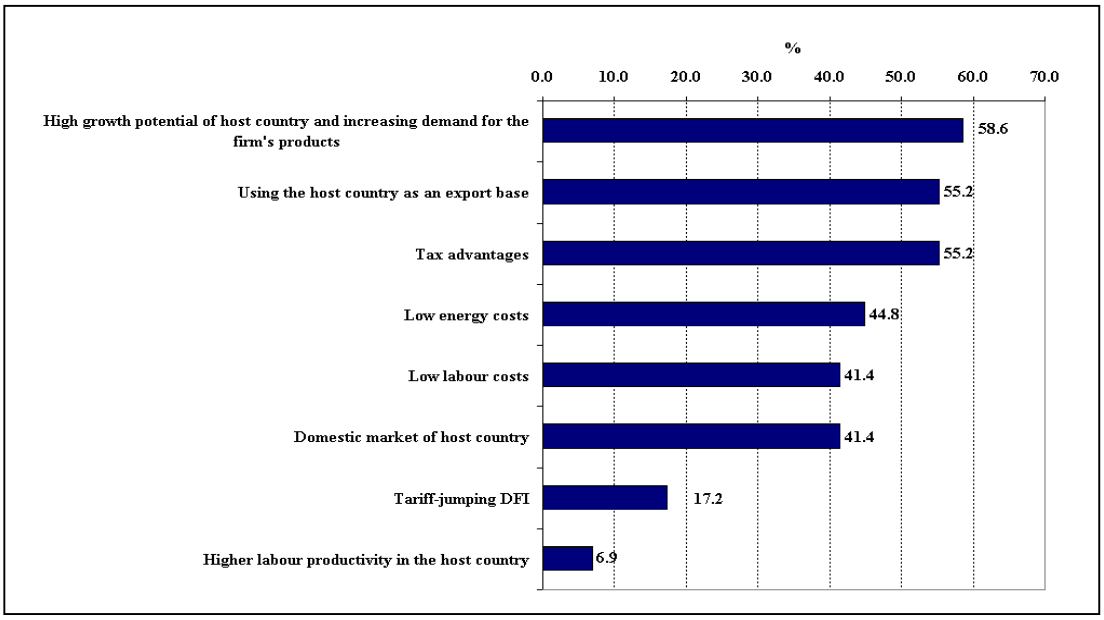

Figure 6.3 Motivations of Domestic Firms in Investing Abroad (%)

Similar to the motivations of DFI respondents in investing in Turkey, high growth potential of the host country and increasing demand for the firm's products turn out to be the most important factors for domestic firms to invest abroad. Again similar to DFI respondents, using host country as a jump base for exports to another country is another important motivation factor in investing abroad. However, for domestic firms investing abroad, low labour costs in the host country rank lower in the list of investment motivations, contrary to DFI respondents. Figure 6.3 present the motivations of domestic firms in investing abroad.

For domestic firms, tax advantages and low energy costs are more important factors than low labour costs to invest abroad. Given that low energy costs were not reported as an important factor to invest in Turkey by DFI respondents, one can argue that energy costs are in fact higher in Turkey, compared to other countries. High profit expectations from the domestic market of the host country turn out to be as important as low labour costs in that country. Moreover, similar to DFI respondents, domestic firms do not see tariff jumping as an important factor to invest abroad, which is not surprising in an era of liberal foreign trade regimes.

6.5 Foreign Mergers and Acquisitions and the Relations between DFI and Domestic Firms

In this section, four interrelated issues will be analysed regarding the relations between DFI and domestic firms. The first of these issues is whether DFI firms cause any changes in the domestic firms after mergers and acquisitions. The second one pertains to the reasons, if any, for domestic firms to search for foreign partnerships. Thirdly, the effects of DFI on domestic firms will be analysed. Fourthly, the question whether domestic firms implement any innovations in their firms by observing the operations of DFI firms in Turkey is tackled.

6.5.1 The Changes Made in Domestic Firms through Foreign Mergers and Acquisitions

In this section, it is asked whether the merger or acquisition of a domestic firm by a foreign investor is only a transfer of ownership or there are any changes made by the DFI firm that merges with or acquires the domestic firm so that the domestic firm may become more efficient. Data is not available to compare the efficiency of the domestic firm before and after the M&A , but one can obtain some clues on this count according to the kinds of changes made.

Figure 6.4 presents the changes made in the domestic firms after the merger or acquisition by DFI firms, as percentages reported by DFI respondents. 48.6% of DFI respondents that merged with or acquired a domestic firm reported that the organisation chart of the firm was changed. One can infer from this result that, if foreign firms have better organisational techniques than their domestic counterparts, the organisations of domestic firms will be improved after the merger and acquisition. However, it should be emphasised that this improvement is valid only under the assumption that DFI firms have implemented better organisational techniques that did not exist before in the domestic firms.

43.2% of DFI respondents reported that they replaced the existing machinery and equipment with new ones and they employed more engineers and technical personnel. Moreover, 37.8% reported that managers were changed, 32.4% reported that buildings were renovated, and 18.9% reported that engineers and technical personnel were replaced with new ones. From these results, it can be inferred that

foreign M&A is not just a transfer of ownership from domestic to foreign investors. It seems that measures are taken by the new foreign owners to increase the efficiency of the existing firms by implementing better managerial and organisational techniques, by renovating the buildings, by replacing the existing machinery and equipment by new, perhaps better ones, and by increasing engineers and technical personnel.

On the other hand, 16.2% of DFI respondents reported that employment was decreased after the merger or acquisition. Then it turns out that, along with the implementation of better managerial and organisational techniques, laying off workers and decreasing the employment of the existing firms is another important policy preferred by foreign investors in mergers and acquisitions. Thus, although M&A's may contribute to increased efficiency of the existing domestic firms, it seems that they have negative consequences in terms of the level of employment. 13.5% of DFI respondents reported that no changes were made in the firm at all in the existing domestic firms after the M&A. Lastly but not surprisingly, one DFI respondent from food manufacturing reported that the firm was acquired by a DFI firm in 2003, because it was sold below its market value. This example stands as an anecdotal evidence of fire sale DFI at times of deep economic crisis.

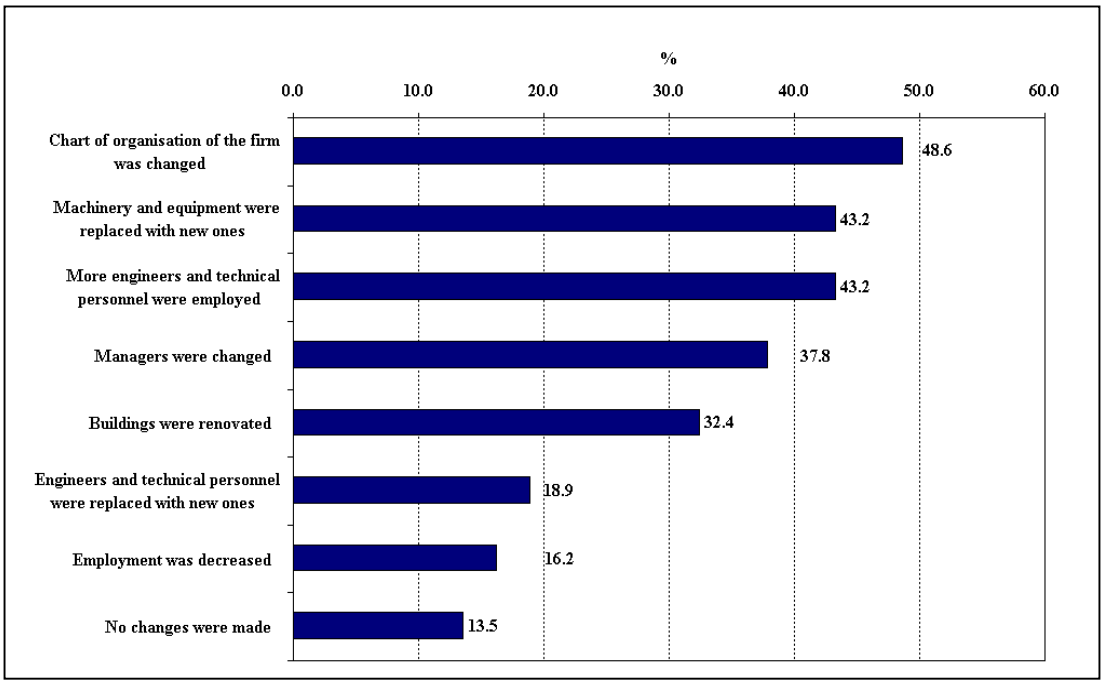

Figure 6.4 The Changes Made in Domestic Firms that were Merged or Acquired by DFI Firms (%)

6.5.2 Domestic Firms in Search of Foreign Partnerships

It is asked to domestic firms whether they consider merging with or acquiring a DFI firm in the near future. 25 of the 60 domestic respondents answered this question positively. Then, further by e-mail, the reasons behind their answer that they want to merge with or acquire a DFI firm were asked to these 25 domestic respondents. 10 of these 25 respondents responded to e-mails. Of these 10 domestic respondents, 9 reported that they want to merge with a DFI firm in order to increase their exports by opening up to new world markets. One respondent reported that they planned to acquire a foreign firm in a foreign country, which is central to their export markets. In this way, they also plan to increase their exports by opening up to new regions, similar to the other respondents.

It turns out that domestic firms are faced with serious difficulties in competing in world markets for exporting their products. These difficulties seem to be due to technological insufficiencies, financial problems and the general image of Turkey in world markets. By merging with foreign firms, which have high competence in world markets, domestic firms expect to overcome these problems. They think that, with foreign partners, they will have better access to credit as they will overcome the country risk, and they will better utilise their engineers and technical personnel to improve their technological base by complementing their resources with that of DFI firms and increasing the scale of their R&D operations. It can be argued that the lack of a technology and trade policy in Turkey, embedded in a broad development strategy forces domestic firms to search for foreign partnerships in order to compete in world markets.

6.5.3 The Effects of DFI Firms on Domestic Firms

It was asked to domestic firms how they were affected from the increase in the number of DFI firms operating in their sectors. Figure 6.5 presents the results, as percentages of domestic respondents. 62.7% of domestic respondents reported that they make new technology investments as competition increases through the increase in the number of DFI firms in their sector. 43.1% of domestic respondents reported that their productivity increases as competition increases. 35.3% reported that their productivity increases as they implement innovations that they observe from the

operations of DFI firms. From these three results, it can be inferred that competition increases in the market as the number DFI firms increase. This rise in competition forces domestic firms to increase their productivity levels. Domestic firms prefer to make new technology investments and implement the innovations they observe in DFI firms to increase their productivity and be able to compete with DFI firms. However, there are also negative effects for domestic firms of this rise in competition among DFI and domestic firms. 31.4% of domestic firms reported that their market share decreases as the number of DFI firms in their sector increases. That is, it seems that at least one-third of domestic firms find it hard to compete with DFI firms.

21.6% of domestic respondents reported that, as the number of DFI firms increases in their sector, the level of wages in their sector increases, and 17.6% of them reported that they face difficulties in employing skilled labour. These two results can be taken as an indicator of the fact that DFI firms are more inclined to hire skilled labour and pay higher wages. On the other hand, employment by domestic firms of workers, who have previous work experience in DFI firms does not seem to be a common practice in Turkish manufacturing industry. Only 3.9% of domestic respondents reported that they employ workers who have had previous working experience in a DFI firm. Thus, the channel of knowledge spillovers through mobility of workers does not seem to be working in the Turkish case[95].

Financial crowding out of domestic firms by DFI firms does not seem to be an important problem either. Only 5.9% of domestic respondents reported that they face difficulties in finding new finance opportunities as the number of DFI firms increases in their sectors. That is, the vast majority of domestic firms do not seem to face any difficulties in getting new finance as the number of DFI firms increases. One domestic respondent operating in transport equipment industry has reported that DFI firms operating in the same industry are provided cheap materials by their parent firms abroad, and hence there is unfair competition between DFI firms and their domestic counterparts. As a last point, it should be noted that 13.7% of domestic

[95] This result contradicts the result reached by Lenger (2004:147) who has argued that mobility of workers is an important channel of spillovers from DFI. The difference in the two results may be due to the fact that whereas Lenger (2004) measures mobility effect indirectly in an aggregate way for 4-digit industries, the result in this study reflects the direct answers of DFI firms (cf. Lenger, 2004:93).

respondents reported that the increase in the number of DFI firms operating in their sector does not have any effects on their operations.

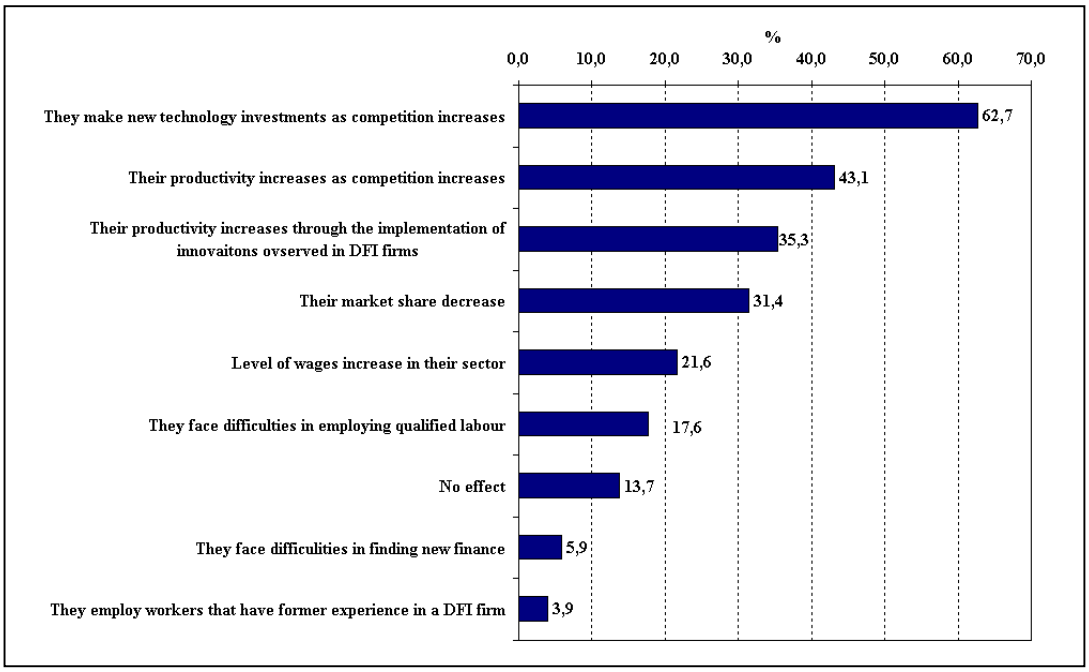

Figure 6.5 The Effects of DFI on Domestic Firms (%)

6.5.4 Innovations Implemented by Domestic Firms by Observing DFI Firms

Domestic firms were asked whether they implement any innovations that they observe in the operations of DFI firms, and if they do so, they were asked to mention the area of innovation among production, management, accounting, information systems, sales and distribution, or any other area they would like to mention. 31.0% of domestic respondents reported that they have implemented innovations in their firms that they observed from the operations of DFI firms[96]. Of these domestic firms that have responded positively to the question, 77.8% reported that their innovations were related to production. They reported that they increased their investments in design and engineering, they invested in new technologies, they established quality management systems, and they started to implement lean production techniques[97].

55.6% reported that they applied innovations in the sphere of management. They have implemented enterprise resource planning (ERP) software, ISO 9000

[96] Out of 58 responses, 18 responded positively and 40 responded negatively.

[97] Lean production, also known as Toyota Production System, is defined as producing more and just-in-time with minimizing waste, that is using less time, space, inventory, labour and money.

quality management techniques, and again lean production techniques. One of the respondents has reported that they have implemented the work flow plans along with the quality and service applications of a DFI firm operating in the Turkish manufacturing industry.

44.4% reported that they have implemented innovations in information systems and automation. Among the examples mentioned, there were ERP applications, utilisation of latest technology machinery and equipment, and fully-automated machinery. 22.2% reported that they have applied innovations in marketing, and sales and distribution, through implementing customer-focused policies, supplying customers on time, and providing after sales services and spare parts. 11.1% reported that they have implemented quality management techniques and increased the efficiency of their organisation.

It can be inferred from these results that inflows of DFI in Turkish manufacturing industry increase the level of competition. It seems that at least one-third of domestic firms in the sample are forced by the operations of DFI firms to increase the level of their technology and to take measures to operate more efficiently.

6.6 Comparison of DFI and Domestic Firms

In this section, DFI and domestic firms will be compared and contrasted in terms of their evaluations of Turkish investment climate, their employment, technology, export and import behaviour and their responses to economic crises.

