

ECONOMIC IMPACTS OF FREE ZONES IN TURKEY:  
*A QUESTIONNAIRE STUDY CONDUCTED WITH FIRMS OPERATING IN  
TURKISH FREE ZONES REGARDING THE PERCEPTION OF THE FIRMS ON  
THE SUCCESS OF FREE ZONES*

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## **ABSTRACT**

**ECONOMIC IMPACTS OF FREE ZONES IN TURKEY:  
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In Turkey, the trade regime has been liberalized to some extent after Resolutions of 24 January 1980, and Turkey started to implement export-led trade strategies. As a part of these policy instruments, the Free Zones Law was published in the Official Gazette in 1985. Following various amendments in the Law, objectives of free zones have been defined as “promoting export-oriented investment and production, accelerating the entry of foreign investment and technology, directing enterprises to export and improving international trade”.

Within this context, the purpose of this study is to explore the economic impacts of free zones and analyze the free zone firms’ perceptions on the success of free zones by assessing to what extent the establishment objectives of the free zones in Turkey have been realized.

**Keywords:** Free Zones, Export Processing Zones, Exports, Foreign Direct Investments, Transfer of Technology

## ÖZ

TÜRKİYE'DEKİ SERBEST BÖLGELERİN EKONOMİK ETKİLERİ:  
*SERBEST BÖLGELERDE FAALİYET GÖSTEREN FİRMALARIN SERBEST  
BÖLGELERİN BAŞARI DÜZEYİ ALGILARININ BELİRLENMESİNE YÖNELİK  
OLARAK YÜRÜTÜLEN BİR ANKET ÇALIŞMASI*

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Türkiye'de 24 Ocak 1980 Kararları'ndan sonra ticaret rejiminde ortaya çıkan liberalleşme eğilimleri ile birlikte, Türkiye ihracat odaklı ticaret stratejileri izlemeye başlamıştır. Bahse konu ticaret politikasının bir parçası olarak, Serbest Bölgeler Kanunu 1985 yılında Resmi Gazete'de yayımlanmıştır. Mezkûr Kanun ile Serbest Bölgelerin amaçları "ihracata dönük üretimi ve yatırımı teşvik etmek, yurtdışı yatırımları ve teknoloji girişini hızlandırmak, firmaları ihracata yönlendirmek ve uluslararası ticareti geliştirmek" olarak tanımlanmıştır.

Bu çerçevede, bu çalışmanın amacı, serbest bölgelerin ekonomik etkilerinin araştırılması ve serbest bölgelerin kuruluş amaçlarını ne ölçüde gerçekleştirebildiğine ilişkin olarak bölgede faaliyet gösteren firmaların algısının ölçülmesidir.

**Anahtar Kelimeler:** Serbest Bölgeler, İhracat, Doğrudan Yabancı Yatırımlar, Teknoloji Transferi

to my beloved Parents

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## LIST OF ABBREVIATIONS

ASBAŞ	Antalya Free Zone Operator Incorporation
BUSEB	Bursa Free Zone Founder and Operator Incorporation
DENSER	Denizli Free Zone Founder and Operator Company
DESBAŞ	İstanbul Industry and Trade Free Zone Founder and Operating Company
ESBAŞ	Aegean Free Zone Corporation
EU	European Union
FOB	Free on Board
FDI	Foreign Direct Investments
FIAS	Foreign Investment Advisory Service of the World Bank Group
ILO	International Labour Organization
İDESBAŞ	İzmir Menemen Free Zone Founder and Operator
İSBAŞ	İstanbul Thrace Free Zone Incorporation
KOSBAŞ	Kocaeli Free Zone Founder and Operator Corporation
MASBAŞ	Mardin Free Zone Founder and Operator Corporation
MESBAŞ	Mersin Free Zone Operator Incorporation
OECD	Organization for Economic Cooperation and Development
SASBAŞ	Samsun Free Zone Founder and Operator Corporation
SPSS	Statistical Package for the Social Sciences
The USA	The United States of America
TRANSBAŞ	Trabzon Free Zone Operator Corporation
TÜBİTAK	The Scientific and Technological Research Council of Turkey
TÜBİTAK-MAM	TÜBİTAK Marmara Research Centre
UNCTAD	United Nations Conference on Trade and Development
UNCTC	United Nations Centre on Transnational Corporations

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## **CHAPTER I**

### **INTRODUCTION**

Many developing countries have moved from a strategy of import substitution to export promotion after 1970s. The adoption of export-oriented strategies has been accompanied by establishment and expansion of free zones (or most widely known in the literature, export processing zones) in these countries.

Free zones are defined as geographically delimited areas where certain incentives (duty-free importing, tax advantages etc.) are offered. They are considered as key instruments not only to stimulate exports, but also to attract foreign direct investment, generate employment, boost economic growth and accelerate the transfer of technology.

In Turkey, the trade regime has been liberalized to some extent after Resolutions of 24 January 1980 and Turkey started to implement export-led trade strategies. As a part of these strategies, the Free Zones Law was published in the Official Gazette in 1985. Following various amendments in the Law, objectives of free zones have been defined as "promoting export-oriented investment and production, accelerating the entry of foreign investment and technology, directing enterprises to export and improving international trade".

In the literature, there are studies analyzing free zones and their economic impacts on Turkish economy. However, most of these studies either select a specific free zone as a sample or focus on specific effects of the free zones. Nevertheless, there is no study analyzing the perception of firms operating in free zones regarding all of 19 free zones' economic impacts on economy in terms of objectives stated in the Law.

In this context, the purpose of this study is to explore the economic impacts of all free zones and analyze the free zone users' perceptions on the success of free zones by assessing to what extent the establishment objectives of the free zones in Turkey have been realized.

In the first part of the study, the concept of free zone is defined by explaining objectives and economic impacts of establishment of free zones in the world in conjunction with a literature review.

In the second part, the free zone concept and understanding in Turkey is described. Moreover, brief information on 19 free zones is presented. In order to analyze the success of free zones, establishment objectives, which are identified in the Free Zone Law, are analyzed separately by focusing on statistics and figures based on the descriptive data.

In the third part, the perception of firms operating in the free zones is examined with a view to reach a comprehensive conclusion regarding the economic impacts of free zones. To that end, a questionnaire study is carried out with these firms on the success of free zones in directing enterprises to export, promoting export-oriented investment and production, attracting foreign direct investment and transferring technology. Lastly, taking into account the results of the questionnaire, an overall evaluation accompanied by recommendations for policy-makers is stated.

This research is important for trying to fill the gap in the literature by exploring the economic impacts of all 19 free zones in terms of objectives stated in the aforementioned Law. Furthermore, considering Turkey's current political and economic conjuncture, where efficiency and future of the free zones are discussed, the conclusions of the study would be practical and beneficial both for policy-makers and economic operators.

## **CHAPTER II**

### **FREE ZONES IN THE LITERATURE**

#### **II-1. The Concept of Free Zone**

Although different countries have adopted different names for free zones, such as export processing zones, free trade zones and special economic zones; they refer to similar concepts (Jayanthakumaran, 2003; Madani, 1999). The diversity in the name of these zones reflects the evolving nature and distinct purpose of each zone. Despite the fact that the term export processing zones is widely used in the literature, in Turkey these zones are defined as 'free zones' and therefore this term is used in this study.

When different definitions for free zone are observed, it is seen that the World Bank (1992) defines free zones as "fenced-in areas that specialize in manufacturing for exports that offer firms free trade conditions and a liberal regulatory environment". According to the study of ILO/UNCTC (1988) "a free zone can be defined as a clearly delineated industrial estate which constitutes a free trade enclave in the customs and trade regime of a country, and where foreign manufacturing firms producing mainly for export benefit from a certain number of fiscal and financial incentives". Similarly, a study of OECD defines the free zone as "a government policy to promote exports of goods and/or services by offering a more competitive business environment through provision of special incentives including particular tariff exemptions to inputs in a geographically defined area" (Engman, Onodera and Pinali, 2007).