6.6.1 Evaluation of the Investment Climate

DFI firms were asked to evaluate the given factors on a 1-4 scale[98] in terms of their importance as an obstacle in hindering DFI inflows to Turkey. On the other hand, domestic firms were asked to evaluate the same factors, this time in terms of their importance as an obstacle in hindering domestic investment. Table 6.7 presents the results.

According to the results given in Table 6.7, the lack of an industrial strategy, technology policy and trade policy in Turkey stands out as important obstacles in

[98] 1: Does not hinder at all, 2: Hinders a little, 3: Highly Hinders, 4: Definitely hinders.

front of both DFI inflows and domestic investments. The averages of DFI and domestic responses do not differ significantly for these three factors. Moreover, the lack of a policy that determines priority sectors for DFI, and the fact that DFI policy is not a part of a broader development strategy turn out to be major obstacles for DFI in contrast to domestic investments. DFI respondents have reported that these two factors highly hinder DFI inflows to Turkey, while domestic respondents do not see them as important obstacles for domestic investments, and the results are significant at 1%.

Not surprisingly, post-1980 open-door policies for DFI do not seem to constitute an obstacle for DFI inflows, but it is not an important obstacle for domestic firms, either. On the other hand, the existence of complex procedures for starting up a business turn out to be a major obstacle for DFI firms, in contrast to domestic firms. It is either the case that DFI firms are more sensitive to the bureaucracy involved in start-up procedures or they are treated differently from domestic firms.

While inadequate infrastructure facilities, high tax rates, tax legislation, customs regulation and import regime, high interest rates and low growth expectations seem to be important obstacles equally for both DFI and domestic investment; insufficient domestic demand, overvaluation of domestic currency, high labour costs and high energy costs seem to be more important obstacles in hindering domestic investments than DFI inflows. Moreover, it seems that DFI inflows are more sensitive to inflation, laws, rules and regulations, political instability and uncertainty, and corruption than domestic investments.

When the frequency of answers are analysed in terms of modes, it is observed that while only high tax rates definitely hinder domestic investments, tax legislation, laws, rules and regulations, political instability and uncertainty, and corruption are reported to definitely hinder DFI inflows. The lack of a technology policy, infrastructure facilities and high energy costs turn out to be obstacles, strongly hindering both DFI inflows and domestic investments. The obstacles that are reported to strongly hinder DFI inflows are reported to be the lack of priority sectors, the fact that DFI policy is not a part of a broader development strategy, start-up procedures, inflation rate, high tax rates and customs legislation and the import

regime. On the other hand, the lack of industrial and trade policies, insufficient domestic demand, high interest rates, tax legislation, laws and regulations and political instability and uncertainty are reported by domestic respondents to be highly hindering domestic investments.

Table 6.7 Obstacles perceived as Hindering DFI Inflows and Domestic Investment

	DFI Firms			Domestic Firms			
	N	Mean	Mode	N	Mean	Mode	
Turkey does not have an industrial strategy	78	2,5	2	59	2,6	3	
Turkey does not have a technology policy	78	2,5	3	59	2,4	3	
Turkey does not have an international trade policy	77	2,4	2	57	2,5	3	
Priority sectors to attract DFI are not determined	76	2,7	3	54	2,2	2	***
Foreign investment policy is not a part of broader development strategy	77	2,7	3	55	2,1	1	***
Post-1980 open-door policies to direct foreign investment	76	2,0	2	55	1,9	1	
Procedures for starting up a business	78	2,6	3	57	2,0	1	***
Infrastructure facilities (Electricity, Water, Telephone, Roads, Land)	76	2,6	3	57	2,7	3	
Inflation rate	80	2,8	3	59	2,3	2	***
Overvaluation of Turkish Lira	76	2,4	2	57	2,8	2	**
Insufficient domestic demand	76	2,4	2	57	2,8	3	**
Low growth expectations	76	2,2	2	56	2,3	2	
High interest rates	77	2,7	2	59	2,7	3	
High labour costs	78	2,2	2	59	2,7	2	***
High energy costs	77	2,6	3	57	3,2	3	***
High tax rates	78	3,1	3	59	3,3	4	
Tax legislation	77	3,2	4	57	3,0	3	
Customs Legislation and Imports Regime	75	2,9	3	56	2,8	2	
Laws, Legislations and Regulations	77	3,0	4	57	2,6	3	*
Political instability and uncertainty	79	3,2	4	58	2,8	3	**
Corruption	78	3,0	4	58	2,7	2	*

Notes:
The averages were on a 1-4 scale: 1-does not hinder at all; 2-hinders a little; 3-highly hinders; 4-definitely hinders.
N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

It turns out from the responses of DFI and domestic firms that, in order to remove the obstacles in front of both DFI inflows and domestic investments, the policies that will be designed to improve the investment climate for both foreign and domestic investors should be embedded in a broader development strategy. Priority sectors should be determined to increase DFI inflows to Turkey. The broader development strategy that will stand as a framework for investment climate improvements should include industrial, trade and technology policies as important elements of the broader development strategy.

In order to analyse the factors affecting new investment decisions of DFI and domestic firms in Turkish manufacturing industry, the respondents were asked to

evaluate the effects of the factors presented in Table 6.8 below on their new investment decisions in Turkey, on a 1-3 scale. The factors were expected to have a positive or negative effect or no affect at all on new investment decisions. Table 6.8 presents the results.

Table 6.8 The Factors Affecting New Investment Decisions of DFI and Domestic Firms

	DFI Firms			Domestic Firms			
	N	Mean	Mode	N	Mean	Mode	
Liberalizations in foreign investment regime in the post-1980 period	69	2,5	3	58	2,0	3	***
Liberalization of capital flows in 1989	69	2,6	3	58	2,1	3	***
1994 crisis	71	1,9	2	55	1,8	2	
Customs Union	73	2,4	3	58	2,2	3	
2001 Crisis	73	1,9	2	57	1,9	2	
The lack of industrial strategy in Turkey	72	1,8	2	58	1,7	2	
The lack of international trade strategy in Turkey	72	1,7	2	58	1,7	2	
The lack of technology policy in Turkey	72	1,7	2	58	1,7	2	
New Foreign Investment Law No. 4875 enacted on 5.6.2003	65	2,1	3	55	1,5	1	***

Notes:
The averages were on a 1-3 scale: 1- not affected; 2-negatively affected; 3-positively affected.
N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

Although the mode of both DFI and domestic firms' answers is 3 (ie. positively affected) for the liberalization in DFI regime in the post-1980 period and the liberalization of capital flows in 1989, the means of the answers of DFI respondents are significantly higher than that of domestic respondents. That is, while the mean of these answers is 2.5 and 2.6 for DFI firms (ie. they can be taken as close to 3), they are 2.0 and 2.1 for domestic firms, and the differences between DFI and domestic firms are significant at 1%. Thus, one can conclude that, on statistically significant grounds, the liberalization attempts in the post-1980 period have, in terms of both DFI regime and capital flows, affected the new investment decisions of DFI firms positively but that of domestic firms negatively. On the other hand, the new Foreign Investment Law No. 4875 enacted in June 2003 affected the new investment decisions of DFI firms positively, which is not surprising, and it did not have any effect at all on the new investment decisions of domestic firms.

As expected, the new investment decisions of both DFI and domestic firms were negatively affected by the economic crises in 1994 and 2001. On the other

hand, customs union with the EU that came into force early in 1996 positively affected positively the new investment decisions of both DFI and domestic firms.

Both DFI and domestic firms reported that the lack of industrial, trade and technology policies in Turkey affected their new investment decisions negatively. This result, as emphasised above in evaluating the results presented in Table 6.7, supports our main hypothesis that DFI policy should be an integral part of a broader development strategy in which industrial, trade and technology policies stand out as important facets of the development strategy. Thus, on the basis of the survey results it can be argued that DFI and domestic investment should be considered as mutually reinforcing each other and a broader development strategy is required to increase the level of both DFI inflows and domestic investment.

As the last question of this section, the survey respondents were asked to compare the current investment climate in Turkey with other developing countries on a 1-3 scale as worse, similar or better. The results are presented in Table 6.9.

Table 6.9 Current Investment Climate in Turkey as Compared to Other Developing Countries

	DFI Firms			Domestic Firms			
	N	Mean	Mode	N	Mean	Mode	
Bureaucratic procedures in starting a business	76	1,9	2	59	1,8	1	
Tax legislation	75	1,6	1	58	1,4	1	*
Customs Legislation	74	1,8	2	58	1,6	1	
Industrial standards and certificates	73	2,1	2	58	1,9	2	
Investment incentives	73	1,8	1	59	1,7	1	
Export incentives	73	1,9	2	58	1,5	1	**
Procedures related to land registration and ownership	73	1,6	2	55	1,7	2	
Infrastructure facilities (Electricity,roads,water,telephone,land)	74	1,9	2	59	1,6	1	*

Notes: The averages were on a 1-3 scale: 1- worse; 2-similar; 3-better.
N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

The averages of the answers of both DFI and domestic firms are very close to 2, that is it seems that both DFI and domestic firms regard the current investment climate in Turkey as similar to that of other developing countries. However, when the modes of answers are analysed, it turns out that both the DFI and domestic respondents report that tax legislation and investment incentives are worse in Turkey than in other developing countries. On the other hand, while DFI respondents report that export incentives and infrastructural facilities are similar in Turkey to that in

other developing countries, domestic respondents report that these two factors are worse in Turkey. Industrial standards and certificates, and procedures related to land registration and ownership are reported as similar to other developing countries by both the DFI and domestic firms.

It turns out that, according to the perceptions of DFI and domestic firms which have participated in the survey, the current investment climate in Turkey does not differ significantly from the case of other developing countries. This result supports earlier argument presented in Chapter 3. That is, the inability of Turkey in attracting sufficient DFI inflows as compared to high-performing developing countries should not be sought in the lack of an enabling investment climate. On the contrary, it should be sought on the lack of industrial, trade and technology policies, which should be part of a broader development strategy that also identifies the priority sectors for DFI inflows.

6.6.2 Employment Performance

In this section, the performance of DFI and domestic firms are compared and contrasted in terms of employment generation, the distribution of employment with respect to the level of education, and the shares of part-time and unionised employment in total employment. As the indicator of employment generation, annual average growth of employment has been calculated, with respect to different employment categories, for DFI and domestic firms, as exponential growth of employment from its initial to its current level. As Table 6.10 below shows, there is no significant difference in the annual average increase in employment, in any of the categories, between DFI and domestic firms.

Table 6.11 presents the distribution of employment in DFI and domestic respondents with respect to education categories. The shares of graduates and undergraduates are significantly higher in DFI firms as compared to domestic firms. There is no significant difference in the shares of employees with other education categories. It seems that DFI firms are inclined to employ workers with higher levels of education. This result may be one of the factors behind the higher level of labour productivity in DFI firms as has been indicated in Chapter 5.

Table 6.10 Annual Average Increase in Employment of DFI and Domestic Firm Respondents

	DFI Firms		Domestic Firms	
Employment Category	**N**	**Mean**	**N**	**Mean**
Managers	51	7,2	41	7,4
Engineers	44	8,9	33	9,5
Technical Personnel	43	8,5	36	5,6
Clerks	47	9,8	37	7,9
Workers	47	8,6	40	9,2
Total Employment	58	11,0	43	11,9

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

Table 6.11 Distribution of Employment in DFI and Domestic Respondents by Education Categories

	DFI Firms		Domestic Firms		
Education Category	**N**	**Mean**	**N**	**Mean**	
Graduate	69	3,0	53	1,5	**
Undergraduate	69	24,2	54	11,1	***
Two-year high school	69	4,9	54	5,3	
Vocational school	69	20,3	54	24,3	
High school	69	18,7	54	19,8	
Junior high school	69	12,7	54	15,4	
Primary school	69	16,2	54	22,7	*

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

Table 6.12 presents the percentages of DFI and domestic firms that organise special training programs for their employees. Only 3.8% of DFI firms and 5.0% of domestic firms have indicated that they do not organise any training programs for their employees. It is observed that there are no statistically significant differences between DFI and domestic firms in terms of training programs. However, for different employment categories, the proportion of DFI respondents that indicate that they organise training programs seems to be slightly higher than that of domestic firms. For example, while 81.3% of DFI firms reported that they organise training programs for their managers, this ratio decreases to 73.3% for domestic firms. The percentage of DFI firms is also slightly higher for engineers and workers.

The shares of unionised and part-time employment in DFI and domestic firms are presented in Table 6.13. While 64.1% of DFI firms reported that their workers

are unionised, this ratio increases to 71.1% for domestic firms. The average ratio of unionised workers in total employment in DFI and domestic firms are, respectively, 28.7% and 25.0%. However, the difference is not statistically significant.

Table 6.12 Percentage of DFI and Domestic Respondents that Arrange Training Programs for Different Employment Categories

Table 6.12 Percentages of DFI and Domestic Respondents that Arrange Education Programs for Different Employment Categories (%)				
	DFI Firms		Domestic Firms	
Employment Category	N	%	N	%
Managers	80	81,3	60	73,3
Engineers	80	82,5	60	80,0
Technical Personnel	80	83,8	60	85,0
Clerks	80	77,5	60	68,3
Workers	80	76,3	60	75,0
No education prorgam is arranged	80	3,8	60	5,0

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

Table 6.13 The Share of Unionised and Part-Time Workers in Total Employment

	DFI Firms			Domestic Firms		
	N1	N2	Mean	N1	N2	Mean
Unionized Workers	64	41	28,7	45	32	25,0
Part-Time Workers	54	20	0,5	42	20	0,1

Notes:
N1: Number of responses; N2: Number of non-zero responses.
Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

The situation for part-time employment is the reverse of unionised employment. That is, while 37.0% of DFI firms reported that they employ part-time workers, this ratio increased to 47.6% for domestic firms. However, although statistically not significant, the share of part-time workers in total employment seems to be higher (0.5%) than in domestic firms (0.1%).

6.6.3 Exports and Imports of DFI and Domestic Firms

DFI firms are expected to bring about easier market access to world markets for domestic firms, and as seen above in Section 6.5.2, the motivation for domestic firms to merge with DFI firms is to increase their penetration to world markets. Thus, when export orientation of DFI and domestic firms are compared, it can be expected

that the ratio of exports to net sales may be higher for DFI firms than domestic firms. However, as Table 6.14 presents, the ratio of exports to net sales is 36.3% for DFI firms, and 37.7% for domestic firms. The difference between these two figures is not statistically significant at conventional levels of significance. Thus, DFI and domestic firms are equally export oriented. Contrary to the expectations, DFI respondents do not seem to have any superiority over domestic firms in terms of export orientation.

Unlike exports, import dependence of DFI respondents is significantly higher than that of domestic respondents. While the ratio of imports to net sales is 27.5% for domestic respondents, this ratio increases to 38.3% for DFI respondents. This import dependence is especially higher in terms of intermediate inputs. The share of imported raw materials in total raw material costs of DFI and domestic firms are, respectively, 44.0% and 37.9%. This difference between the two groups of respondents is not statistically significant. On the other hand, the ratio of imported intermediate inputs in total intermediate input costs is 50.5% for DFI firms and 32.3% for domestic firms; this difference is significant at 5%. This higher import dependence of DFI firms, especially for intermediate inputs, may indicate the lack of backward linkages expected to be established from DFI firms to domestic suppliers. It also draws attention to the fact that the increase of DFI firms operating in Turkish manufacturing industry may have negative consequences on the Turkish balance of payments.

Table 6.14 Average Ratio of Exports and Imports to Net Sales

	DFI Firms		Domestic Firms		
	N	Mean	N	Mean	
Exports / Net Sales	76	36,3	54	37,7	
Imports / Net Sales	64	38,3	45	27,5	***
Imported Raw Materials / Raw Material Inputs	59	44,0	39	37,9	
Imported Intermediates / Intermediate Inputs	35	50,5	23	32,3	**

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

The respondents have been asked how their ratio of exports to net sales changed since the date of establishment of the firm. 74.0% of DFI respondents and 77.6% of domestic respondents reported that their export share today was higher than

in the initial year of investment. Only 10.4% of DFI firms and 12.1% of domestic firms have reported that their export share have decreased. Moreover, 15.6% of DFI firms and 10.3% of domestic respondents reported that the ratio of their exports to net sales did not change much since the beginning (see Table 6.15). Although there are small differences in the percentages of DFI and domestic firms, none of the differences are significant at conventional levels of significance.

Table 6.15 Change in the Ratio of Exports in Net Sales of DFI and Domestic Firms

	DFI Firms		Domestic Firms	
	N	%	N	%
Increase	57	74,0	45	77,6
Decrease	8	10,4	7	12,1
No change	12	15,6	6	10,3

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

The reasons behind increase in exports are presented below in Table 6.16[99]. Although the responses of DFI and domestic firms are not statistically significantly different from each other, there are slight differences in the ranking of reasons for DFI and domestic firms. While export incentives seem to be the most important reason for the increase of export share of DFI firms (48.5%), Customs Union with the EU turn out to be the most important reason for the increase in domestic firms' export share (54.3%).

The economic crisis in 2001 turn out to be the second most important reason behind the increase in export share for both DFI (45.5%) and domestic firms (48.6%), while Customs Union and export incentives are ranked as the third most important reason for the increase of exports in DFI and domestic firms, respectively. Exchange rate policies follow these three reasons for both DFI and domestic firms. While 30.3% of DFI respondents reported that liberalization of capital movements in 1989 contributed positively to the increase of their ratio of exports to net sales, this ratio decreased to 17.1% for domestic firms. Interestingly, the former crises of 1990/1991 and 1994 do not seem to have been effective in the increase of export

[99] Although 57 DFI and 45 domestic firms reported the their exports have increased, only 33 of DFI and 35 of domestic firms answered the question on the reasons of export increase.

share of DFI and domestic firms. This represents a sharp contrast with the effects of the 2001 crisis. It also indicates that the 2001 crisis was much deeper than the previous ones in terms of the contraction of domestic demand, which forced all firms, whether they are DFI and domestic, to increase the share of exports in net sales to survive.

Table 6.16 The Reasons Behind the Increase in Exports of DFI and Domestic Firms

	DFI Firms		Domestic Firms	
	N	%	N	%
Exchange rate policies	33	39,4	35	40,0
Export incentives	33	48,5	35	40,0
Liberalization of capital movements in 1989	33	30,3	35	17,1
1990/1991 Gulf Crisis	33	15,2	35	11,4
1994 Crisis	33	21,2	35	20,0
1996 Customs Union	33	42,4	35	54,3
2001 Crisis	33	45,5	35	48,6

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

As the customs union has turned out to be one of the most important reasons behind the increase in the export share of DFI and domestic firms, now the effects of customs union on the two groups are analysed. Several interesting results emerge from their responses, presented in Table 6.17. First of all, the majority of both the DFI and domestic firms report that the competition in the domestic market has intensified after the customs union. Secondly, a significant proportion of DFI respondents (69.6%) have reported that they have taken measures to increase their productivity. Moreover, half of domestic respondents reported that they have changed their production technology. These two ratios are significantly lower for DFI respondents and the difference between DFI and domestic firms are statistically significant. Both DFI and domestic respondents have also reported that their export markets were diversified, the share of exports in net sales and imported input usage have increased, and their demand for skilled labour increased after the customs union in 1996. Unlike domestic respondents, one-third of DFI respondents reported that, they have decided to increase their investments in Turkey after the customs union as their attitude to the Turkish economy became more positive.

To recapitulate, competition in the domestic market seems to have intensified following the customs union, and this has forced domestic firms to take measures to increase their productivity and to change their production technology. DFI firms seem also to have taken the same measures, albeit to a lesser extent than the domestic firms. Although a significant percentage of both DFI and domestic firms reported that their export share increased and export markets became more diversified, the number of DFI and domestic firms that reported that their usage of imported inputs has increased is also significant. The increased demand for skilled labour seems to be another important effect of the customs union on both the DFI and domestic firms. Last but not least, the perceptions of DFI firms about Turkey seem to have been positively affected by the customs union.

6.6.4 Technology Performance

Technology performance of DFI and domestic firms is compared in terms of the ownership, if any, of product and process patents and whether they have engaged in technical cooperation with universities and public institutions. Table 6.18 presents the percentages of DFI and domestic firms that reported that they have product and process patents[100] and has technological cooperation with universities and public institutions. Average ratio of research and development (R&D) expenditures to net sales is also given in Table 6.18.

Table 6.17 The Effects of Customs Union on DFI and Domestic Firms

	DFI Firms		Domestic Firms		
	N	%	N	%	
The share of exports in net sales increased	60	41,7	56	41,1	
Imported input usage increased	60	40,0	56	46,4	
Competition in domestic market intensified	60	55,0	56	60,7	
Have taken measures to increase productivity	60	46,7	56	69,6	**
Have changed production technology	60	33,3	56	50,0	*
Export markets were diversified	60	45,0	56	48,2	
Demand for qualified labor increased	60	30,0	56	37,5	
Vision of Turkey has positively changed	60	31,7	56	16,1	**
Decided to increase investments in Turkey	60	31,7	56	17,9	*

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

[100] A cross check from the Turkish Patent Institute regarding the patent ownership of the firms in the sample would be interesting, but it could not be handled due to costly procedures of the Institute.

Table 6.18 Technology Performance of DFI and Domestic Firms

	DFI Firms		Domestic Firms		
	N	%	N	%	
Product Patents	72	19,4	55	32,7	*
Process Patents	70	5,7	53	13,2	
Technical Cooperation	75	37,3	56	42,9	
R&D Expenditures	53	2,0	43	2,6	

Note: N: The number of responses. Two-tailed t-test: ***p<0.01; **p<0.05; *p<0.1.

In terms of all four criteria in the above table, DFI firms are inferior to domestic firms. 32.7% of domestic firms as opposed to only 19.4% of DFI firms reported that they have patented products, and the difference is statistically significant at 10%. Although statistically not significant, the percentage of domestic firms that reported that they have patented processes (13.2%) is also higher than DFI firms (5.2%). Moreover, a higher percentage of domestic firms reported that they have technical cooperation with universities and public institutions[101]. The ratio of R&D expenditures to net sales is also higher for domestic firms (2.6%) than for DFI firms (2.0%), although statistically not significant.

Taking patented products and processes and R&D expenditures as the indicators for innovative and technological performance, it can be argued that DFI firms operating in the Turkish manufacturing industry do not have a superior innovative performance than their domestic counterparts. Indeed, they seem to be inferior to domestic firms in terms of innovative performance. As one DFI respondent mentioned, DFI firms generally do not have local R&D facilities, and their R&D operations are generally centred at their headquarters in home countries. Neither do DFI firms seem to engage in technological cooperation with universities and public institutions as much as domestic firms. It can be inferred from all these results that, whether DFI firms are technologically superior than their domestic parts

[101] Based on SIS Innovation Surveys, Lenger (2004) has found that DFI firms have significantly higher patent applications than their domestic counterparts, but only in medium and high technology industries. In low technology industries, he has found no significant difference between DFI and domestic firms. Moreover, he has also found that DFI firms tend to establish more cooperative relations in terms of technology with domestic institutions than their domestic counterparts (Lenger 2004:144). This difference may be due to the differences in the samples of the two studies, but the raw data of the SIS Innovation Surveys were not available to the present author, thus a comparison of the two samples could not be made.

or not, they do not seem to contribute to technological and innovative performance of Turkish manufacturing industry through R&D facilities, innovative work and technological cooperation as much as their domestic counterparts.

6.6.5 Response to Crises

DFI and domestic firms were asked to reveal their responses to seven major events causing dislocations in the Turkish economy since 1990, namely the 1990/91 Gulf Crisis, 1994 financial crisis, 1997 East Asian crisis, 1998 Russian crisis, 1999 Marmara earthquake, 2001 financial crisis, and more recently the war in Iraq in 2003. The questions were of the closed-ended type including thirteen response categories, and an open ended option where the firms could provide more specific answers. The responses of DFI and domestic firms as percentages of the total are given in Table 6.19.

Several interesting results emerge from Table 6.19. First of all, the responses of DFI and domestic firms to various crises do not differ significantly. The different responses are statistically significant in only a few cases. Secondly, the responses that were cited by a high percentage by both DFI and domestic firms are that, in crises times, capacity utilisation ratio decreases, input costs increase, liquidity problems emerge, employment is decreased, domestic sales decrease, the share of exports in net sales increases, borrowing costs increase, and new investments are abandoned. These responses are common for both DFI and domestics firms in almost all of the events under consideration, although their ranking may change for different events. Thirdly, cutting wages, starting to export, pausing production, acquiring or merging with a new firm in Turkey turn out to be the least cited responses in all events by both the DFI and domestic firms, except for the increase in the percentage of both DFI and domestic firms reporting that wages were cut in the 2001 financial crisis. Fourthly, among all seven events, 1994 and 2001 financial crises, and especially the 2001 crisis, seem to be the most severe, affecting DFI and domestic firms to the same degree. The war in Iraq does not seem to have had much effect on DFI and domestic firms.

Until the 2001 crisis, and especially in 1994 crisis, the percentage of domestic firms reporting that input costs increased, borrowing costs increased, domestic sales

decreased and the share of exports increased is higher than that of DFI firms. However, about 60% of both DFI and domestic firms reported that their input and borrowing costs increased and domestic sales decreased during the 2001 crisis. But still, the percentage of domestic firms that reported that they started exporting or their export share in net sales increased in response to the 2001 crisis is significantly higher than that of DFI firms. Domestic firms seem to have been affected more from the increase in input costs and the decrease in domestic sales than DFI firms. As mentioned before, one of the domestic firms reported that it was adversely affected from the competition with DFI firms, because DFI firms are provided with cheap inputs from their foreign affiliates, which puts them in an advantageous position in competing with domestic firms. This may be one of the reasons explaining the percentage of domestic firms reporting that their input costs increase and domestic sales decrease in crisis times being higher than that of DFI firms.

Table 6.19 Responses of DFI and Domestic Firms to Crises

	1990/91 Gulf Crisis			1994 Financial Crisis			1997 East Asian Crisis			1998 Russian Crisis			1999 Earthquake			2001 Financial Crisis			2003 War in Iraq		
	DFI Firms	Domestic Firms	$\chi 2(1)$	DFI Firms	Domestic Firms	$\chi 2(1)$	DFI Firms	Domestic Firms	$\chi 2(1)$	DFI Firms	Domestic Firms	$\chi 2(1)$	DFI Firms	Domestic Firms	$\chi 2(1)$	DFI Firms	Domestic Firms	$\chi 2(1)$	DFI Firms	Domestic Firms	$\chi 2(1)$
Utilization ratio decreased	31,1	44,6	2,517	45,9	53,6	0,742	23,0	26,8	0,250	25,7	31,0	0,373	33,8	39,3	0,418	50,0	48,2	0,041	13,5	11,4	0,115
Input costs increased	34,2	46,4	1,967	43,8	67,9	7,368 ***	28,8	30,4	0,039	27,4	25,0	0,097	16,4	19,6	0,222	62,5	69,6	0,712	27,4	26,8	0,006
There were liquidity problems	28,4	35,7	0,795	37,8	48,2	1,406	18,9	30,4	2,297	18,9	19,6	0,011	12,2	21,4	2,021	49,3	55,4	0,463	6,8	10,7	0,645
Employment was decreased	27,0	19,6	0,957	24,3	35,7	1,999	12,2	7,1	0,892	5,4	16,1	4,029 **	5,4	1,8	1,129	28,8	37,5	1,101	5,4	5,4	0,000
Wages were cut	5,4	7,1	0,167	8,1	14,3	0,261	0,0	7,1	5,454 ***	0,0	3,6	2,684	1,4	0,0	0,763	13,5	19,6	0,884	1,4	3,6	0,697
Started to export	13,5	19,6	0,884	13,5	25,0	2,794 *	9,5	16,4	1,291	5,4	10,7	1,265	4,1	8,9	1,312	13,5	28,6	4,517 **	8,1	16,1	1,980
Domestic sales decreased	36,5	60,7	7,513 ***	35,1	60,7	8,392 ***	14,9	25,0	2,108	17,6	21,4	0,306	40,5	37,5	0,124	62,2	62,5	0,002	12,2	23,2	2,77 *
The share of exports in net sales increased	16,2	26,8	2,164	24,3	39,3	3,350 *	6,8	26,8	8,823 ***	6,8	14,3	2,008	13,5	21,4	1,420	27,0	51,8	8,320 ***	5,4	21,4	7,583 ***
Borrowing costs increased	31,1	44,6	2,517	36,5	57,1	5,487 **	31,1	35,7	0,309	24,3	32,1	0,973	16,2	25,0	1,537	55,4	58,9	0,161	9,5	19,6	2,771 *
New investments were abandoned	24,3	41,1	4,141 **	27,0	37,5	1,619	14,9	19,6	0,518	12,2	10,7	0,065	10,8	12,5	0,089	31,1	51,8	5,694 **	12,2	17,9	0,828
Production was paused	2,7	7,1	1,428	4,1	8,9	1,312	1,4	1,8	0,040	0,0	1,8	1,332	6,8	5,4	0,108	2,7	16,1	7,355 ***	2,7	0,0	1,537
Acquired a new firm in Turkey	0,0	0,0	-	0,0	1,8	1,332	1,4	0,0	0,763	0,0	0,0	-	0,0	0,0	-	0,0	0,0	-	0,0	1,8	1,332
Participated in a new firm in Turkey	0,0	3,6	2,684	1,4	0,0	0,763	1,4	0,0	0,763	0,0	0,0	-	0,0	0,0	-	0,0	0,0	-	0,0	0,0	-

Note: Number of responses is 56 for domestic firms and 74 for DFI firms. ***p<0.01; **p<0.05; *p<0.1.

6.7 Conclusion

Several interesting results have emerged from the analysis of the survey results. First of all, the share of greenfield investments in total DFI decreased especially in the post-1990 period, and the share of mergers and acquisitions increased. In particular, mergers and acquisitions increased sharply in the post-crisis adjustment periods of 1994-1995 and 2001-2003.

Secondly, low labour costs and large domestic market as well as using Turkey as a jump base for exporting to third countries turned out to be the most important motivational factors for DFI firms to invest in Turkey. Then came some ownership advantages of DFI firms like product and process variety and technology, which do not exist in Turkey. These motivational factors for investing in Turkey did not differ significantly with respect to the type of initial investment or whether the investment was made before or after 1980. The low-cost raw materials, transportation, communication and energy costs, and tariff jumping turn out to be less important factors for DFI firms to invest in Turkey.

Regarding the motivations of domestic firms for investing abroad, high growth potential of host countries and using those countries as an export base turned out to be the most important factors similar to the case of DFI in Turkey. However, low labour costs fell back in the ranking of motivations for outward investment in contrast to that of inward investments. Tax advantages and low energy costs of the host countries turned out to be more important factors to invest abroad than labour costs.

High tax rates and high energy costs also turned out to be important obstacles hindering both DFI and domestic investments, along with tax legislation, customs regulation and import regime[102], high interest rates, and low growth expectations. While insufficient domestic demand, overvaluation of domestic currency, and high labour and energy costs turned out to be more important obstacles for domestic investments, foreign investors seemed to be more sensitive to inflation rate, laws, rules and regulations, political instability and uncertainty, and corruption. Most importantly, the lack of industrial, trade and technology policies, the lack of a policy that determines the priority sectors for DFI, and the fact that DFI policy is not a part

[102] Although Turkey has a very liberal import regime, both DFI and domestic firms complained the bureaucratic burdens in the customs and import regime.

of a broader development strategy turned out to be major obstacles for DFI inflows as well as for domestic investments.

Both DFI and domestic respondents have indicated that the lack of industrial, trade and technology policies in Turkey affected their new investment decisions negatively. Moreover, domestic firms cited that increased market access is their primary motive in searching for foreign partnerships in the form of mergers and acquisitions, which can be taken as another indicator of the lack of appropriate trade policy in Turkey. On the other hand, both DFI and domestic firms have evaluated the current investment climate in Turkey as similar to (ie. not significantly different from) that of developing countries in general. All these results imply that the inability of Turkey in attracting sufficient DFI inflows as compared to high-performing developing countries should not be sought in the lack of an enabling investment climate. On the contrary, it should be sought in the lack of industrial, trade and technology policies, which should be part of a broader development strategy that also identifies the priority sectors for DFI inflows.

DFI firms that merge with or acquire a domestic firm generally change the organisational and managerial structure of the existing firms. This can be taken as an indicator of the transfer of better managerial and organisational techniques to the existing firms, however they also decrease employment of the existing firms. Hence, although there may be an improvement in terms of productivity and efficiency after M&A's, there are also negative consequences in terms of employment. On the other hand, DFI is instrumental in increasing competition in domestic market while domestic firms are forced to take measures to increase their efficiency through making new technology investments. However, domestic firms also complain of losing their market shares as the number of DFI firms operating in their sectors increases.

There is no significant difference between DFI and domestic firms in terms of employment generation. Neither do the shares of unionised and part-time workers in the two groups of firms differ significantly. Both DFI and domestic firms have training programs for their employees. The only statistically significant difference between DFI and domestic firms in terms of employment is that DFI firms are more inclined to employ better-educated workers than domestic firms.