Taking into account the definitions of different institutions, the common features of free zones can be summarized as follows:



- Geographically enclosed area, usually physically secured;
- Simplified administrative procedures with a view to decrease red-tape;
- Duty-free imports of raw materials and intermediate goods;
- Substantial tax incentives for the firms;
- Improved infrastructure services, which have generally better conditions than the rest of the host country (FIAS, 2008; Madani, 1999).

Although free zones have some definitive characteristics, they can be differentiated by their specific features. For instance, "free trade zones", also known as "commercial free zones", focus specifically on trade operations by offering warehousing, storage and distribution facilities in duty-free areas. As for "export processing zones", the main motivation is to provide special incentives and facilities for export-oriented manufacturing, in addition to simplified trade procedures. The other type of these zones is "free port", which is a broader concept and typically encompasses larger areas, where all types of activities including tourism and retail sales are realized and people are permitted to reside on site.

Free zones can be also differentiated in terms of firms' rights to sell their output in the host country. Different countries allow different percentages of the free zone production to be sold on the domestic market after required import tariffs on the final goods are paid. For instance, while the Dominican Republic allows up to 20 percent of the free zone products entering into its market, Turkey allows all the products to be sold in the domestic market. Furthermore, in the Manaus free zone of Brazil, firms are allowed only to sell their products to the domestic market (Madani, 1999).

Free zones can also be separated by the ownership status of the zones. They can be operated either by public institutions or by private entities. The older zones were typically set up and run by the government institutions. However in recent years, an increasing number

of zones have been developed and are being operated by private entities. Due to the fact that free zones can be profitably operated by the private sector and thus the burden on government budget is decreased, the number of private operators has increased in recent years (FIAS, 2008).

In spite of the fact that there are different variations of free zones based on policy objectives, they aim to achieve the following in general:

- To promote exports,
- To attract foreign direct investment,
- To facilitate technology transfer,
- To stimulate non-traditional exports;
- To increase foreign exchange earnings;
- To provide quick, easy and low-cost supply of raw-materials and intermediate goods necessary for the production of goods to be exported;
- To increase employment opportunities in order to mitigate unemployment problems in the country (Nkhoma, 2007; Blanco de Armas and Sadni-Jallab, 2002).

## **II-2. The Historical Background – Emergence of Free Zones**

Although the foundation of free zones finds its roots in free trade ports of the Roman Empire, free cities of the middle-age and free ports of the British Empire; the concept of modern free zone has existed for roughly half a century. Shannon Free Zone in Ireland which was established in 1959 is widely considered as the first modern free zone in the world. Before the establishment of Shannon Free Zone, free zones were known as 'free trade zones' where goods had been traded internationally without any customs tariffs. However in 1959, the Irish government established Shannon Free Zone with the purpose of attracting firms to set up manufacturing facilities in the area in addition to storage and trade. Following the establishment of Shannon as the first modern free

zone, it was taken as a sample in several other countries and zones have proliferated in the following decades (ILO/UNCTC, 1988).

Free zones in developing countries became popular in the 1970s, when many developing countries gradually began to leave import substitution policies in favour of more open and export-oriented policies (DeRosa and Roningen, 2002; Cling and Letilly, 2001). Within this conjuncture, free zones were considered as important policy instruments by policy makers in terms of increasing export growth, export diversification (stimulation of non-traditional exports), foreign direct investments, employment opportunities and foreign exchange earnings thanks to the incentives and facilities presented in these zones (Aggarwal, 2007). Moreover, technology transfer, development of administrative skills and marketing experience accompanied by foreign direct investment were of critical importance in order to change the export structure of countries in favour of finished/manufactured goods. When it is considered that the foreign exchange earnings generated in free zones are crucial for the industrialization of the developing countries, the zones have gained more importance in these countries in the course of time (Engman, Onodera and Pinali, 2007).

On the other hand, profit maximization policies of multinational companies have contributed to the expansion of free zones world-wide. The cost-minimizing production opportunities in developing countries such as low-cost employment, rich raw-materials supply and geographical advantages have provided a fruitful environment for multinational companies to operate and invest. Thus, the proliferation of free zones can be attributed in part to increasing levels of overseas manufacturing by multinational companies.

### **II-3. Theoretical Framework**

While free zones continue to proliferate all around the world, theoretical and practical debates on the pros and cons of free zones have been

going on since the emergence of free zones. Studies regarding the economic impacts of free zones put forth that although many free zones affect the host economies in a positive manner, all free zones cannot be accepted as successful. Thus, there is no consensus in the academic area on the net benefits of free zones. Some analysts present that free zones can help attracting FDI, promoting trade and thus generating employment and foreign exchange earnings. Furthermore, foreign direct investments in turn can generate backward and forward linkages to domestic industries and have spillover effects through transfer of technology, management skills and know-how. Other analysts approach to net economic effects of free zones cautiously because of the costs; including infrastructure investments, administrative costs, forgone tax and tariff revenue (Engman, Onodera and Pinali, 2007).

There are number of studies which lay out overall economic impacts of free zones in developing countries. The 'neo-classical school' is the first school of economics analyzing the welfare effects of free zones. For the neo-classical economists, the best policy is the overall liberalization of the economy and in this respect free zones are considered as the second best policy instrument to promote industrialization and generate employment.

Hamada (1974), who is one of the representatives of the neo-classical school and whose analysis is based on Hecksher-Ohlin two goods – two factors – two countries framework, asserts that free zones have a negative welfare effect on the host country. According to his analysis, if it is assumed that the developing country has a comparative advantage in labour intensive industries, foreign direct investment into the free zone means that capital is imported in the free zone and labour in the developing country is withdrawn from the domestic sector to in order to work on imported capital intensive good. Therefore, production of the capital intensive goods will increase, while production of the labour intensive domestic goods will decrease. Within this framework, the establishment of zones will result in inefficiency by distorting production

away from country's comparative advantage, which is labour intensive good in the case.

On the other hand, his analysis showed that foreign capital invested in the free zones is potentially less damaging to the host nation than the same amount of foreign capital invested in domestic zone (rest of domestic region stay out of free zones).

Hamilton and Svensson (1982) improved the analysis of Hamada; however the welfare reduction impact of free zones which is briefly explained above was kept intact in their analysis. They set up their analysis by removing Hamada's incomplete assumption that the labour intensive good is not produced in the free zones. As a result of their study, contrary to Hamada, they put forward that foreign direct investments into the free zones reduce welfare relatively more than the same amount of FDI flow into the domestic zone.

Aforementioned neo-classical assumptions and conclusions have been questioned by later economists based on a number of arguments. To begin with, it is pointed out that the neo-classical approach assumes that there is full employment in the country while most developing countries experience the underemployment problem. Secondly, the neo-classical trade theory does not consider the possible spillover effects of foreign direct investments on the domestic economy. Thirdly, the neo-classics do not take into account the trade of intermediate goods which has an important role in the manufacturing activities of free zones.

Later neo-classical economists improved their analysis by considering the aforementioned criticisms. Miyagiwa (1986), who developed a model with three goods and three production factors, indicates that the establishment of free zones contributes to a country's welfare. Besides, Young and Miyagiwa (1987) assert that when the existence of unemployment is taken into account, the positive impact of free zones on nation's well being would be reinforced. But still, these studies point

out that establishment of free zones would be a second best policy for the promotion of national welfare.

Warr (1987 and 1989), who uses the 'cost-benefit approach' to evaluate the performance of free zones, also criticizes the assumptions of neo-classical analysis. He criticized the assumptions of neo-classical theory that capital was internationally immobile and he argues that neo-classics did not take into consideration the international mobility of capital goods, which is crucial for functioning of free zones. Therefore, Warr asserts that the main conclusion of most of the neo-classical studies, proposing that free zones reduce the welfare of developing countries, is not valid. On the contrary, studies using the cost-benefit approach put forward the positive impacts of free zones; however define them as good but limited policy instruments for export promotion.