As regards to the ratio of exports to net sales, there is no statistically significant difference between DFI and domestic firms. Both DFI and domestic firms mentioned that their export share have increased since their establishment. The reasons for the increase in the export share were similar for the DFI and domestic firms, namely the customs union with the EU, the 2001 crisis, exchange rate policies and export incentives. On the other hand, DFI firms seem to have significantly higher import dependence than domestic firms, especially for intermediate inputs. This indicates negative consequences for the balance of payments as the number of DFI firms in Turkish manufacturing industry increases.

As regards to the effects of the customs union, both DFI and domestic firms have reported that competition in the domestic market has intensified, the share of exports in net sales increased, export markets were diversified, imported input usage increased, and demand for skilled labour increased. The intensified competition seems to have forced domestic firms to take productivity increasing and technology improving measures to a greater extent than DFI firms. On the other hand, DFI firms have reported that their vision of Turkey changed positively and they have decided to increase their investments following the customs union.

As another important result, DFI firms seem to be inferior to domestic firms in terms of innovative and research and development activities. DFI firms in general do not perform R&D activities locally, their reported product and process patents are lower than that of domestic firms, and a lower percentage of DFI firms have technological cooperation with universities and public institutions. Then, DFI firms do not seem to be contributing much to technological and innovative performance of Turkish manufacturing industry through R&D facilities, innovative work and technological cooperation.

DFI and domestic firms seem to have been affected from economic crises to a similar extent. That is, both DFI and domestic firms have reported that their capacity utilisation rates decreased, input costs increased, liquidity problems emerged, employment was decreased, domestic sales decreased, the share of exports in net sales and borrowing costs increased, and new investments were abandoned in crisis times. Among all the seven events considered, the 1994 and 2001 financial crises, and especially the 2001 crisis, seem to have been the most severe, affecting the DFI

and domestic firms equally. Domestic firms seem to have been affected more from the increase in input costs and decrease in domestic sales than DFI firms.

CHAPTER VII

CONCLUSION

The activities of transnational corporations (TNCs) and direct foreign investment (DFI) gained worldwide importance especially after the 1970s. As development policies were substituted by a neo-liberal agenda, which included DFI as an integral part of it, developing countries have been increasingly focused on attracting DFI. In this study, DFI was singled out from the general prescriptions of the neo-liberal agenda, and argued that DFI policies need not be a part of it. Rather, DFI policies should be subsumed by a general development strategy, in particular a selective and strategic industrial policy, complemented with appropriate trade and technology policies, in order to be beneficial for developing countries.

The empirical studies that have been surveyed in this study have shown that the benefits of DFI are not realized automatically. That is, inflows of DFI do not guarantee technological improvement, economy wide increase in productivity, higher growth rates, more employment, and higher wages. The impact of DFI inflows on host countries is actually a function of the specific characteristics of the host country. Host countries should have a minimum level of human capital and technological capacity as well as a competitive environment within a well-defined regulatory framework in order to maximise the benefits of DFI. It is apparent that DFI may contribute to growth in the long run, but for this to be realised, the other policies necessary for development should be in place before DFI can be expected to make an impact.

Against this background, this study has tackled two main questions: Firstly, what were the reasons for the failure of Turkey in attracting sufficiently high levels of DFI as compared to other developing countries, which have been successful on this count? Secondly, it is asked whether DFI inflows can help Turkey to overcome its structural problems and attain its industrialisation and development objectives by expanding and deepening its export base and upgrade its existing technological capabilities.

As regards to the first question, investment climates and DFI regimes of 15 developing countries with outstanding DFI performances have been compared with those of Turkey. Regarding the second question, the pattern of DFI in Turkish economy was first analysed in comparison with the pattern of domestic investment. Secondly, the significance of mergers and acquisitions as well as privatisation in DFI inflows into Turkey was discussed. Thirdly, the export, employment and technological performances of DFI and domestic firms, as well as their responses to the Customs Union between Turkey and the European Union (EU), and to the economic crises that the Turkish economy faced in the past ten years or so have been compared. Finally, the pattern of outward DFI from Turkey was analysed. In attempting to find satisfactory answers to these questions, the study has drawn upon various data sets as well as the results of two surveys that have been implemented to DFI and domestic firms operating in the Turkish manufacturing industry.

Investment Climate and DFI Regime

The examination of high DFI performing countries has indicated that policies were not uniform and there was considerable variation among countries in terms of investment climate. It turned out that the failure of Turkey in attracting sufficiently high DFI inflows cannot be easily attributed to its investment climate, as all countries have shortcomings in their investment climates in one way or another.

There was also considerable variation among DFI regimes of the countries in the sample. While some countries have fairly liberal DFI regimes, there are various restrictions in others to tailor DFI policy for their developmental needs. In Singapore, Thailand and Malaysia, DFI policy is a part of a broader industrial strategy. In China, there are certain strict bureaucratic procedures at the screening stage. Moreover, there are sectoral restrictions for DFI in most of the countries. In some countries there are performance requirements for DFI, in others these performance requirements are linked to incentives for DFI. In particular in the Czech Republic and Poland, DFI incentives are linked to performance criteria to maximise host country benefits from DFI, especially by steering DFI firms to high value added and high-tech industries. Last but not least, the high DFI performers do not practise

international arbitration exclusively. Indeed, the attitudes of China, Thailand, and Latin America are not very favourable to international arbitration.

Turkey has been increasingly liberalising its DFI regime. However, unlike the experiences of Singapore, Republic of Korea, Thailand and even China, Turkey has not formed a broad industrial strategy and embedded its DFI policy in this strategy. Neither has it designed an incentive structure closely linked to performance criteria to make Turkey a knowledge-based, high technology country, contrary to the experiences of Czech Republic and Poland. As the variety of experiences of high performer countries have shown, a liberal DFI regime and a neo-liberal investment climate do not emerge as the sole factors attracting DFI inflows. Rather, countries seem to have their own institutional structure in which they design specific policies for DFI according to their needs. The low level of educational attainment of the labour force and technological capacity in Turkey as compared to the other countries in the sample seemed to be important factors in the weak performance of Turkey in attracting DFI, which seems to be another indicator of the need to have priorities in development before DFI inflows can be attracted.

As the survey results have indicated, the lack of industrial, trade and technology policies, the lack of a policy that determines the priority sectors for DFI, and the fact that DFI policy is not a part of a broader development strategy turned out to be major obstacles confronting DFI and domestic investments alike. Both DFI and domestic respondents have stated that the lack of industrial, trade and technology policies in Turkey affected their new investment decisions negatively. Moreover, domestic firms have cited that increased market access is their primary motive in searching for foreign partnerships in the form of mergers and acquisitions, which can be taken as another indicator of the lack of an appropriate trade policy in Turkey. On the other hand, both DFI and domestic firms have evaluated the current investment climate in Turkey as not significantly different from that of developing countries. These results together imply that the inability of Turkey in attracting sufficient DFI inflows as compared to high DFI performing developing countries should not be sought in the lack of an enabling investment climate as often propagated by Bretton Woods institutions. On the contrary, it should be sought in the lack of industrial,

trade and technology policies, which should be part of a broader development strategy that also defines the priority sectors for DFI inflows.

DFI and Domestic Investment Pattern

DFI inflows to Turkey have been very low both historically and as compared to other developing countries. Moreover, the number of firms that can be counted as international investors are actually very low in Turkey. The bulk of DFI inflows in Turkey has come to services and manufacturing industry. Manufacturing has a decreasing trend in attracting DFI, while services has an increasing trend. In fact, between January 1, 2003 and April 30, 2005, almost half of the total DFI inflows consisted of unproductive real estate investments.

Historical evolution of DFI in the post-1980 period bears a close resemblance to the evolution of both total and public gross fixed capital formation in Turkey. Given that (i) public and private investments in Turkish economy were complementary at least until the late 1980s, (ii) domestic investments actually precede DFI in developing countries, and (iii) the shift in the sectoral distribution of DFI from manufacturing to services is a mirror image of the shift of sectoral distribution of gross fixed capital formation in the post-1980 period, it can be argued that the low performance of DFI inflows in Turkey is related to the low performance of public and domestic private investment.

As regards to motivations of DFI firms in investing in Turkey, low labour costs, a large domestic market and using Turkey as a jump base for exports to third countries have turned out to be the most important ones. Then came some ownership advantages of DFI firms like product, process and technology variety, which did not exist in Turkey. Low-cost raw materials, transportation, communication and energy costs, and tariff jumping have turned out to be less important factors for DFI firms to invest in Turkey. These motivational factors for investing in Turkey did not differ significantly with respect to the type of initial investment or whether the investment was made before or after 1980. It turned out that DFI in Turkey is of the market seeking kind and also attracted by low cost labour.

The motivations of domestic firms in investing abroad were also not different from that of inward DFI. High growth potential of host countries and using those

countries as an export base turned out to be the most important factors for outward DFI. Tax advantages and low energy costs of the host countries turned out to be more important factors to invest abroad than labour costs. The motivational factors for both inward and outward DFI indicate that while labour is relatively cheap in Turkey, energy costs and taxes turn out to be obstacles for both domestic investment and DFI.

Mergers and Acquisitions

Greenfield investments have constituted only a small portion of total DFI approvals in Turkish economy, especially in the manufacturing sector, and they had a constant decreasing trend in the 1983-2002 period. This constant decrease in the trend of the share of manufacturing greenfield DFI approvals in total manufacturing DFI approvals was in line with the decreasing trend of the share of manufacturing gross fixed capital formation in Turkish economy during the same period. On the other hand, capital increase and participation DFI in both manufacturing and services had an increasing trend, with jumps in participation approvals especially following the trough years of the Turkish economy. Moreover, the survey results have indicated that mergers and acquisitions jumped in the post-crisis adjustment periods of 1994-1995 and 2001-2003. Thus, it can be argued that after the recession years in the Turkish economy, some kind of "fire-sale" DFI increases in both manufacturing and services.

DFI firms that merge with or acquire a domestic firm generally change the organisational and managerial structure of the existing firms. This can be taken as an indicator of implementing better managerial and organisational techniques to the existing firms, however the new owners also decrease employment of the existing firms. Hence, although there may be an improvement in terms of productivity and efficiency after mergers and acquisitions, there are also negative consequences in terms of the level of employment. On the other hand, competition in domestic market seems to increase following DFI, and domestic firms are forced to take measures to increase their efficiency through making new technology investments. However, domestic firms also complain of losing their market shares as the number of DFI firms in their sector increases.

Structure of Exports

The results based on the database of the General Directorate of Foreign Investment (GDFI), which defines any firm with any positive foreign share as DFI firm, have shown that DFI firms have on average accounted for one-fifth of Turkish exports. However, the export performance of DFI firms is very sensitive to how a DFI firm is defined. When the definition of a DFI firm changed from, for example, any positive foreign share to majority foreign share, the contribution of DFI firms to total exports decreased by more than 50%. That is, GDFI database actually overestimated the contribution of DFI firms to Turkish exports. Actually, the bulk of DFI exports were accounted for by the largest DFI firms in Turkey, that is by DFI firms placed among the largest 500 industrial firms. In other words, about three-quarters of DFI firms operating in Turkish manufacturing industry were producing mainly for the domestic market. Moreover, export orientation of DFI firms was also sensitive to the definition of DFI. In the largest 500 industrial firms of Turkey, there was a tendency of the number of export-oriented firms to decrease as foreign share increased.

As regards to the regional distribution of exports, it has been observed that there was a significant positive correlation between DFI and domestic exports. That is, the largest share of both domestic and DFI exports were directed to EU-15 and Central and Eastern European countries, and West Asia. Contrary to the expectations that DFI firms would use Turkey as a jump base for their exports to Turkic Republics of Central Asia, Central Asian countries have had very low shares in DFI exports.

In terms of broad economic categories, DFI exports were more focused on intermediate and capital goods, while domestic exports were more focused on consumption goods. Actually, the shares of intermediate and capital goods in DFI exports increased gradually with the help of the increase in the exports of automotive industry. However, domestic exports were rooted more in consumption and less in intermediate goods and this structure did not change much during the 1996-2002 period. It should also kept in mind that, as DFI export figures from GDFI database include all firms with any positive foreign share, they also include domestic firms if a DFI firm is re-defined as having more than 10% or even more than 50% foreign share.

Although the bulk of domestic exports consisted of medium-low and low technology exports, and the bulk of DFI exports constituted medium-high technology exports, a shift has been observed in domestic exports towards the upper levels of the technology ladder during 1996-2002. That is the share of low-technology domestic exports decreased and the share of medium-high and high technology domestic exports increased during this period. It was even the case that the share of high technology exports in domestic exports was higher than that in DFI exports. However, this last result should be evaluated with caution, because it is the identity of exporting firm, not that of manufacturing firm, which is the basis of the data in GDFI database. The most dynamic DFI exports in Turkish manufacturing industry were far from being in line with the most dynamic export products in world trade. Only three products among the most dynamic 20 products in Turkish DFI exports could enter the list of the most dynamic 100 products in world exports.

The survey results have indicated that there was no statistically significant difference between DFI and domestic firms in terms of export orientation, measured as regards to the ratio of exports to net sales. Moreover, both DFI and domestic firms have indicated that their exports have increased since the date of their establishment. The factors behind the increase in exports were similar for DFI and domestic firms, namely Customs Union with the EU, 2001 crisis, exchange rate policies and export incentives. On the other hand, DFI firms seemed to have significantly higher import dependence than domestic firms, especially for intermediate inputs. This points to the possible negative consequences of the increase in the number of DFI firms in Turkish manufacturing industry on the Turkish balance of payments. It can also be taken as an indication of the lack of backward linkages between DFI firms and domestic suppliers.

As regards the effects of the Customs Union between Turkey and the EU, both DFI and domestic firms have reported that competition in the domestic market has intensified, the share of exports in net sales has increased, export markets were diversified, imported input usage and the demand for skilled labour have increased. The intensified competition seems to force domestic firms to take productivity-increasing and technology-improving measures more than DFI firms. On the other

hand, DFI firms have reported that their vision of Turkey has changed positively and they have decided to increase their investments following the Customs Union.

Structure of Employment

As compared to exports, the contribution of DFI firms to total employment in Turkish manufacturing industry was even lower. The contribution of DFI firms to manufacturing employment was on average only 9.7% in the 1992-2001 period. Moreover, employment performance of DFI firms was also sensitive to the definition of DFI as was the case in exports. When a DFI firm is defined as having a foreign share above 50%, the share of DFI employment in total manufacturing employment falls to 4.9% in 1992 and 6.0% in 2001. And if a DFI firm is defined as having above 90% foreign share, DFI employment share falls further to 1.8% in 1992 and 4.4% in 2001.

Although DFI firms have accounted for very low levels of total employment during the 1992-2001 period, they have accounted for a significant share in employment generation from 1992 to 2001. Slightly more than a quarter of employment generation during 1992-2001 was accounted for by DFI firms having more than 90% foreign share. The contribution of employment generation of those DFI firms with a foreign share between 20% and 70% was, on the other hand, negligible. This significantly high contribution of DFI firms with more than 90% foreign share to employment generation was due to the increase in the number of firms in this category in the same period. Because of this high contribution to employment generation, DFI firms with more than 90% foreign share accounted for 37.3% of DFI employment in Turkish manufacturing industry by 2001. Moreover, DFI firms with more than 90% foreign share have generated employment in all sectors in the 1992-2002 period, with engineering industries having the highest share.

On the other hand, the survey results have indicated that there was no significant difference between DFI and domestic firms in terms of employment generation. Neither did the shares of unionised and part-time workers in total employment differ significantly between the two groups of firms. Both DFI and domestic firms have training programs for their employees. One major statistically significant difference between DFI and domestic firms in terms of employment was

that DFI firms were more inclined to employ better-educated employees than domestic firms. Labour productivity and wages were also higher in DFI firms than in domestic firms, and both of these indicators showed a clear tendency to rise as foreign share rises. However, DFI firms were also affected from the cyclical changes in the Turkish economy. For example, in 2001 labour productivity and wages in DFI firms were below their 1992 levels, as in the case of domestic firms. On the other hand, the decrease in labour productivity and wages in DFI firms was lower than that in domestic firms during 1992-2001. It should also be noted that, while employment generation was highest in DFI firms with more than 90% foreign share, the share of wages in value added was lowest in this category of DFI firms.

Technology Performance

The survey results have indicated that DFI firms are inferior to domestic firms in terms of innovative and research and development activities. DFI firms in general do not perform R&D activities locally, their reported product and process patents are lower than that of domestic firms, and a lower percentage of DFI firms have technological cooperation with universities and public institutions. Likewise, DFI firms do not seem to be contributing to technological and innovative performance of Turkish manufacturing industry through R&D facilities, innovative work and technological cooperation. Under these circumstances, it is not rational to expect DFI to contribute to the technological base of Turkish economy without any deliberate action through appropriate economic policies.

Response to Economic Crises

The effect of economic crises on DFI and domestic firms seem to have been rather similar. That is, both DFI and domestic firms have reported that during crises capacity utilisation rates decreased, input costs increased, liquidity problems emerged, employment was decreased, domestic sales decreased, the share of exports in net sales and borrowing costs increased, and new investments were abandoned. Among the seven major events that Turkey was confronted with in the past decade, the 1994 and especially the 2001 financial crisis seemed to be the most severe, affecting DFI and domestic firms in a similar fashion. Domestic firms seem to have

been affected more from the increase in input costs and decrease in domestic sales than DFI firms. This may be due to the provision of DFI firms with cheaper inputs from their foreign affiliates, an opportunity which does not avail itself for domestic firms.

The Need for a Development Strategy

The failure of Turkish economy in attracting high amounts of DFI inflows do not seem to be easily attributed to the problems of investment climate (as often claimed by the Bretton Woods institutions). Neither can the DFI regime of Turkey be blamed for not being sufficiently liberal. On the contrary, Turkey has a fairly liberal regime as compared to other developing countries, and every country has its own investment climate problems in one way or another. The survey respondents have also indicated that investment climate of Turkey does not significantly differ from that of other developing countries. They have also mentioned that the lack of industrial, trade and technology policies embedded in a development strategy turn out to be the major obstacles confronting both DFI and domestic investments. Moreover, there does not seem to be a significant difference between the performances of DFI and domestic firms. While DFI seemed to contribute positively to exports, adverse effects of DFI on employment and balance of payments as well as the lack of its contribution in terms of research and development and innovative activities should not be underestimated. Then, rather than focusing solely on improvements in investment climate and liberalizing eagerly economic policy framework, it seems more appropriate to have a broad development strategy, in which both domestic investment and DFI should be handled in an integrated approach, within the framework of appropriate industrial, trade and technology policies. This approach seems to be more appropriate not just for maximising DFI inflows but also in order to reap the full benefits that may accrue from DFI.

A broad development strategy is meant to be the strategy that will facilitate the transformation of society into being an advanced one through identifying and removing obstacles as well as identifying the catalysts for change in order to provide a sustainable increase in the living, health and education standards (Stiglitz, 1998: 3,15). On the one hand, continuous productivity increases in the manufacturing

sector is needed in order to maintain the level of income without running into balance of payments problems, as agriculture and services sectors are laggard in terms of productivity (Chang, 1989:58). On the other hand, industry and trade structures increasingly become more complex and technology based activities through the rapid increase in technical change (Lall, 2004: 3). Moreover, as the examples of Singapore, Czech Republic and Poland show, TNCs are preferring those locations where they can complement their mobile assets with a skilled labour force as well as with competitive institutions (see also Lall, 2004:4). Thus, there is a need for an industrial policy to create technological dynamism, generating new areas of comparative advantage as well as diversifying the economy in terms of goods produced and exported (Chang, 1989:79; Rodrik, 2004: 7,21). Then, one of the key objectives of this development strategy will be to identify the areas of dynamic comparative advantage for the country through the utilisation of appropriate industrial policies.

Industrial policy should facilitate the mobility of capital and labour from declining to emerging industries. But, rather than targeting specific sectors, specific activities, like a new or a particular kind of technology, or a new good or service should be targeted (Rodrik, 2004:14). In targeting specific activities, support policies should be complemented with appropriate performance criteria as well as an *a priori* identification of an exit strategy from support policy. These performance criteria can be based on productivity as well as export success (Rodrik, 2004:11-22). On the other hand, national technology policies should be designed such that enterprises in the domestic economy will be able to manage the process of learning and improving upon the acquisition of new technologies (Lall, 2004:11).

It is true that within the framework of WTO agreements, it is highly difficult to design industrial, trade and technology policies. However, in order to achieve the objectives of development strategy, one should "reclaim development" and find the ways of designing appropriate policies by learning (see Chang 2002, 2003 and Chang and Glabel, 2004). For example, there is still room for selective policies under the TRIMs agreement of WTO, such as skill formation, technology support, innovation financing, infrastructure development for information technologies, and all general subsidies, unless they do not affect trade performance (Lall, 2004:27).

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APPENDICES

APPENDIX A

Table A.1 Regional Classification of Countries

EU-15	**OTHER WESTERN EUROPE**	**NORTH AMERICA**
AUSTURIA	MALTA	USA
BELGIUM-LUXEMBOURG	NORWAY	CANADA
DENMARK	SWITZERLAND	
FINLAND		
FRANCE	**OTHER DEVELOPED**	**NORTH AFRICA**
GERMANY		
GREECE	AUSTRALIA	ALGERIA
IRELAND	ISRAEL	EGYPT
ITALY	JAPAN	LIBYA
NETHERLANDS	NEW ZEALAND	MOROCCO
PORTUGAL		SUDAN
SPAIN		TUNISIA
SWEDEN		
UK		

WEST ASIA	**LATIN AMERICA**	**OTHER AFRICA**
UNITED ARAB EMIRATES	ARGENTINA	SOUTH AFRICAN REP
BAHREIN	BRAZIL	CAMEROON
IRAN	ECUADOR	QATAR
TRN CYPRUS	PERU	KENYA
KUWAIT	CHILE	NIGERIA
LEBENON	VENEZUELLA	
SYRIA	MEXICO	
UMMAN	URUGUAY	
JORDAN		
SOUTH YEMEN		
NORTH YEMEN		
SAUDI ARABIA		

Table A.1 (cont'd) Regional Classification of Countries

CENTRAL AND EASTERN EUROPE	SOUTH / EAST ASIA	CENTRAL ASIA
ALBANIA	BANGLADESH	GEORGIA
BELARUS	CHINA	KAZAKHSTAN
BOSNIA HERZEGOVINA	SINGAPORE	KYRGYZSTAN
BULGARIA	PHILLIPINNES	UZBEKISTAN
CZECH REPUBLİC	SOUTH KOREA	TAJIKISTAN
ESTONIA	INDONESIA	TURKMENISTAN
CROATIA	INDIA	AZERBAIJAN
LATVIA	HONG KONG	
LITHUANIA	MALAYSIA	
HUNGARY	PAKISTAN	
MACEDONIA	THAILAND	
MOLDOVA	TAIWAN	
POLAND	VIETNAM	
ROMANIA		
RUSSIAN FEDERATION		
SLOVAKIA		
SLOVENIA		
UKRAINE		
YUGOSLAVIA		

APPENDIX B

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
İKTİSAT BÖLÜMÜ

TÜRKİYE İMALAT SANAYİİNDE DOĞRUDAN YABANCI SERMAYE YATIRIMLARI

DOKTORA TEZİ İÇİN ANKET ÇALIŞMASI
2005

TO CONTINUE IN ENGLISH, PLEASE CLICK HERE.

Türkiye İmalat Sanayiinde Doğrudan Yabancı Sermaye Yatırımları konulu doktora tezi için yapılan bu anket çalışması, adı geçen teze olduğu kadar, konunun Türkiye akademik çevrelerinde daha iyi anlaşılmasına da önemli katkılar sağlayacaktır.

Anketimizi doldurmanız için en fazla 15-20 dakikanızı ayırmanız yeterli olacaktır. Vereceğiniz tüm bilgiler kesinlikle gizli tutulacaktır. Çalışmamızın sonuçlarında şirketinizin kimliğini ortaya çıkaracak herhangi bir bilgiye yer verilmeyecektir.

- **Şirketinizin yabancı sermaye payı %10 ve daha üzerinde** ise **BURADAN DEVAM EDİNİZ.**
- **Şirketiniz % 100 yerli sermayeli ise veya yabancı sermaye payınız %10'un altında** ise **BURADAN DEVAM EDİNİZ .**

Katılımınız için şimdiden çok teşekkür ederiz.

Prof. Dr. Fikret Şenses, ODTÜ İktisat Bölümü Öğretim Üyesi
Tevfik Koldaş, Türkiye Cumhuriyet Merkez Bankası, Muhasebe Genel Müdürlüğü Uzman Yardımcısı

İletişim: tevfik.koldas@tcmb.gov.tr
Tel: 0 312 310 36 46 / 2762
Faks: 0 312 311 58 66

Figure B.1 Introductory Page of the Survey (Turkish version)

MIDDLE EAST TECHNICAL UNIVERSITY
DEPARTMENT OF ECONOMICS

FOREIGN DIRECT INVESTMENT IN TURKISH MANUFACTURING INDUSTRY

Ph.D. DISSERTATION SURVEY STUDY
2005

This survey study undetaken for the Ph.D. dissertation on Direct Foreign investment in Turkish Manufacturing Industry will contribute to the dissertation as well to an enhanced understanding of the subject in Turkish academic circles.

It will take no more than 10-15 minutes to fill out the form. All the information you will submit will be kept confidential. Our study will not include any kind of information that will help to identify you or your company.

- **To fill out our survey form please CLICK HERE.**

Thank you in advance for your participation.

Prof. Dr. Fikret Şenses, METU Department of Economics
Tevfik Koldaş, Central Bank of Turkey

Contact: tevfik.koldas@tcmb.gov.tr
Tel: 0 312 310 36 46 / 2762
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Figure B.2 Introductory Page of the Survey (English version)

APPENDIX C

C1. TURKISH COVER LETTER

SAYIN YETKİLİ,

ODTÜ İktisat Bölümü'nde hazırlamakta olduğumuz **doktora tezi** için Türkiye imalat sanayiinde faaliyet gösteren şirketler üzerine bir anket çalışması yapıyoruz ve **sizin yardımınıza ihtiyacımız var.**

Çalışmamızın amacı, **Türkiye İmalat Sanayiinde Doğrudan Yabancı Sermaye Yatırımları** konusunun Türkiye akademik çevrelerinde daha iyi anlaşılmasına katkıda bulunmaktır.

Anketimizi doldurmanız için en fazla 10-15 dakikanızı ayırmanız yeterli olacaktır. **Vereceğiniz tüm bilgiler kesinlikle gizli tutulacaktır.** Çalışmamızın sonuçlarında şirketinizin kimliğini ortaya çıkaracak herhangi bir bilgiye yer verilmeyecektir.

Anketimizde isim, e-posta, şirket adı ve sektör bilgilerini istememizin nedeni kimlere ulaşabildiğimizi anlayabilmemiz içindir. Çalışmamızın bitiminde, ankete katılan şirketlere bulgularımızın bir özetini göndereceğiz.

Anketimizi doldurmak için lütfen aşağıdaki linki tıklayınız:
http://www.metu.edu.tr/home/wwwdfi

Yanıtınızı en kısa zamanda yollarsanız çok memnun oluruz.
Yardımınız için teşekkür ederiz.
Saygılarımızla,

Prof. Dr. Fikret Şenses — **ODTÜ İktisat Bölümü Öğretim üyesi**

Tevfik Koldaş — **Türkiye Cumhuriyet Merkez Bankası Muhasebe Genel Müdürlüğü Uzman Yardımcısı**
ODTÜ İktisat Bölümü Doktora Öğrencisi

İrtibat : **Tevfik Koldaş**
Türkiye Cumhuriyet Merkez Bankası

Muhasebe Genel Müdürlüğü
İstiklal Cad. No:10 06100
Ulus / Ankara
Tel: 0 312 310 36 46 / 2762
Faks: 0 312 311 58 66
e-posta: tevfik.koldas@tcmb.gov.tr

APPENDIX C

C2. ENGLISH COVER LETTER

DEAR SIR / MADAME,

We are doing a survey study on manufacturing firms for our Ph.D. Dissertation study to be submitted to the **Economics Department of Middle East Technical University**, and we need your help.

The objective of our study is to contribute to the subject of **Direct Foreign Investment in Turkish Manufacturing Industry**.

It will not take for you more than 10 or 15 minutes to fill out our survey form.

All information you will submit will be kept strictly confidential. Our study will not include any information unveiling you or your company.

Please procede with the following link to fill our survey:
http://www.metu.edu.tr/home/wwwdfi

We are looking forward to seeing your answers as soon as possible.
Thanks in advance for your participation.

Prof. Dr. Fikret Şenses — **METU Department of Economics**
Tevfik Koldaş — **Central Bank of Turkey, Accounting Department**

Contact : **Tevfik Koldaş**
Türkiye Cumhuriyet Merkez Bankası
Muhasebe Genel Müdürlüğü
İstiklal Cad. No:10 06100
Ulus / Ankara
Tel: 0 312 310 36 46 / 2762
Faks: 0 312 311 58 66
e-posta: tevfik.koldas@tcmb.gov.tr

APPENDIX D

D1. DOMESTIC FIRM SURVEY FORM

Company Title :	
Industry :	
Respondent's	
Name :	
Phone :	
E-mail address :	

A. GENERAL INFORMATION

1. The establishment year of your firm: ……

2. a) Please mention the initial shareholder structure of your firm:

Domestic private % ……..

Domestic public % ……..

Foreign private % ……..

Foreign public % ……..

2. b) Please mention the current shareholder structure of your firm:

Domestic private % ……..

Domestic public % ……..

Foreign private % ……..

Foreign public % ……

3. What were your motivations in making your initial investment?

[ ] A. To make high profits in domestic market,

[ ] B. To make high profits from exports

[ ] C. High growth potential of Turkish economy

[ ] D. Low labour costs in Turkey

[ ] E. Other (Please specify) …….

B. RELATIONS WITH DFI FIRMS

4. Do you plan to merge with, acquire or sell your firm to a DFI firm?

[ ] A. Yes [ ] B. No

5. If your answer to previous question is yes, please check the appropriate option below:

[ ] A. Merge with a DFI firm

[ ] B. Acquire a DFI firm

[ ] C. Sell your firm to a DFI firm

6. Do you receive any paid or unpaid technical assistance from DFI firms?

[ ] A. Yes (Paid …… / Unpaid ……..) [ ] B. No

7. Do you make sales to DFI firms?

(If yes, please mention the percentage of sales to DFI firms in total sales.)

[ ] A. Yes ……% **[ ] B.** No

8. Are there any innovations that you have implemented by observing the operations of DFI firms in Turkey in order to increase your competitiveness?

[ ] A. Yes **[ ] B.** No

9. If your answer is yes to previous question, please exemplify the type of innovation that you have implemented.

PRODUCTION ……..

MANAGEMENT ……

ACCOUNTING ……..

INFORMATION SYSTEMS ……..

AUTOMATION …….
MARKETING ……
SALESAND DISTRIBUTION ……
OTHER (Please specify) ……

10. How is your firm affected as the number of DFI firms operating in your industry increase? Please check all that apply.

[ ] A. Our market share decreases
[ ] B. We face difficulties in employing skilled labour
[ ] C. We increase the quality of our labour force by employing those who have previous work experience in DFI firms
[ ] D. The level of wages in our industry rises
[ ] E. Our productivity increases as competition increases
[ ] F. We increase our productivity by implementing innovations that we observe in DFI firms
[ ] G. We invest in new technologies as competition increases
[ ] H. We face difficulties in finding new finance
[ ] I. We are not affected at all
[ ] J. Other (Please specify) …….

C. OUTWARD INVESTMENTS

11. Do you have investments abroad?

[ ] A. Yes **[ ] B.** No

12. If you have investments abroad, please mention the country and city of the investments.

……

13. If you do not have investments abroad, do you plan to make investment abroad?

[ ] A. Yes **[ ] B.** No

14. If you have or plan to make investments abroad, please mention your reason. Please check all that apply.

[ ] A. Low labour costs in the country that we have invested / plan to invest

[ ] B. Low energy costs in the country that we have invested / plan to invest

[ ] C. High earning expectations from the domestic market of the country that we have invested / plan to invest

[ ] D. Tariff jumping by direct investment instead of exporting

[ ] E. High growth potential of the country that have invested / plan to invest and increasing demand for our products

[ ] F. To use the country that we have invested / plan to invest as an export base

[ ] G. Tax advantages in the country that we have invested / plan to invest

[ ] H. Higher labour productivity in the country that we have invested / plan to invest

[ ] I. Other (Please Specify)

……..

D. INVESTMENT DECISION

15. Do you think the fact Turkey has been given a date to start negotiations with the European Union will positively affect foreign direct investment inflows to Turkey?

[ ] A. Yes **[ ] B.** No

16. To what extent do you think the following factors hinder foreign direct investment inflows to Turkish manufacturing industry?