The cost-benefit analysis follows the method of calculating all costs and benefits associated with free zones. The main benefits calculated are taxes earned, foreign exchange earnings generated, employment created, domestic raw materials sold and revenues raised from renting or selling factory land in free zones. The main costs taken into account are expenses related to infrastructure investments, public services provided and managerial costs of free zones (Jenkins, Esquivel and Larrain, 1998).

The key drawback of this method is the lack of sufficient data to be used cost-benefit calculations. In this regard, its assumptions and rough approximations constrain practical application of cost-benefit approach. In addition, the analysis ignores externalities and intangibles such as transfer of technology and improvement of local skills, which are difficult to calculate but are amongst the most important objectives of establishing free zones.

The 'new growth theory' is another theory which questions the methodology of neo-classical studies. The theory emphasizes that the

neo-classical approach does not take into account the spillover effects of free zones on the host economy. According to the Johansson (1994), the foreign direct investment effect of free zones is not limited with the capital inflow (both financing and machinery) from developed countries, but also includes the impacts of spillovers from FDI on the host country. These spillovers consist of technology transfer, development of administrative skills, learning effects, human capital development and catalyst factor in host countries (Madani 1999). Rhee, et. al. (1990) also describe free zones as the 'catalysts' on the grounds that they contribute to promotion of non-traditional export oriented production by combining technical, marketing and managerial know-how and ability to access the world markets with the other comparative advantages of the domestic economy.

Johansson (1994) indicates that the new growth approach provided important contributions to the neo-classical studies. First, foreign direct investments into free zones provide local firms the capacity to package technical, marketing and managerial know-how with the internal and external resources available to them, while domestic firms originally lack this capacity. Moreover, since the local firms face with difficulties to access international distribution channels on their own, free zones are considered as important tools to support these firms by attracting multinational companies. Besides, in the absence of a multinational company with wide international business networks, entry into international markets would be hard for the home country firms. In this respect, free zones support domestic firms to join multinational networks through foreign direct investments by providing international contacts and technical assistance.

In the light of catalyst impacts and spillover effects of free zones, the new growth theory suggests amending the originally negative assessments of neo-classical literature on free zones. Johansson (1994) argues that once abovementioned factors are integrated to the neo-classical approach; free zones would be considered as beneficial for the

host economy owing to spillovers and catalyst effects. Johansson and Nilsson (1997) tested the aforementioned catalyst effect of free zones on ten countries<sup>1</sup> and the results supported the hypothesis that free zones make a positive economic effect on the economy of the host country.

Overall, it should be noted that reservation on the success of free zones has declined in the later studies and positive contributions of the zones for the host economies have come to forefront as the second best-option.

#### **II-4. Studies on Economic Impacts of Free Zones in the World**

Theoretical framework of the economic impacts of free zones has been studied in numerous researches by different schools of economics. In addition to the theoretical analysis, practical economic reflections of free zones in the world, especially in developing countries, have been discussed in various studies and reports.

FIAS (2008) classified economic impacts of free zones as static and dynamic benefits. The static benefits are described as export promotion and diversification, foreign direct investments, direct employment, foreign exchange earnings and government revenues. As for dynamic benefits, which are more difficult to measure but much more important in the long-run for the host country, are defined as indirect employment creation, technology transfer, skills improvement and backward linkages established with the domestic economy.

It is put forward that in line with the primary objectives of the foundation of free zones, they have a considerable share in exports for most of the countries. According to the estimations of FIAS (2008), free zones' share in exports in manufactured goods constituted 40.8% of world exports. Most prominent countries enjoying important free zone contribution in

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<sup>1</sup> Dominican Republic, Egypt, Hong Kong, Malaysia, Mauritius, the Philippines, Singapore, South Korea, Sri Lanka and Tunisia.



their exports are Madagascar (80%), Nicaragua (79.4%), Philippines (78.2%), Dominican Republic (77%), Bangladesh (75.6%), Bahrain (68.9%), Morocco (61%) and Mauritius (34.4%) by 2005. Furthermore, free zones contribute to export diversification, which means to expand the basket of exports commodities by introducing exports of non-traditional products, in most countries. Since many developing countries' export profiles rely on limited number of goods and sectors, diversification of exports has great importance for these countries. In this regard, the Philippines (from 22% in 1995 to 76% in 2003), Costa Rica (10% from 1990 to 55% in 2003), Kenya (from 3.5% in 1997 to 19.3% in 2003), Madagascar (the number of products which have more than US\$ 1 million export value increased from 38 in 1991 to 70 in 2001) and other countries including South Korea, India, Mauritius, Taiwan and Ghana are considered as successful examples of free zone implementations in terms of providing export diversification. As well as diversification of exports, transformation of export structure towards more value-added goods is crucial for the profitability of firms and attainment of sustainable economic development. Accordingly, different studies put forward that the share of value-added goods in exports of aforementioned countries has increased following the establishment of free zones. To illustrate, while in 1990s main exports of the zones were textile and apparel products, in 2000s more than half of the exports was comprised of electronic components. Similarly in the Philippines, the electronics sector has improved substantially, constituting more than 70% of the country's exports as a result of success of free zones in attracting investments in this sector (Aggarwal, 2010; FIAS, 2008; Engman, Onodera, Pinali, 2007; Milberg, 2007; DeRosa and Roningen, 2002; Jenkins, Esquivel and Larrain, 1998).

Regarding the employment creation effect, statistics indicate that employment level increases gradually in most of free zones. However, when the increase in employment level in free zones is compared to the total work force in the host economies, it can be pointed out that direct employment impact of free zones remains minor. There are countries

where free zones could not meet expectations in terms of increasing employment. In this context, free zones in Kenya, Senegal and Guatemala are introduced as unsuccessful examples in job creation (Madani, 1999). On the other hand, there are examples where the impact of free zones in employment creation is outstanding. For example, free zones in Asia are accepted as the most successful examples of employment creation effect (Aggarwal, 2007); the number of people employed in free zones in China has exceeded 40 million people (Milberg and Amengual, 2008). Free Zones in Mauritius have generated 88.000 new jobs after the establishment in 1970s and unemployment rate decreased from 23% in 1979 to 2% in the early 1990s. Furthermore, 1980s Mauritius began to import labour from foreign countries to overcome labour shortages. Similar to Mauritius, free zones in Madagascar, Tunisia and Egypt are considered as other successful examples in Africa in terms of job creation. In Central America, Honduras, Nicaragua and Costa Rica are evaluated as successful free zones, which created increasing employment opportunities and took important share in employment of their home countries. It should be noted that free zones are important instruments to increase employment opportunities not only for small economies, but also for large economies like Mexico where free zones played an important role in handling unemployment problem (Aggarwal, 2007; Engman, Onodera, Pinali, 2007; Blanco de Armas and Sadni-Jallab, 2002).

Despite the employment generation effect of free zones, wages and working conditions in the zones are questioned in the literature. According to Aggarwal (2007), there is a general perception that wages paid in the zones are lower than wages paid in home country as labour laws are not applied in the zones. In this regard, wages in Costa Rica, Panama, Haiti and Pakistan are lower than wages in home countries. However, Aggarwal (2007) put forth that there are studies indicating that average wages in free zones are higher than wages paid on home country. Thus it is concluded that to reach a conclusion regarding the

impact of free zone implementation in wages in and outside of the zones are difficult as even wages in different free zones vary in the same country (Aggarwal, 2007; Madani 1999). Similarly, there is intense debate on the working conditions in free zones. Although some studies emphasize on poor working conditions in free zones especially in terms of long working hours and job insecurity; there also studies asserting that conditions in free zones have common characteristics with home country. Thus, it can be concluded that there is no consensus on the impact of free zones on working conditions as different studies even in same countries present conflicting results (Aggarwal, 2007). As working conditions in free zones is an important issue to be examined, impacts of free zones on working conditions can be subject of another study for further examination.