	DOES NOT HINDER AT ALL	HINDERS A LITTLE	HIGHLY HINDERS	DEFINITELY HINDERS
Turkey does not have an industrial strategy	[ ]	[ ]	[ ]	[ ]
Turkey does not have a technology policy	[ ]	[ ]	[ ]	[ ]

Turkey does not have an international trade policy	[ ]	[ ]	[ ]	[ ]
Priority sectors to attract FDI are not determined	[ ]	[ ]	[ ]	[ ]
Foreign nivestment policy is not a part of broader development strategy	[ ]	[ ]	[ ]	[ ]
Post-1980 open-door policies to foreign direct investment	[ ]	[ ]	[ ]	[ ]
Procedures for starting a business	[ ]	[ ]	[ ]	[ ]
Infrastructure facilities (electricity, water, telephone, roads, land)	[ ]	[ ]	[ ]	[ ]
Inflation rate	[ ]	[ ]	[ ]	[ ]
Overvaluation of Turkish Lira	[ ]	[ ]	[ ]	[ ]
Insufficient domestic demand	[ ]	[ ]	[ ]	[ ]
Low growth expectations	[ ]	[ ]	[ ]	[ ]
High interest rates	[ ]	[ ]	[ ]	[ ]
High labour costs	[ ]	[ ]	[ ]	[ ]
High energy costs	[ ]	[ ]	[ ]	[ ]
High tax rates	[ ]	[ ]	[ ]	[ ]
Tax legislation	[ ]	[ ]	[ ]	[ ]
Customs Legislation and Imports Regime	[ ]	[ ]	[ ]	[ ]
Laws, Rules and Regulations	[ ]	[ ]	[ ]	[ ]
Political instability and uncertainty	[ ]	[ ]	[ ]	[ ]
Corruption	[ ]	[ ]	[ ]	[ ]
Other (Please Specify) **.....**	[ ]	[ ]	[ ]	[ ]

E. INVESTMENT CLIMATE

17. How did the factors below affect yur new investment decisions in Turkey?

	POSITIVELY	NEGATIVELY	NOT AFFECTED
Liberalizations in foreign investment regime in the post-1980 period	[ ]	[ ]	[ ]
Liberalization of capital flows in 1989	[ ]	[ ]	[ ]
1994 crisis	[ ]	[ ]	[ ]
Customs Union	[ ]	[ ]	[ ]
2001 Crisis	[ ]	[ ]	[ ]
There being no industrial strategy in Turkey	[ ]	[ ]	[ ]
There being no international trade strategy in Turkey	[ ]	[ ]	[ ]
There being no technology policy in Turkey	[ ]	[ ]	[ ]
New Foreign Investment Law No. 4875 enacted on 5.6.2003	[ ]	[ ]	[ ]
Other (Please specify) **.....**	[ ]	[ ]	[ ]

18. Please evaluate the current investment climate in Turkey as compared to other developing countries.

	BETTER	SIMILAR	WORSE
Bureaucratic procedures in starting a business	[ ]	[ ]	[ ]
Tax legislation	[ ]	[ ]	[ ]
Customs Legislation	[ ]	[ ]	[ ]
Industrial standards and certificates	[ ]	[ ]	[ ]
Investment incentives	[ ]	[ ]	[ ]

Export incentives	**[ ]**	**[ ]**	**[ ]**
Procedures related to land registration and ownership	**[ ]**	**[ ]**	**[ ]**
Infrastructure facilities (electricity, roads, water, telephone, land)	**[ ]**	**[ ]**	**[ ]**
Other (Please specify) **.....**	**[ ]**	**[ ]**	**[ ]**

19. What types of incentives have your firm utilized since initial investment? Please check all that apply.

[ ] A. Customs allowance

[ ] C. Investment allowance

[ ] D. VAT allowance

[ ] E. Accelerated depreciation

[ ] F. None

[ ] G. Other (Please specify) ……

F. PRODUCTION

20. What type of products do you produce? Please check all that apply.

[ ] A. Durable consumption good

[ ] B. Non-durable consumption good

[ ] C. Intermediate good

[ ] D. Capital good

[ ] E. Other (Please specify) …….

21. Which ones below are your competitors? Please check all that apply.

[ ] A. Turkish private firms

[ ] B. Turkish public firms

[ ] C. Imports

[ ] D. Foreign capital firms operating in Turkey

[ ] E. Other (Please specify) ……...

G. EMPLOYMENT

22. a) How many persons do you currently employ in your firm? Please specify the number of employees with respect to categories.

Manager: ……..

Engineer: ……..

Technical personnel: ……..

Clerk: ……..

Worker: ……..

Total: ……..

22. b) What was your initial employment? Please specify the number of employees with respect to categories.

Manager: ……..

Engineer: ……..

Technical personnel: ……..

Clerk: ……..

Worker: ……..

Total: ……..

23. Please specify the educational level of your employees as number or percentage in total.

Graduate: ……..

Undergraduate: ……..

Two year high school: ……..

Vocational school: ……..

High school: ……..

Junior high school: ……..

Primary school: ……..

24. For which level of employees do you have training programs? Please check all that apply.

[ ] A. Manager

[ ] B. Engineer

[ ] C. Technical personnel

[ ] D. Clerk

[ ] E. Worker

[ ] F. None

25. Please specify the percentage of unionised workers in your total employment. ……..

26. Please specify the percentage of part-time employees in your total employment. ……..

H. TECHNOLOGY

27. Which of the following methods do you utilize to acquire your technology? Please check all that apply.

[ ] A. Technology transfer from abroad by license agreements

[ ] B. Produce our own technology by employing foreign experts

[ ] C. Producing our own technology in our own R&D department

[ ] D. Other (Please specify): …….

28. Did you develop and have the patent of a new product? Please specify the number of patents, if any.

[ ] A. Yes (……) **[ ] B.** No

29. Did you develop and have the patent of a new process? Please specify the number of patents, if any.

[ ] A. Yes (……) **[ ] B.** No

30. Do you have technological cooperation with universities and/or public institutions?

[ ] A. Yes **[ ] B.** No

31. Please specify the percentage of your R&D expenditures in your total 2003 sales. ……

I. FOREIGN TRADE

32. Please specify the percentage of your exports in your total 2003 sales.

……..

33. How has the percentage of your exports in net sales changed since start-up?

[ ] A. Increased **[ ] B.** Decreased **[ ] C.** Not changed

34. If the percentage of exports increased in your net sales, which of the following were effective in this? Please all that apply.

[ ] A. Exchange rate policies

[ ] B. Export incentives

[ ] C. Liberalization of capital movements in 1989

[ ] D. 1990/1991 Gulf Crisis

[ ] E. 1994 Crisis

[ ] F. 1996 Customs Union

[ ] G. 2001 Crisis

[ ] H. Other (Please specify) ……..

35. How were you affected from Customs Union in effect since 1996? Please check all that apply.

[ ] A. The share of exports in our net sales increased

[ ] B. Our imported input usage increased

[ ] C. Competition in domestic market intensified

[ ] D. We have taken measures to increase our productivity

[ ] E. We have changed our production technology

[ ] F. Our export markets were diversified

[ ] G. Our demand for qualified labour increased

[ ] H. Our vision of Turkey has positively changed

[ ] I. We decided to increase our investments in Turkey

[ ] J. Other (Please specify) …….

36. Do you import your raw materials or procure from Turkey? Please specify the ratio of imported raw materials in your 2003 raw material costs.

[ ] A. Import (…….%) **[ ] B.** Procure from Turkey

37. Do you import your intermediate goods or procure from Turkey? Please specify the ratio of imported intermediate inputs in your 2003 intermediate input costs.

[ ] A. Import (…….%) **[ ] B.** Procure from Turkey

38. Please specify the ratio of your imports in your total 2003 sales.

……

J. CRISES

39. How were you affected from 1990/1991 Gulf Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

40. How were you affected from 1994 Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

41. How were you affected from 1997 Asian Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

42. How were you affected from 1998 Russian Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

43. How were you affected from 1999 Marmara Earthquake? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

44. How were you affected from 2001 Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

45. How were you affected from War in Iraq since 2003? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify) ……

46. You can enter below your comments and considerations regarding our survey and our subject matter. Your opinions will be appreciated.

Thank you very much for participating in our survey!

APPENDIX D

D2. DFI FIRM SURVEY FORM

Company Title :	
Industry :	
Respondent's	
Name :	
Phone :	
E-mail address :	

A. GENERAL INFORMATION

1. The establishment year of your firm: ……

2. a) Please mention the initial shareholder structure of your firm:

Domestic private % ……..

Domestic public % ……..

Foreign private % ……..

Foreign public % ……..

2. b) Please mention the current shareholder structure of your firm:

Domestic private % ……..

Domestic public % ……..

Foreign private % ……..

Foreign public % ……

3.When did you invested for the first time in your firm? ……

4. Please mention the country/countries of your foreign partner(s) and their respective shares in percentages:

Country : …… Percentage share: ……

Country : …… Percentage share: ……

Country : …… Percentage share: ……

5. How many foreigners are there in your board of directors? ……

6. What were your motivations in investing in Turkey? Please check all that apply.

[ ] A. Lower labour costs in Turkey

[ ] B. Lower energy costs in Turkey

[ ] C. Lower communication and transportation costs in Turkey

[ ] D. To use Turkey as a bridge to export to third countries

[ ] E. The availability of low-cost raw materials from Turkey and her neighbours

[ ] F. Tariff jumping by direct investment in Turkey rather than exporting to Turkey

[ ] G. High-growth potential of Turkey and increasing demand for your products

[ ] H. That your parent firm owns a technology non-existing in Turkey

[ ] I. That your parent firm owns product variety non-existing in Turkey

[ ] J. That your parent firm owns process variety non-existing in Turkey

[ ] K. Other (Please specify): ……

7. Please specify the type of your initial investment.

[ ] A. Greenfield investment

[ ] B. Joint venture

[ ] C. Acquiring an existing domestic firm

[ ] D. Participating in an existing domestic firm

(Percentage share ……)

[ ] E. Other (Please specify): ……

8. If you have checked C or D in the previous question, what kind of changes have you made in the firm you have acquired / participated? Please check all that apply.

[ ] A. Machinery and equipment were replaced with new ones

[ ] B. Buildings were renovated

[ ] C. Employment was decreased

[ ] D. Engineers and technical personnel were replaced with new ones

[ ] E. More engineers and technical personnel were employed

[ ] F. Managers were changed

[ ] G. Chart of organisation of the firm was changed

[ ] H. No changes were made

[ ] I. Other (Please specify): ……

E. ADDITIONAL INVESTMENTS

9. Did you make new investments in Turkey after the initial investment?

[ ] A. Yes **[ ] B.** No

10. Please specify the type of new investment that your firm made after the initial investment. Please check all that apply.

[ ] A. Greenfield (New)

[ ] B. Expansion

[ ] C. Capital Increase

[ ] D. Participation

[ ] E. Other (Please specify): ……

F. INVESTMENT DECISION

11. Do you think the fact Turkey has been given a date to start negotiations with the European Union will positively affect foreign direct investment inflows to Turkey?

[ ] A. Yes **[ ] B.** No

12. To what extent do you think the following factors hinder foreign direct investment inflows to Turkish manufacturing industry?

	DOES NOT HINDER AT ALL	HINDERS A LITTLE	HIGHLY HINDERS	DEFINITELY HINDERS
Turkey does not have an industrial strategy	[ ]	[ ]	[ ]	[ ]
Turkey does not have a technology policy	[ ]	[ ]	[ ]	[ ]
Turkey does not have an international trade policy	[ ]	[ ]	[ ]	[ ]
Priority sectors to attract FDI are not determined	[ ]	[ ]	[ ]	[ ]
Foreign nivestment policy is not a part of broader development strategy	[ ]	[ ]	[ ]	[ ]
Post-1980 open-door policies to foreign direct investment	[ ]	[ ]	[ ]	[ ]
Procedures for starting a business	[ ]	[ ]	[ ]	[ ]
Infrastructure facilities (electricity, water, telephone, roads, land)	[ ]	[ ]	[ ]	[ ]
Inflation rate	[ ]	[ ]	[ ]	[ ]
Overvaluation of Turkish Lira	[ ]	[ ]	[ ]	[ ]
Insufficient domestic demand	[ ]	[ ]	[ ]	[ ]
Low growth expectations	[ ]	[ ]	[ ]	[ ]
High interest rates	[ ]	[ ]	[ ]	[ ]
High labour costs	[ ]	[ ]	[ ]	[ ]
High energy costs	[ ]	[ ]	[ ]	[ ]
High tax rates	[ ]	[ ]	[ ]	[ ]
Tax legislation	[ ]	[ ]	[ ]	[ ]
Customs Legislation and Imports Regime	[ ]	[ ]	[ ]	[ ]
Laws, Rules and Regulations	[ ]	[ ]	[ ]	[ ]

Political instability and uncertainty	[ ]	[ ]	[ ]	[ ]
Corruption	[ ]	[ ]	[ ]	[ ]
Other (Please Specify) **.....**	[ ]	[ ]	[ ]	[ ]

D. INVESTMENT CLIMATE

13. How did the factors below affect your new investment decisions in Turkey?

	POSITIVELY	NEGATIVELY	NOT AFFECTED
Liberalizations in foreign inves regime in the post-1980 period	[ ]	[ ]	[ ]
Liberalization of capital flows in 1989	[ ]	[ ]	[ ]
1994 crisis	[ ]	[ ]	[ ]
Customs Union	[ ]	[ ]	[ ]
2001 Crisis	[ ]	[ ]	[ ]
There being no industrial strategy in Turkey	[ ]	[ ]	[ ]
There being no international trade strategy in Turkey	[ ]	[ ]	[ ]
There being no technology policy in Turkey	[ ]	[ ]	[ ]
New Foreign Investment Law No. 4875 enacted on 5.6.2003	[ ]	[ ]	[ ]
Other (Please specify) **.....**	[ ]	[ ]	[ ]

14. Please evaluate the current investment climate in Turkey as compared to other developing countries.

	BETTER	SIMILAR	WORSE
Bureaucratic procedures in starting a business	[ ]	[ ]	[ ]
Tax legislation	[ ]	[ ]	[ ]
Customs Legislation	[ ]	[ ]	[ ]
Industrial standards and certificates	[ ]	[ ]	[ ]
Investment incentives	[ ]	[ ]	[ ]
Export incentives	[ ]	[ ]	[ ]
Procedures related to land registration and ownership	[ ]	[ ]	[ ]
Infrastructure facilities (electricity, roads, water, telephone, land)	[ ]	[ ]	[ ]
Other (Please specify) **.....**	[ ]	[ ]	[ ]

15. What types of incentives have your firm utilized since initial investment? Please check all that apply.

[ ] A. Customs allowance

[ ] C. Investment allowance

[ ] D. VAT allowance

[ ] E. Accelerated depreciation

[ ] F. None

[ ] G. Other (Please specify) ……

E. PRODUCTION

16. What type of products do you produce? Please check all that apply.

[ ] A. Durable consumption good

[ ] B. Non-durable consumption good

[ ] C. Intermediate good

[ ] D. Capital good

[ ] E. Other (Please specify) …….

17. Which ones below are your competitors? Please check all that apply.

[ ] A. Turkish private firms

[ ] B. Turkish public firms

[ ] C. Imports

[ ] D. Foreign capital firms operating in Turkey

[ ] E. Other (Please specify) ……...

F. EMPLOYMENT

18. a) How many persons do you currently employ in your firm? Please specify the number of employees with respect to categories.

Manager: ……..

Engineer: ……..

Technical personnel: ……..

Clerk: ……..

Worker: ……..

Total: ……..

18. b) What was your initial employment? Please specify the number of employees with respect to categories.

Manager: ……..

Engineer: ……..

Technical personnel: ……..

Clerk: ……..

Worker: ……..

Total: ……..

19. Please specify the educational level of your employees as number or percentage in total.

Graduate: ……..

Undergraduate: ……..

Two year high school: ……..

Vocational school: ……..

High school: ……..

Junior high school: ……..

Primary school: ……..

20. For which level of employees do you have training programs? Please check all that apply.

[ ] A. Manager

[ ] B. Engineer

[ ] C. Technical personnel

[ ] D. Clerk

[ ] E. Worker

[ ] F. None

21. Please specify the percentage of unionised workers in your total employment. ……..

22. Please specify the percentage of part-time employees in your tota l employment. ……..

G. TECHNOLOGY

23. Which of the following methods do you utilize to acquire your technology? Please check all that apply.

[ ] A. Technology transfer from the parent firm abroad

[ ] B. Technology transfer from abroad by license agreements

[ ] C. Produce our own technology by employing foreign experts

[ ] D. Producing our own technology in our own R&D department

[ ] E. Other (Please specify): …….

24. Did you develop and have the patent of a new product? Please specify the number of patents, if any.

[ ] A. Yes (……..) **[ ] B.** No

25. Did you develop and have the patent of a new process? Please specify the number of patents, if any.

[ ] A. Yes (…….) **[ ] B.** No

26. Do you have technological cooperation with universities and/or public institutions?

[ ] A. Yes **[ ] B.** No

27. Please specify the percentage of your R&D expenditures in your total 2003 sales. ……

H. FOREIGN TRADE

28. Please specify the percentage of your exports in your total 2003 sales. ……..

29. How has the percentage of your exports in net sales changed since start-up?

[ ] A. Increased **[ ] B.** Decreased **[ ] C.** Not changed

30. If the percentage of exports increased in your net sales, which of the following were effective in this? Please all that apply.

[ ] A. Exchange rate policies

[ ] B. Export incentives

[ ] C. Liberalization of capital movements in 1989

[ ] D. 1990/1991 Gulf Crisis

[ ] E. 1994 Crisis

[ ] F. 1996 Customs Union

[ ] G. 2001 Crisis

[ ] H. Other (Please specify) ……..

31. How were you affected from Customs Union in effect since 1996? Please check all that apply.

[ ] A. The share of exports in our net sales increased

[ ] B. Our imported input usage increased

[ ] C. Competition in domestic market intensified

[ ] D. We have taken measures to increase our productivity

[ ] E. We have changed our production technology

[ ] F. Our export markets were diversified

[ ] G. Our demand for qualified labour increased

[ ] H. Our vision of Turkey has positively changed

[ ] I. We decided to increase our investments in Turkey

[ ] J. Other (Please specify) …….

32. Do you import your raw materials or procure from Turkey? Please specify the ratio of imported raw materials in your 2003 raw material costs.

[ ] A. Import (…….%) **[ ] B.** Procure from Turkey

33. Do you import your intermediate goods or procure from Turkey? Please specify the ratio of imported intermediate inputs in your 2003 intermediate input costs.

[ ] A. Import (…….%) **[ ] B.** Procure from Turkey

34. Please specify the ratio of your imports in your total 2003 sales. ……

I. CRISES

35. How were you affected from 1990/1991 Gulf Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

36. How were you affected from 1994 Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

37. How were you affected from 1997 Asian Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

38. How were you affected from 1998 Russian Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

39. How were you affected from 1999 Marmara Earthquake? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

40. How were you affected from 2001 Crisis? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

41. How were you affected from War in Iraq since 2003? Please check all that apply.

[ ] A. Utilization ratio decreased

[ ] B. Input costs increased

[ ] C. There were liquidity problems

[ ] D. Employment was decreased

[ ] E. Wages were cut

[ ] F. Started to export

[ ] G. Domestic sales decreased

[ ] H. The share of exports in net sales increased

[ ] I. Borrowing costs increased

[ ] J. New investments were abandoned

[ ] K. Paused production

[ ] L. Acquired a new firm in Turkey

[ ] M. Participated in a new firm in Turkey

[ ] N. Other (Please specify)

……

42. You can enter below your comments and considerations regarding our survey and our subject matter. Your opinions will be appreciated.

Thank you very much for participating in our survey!

APPENDIX E

TURKISH SUMMARY

Çok uluslu şirketlerin faaliyetleri ve doğrudan yabancı yatırım (DYY) konusu özellikle 1970'lerden sonra dünya çapında önem kazanmıştır. Ayrılmaz bir parçasını doğrudan yabancı yatırımların oluşturduğu neo-liberal bir gündem gelişme stratejilerinin yerini aldıkça, gelişmekte olan ülkeler giderek daha fazla DYY çekmeye odaklanmışlardır. Bu çalışmada, gelişmekte olan ülkelere fayda sağlayabilmesi için, DYY'nin neo-liberal politikalar çerçevesinde değil, sanayi, dış ticaret ve teknoloji politikaları ile desteklenmiş genel bir gelişme stratejisi çerçevesinde ele alınması gerektiği savunulmaktadır.

Literatürdeki ampirik sonuçlar, DYY'nin yararlarının kendiliğinden gerçekleşmediğini göstermektedir. Başka bir deyişle, tek başına DYY akımları, ev sahibi ülkedeki teknolojik ilerlemeyi, verimlilik artışını, yüksek büyüme oranlarını, istihdam ve ücret artışını garanti etmemektedir. DYY'den beklenen yararların ortaya çıkması ve bunların azamileştirilmesi, ev sahibi ülkenin, asgari düzeyde beşeri sermaye ve teknolojik kapasiteye sahip olmak gibi, belirli gelişmişlik şartlarını yerine getirmesine bağlıdır.

Bu çalışmada iki temel soruya yanıt aranmıştır: Birinci olarak, DYY çekmede başarılı olmuş gelişmekte olan ülkelerle karşılaştırıldığında, Türkiye'nin yeterince DYY çekememiş olmasının nedenleri araştırılmıştır. İkinci olarak, bir taraftan ihracat yapısının genişlemesi ve derinleşmesi, diğer taraftan mevcut teknoloji kapasitesinin dönüştürülmesi ve iyileştirilmesi yoluyla, Türkiye'nin yapısal sorunlarını aşarak sanayileşme ve gelişme amaçlarını gerçekleştirebilmesinde DYY'nin ne ölçüde faydalı olabileceği araştırılmıştır.

İlk soruya ilişkin, DYY çekme konusunda başarılı olmuş 15 gelişmekte olan ülke[103], yatırım ortamı ve yabancı sermaye rejimleri bakımından Türkiye ile

[103] Karşılaştırma amacıyla seçilen 15 gelişmekte olan ülke şunlardır: Arjantin, Brezilya, Meksika, Şili, Venezuela, Çin, Hong Kong, Singapur, Tayland, Güney Kore, Malezya, Hindistan, Polonya, Çek Cumhuriyeti, Macaristan.

karşılaştırılmıştır. İkinci soruyla ilgili olarak, öncelikle Türkiye'deki mevcut DYY ile yurt içi yatırım deseni karşılaştırılmıştır. Ayrıca, DYY akımları içinde birleşme ve devralmalar ile özelleştirmenin önemi araştırılmış; yerli ve yabancı sermayeli şirketlerin karşılaştırmalı ihracat, istihdam ve teknoloji yapıları çözümlenmiş; yine yerli ve yabancı sermayeli şirketlerin Avrupa Birliği ile kurulan Gümrük Birliği'ne ve Türkiye'nin son on yıllık dönemde yaşadığı ekonomik krizlere tepkileri tartışılmıştır. Bunların dışında, yerli firmaların yurt dışında yaptıkları yatırımlar da araştırılmıştır. Bu sorulara cevap aranırken, imalat sanayiinde faaliyet gösteren yerli ve yabancı sermayeli şirketlere anket uygulanmış, çeşitli veri setlerinin yanında bu anket sonuçları da kullanılmıştır.

Yatırım Ortamı ve Yabancı Sermaye Rejimi

Yüksek miktarda DYY çekmiş gelişmekte olan ülkelerin karşılaştırması, DYY politikalarının türdeş olmadığını ve ülkeler arasında uygulama farklılıkları bulunduğunu göstermektedir. Hiçbir ülkede mükemmel bir yatırım ortamı bulunmaması ve her ülkenin yatırım ortamında çeşitli derecelerde sorunların görülmesi, Türkiye'nin yeterli miktarda DYY çekememesinde yatırım ortamının açıklayıcı bir değişken olmadığını göstermektedir.

Seçilen ülkeler, yabancı sermaye rejimi bakımından da farklılık göstermektedir. Bazı ülkeler oldukça liberal bir yabancı sermaye rejimine sahipken, bir kısım ülkelerde kendi gelişme amaçlarına uygun biçimde çeşitli kısıtlamalar mevcuttur. Singapur, Tayland ve Malezya'da yabancı sermaye rejimi daha genel bir sanayileşme stratejisinin parçasıdır. Çin'de yabancı sermaye izinleri belirli bürokratik prosedürlere bağlanmıştır. Çoğu ülkede, sektörel kısıtlamalar söz konusudur. Bazı ülkelerde DYY için belirlenmiş performans ölçütleri bulunurken, diğerlerinde yabancı sermaye yatırımlarına verilen teşvikler belirli performans ölçütlerine bağlanmıştır. Özellikle Çek Cumhuriyeti ve Polonya'da, DYY'den en fazla faydayı elde etmek için, katma değeri yüksek, yüksek teknoloji sanayilerine gelecek DYY firmalarına, performans ölçütlerine bağlanmış teşvikler verilmektedir. Bunların dışında, uluslararası tahkimin yüksek DYY çeken ülkelerin hepsinde ayrımsız biçimde uygulanan bir rejim olmadığı görülmüştür. Özellikle, Çin, Tayland ve Latin Amerika'da uluslararası tahkime çok sıcak bakılmamaktadır.

Türkiye'de yabancı sermaye rejimi gittikçe serbestleştirilmektedir. Ancak, diğer ülke deneyimlerinin aksine, Türkiye'nin yabancı sermaye rejimi daha genel bir gelişme stratejisinin parçası olmadığı gibi, bilgiye dayalı bir yüksek teknoloji ülkesi olma yolunda, performans ölçütlerine bağlı bir teşvik mekanizması da kurulamamıştır. İncelenen ülke deneyimleri göstermektedir ki, yüksek düzeyde DYY çekebilmenin en önemli koşulu liberal bir yabancı sermaye rejimi ile neo-liberal bir yatırım ortamına sahip olmak değildir. Aksine, her ülkenin kendi kurumsal yapısına dayanarak, kendi ihtiyaçlarını karşılamak üzere özgül yabancı sermaye politikaları oluşturduğu gözlenmiştir. Seçilen diğer ülkelerle karşılaştırıldığında Türkiye'nin yeterli miktarda DYY çekememesi, Türkiye'de işgücünün eğitim düzeyinin düşüklüğüne ve teknoloji kapasitesinin yeterince gelişmemiş olmasına bağlanabilir. Bu sonuç da göstermektedir ki, DYY akımlarını çekebilmek için, belirli gelişmişlik şartlarının yerine getirilmiş olması gerekmektedir.

Çalışmada uygulanan anket sonuçları da göstermiştir ki, Türkiye'nin sanayi, dış ticaret ve teknoloji politikalarına sahip olmaması, DYY için öncelikli sektörlerin belirlenmemiş olması ve yabancı sermaye rejiminin daha genel bir gelişme stratejisinin parçası olmaması, hem yerli yatırımların hem DYY'nin önündeki en önemli engelleri oluşturmaktadır. Hem yerli hem de yabancı sermayeli şirketlerden anket katılımcıları, Türkiye'nin sanayi, dış ticaret ve teknoloji politikalarına sahip olmamasının yeni yatırım kararlarını olumsuz yönde etkilediğini belirtmişlerdir. Buna ek olarak, yerli şirketlerin şirketlerini yabancılara satma veya yabancılarla birleşme tutumlarının en önemli nedeninin yeni pazarlara erişme güdüsü olduğu belirtilmiştir. Bu da göstermektedir ki, Türkiye'nin yerli şirketlere uluslararası piyasalarda rekabet gücü sağlayacak uygun bir ticaret politikası bulunmamaktadır. Diğer taraftan, hem yerli hem de yabancı sermayeli anket katılımcıları, Türkiye'nin mevcut yatırım ortamının diğer gelişmekte olan ülkelerinkinden anlamlı derecede farklı olmadığını belirtmişlerdir. Bütün bu sonuçlar göstermektedir ki, Türkiye'nin DYY çekmedeki başarısızlığı, Bretton Woods kuruluşlarının telkin ettiği gibi, elverişli bir yatırım ortamının eksikliğinden kaynaklanmamaktadır. Tam tersine, bu başarısızlığın nedeni, DYY için öncelikli sektörleri de belirleyen geniş bir gelişme stratejisinin parçası olması gereken sanayi, dış ticaret ve teknoloji politikalarının eksikliğinde aranmalıdır.

DYY ve Yurtiçi Yatırım Deseni

Türkiye'ye gelen DYY akımları, hem tarihsel olarak hem de diğer gelişmekte olan ülkelerle karşılaştırılığında, çok düşük düzeylerde seyretmiştir. Türkiye'de uluslarası yatırımcı sayılabilecek firma sayısı da çok azdır. DYY akımlarının büyük bir kısmı hizmetler ve imalat sanayii sektörlerine gelmiştir. Hizmetlerin payı giderek artmakta, imalat sanayiinin payı da düşmektedir. Özellikle belirtilmelidir ki, 1 Ocak 2003 ve 30 Nisan 2005 tarihleri arasında gelen DYY akımlarının yarıya yakını, üretken bir özelliği bulunmayan gayrimenkul yatırımlarıdır.

1980 sonrasında DYY akımlarının gelişimi ile toplam yurtiçi ve kamu yatırımlarının gelişimi birbirlerine çok benzemektedir. En azından 1980lerin sonuna kadar Türkiye'de kamu yatırımları ile özel yatırımların birbirini tamamlayıcı bir ilişki içinde olduğu, gelişmekte olan ülkelerde yurtiçi yatırımların DYY'yi öncelediği, DYY akımlarında imalat sanayiinden hizmetlere doğru yaşanan sektörel kaymanın Türkiye'de 1980 sonrası sabit sermaye yatırımlarında gözlenen sektörel kaymanın birebir yansıması olduğu gerçekleri göz önünde bulundurulduğunda, Türkiye'nin zayıf DYY performansı, imalat sanayiindeki kamu yatırımları ve özel yurtiçi yatırımların zayıf performansına bağlanabilir.

Türkiye imalat sanayiine yatırım yapan yabancı sermayeli firmaların yatırım saikleri arasında, işgücü maliyetlerinin düşük olması, yurtiçi piyasanın büyüklüğü ve Türkiye'nin üçüncü ülkelere ihracat için köprübaşı konumunda bulunması ilk sıraları almıştır. Türkiye'de bulunmayan ürün, süreç ve teknoloji çeşitliliğine sahip olmak bu saikleri izlemektedir. Ucuz hammadde bulma olanağı, düşük ulaştırma, iletişim ve enerji maliyetleri ve gümrük tarifelerinden kurtulma, daha az önemli saikler olarak ortaya çıkmıştır. Yatırım saiklerindeki bu sıralama, yabancı yatırımın türüne ve yapılış yılına göre değişmemektedir. Özetle, Türkiye'deki DYY'nin pazar arayan türden olduğu ve düşük işgücü maliyetlerini cazip bulduğu söylenebilir.

Yurtdışına yatırım yapan yerli firmaların yatırım saikleri de yabancı sermayeli firmalarınkinden farklı değildir: Ev sahibi ülkelerin büyüme potansiyeli ve bu ülkeleri ihracatta köprübaşı olarak kullanmak yurt dışı yatırımların en önemli saikleridir. Yurt dışı yatırımlarda, vergi avantajları ile düşük enerji maliyetlerinin, düşük işgücü maliyetlerinden daha önemli olduğu belirtilmiştir. Hem Türkiye'ye yatırım yapan yabancı sermayeli firmaların, hem de yurt dışına yatırım yapan yerli

firmaların yatırım saikleri göstermektedir ki, Türkiye'de işgücü maliyetleri ucuzken, vergilerin yüksekliği ve enerji maliyetleri hem yerli hem yabancı yatırımların önünde önemli engeller olarak algılanmaktadır.

Birleşme ve Devralmalar

Türkiye'de, özellikle imalat sanayiinde DYY izinleri içinde, yeni (greenfield) yatırımların payının çok düşük kaldığı görülmektedir. Üstelik, 1983-2002 döneminde yeni yatırmların payı azalış eğilimi göstermektedir. İmalat sanayii için verilen toplam DYY izinleri içerisinde yeni yatrım izinlerinin bu azalma eğilimi, söz konusu dönemde toplam sabit sermaye yatırımları içinde imalat sanayiinin payının azalma eğilimiyle koşutluk göstermektedir. Diğer taraftan, sermaye artışı ve iştirak yatırımları için verilen DYY izinleri hem imalat sanayii hem de hizmetler sektöründe artma eğiliminde olup, özellikle iktisadi konjonktürün dip noktalarını izleyen dönemlerde, iştirak izinlerinin sıçrama yaptığı gözlenmektedir. Anket sonuçları da göstermiştir ki, kriz sonrası intibak dönemleri olan 1994-1995 ve 2001-2003 dönemlerinde yabancı sermayeli birleşme ve devralmalar artmıştır. Bu sonuç, özellikle kriz dönemlerinde, yerli şirketlerin "batan geminin malları" gibi yabancı sermaye saldırısına uğradıklarının bir işareti olarak değerlendirilebilir.