As for the matter of indirect employment, according to the limited data, it can be asserted that free zones' positive impacts are remarkable (Aggarwal, 2007). ILO (2003) calculated that the level of indirect employment creation varies from 0.25% in Mauritius to 2% in Honduras. Within this framework, it can be asserted that free zones have potential to create 77 million jobs in the world (FIAS, 2008).

As for the analysis on the effects of foreign direct investments, there are constraints regarding data collection since many countries do not calculate FDI inflow into home country and free zones in separate accounts. Based on available data in certain countries, free zones are evaluated as an important factor to attract foreign direct investments. For instance, in Mexico foreign direct investments into free zones have increased gradually and within six years doubled from 895 million dollars to 2.98 billion dollars. Similarly, the share of the free zones in foreign direct investments inflow in China reached to 80%. However, different studies in different countries prove that free zones do not result in an automatic increase in foreign direct investments and thus they should be supported with encouraging government policies. This is the main reason behind the fact that some free zones' impacts on attracting FDI remains

marginal (Blanco de Armas and Sadni-Jallab, 2002; Engman, Onodera, Pinali, 2007; FIAS, 2008).

As for the technology transfer, the lack of zone and firm-level data prevents setting up systematic analysis. However, according to UNCTAD (2002) study, surveys indicate no significant differences between free zones and home country. Moreover, although development of skills through learning by doing is defined as one of the positive effects expected from free zones; studies of ILO (2003) and UNCTAD (2004) point out that production processes in free zones require basic skills and low technology since labour is accepted as a cost to be minimized rather than as a resource to be developed. Accordingly low-skill-required production processes in free zones leave little scope for technology transfer (Blanco de Armas and Sadni-Jallab, 2002; Aggarwal, 2007; FIAS, 2008). Besides, most studies analyzing the backward linkages indicate that free zones' impact on creating backward linkages with the home country is small and technology spillovers are rare (Milberg, 2007). However, free zones in Mauritius and emerging Asian economies like South Korea should not be ignored thanks to their success in terms of creating backward linkages and transfer of technology (Aggarwal, 2007).

The foundation of free zones has budgetary impacts on government in two ways; expenditures and revenues. One of the main expenditure items is infrastructure investments made for the establishment and operation of free zones. However, especially in recent years, while the role of government in establishment and operation has declined; the share of free zones founded and operated by the private sector has increased and thus government expenditures on free zones have reduced. The second important cost item of public expenditure stems from forgone tax revenues resulted from tax and tariff exemptions. However, some studies put forth that tax incentives can stimulate private sector to invest more in the free zones and thus positive impacts of forgone revenues may exceed negative impacts on government

revenues. Furthermore, free zones have revenue impacts on government budget. The main revenue items are described as income generated from import duties on goods exported into home country and residual tax revenues which are not forgone. Nevertheless, empirical evidence on the net effects of free zones on economy is uncertain (FIAS, 2008; Engman, Onodera and Pinali, 2007).

All in all, free zones' economic impacts in terms of export promotion and diversification, employment creation, foreign direct investment attraction and technology transfer are varying in each free zone. Even in the same region, free zones in different countries present diverse effects. For instance, while free zone experience of Mauritius is considered as a success story thanks to the achievements in objectives of creating jobs, increasing and diversifying exports, attracting foreign direct investments and creating linkage between domestic economy and free zone; Senegal Free Zone is evaluated as an example of failure since it could not realize aforementioned objectives. Although various studies focusing on several free zones in different countries present distinct results, it is generally accepted that the difference between the successes of free zones arises from factors like government policy, incentives provided in free zones, red-tape, investments in infrastructure and political stability (World Bank, 1998; Madani, 1999; Engman, Onodera, Pinali, 2007).

## **II-5. Studies on Economic Impacts of Free Zones in Turkey**

In Turkey, free zones could be established and operated effectively after Resolutions of 24 January 1980, by which Turkey started to pursue export oriented economic policies. Following the proliferation of free zones in different regions of Turkey, the economic impacts of free zones have been analyzed in various studies. For the aim of this research, descriptive studies presenting overall economic impact of free zones and studies exploring economic impacts of certain free zones based on field research are reviewed.

In the conclusion his literature survey, Kibritçioğlu (1997) presents effects of free zones in Turkey. Based on trade, employment and foreign direct investment figures, he put forward that free zones in Turkey are net importers in foreign trade and thus have negative impacts on national economy in terms of international trade. Besides, they have weak employment and limited foreign capital attraction effects.

Ay (2009) also asserts that free zones in Turkey do not provide positive contribution to Turkey in terms of foreign trade, thus their functions as foreign currency generator are not very much applicable in Turkey and they remain insufficient in export oriented development efforts. In addition, foreign investments in free zones have remained low compared to foreign investments in domestic area. On the other hand, free zones contribute to decrease in unemployment; however establishment of free zones can only be alternative policy to deal with unemployment problem in an economy (Ay, 2009).

According to Kocaman (2007), the free zone experience both in the world and Turkey indicates that these zones do not have effects on the improvement of foreign trade and employment.

Although these are the main descriptive studies analyzing the impacts of free zones in Turkey, they reached conclusions based only on descriptive data. Therefore, studies based on field research would give more reliable results.

Regarding the specific free zones, Uzay and Tıraş (2009) conducted a questionnaire study on the firms operating in Kayseri Free Zone to determine the economic impacts and efficiency of Kayseri Free Zone. In their research, it is emphasized that Kayseri Free Zone has positive impacts on the escalation of commercial activities in the region and employment. However, firms export their products mainly to domestic market rather than foreign markets, and foreign direct investments to the Zone are limited. Therefore the main objectives of free zones,

namely 'directing firms to exports' and 'attracting foreign direct investments', have not been succeeded.

In a similar way, Arslan and Yapraklı (2007) conducted a field research in Gaziantep Free Zone and reached that Gaziantep Free Zone has positive reflections on economy through its contributions in boosting foreign and internal trade in the region.

Bursa Free Zone also contributes Turkish economy positively in terms of foreign trade, employment and regional development. However, Bursa Free Zone is considered to be unsuccessful in attracting foreign capital, as the amount of foreign direct investments in free zones has remained relatively low in comparison to investments in domestic area (Ay, 2009).

Aforementioned studies are based on field research; however the main drawback of these researches is that their coverage is limited to specific free zones. Thus, they could not be evaluated as reference studies to evaluate overall economic impacts of free zones in Turkey.

In this respect, this research has crucial importance since it studies the perception of firms operating in free zones regarding the economic impacts of all 19 free zones in Turkey based on a field research. Furthermore, it is the first study which is exploring the success of free zones focusing on the establishment objective of the zones.

## **CHAPTER III**

### **FREE ZONES IN TURKEY**

#### **III-1. General Characteristics of Free Zones in Turkey<sup>2</sup>**

In Turkey, Ministry of Economy defines free zones as “fenced-in areas in which special regulatory treatment and more convenient and flexible business climate exist for the enterprises mainly in order to promote exports of goods”. Free Zones Law, which was published in the Official Gazette and came into effect in 1985, identifies objectives of free zones as “promoting export-oriented investment and production, accelerating entry of foreign investment and technology, directing enterprises towards export and improving international trade”.

In this respect, one of the basic advantages of free zones is to control free customs duty procedures in trading. In this context, no customs duty is applied on the third country originated goods at the entrance of the free zones and exit to the third countries. Besides, the goods in free circulation can be sent to Turkey or to the EU countries (thanks to the Customs Union established between Turkey and the EU in 1996) from free zones without any customs duty payment.

Secondly, in order to facilitate foreign trade and input supply, firms operating in these zones can buy goods and services from Turkey without paying value added tax. On the other hand, while the commodities sold by Turkey to the zones are subject to export regime, Turkish origin commodities whose value are less than 5,000 dollars can be exempted from export procedures. Besides, contrary to many other

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<sup>2</sup> The information in this section is compiled from the Law on Free Zones which was published in the Official Gazette dated on 15.06.1985 and numbered 18785; Regulation on Free Zone Implementation which was published in the Official Gazette dated on 10.03.1993 and numbered 21520; and fact sheet which was retrieved in August 2012 from <http://www.economy.gov.tr/upload/FA7B68AE-CBB2-2A00-B79D2D5CFBCBBDE5/Advantages.pdf>



free zones in the world, in Turkey sales to domestic market are allowed except for consumer goods and risky products.

The most important advantage provided for firms operating in free zones are tax advantages (Table 1).

**Table 1. Tax Exemptions Provided in Free Zones in Turkey**

Tax Exemptions	1985-2004	(Following Various Amendments in 2004-2008) After 2009		
	All Users	Producers	Other Users	
			For Users Having Operating Licence Before 06/02/04	For Users Having Operating Licence After 06/02/04
<b>Income and Corporate Taxes</b>	Exempted	Exempted until the EU Membership	Exempted until the validity period of Operating Licence	No exemption
<b>Income Tax</b>	Exempted	Exempted in case 85% of production is exported (Until the EU Membership)	No exemption	No exemption
<b>Stamp Duties and Fees</b>	Exempted	Exempted until the EU Membership	Exempted until the EU Membership	Exempted until the EU Membership
<b>Customs Tariff</b>	Exempted	Exempted	Exempted	Exempted
<b>Value Added Tax</b>	Exempted	Exempted	Exempted	Exempted

**Source:** Ministry of Economy, Directorate General of Free Zones, Overseas Investment and Services

As it is seen in Table 1, producer firms' earnings, which are generated from their activities in the zones, are exempted from the income or corporate taxes (until Turkey's full membership to the European Union). Besides, the wages of labours employed by the producers, which export more than 85% of the FOB value of the commodities they produce in the

zones, are exempted from income tax. Moreover, firms' transactions related to the activities carried out in the zones are exempted from stamp duties and fees. Although the firms which have operating licence before 6 February 2004 are exempted from income and corporate tax until the validity time of their licence; firms which obtained operating licence after 6 February 2004 are not exempted from income or corporate tax.

As a part of the liberal economic policy, free zones in Turkey provide opportunity to transfer profits to Turkey or third countries without any permission. Besides, payments in free zones are made with foreign currency and this creates relatively stable economic environment by avoiding exchange rate fluctuations.

On the other hand, according to the equal treatment principle in free zones, all firms benefit from the facilities and advantages in the zones irrespective of their origin.

In free zones, all kind of activities including manufacturing, trading, storing, packaging, research & development, and banking & insurance can be carried out. However, as it is mentioned above, Turkish free zones especially encourage export oriented manufacturing and production by providing important tax incentives for these activities. Besides, storing is considered as one of the beneficial features of free zones due to the facility to store goods in the zones without any time restriction.

The location of free zones has crucial importance to derive maximum benefit from these zones. Taking into account Turkey's geostrategic position, the location of Turkish free zones becomes advantageous since they are close to significant neighbouring markets. Furthermore, Turkish free zones have been established mostly in places where there is easy access to major Turkish ports by the Mediterranean, Aegean and Black Sea and international airports.

In Turkey, Council of Ministers is authorized to determine the place and boundaries of free zones. These zones can be established either on the public or private land. Besides, the infrastructure investments may be undertaken by the relevant Ministries or be contracted to the private Zone Founder or Operator.

Accordingly, the establishment of free zones is based on three models: public-public, build-operate-transfer and build-operate. In the first model, the free zone is founded on public land where the infrastructure investments are undertaken by public authorities and operated by an incorporation established by the state. Mersin and Antalya Free Zones (which are the first examples of free zones in Turkey), TÜBİTAK-MAM and İstanbul Atatürk Airport Free Zones have been established via public-public model. The second model, build-operate-transfer, envisages that the foundation and operation liabilities of the free zones on the public land belong to private sector. Adana-Yumurtalık, Aegean, Kocaeli, Rize, Samsun and Trabzon Free Zones have been founded by taking the build-operate-transfer model as basis. The build-operate model also requires that free zones are founded and operated by private sector, and differently from the build-operate-transfer model, they are established on the private land. Bursa, Denizli, Europe, Gaziantep, İzmir, İstanbul Industry and Trade, İstanbul Thrace, Kayseri and Mardin Free Zones have been established in accordance with the build-operate model.

Certain free zones in Turkey provide title deed ownership to investors, which mean that investors can purchase their own land in free zones. Thus it presents investors an opportunity to "purchase it and own it" and accordingly the investors gain the right to sell or rent their properties. By means of this opportunity, the investors have a reliable and profitable investment model which they can liquidate any time. Bursa, Denizli, Europe, Gaziantep and İstanbul Thrace Free Zones are the free zones which provide title deed ownership to investors.

Lastly, according to the Turkish legislation, free zones are considered in the outside of the Turkish customs border. In this regard, in the calculation of Turkey's trade data, while Turkey's sales to free zones are considered as exports and purchases from free zones are considered as imports of Turkey; free zones' exports to and imports from third countries are not taken into account.

On the other hand, in the calculation of free zone statistics, four categories are used; outflow from free zones to Turkey, outflow from free zones to third countries, inflow from Turkey to free zones, and inflow from third countries to free zones. However, for the purpose of this study, outflow to third countries are called as exports and inflow from third countries as imports of free zones.

### **III-2. Data on Each Free Zone in Turkey<sup>3</sup>**

Although the idea of establishing free zones goes back to the earliest years of the foundation of Turkish Republic, following the publication of the Free Zones Law in 1985, Mersin Free Zone was established as the first free zone and became operational in 1987. The number of free zones in Turkey has reached to 19 by 2012 (Table 2).

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<sup>3</sup> Data on each free zone is collected from restricted fact sheets of Ministry of Economy, Directorate General of Free Zones, Overseas Investment and Services; and each free zone's web-sites indicate in the References Section.

**Table 2. Free Zones in Turkey**

No.	Free Zone	Establishment Date	Number of Firms by 2011	Employment by 2011	Foreign Trade Volume by 2011 (Million \$)	Total FDI Inflow (Million \$)
1	Mersin Free Zone	1985	412	6,537	3,700	19.5
2	Antalya Free Zone	1985	103	3,328	731	54.1
3	Aegean Free Zone	1987	228	19,057	5,800	666.3
4	İstanbul Atatürk Airport Free Zone	1990	212	892	2,200	13.3
5	Trabzon Free Zone	1990	5	88	90	-
6	İstanbul Thrace Free Zone	1990	245	1,385	1,500	21.2
7	Adana Yumurtalık Free Zone	1992	15	286	265	15.6
8	İstanbul Industry and Trade Free Zone	1992	520	2,929	3,600	25.8
9	Mardin Free Zone	1994	29	19	2.6	-
10	Samsun Free Zone	1995	22	281	118	-
11	Europe Free Zone	1996	146	2,153	2,100	292.4
12	Rize Free Zone	1997	1	-	4.5	-
13	Kayseri Free Zone	1997	85	1,582	701	0,294
14	İzmir Free Zone	1997	187	1,493	365	11.4
15	Gaziantep Free Zone	1998	24	225	112	7.1
16	TÜBİTAK-MAM Free Zone	1999	31	196	2,684	3.8
17	Denizli Free Zone	2000	24	40	67	2
18	Bursa Free Zone	2000	126	8,123	1,600	96.5
19	Kocaeli Free Zone	2000	29	2,920	549	61

**Source:** Ministry of Economy, Directorate General of Free Zones, Overseas Investment and Services

- **Adana-Yumurtalık Free Zone:** The free zone was founded in 1992; however because of the Gulf Crisis it was able to beginning its operations in 1999. The zone was established on 4.500.000 m<sup>2</sup> private land adjacent to Toros Port which is one of the largest privately held ports of Turkey. Besides, there is easy connection to Adana Airport and the railway.