Yerli şirketlerle birleşen veya yerli şirketleri satın alan yabancı sermayeli şirketler, öncelikle birleştikleri/satın aldıkları şirketlerin örgütsel ve idari yapısını değiştirdiklerini vurgularken, istihdamı azaltttıklarını da belirtmişlerdir. Öyleyse, yabancı sermayeli birleşme ve devralmalardan sonra etkinlik ve verimlilik artışları olabileceği gibi, istihdama muhtemel olumsuz yansımalar da gözardı edilmemelidir. Diğer taraftan, yabancı sermayeli şirket sayısının artması, yurtiçi piyasadaki rekabeti artırmakta, yerli şirketleri yeni teknoloji yatırımları yaparak etkinliklerini artırmaya zorlamaktadır. Ancak, yerli şirketler, yabancı sermayeli şirket sayısı arttıkça pazar paylarını yitirdikleri hususunda da şikayetlerini dile getirmişlerdir.

İhracat Yapısı

Herhangi pozitif yabancı sermaye payına sahip her şirketi yabancı sermayeli kabul eden Yabancı Sermaye Genel Müdürlüğü (YSGM) verilerine göre, yabancı sermayli şirketler Türkiye ihracatının ortalama beşte birini gerçekleştirmektedir.

Ancak, yabancı sermayeli şirketlerin ihracatı, yabancı sermayeli şirketin nasıl tanımlandığına bağlıdır. Örneğin, tanım herhangi pozitif yabancı sermaye oranı yerine çoğunluğu yabancı sermayeli olarak değiştirildiğinde, yukarıdaki oran yarıdan fazla azalmaktadır. Öyleyse, YSGM verilerine göre toplam ihracattaki DYY payı olduğundan fazla görünmektedir. Aslında, Türkiye imalat sanayindeki yabancı sermayeli şirketlerin toplam ihracatının büyük bir kısmı, Türkiye'nin en büyük birinci 500 şirketi arasında faaliyet gösteren yabancı sermayeli şirketler tarafından gerçekleştirilmektedir. Başka bir deyişle, Türkiye imalat sanayiinde faaliyet gösteren yabancı sermayeli şirketlerin ortalama dörtte üçlük kısmı, esasen iç piyasaya dönük üretim yapmaktadır. İhracat yönelimi de yabancı sermayeli şirketin tanımına duyarlı bir husustur. Türkiye'nin birinci 500 büyük sanayi şirketi arasında, yabancı sermaye payı arttıkça ihracata dönük şirket sayısının azalma eğiliminde olduğu gözlenmiştir.

İhracatın coğrafi dağılımı incelendiğinde, yerli ve yabancı sermayeli şirketlerin ihracatı arasında anlamlı bir pozitif bağıntı gözlenmiştir. Hem yerli hem de yabancı sermayeli şirketlerin ihracatında AB-15 ülkeleri, Merkez ve Doğu Avrupa ile Batı Asya ilk üç sırayı almaktadır. Yabancı sermayeli şirketlerin Türkî Cumhuriyetlere ihracat için Türkiye'ye yatırım yapacakları beklentisinin aksine, bu ülkelerin yabancı sermayeli şirketlerin ihracatı içindeki payı çok düşük kalmıştır.

Yabancı sermayeli şirketlerin ihracatının ara malı ve sermaye malında yoğunlaştığı, yerli şirketlerin ihracatının ise ağırlıklı olarak tüketim mallarından oluştuğu gözlenmiştir. Yabancı sermayeli şirketlerin ihracatında ara malı ve sermaye malı payındaki artışı, aslında otomotiv sanayii ihracatındaki artışla açıklamak mümkündür. Yerli şirketlerin ihracatı daha çok orta-düşük ve düşük teknoloji mallarında, yabancı sermayeli şireketlerin ihracatı da orta-yüksek teknoloji mallarında yoğunlaşmış olsa da, 1996-2002 döneminde yerli şirket ihracatının teknoloji basamağında ilerlemekte olduğu da gözlenmiştir. Bu dönemde, yerli şirketlerin yaptığı düşük tekmolojili ihracatın payı azalma eğilimindeyken, orta-yüksek ve yüksek teknolojili ihracatın payı artmıştır. Üstelik, yüksek teknolojili ihracatın payı, yerli şirket ihracatında yabancı sermayeli şirket ihracatındakinden daha fazladır. Ancak bu sonuç değerlendirilirken, YSGM veri setinde üretici firmanın değil ihracatçı firmanın kimliğinin esas alındığı unutulmamalıdır.

Anket sonuçları, ihracatın net satışlar içindeki payı olarak ölçülen ihracat yönelimi bakımından, yerli ve yabancı sermayeli şirketler arasında anlamlı bir fark olmadığını göstermiştir. Hem yerli hem de yabancı sermayeli şirketler kuruldukları tarihten bu yana ihracatlarını artırdıklarını belirtmişlerdir. Avrupa Birliği (AB) ile kurulan Gümrük Birliği, 2001 krizi, döviz kuru politikaları ve ihracat teşvikleri yerli ve yabancı sermayeli şirketlerin ihracat artışlarının arkasındaki ortak nedenlerdir. Diğer taraftan, yabancı sermaye şirketlerin ithalata bağımlılığı, yerli şirketlere göre anlamlı derecede yüksektir. Bu yüksek oran, bir taraftan yabancı semayeli şirket sayısındaki artışın ödemeler dengesi üzerinde olumsuz etkilerine işaret ederken, diğer taraftan yabancı sermayeli şirketlerle yerli ara malı üreticileri arasında geri bağlantıların kurulamamış olduğunu göstermektedir.

AB ile kurulan Gümrük Birliğinin etkileri incelendiğinde, yerli ve yabancı sermayeli şirketler, yurt içi piyasada rekabetin arttığını, net satışlar içinde ihracatın payının yükseldiğini, ihracat pazarlarının genişlediğini, daha fazla ithal girdi kullandıklarını ve vasıflı işgücüne taleplerinin arttığını belirtmişlerdir. Artan rekabetin, yerli firmaları, yabancı firmalardan daha fazla verimlilik artırıcı ve teknoloji geliştirici önlemler almaya zorladığı gözlenmiştir. Diğer taraftan, yabancı sermayeli şirketler, Gümrük Birliği'nin ardından Türkiye'ye daha olumlu bakmaya başladıklarını ve Türkiye'deki mevcut yatırımlarını artırmaya karar verdiklerini belirtmişlerdir.

İstihdam Yapısı, İşgücü Verimliliği ve Ücretler

İhracat ile karşılaştırıldığında, yabancı sermayeli şirketlerin Türkiye imalat sanayiinin toplam istihdamına katkısı daha düşüktür. 1992-2001 döneminde imalat sanayii istihdamı içinde yabancı sermaye payı % 10'un üzerindeki şirketlerin payı ortalama % 9,7'dir. İhracatta oduğu gibi, yabancı sermayeli şirketlerin istihdama katkısı da yabancı sermaye şirket tanımına duyarlıdır. Yabancı sermayeli şirket, % 50'nin üzerinde yabancı sermaye payıyla tanımlandığında, imalat sanayii toplam istihdamındaki payı 1992'de % 4,9'a ve 2001'de % 6'ya düşmektedir. % 90'ın üzerinde yabancı sermaye payıyla tanımlandığında ise söz konusu oran, 1992'de % 1,8'e ve 2001'de % 4,4'e düşmektedir. 1992-2001 döneminde, toplam imalat sanayii istihdamı içinde yabancı sermayeli şirketlerinin payınının çok düşük

seyretmesine rağmen, söz konusu on yıl boyunca yaratılan toplam istihdamın dörtte birinden fazlası, yabancı sermaye payı % 90'ın üzerindeki şirketlerce gerçekleştirilmiştir. Çoğunluk hissesi yabancılara ait bu şirketlerin anlamlı istihdam katkısı, aynı dönemde bu kapsamdaki şirket sayısının artmasına bağlıdır.

Öte yandan, anket sonuçlarına göre, yabancı sermayeli ve yerli şirketler arasında istihdam yaratma bakımından anlamlı bir fark bulunmamıştır. Yabancı sermayeli ve yerli şirketlerdeki sendikalı ve yarı-zamanlı işçilerin oranları da anlamlı bir farklılık göstermemektedir. Hem yerli hem de yabancı sermayeli şirketler, çalışanları için eğitim programları düzenlemektedir. Yabancı sermayeli şirketlerle yerli şirketler arasında anlamlı bulunan en önemli farklılık, yabancı sermayeli şirketlerin daha iyi eğitilmiş işgücü istihdam etme eğilimleridir. İşgücü verimliliği ve ücretler yabancı sermayeli şirketlerde daha yüksek olduğu gibi, yabancı sermaye payı arttıkça da artma eğilimindedir.

Teknoloji Performansı

Çalışmada uygulanan anket sonuçlarına göre, Türkiye imalat sanayiinde faaliyet gösteren yabancı sermayeli şirketler, yenilik ve araştırma/geliştirme faaliyetleri bakımından, yerli şirketlerden daha üstün değildir. Yabancı sermayeli şirketler genellikle yerel araştırma/geliştirme faaliyetlerinde bulunmamakta olup, ürün ve süreç patenti aldıklarını ve üniversiteler ve kamu kuruluşlarıyla teknolojik işbirliği yürüttüklerini belirtenlerin oranı, yerli şirketlerden daha düşüktür. Bu koşullar altında, amaca yönelik politikalar oluşturulmadıkça, DYY akımlarının kendiliğinden Türkiye ekonomisine teknolojik katkıda bulunacağı beklentisi rasyonel bir beklenti olmaktan uzaktır.

İktisadi Krizlerin Etkisi

Türkiye ekonomisinde son on yılda yaşanan krizlerin yerli ve yabancı sermayeli şirketleri benzer şekilde etkilediği gözlenmiştir. Hem yerli hem yabancı sermayeli şirketlerden anket katılımcıları, kriz dönemlerine kapasite kullanım oranlarının düştüğünü, girdi maliyetlerinin arttığını, likidite sıkışıklığı yaşandığını, istihdamın azaltıldığını, yurtiçi satışların düştüğünü, net satışlar içinde ihracatın payının arttığını, borçlanma maliyetlerinin yükseldiğini ve yeni yatırımlardan

vazgeçildiğini belirtmişlerdir. Yabancı sermayeli şirketlerle karşılaştırıldığında, yerli şirketlerin, girdi maliyetlerindeki artıştan ve yurtiçi satışların düşmesinden daha fazla etkilendiği görülmüştür. Bu durum, yabancı sermayeli şirketlerin yurtdışındaki ana firmadan daha ucuz girdi sağlamalarına bağlı olabilir.

Gelişme Stratejisinin Gerekliliği

Çalışmanın bulgularına göre, Türkiye'nin yeterince DYY akımı çekememesindeki başarısızlığı (Bretton Woods kuruluşlarının sıklıkla dile getirdiği gibi) yatırım ortamının sorunlarıyla açıklamak çok kolaycı bir yaklaşım olacaktır. Diğer taraftan Türkiye'yi yeterince liberal bir yabancı sermaye rejimine sahip olmamakla suçlamak da mümkün görünmemektedir. Tam tersine, diğer gelişmekte olan ülkelerle karşılaştırıldığında Türkiye'nin oldukça liberal bir yabancı sermaye rejimi vardır. Üstelik, her ülkenin yatırım ortamında belirli sorunlar mevcuttur. Anket katılımcıları da, Türkiye'nin yatırım ortamının diğer gelişmekte olan ülkelerden anlamlı derecede farklı olmadığını belirtmişlerdir. Ayrıca, Türkiye'nin genel bir gelişme stratejisiyle çevrelenmiş sanayi, dış ticaret ve teknoloji politikalarına sahip olmayışı, hem yerli hem yabancı sermayeli şirketlerce önemli yatırım engelleri arasında sayılmıştır. Yerli ve yabancı sermayeli şirketlerin perfromansları arasında anlamlı bir fark bulunamadığı da unutulmamalıdır. Yabancı sermayeli şirketler ihracata olumlu bir katkıda bulunurken, istihdam katkıları nispeten önemsiz kalmıştır. Öte yandan ödemeler dengesine olumsuz etkileri ile yenilik ve araştırma/geliştirme alanlarında yeterli katkılarının bulunmayışının üzerinde ciddiyetle durulmalıdır. Öyleyse, sadece yatırım ortamını iyileştirmeye odaklanmak ve ekonomi politikalarını daha da serbestleştirmek yerine, genel bir gelişme stratejisi içinde, yerli ve yabancı yatırımların birlikte ele alındığı, sanayi, dış ticaret ve teknoloji politikaları oluşturmak daha doğru görünmektedir. Böyle bir yaklaşım, hem DYY akımlarını artırmak, hem de bu akımlardan azami faydayı sağlamak için daha uygun olacaktır.

Genel bir gelişme stratejisi ile, yaşam, sağlık ve eğitim standartlarında sürdürülebilir bir ilerleme sağlayarak toplumu daha gelişmiş bir aşamaya götürecek bir strateji kastedilmektedir (Stiglitz, 1998:3, 15). Bir yandan, tarım ve hizmetlerin durgun bir verimlilik düzeyine sahip olduğu göz önünde bulundurulduğunda,

ödemeler dengesinde sorun yaşamadan gelir düzeyini korumanın yolu imalat sanayiinde sürekli verimlilik artışları sağlamaktan geçmektedir (Chang, 1989:58). Diğer yandan, hızlı teknolojik değişimler, sanayi ve teknolojinin yapısını karmaşıklaştırmakta ve teknolojiye dayalı faaliyetlerin önemini artırmaktadır (Lall, 2004:3). Bunların dışında, Singapur, Çek Cumhuriyeti ve Polonya örneklerinin de gösterdiği gibi, çok uluslu şirketler, yatırım yapmak için kendi taşınabilir varlıklarını vasıflı işgücü ve rekabetçi kurumlarla birleştirebilecekleri yerleri tercih etmektedirler (ayrıca bkz. Lall, 2004:4). Öyleyse, ekonominin teknolojik dinamizmini artırmak, yeni karşılaştırmalı üstünlük alanları yaratmak, üretilen ve ihraç edilen ürünlerde çeşitliliği sağlamak için bir sanayi politikasına ihtiyaç vardır (Chang, 1989:79; Rodrik, 2004:7,21). Genel gelişme stratejisinin temel amaçlarından birisi, uygun sanayi politikaları aracılığıyla, ülke ekonomisinin dinamik karşılaştırmalı üstünlük alanlarını tespit etmek olacaktır.

Sanayi politikası, önemini kaybeden sektörlerden yeni gelişmekte olan sektörlere işgücü ve sermaye akışını kolaylaştırmalıdır. Ancak, belirli sektörlerden daha çok, yeni veya belirli bir tür teknoloji, yeni bir ürün ya da yeni bir hizmet gibi özgül faaliyetler hedeflenmeli ve desteklenmelidir (Rodrik, 2004:14). Bu özgül faaliyetler hedeflenirken, destekleme politikaları uygun performans ölçütleri ile tamamlanmalı ve destekten hangi koşullarda vazgeçileceği önceden belirlenmelidir. Verimlilik ve ihracat artışları, performans ölçütleri olarak kullanılabilir (Rodrik, 2004:11-22). Diğer taraftan, işletmelerin yeni teknolojileri edinirken yaşayacakları öğrenme ve kendilerini geliştirme süreçlerini yönetebilmeleri için, ulusal teknoloji politikalarına ihtiyaç duyulmaktadır (Lall, 2004:11).

Günümüzdeki Dünya Ticaret Örgütü (DTÖ) anlaşmaları çerçevesine, sanayi, dış ticaret ve teknoloji politikaları oluşturmanın zorlukları da ortadadır. Ancak, gelişme stratejisinin amaçlarına ulaşabilmek için, gelişmeyi iktisat gündeminde ilk sıraya almak ve öğrenerek/deneyerek doğru politikaları oluşturmanın yolunu bulmak zorunluluğu vardır (bkz. Chang 2002 ve 2003). Örneğin, DTÖ'nün TRIMs anlaşması altında, ticaret perfomansını etkilemediği sürece, işgücünün niteliğini geliştirme, teknoloji desteği, yenilik finansmanı, bilişim teknolojileri için altyapı geliştirme gibi seçici politikalar uygulamak hâlâ mümkündür (Lall, 2004:27).

VITA

Tevfik Koldaş was born in Elmalı, Antalya on September 5, 1972. He received his B.S. degree in Industrial Engineering at Bilkent University in 1994. He has worked as a teaching and research assistant in the Department of Economics, Middle East Technical University during 1996-1998, and received his M.Sc. degree in Economics at Middle East Technical University in 1998. Since 1999, he is an assistant specialist at the Central Bank of the Republic of Turkey. His main areas of interest are development economics and institutional economics.