By 2011, there are 15 firms and these firms employ 286 people in Adana Free Zone. The zone has attracted 15.6 million dollars foreign direct investments since 1999. In 2011, the foreign trade volume of Adana Free Zone reached 265 million dollars. Turkey has the biggest share in foreign trade of the zone with 51.1% and it is followed by Saudi Arabia with 23.6%.

- **Aegean Free Zone:** Aegean Free Zone was established in 1987 in İzmir and became operational in 1990. Although the free zone has been founded on 2,200,000 m<sup>2</sup> public land, it is the first Turkish Free Zone to be established and managed by a private sector company, ESBAŞ. Furthermore, the zone is the first production-based modern Free Zone in Turkey.

Aegean Free Zone is the most successful free zone of Turkey in terms of its trade volume, foreign direct investment and employment figures. By 2011, in Aegean Free Zone there are 228 firms and these firms employ 19,057 people, which is highest number of employment among the free zones and accounts for more than 35% of Turkey's total free zone employment. Similarly, the zone has the largest trade volume reaching 5.8 billion dollars in 2011. Aegean Free Zone's main trade partners are the EU (43.3%) and Turkey (36.2%).

Furthermore, Aegean Free Zone has attracted more foreign direct investment than any of the other free zones in Turkey. The zone attracted 130.5 million dollars in 2011 and cumulative FDI inflow has reached 666.3 million dollars since 1990.

- **Antalya Free Zone:** Antalya Free Zone is one of the first examples of free zones in Turkey together with Mersin Free Zone. The zone was established in 1985 on 625,490 m<sup>2</sup> public land and the infrastructure investments have been made by the public authorities; however it has been operated by ASBAŞ, where 66% of its capital belonging to private sector.

The free zone is next to Antalya Port and 12 km away from the city centre and 25 km from the airport. In this respect, Antalya Free Zone's location provides important advantages to the users in the zone.

In Antalya Free Zone there are 103 firms and 3,328 people are employed by 2011. Antalya Free Zone has attracted 54.1 million dollars of FDI since the zone became operational in 1987.

In 2011, total trade volume of the free zone increased to 731 million dollars. In the zone, there is a sectoral concentration on yacht business. The European Union is the main trade partner of Antalya Free Zone with 43.6% share and Germany gets the biggest share within the EU with 29.1%. Turkey is the second major trade partner of the zone with 27.9% share.

- **Bursa Free Zone:** The zone was founded in 2000 on 825,000 m<sup>2</sup> land area and operated by BUSEB.

Bursa Free Zone has geostrategic importance due to its closeness to Bursa city which is one of the industrial metropolises of Turkey and the gate opening to the major ports of the Marmara Sea.

In 2011, 126 firms operate and 8,123 people are employed in the free zone. Cumulative FDI inflow into Bursa Free Zone has reached 96.5 million dollars by 2011. Trade volume of the zone was realized as 1.6 billion dollars. The EU is the major trade partner of the zone with

53.6% share and Germany has the major share within the EU by 18.1%. Turkey is the second biggest trade partner of the zone by 30.3% share.

Production in Bursa Free Zone is concentrated on automotive industry, which accounts more than 80% of exports and employment in the free zone.

- **Denizli Free Zone:** The free zone was established in 2000 on 540,000 m<sup>2</sup> of land area and operated by DENSER. It is close to the Airport and located near the Organized Industrial Area.

There are 24 firms in Denizli Free Zone, employing 40 people by 2011. The free zone could attract only 2 million dollars since the establishment of the zone. In 2011, trade volume of the zone reached 67 million dollars. Turkey is the biggest trade partner of Denizli Free Zone with 58.7% share and it is followed by Turkmenistan (23.8%).

- **Europe Free Zone:** The zone is located on a 2,000,000 m<sup>2</sup> area in Çorlu district of Tekirdağ city, which is one of the important industrial centres of Turkey.

By 2011, 146 firms operate in Europe Free Zone, employing 2,153 people. Europe Free Zone attracted 18.5 million dollars of foreign direct investments and the cumulative FDI inflow to the zone has reached 292.4 million dollars since the establishment of the free zone. Besides, the zone plays an important role in Turkey's foreign trade and trade volume of the zone reached to 2.1 billion dollars in 2011. The EU is the main trade partner of Europe Free Zone by 32.6% share and it is followed by Turkey (31.1%).

- **Gaziantep Free Zone:** Gaziantep Free Zone is founded in 1999. The zone is close to Gaziantep International Airport, İskenderun and Mersin Ports, Öncüpınar and Cilvegözü Board Gates. In addition to its



geographical advantages, the Zone was established in Gaziantep which has an important industrial capacity.

In Gaziantep Free Zone 24 firms operate and these firms employ 225 people. The free zone could attract only 7.1 million dollars of FDI since the establishment of the zone. Trade volume of the free zone was realized as 112 million dollars in 2011. The main trade partners of the Gaziantep Free Zone are Turkey (26.3%), the EU (16.7%), Iran (13.8%) and the USA (11%).

- ***İstanbul Atatürk Airport Free Zone:*** İstanbul Atatürk Airport Free Zone was established in 1990 on 180,000 m<sup>2</sup> of public land. The location of the zone, which is in the intersection of international trade routes, increases the importance of the zone with regard to the development of foreign trade.

There are 212 firms operating in the free zone, which employ 892 people. İstanbul Atatürk Airport Free Zone could attract only 13.3 million dollars FDI since 1990. By 2011, the foreign trade volume of the zone has been realized as 2.2 billion dollars, which is the highest trade volume per square meters among other free zones in Turkey. The biggest trade partners of the zone are Turkey (32.1%) and the EU (30.4%) in which Germany has the major share with 18.4%.

- ***İstanbul Industry and Trade Free Zone:*** The authority to establish and operate İstanbul Trade and Industry Free Zone has been granted to DESBAS and the zone was established on 500,000 m<sup>2</sup> of private land and started its activities in 1994.

In the free zone 2,929 people are employed in 520 firms. In 2011, the zone attracted 8.8 million dollars of foreign direct investments and the amount of cumulative FDI flow into the zone has reached 25.8 million dollars. Although İstanbul Industry and Trade Free Zone is the second largest free zone in terms of trade volume, the volume of trade

decreased from 6 billion dollars in 2008 to 3.6 billion dollars in 2011. Turkey has the biggest share in the zone's foreign trade with 44.3% and it is followed by the EU (29%).

- ***İstanbul Thrace Free Zone:*** Although the zone was established in 1990, it could start its operations in 1998 in İstanbul on 387,500 m<sup>2</sup> of private land. İSBAŞ has taken the authority to found and operate the free zone.

In İstanbul Thrace Free Zone 245 firms operate and the zone created 1,385 jobs in 2011. The free zone has attracted 21.2 million dollars of FDI inflow since the establishment of the zone. In 2011, the trade volume of the zone was realized as 1.5 billion dollars. Turkey is the main trade partner of the zone with 44.8% share and followed by the EU with 22.5%.

- ***İzmir Free Zone:*** The free zone was established in 1994 on 1,760,000 m<sup>2</sup> of land and operated by İDESBAŞ.

By 2011, 187 firms operate in İzmir Free Zone, in which 1,493 people are employed. The zone has attracted 11.4 million dollars of foreign direct investments. In 2011, trade volume of the zone was realized as 356 million dollars. Turkey is the main trade partner of the zone with 46.3% share. The EU has the second largest share in foreign trade of the zone with 17.6%.

İzmir Free Zones is the first leather-oriented free zone in the world, where the industry accounts more than 60% of exports and 80% of employment.

- ***Kayseri Free Zone:*** Kayseri Free Zone was established in 1997 and initiated its operations in 1998. The zone has 6,905,000 m<sup>2</sup> of land area which is the largest free zone area and at the same time has the

lowest cost land in Turkey. Besides, the zone neighbours the Organized Industrial Zone and is at a 15 km distance to the Airport.

In the free zone there are 85 firms, which employ 1,582 people. Kayseri Free Zone was not successful in attracting foreign direct investments as cumulative FDI inflow to the zone has reached only 294 thousand dollars. In 2011, trade volume of the zone reached 701 million dollars. Turkey is the biggest trade partner of the zone with 44.9% and it is followed by the EU (17%) and Russian Federation (14.4%).

- **Kocaeli Free Zone:** The free zone started its activities in 2001 and has been operated by KOSBAŞ. Although the free zone has a land of 798,000 m<sup>2</sup>, investments took place only on 512,000 m<sup>2</sup> of the land.

Kocaeli Free Zone has important geographical advantages since the zone was established in Kocaeli which is the second largest industrial city in Turkey, a crossroad between Europe, Asia, Middle East and Caucasus and located between Marmara and Black Seas.

In the zone, 2,920 people are employed in 29 firms. Foreign direct investment flow into the zone was realized as 7 million dollars and cumulative FDI inflow has reached 61 million dollars.

In 2011, trade volume of the zone was realized as 549 million dollars. Turkey is the major trade partner of the free zone with its 68.3% share. The production in Kocaeli Free Zone is concentrated on vehicle parts and components industry, namely ship building sector.

- **Mardin Free Zone:** Mardin Free Zone was founded in 1994 on 516,000 m<sup>2</sup> of private land owned by MASBAŞ, who is the operator of the zone.

The location of Mardin Free Zone is crucial since it was established within the Mardin Organized Industrial Zone and the only free zone in the South-Eastern Anatolia Project (GAP) region. Its distance to Mardin Airport and International Diyarbakir Airport is 8 and 90 km, respectively. Besides, it is close to Silk Road (Europe - Middle East International Road) and Habur and Nusaybin Border Gates which are the entry points of Turkey and the Europe to the Middle East.

However, Mardin Free Zone is amongst the inefficient free zones in Turkey. There are 29 firms in Mardin Free Zone, in which 19 people are employed. Since its establishment, Mardin Free Zone has not attracted foreign direct investments. Besides, the zone has negligible trade volume amounting to only 2.6 million dollars, half of which was realized with Iraq (46.9%). Iraq is followed by Turkey (45.4%) and Georgia (7.7%).

- **Mersin Free Zone:** Mersin Free Zone is the first free zone which was established in 1985 on 776,000 m<sup>2</sup> of public land, which is adjacent to Mersin Port. The free zone was founded by 11 million dollars state aid and has been operated by MESBAŞ, whose 76% capital belongs to private sector. Since Mersin is the second important port city of Turkey, Mersin Free zone has geostrategic importance in terms of entering the foreign markets.

By 2011, in Mersin Free Zone there are 412 firms and these firms employ 6,537 people. Mersin Free Zone has attracted 19.5 million dollars of FDI since the establishment of the zone.

In the same year, the foreign trade volume of Mersin Free Zone reached 3.7 billion dollars, which has been the highest trade volume since the establishment of the zone. There exists a concentration on textile manufacturing industry in the free zone, where more than half of the manufacturing firms operate in the textile industry. Turkey is

the main trade partner of the zone with 29.7% share of the trade volume followed by the EU (17.4%) and Iraq (9.4%).

- **Rize Free Zone:** The Free Zone is not an active free zone since there is only 1 firm by 2011. Besides, Rize Free Zone has not attracted any foreign direct investment since the zone became operational.

The zone has the second smallest trade volume with 4.5 million dollars. Turkey is the main trade partner of the zone with its 53.7% share and it is followed by Azerbaijan (25.3%), Iran (11.1%) and Georgia (9.9%).

- **Samsun Free Zone:** The free zone was established in 1995 and became operational in 1998 by SASBAŞ on 73,150 m<sup>2</sup> of land. Samsun Free Zone, which has easy access to ports, international airports and highways, has a significant advantage regarding its location.

By 2011, 281 people are employed in Samsun Free Zone in 22 firms. Samsun Free Zone has not attracted any FDI inflow since the establishment of the zone. Following the peak in its trade volume in 2008, the free zone's trade volume decreased and it was realized as 118 million dollars in 2011. More than half of the trade of the zone was made with Turkey. Russia Federation has the second biggest share in foreign trade of the zone with 23.5%.

- **Trabzon Free Zone:** Trabzon Free Zone was founded in 1990 and operated by TRANSBAŞ whose 96% of capital is foreign. It is located on 38,000 m<sup>2</sup> of public land within Trabzon Port.

In the zone, there are 5 firms that employ 88 people by 2011. Trabzon Free Zone has not attracted any FDI flow since the establishment of the zone. In 2011, trade volume of the free zone reached 90 million dollars by 86% compared to previous year. Russian

Federation is the main trade partner of Trabzon Free Zone with 39.8% share. As a positive indicator, Turkey's share has remained at 4.1% in trade volume of the zone.

- **TÜBİTAK – MAM Free Zone:** TÜBİTAK-MAM Free Zone is the newest free zone which was founded in 1999 and became operational in 2002. TÜBİTAK-MAM Free Zone has been designated as 'Technology Development Free Zone'. In this regard, the zone has a different position among other free zones since it is the first technology park in Turkey and mainly concentrates on research and development activities and thus may be called as a specialized free zone.

In TÜBİTAK-MAM Free Zone there are 31 firms, which employ 2,684 people. Besides, the zone has attracted only 3.8 million dollars of foreign direct investments since the zone became operational. In 2011, the free zone's trade volume remained at 196 million dollars. Main trade partners of the zone are Turkey (68.3%), the EU (14.9) and the USA (9.7%),

### **III-3. Economic Impacts of Free Zones in Turkey**

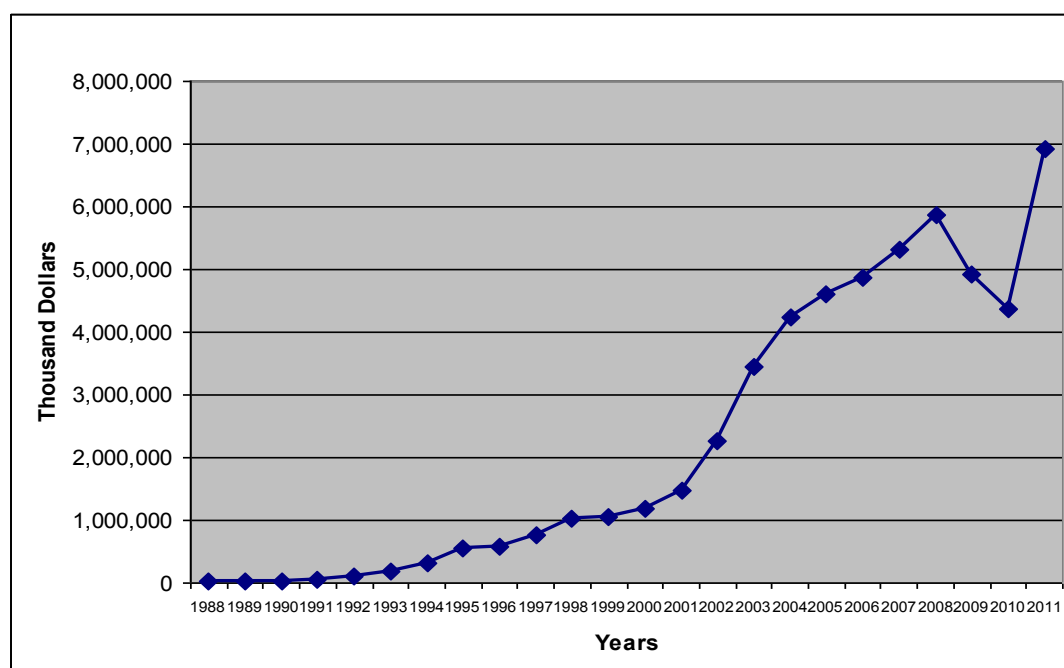
This research explores economic impacts of free zones especially in terms of establishment objectives in the context of the Free Zones Law. In this part of the study, effects of free zones on directing enterprises to export; promoting export-oriented investment and production; attracting foreign direct investment; and transferring technology are analyzed based on descriptive data. Besides, in the literature, effects of free zones on employment, sectoral concentration and government budget are considered as important indicators to determine the success of free zones. In this regard, in addition to objectives of free zones stated in the Law, impacts of Turkish zones on creating employment, sectoral concentration and government budget are examined. However, indirect and induced effects of free zones, including transfer of technology, skills

improvement, indirect employment creation and regional development in host country are not explored.

### III-3a. Impacts of Free Zones on Exports

In Turkey, Free Zones Law settled export-oriented policies as one of the primary objectives of establishment of free zones and the zones have been founded in order to increase exports of the country by directing firms to exports and increasing export oriented production and investments.

In this respect, figures related to the free zones point out that there has been an increasing trend in foreign exports of free zones since 1987, when the first free zones of Turkey became operational. As it is indicated in Graph 1, in 2011 exports of free zones reached the peak point and became 6.9 billion dollars (which amounts to 5.1% of Turkey's exports). Thereby, between 1987-2011 period, free zones' exports to third countries reached 54.1 billion dollars.



**Graph 1. Exports of Free Zones to Third Countries**

**Source:** Ministry of Economy

When the outflow from free zones to third countries and Turkey is compared based on the statistics presented in Table 3 and Graph 1, it is proven that free zones' impact on increasing export performance of firms and the success of free zones in promoting export-oriented production remained limited. Despite the objective of free zones to direct enterprises to export; main destination of sales of free zone firms became Turkey. As the main trade partner of the free zones, Turkey's share in the zones' total outflow amounting to 138 billion dollars became 60.8%. Only 39.2% of free zones' sales have been made to foreign countries in 1988-2011 period. Besides, during the same period, free zones imported goods amounting to 86.4 billion dollars from third countries and sold these imported goods mainly to Turkey. The high volume of free zones' sales to domestic economy can be explained through free zones' ex-establishment objective which envisages "providing cheap and continuous input supply to domestic economy". This objective was valid between 1985-2008 periods and was removed from the Law on Free Zones in 2008. Although the objective was removed from the Law, existing firms serving this purpose lead to continue sales to Turkey.



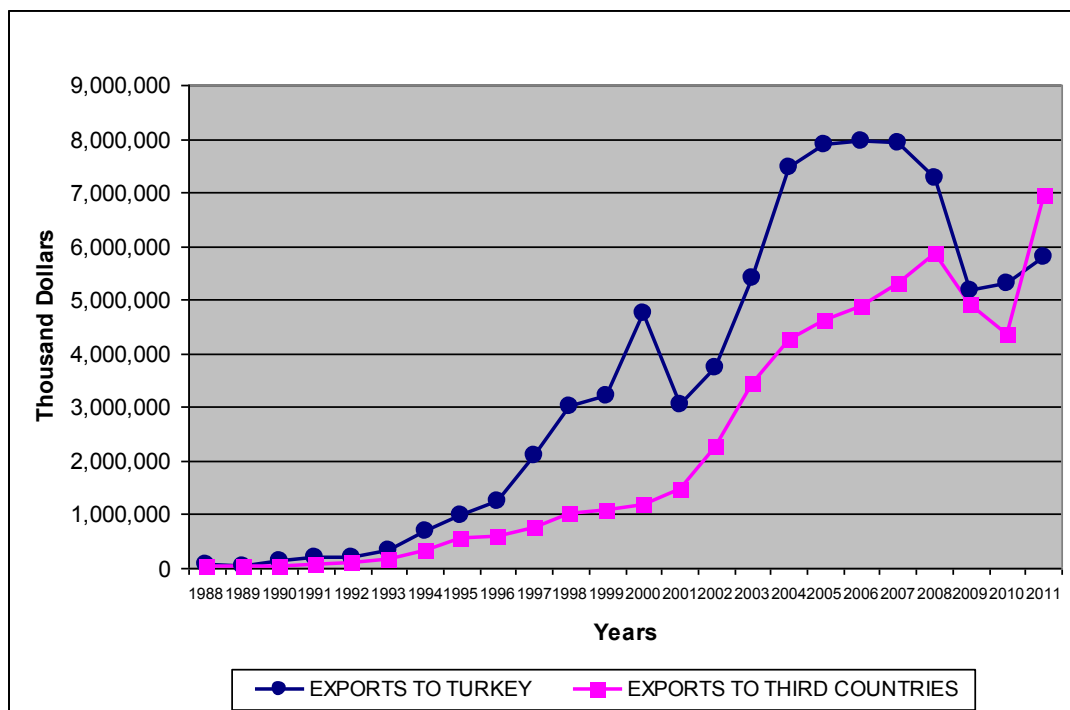
**Table 3. Trade Flow of Free Zones in Turkey (Thousand Dollars)**

	<b>IMPORTS FROM TURKEY</b>	<b>EXPORTS TO TURKEY</b>	<b>IMPORTS FROM THIRD COUNTRIES</b>	<b>EXPORTS TO THIRD COUNTRIES</b>	<b>TOTAL</b>
<b>1988</b>	42,908	53,955	35,607	21,298	153,768
<b>1989</b>	18,769	37,664	67,359	28,673	152,465
<b>1990</b>	50,909	118,632	91,009	21,559	282,109
<b>1991</b>	126,856	181,847	122,364	60,140	491,207
<b>1992</b>	136,243	209,906	186,517	94,902	627,568
<b>1993</b>	215,760	333,914	293,375	177,860	1,020,910
<b>1994</b>	492,320	702,030	442,718	321,685	1,958,752
<b>1995</b>	545,439	968,989	902,017	543,184	2,959,629
<b>1996</b>	584,217	1,243,558	1,230,079	576,367	3,634,221
<b>1997</b>	683,828	2,088,847	1,973,956	761,243	5,507,874
<b>1998</b>	875,643	3,004,772	2,815,572	1,021,777	7,717,764
<b>1999</b>	854,466	3,194,413	2,773,872	1,063,809	7,886,560
<b>2000</b>	982,807	4,748,017	4,396,052	1,173,717	11,300,593
<b>2001</b>	1,086,187	3,059,660	2,713,213	1,472,186	8,331,246
<b>2002</b>	1,527,505	3,729,278	3,588,796	2,257,017	11,102,596
<b>2003</b>	2,118,701	5,406,460	5,637,677	3,445,228	16,608,066
<b>2004</b>	2,882,293	7,464,590	7,520,326	4,243,193	22,110,402
<b>2005</b>	3,160,497	7,888,097	7,703,962	4,610,270	23,362,826
<b>2006</b>	3,071,081	7,939,017	7,951,048	4,862,882	23,824,029
<b>2007</b>	3,045,262	7,916,873	8,299,939	5,311,371	24,573,445
<b>2008</b>	3,194,849	7,262,124	8,247,524	5,873,559	24,578,055
<b>2009</b>	2,176,871	5,173,528	5,492,960	4,913,524	17,756,883
<b>2010</b>	2,294,777	5,291,189	6,625,524	4,360,716	18,572,206
<b>2011</b>	2,668,180	5,800,743	7,252,802	6,924,450	22,646,175
<b>TOTAL</b>	32,836,368	83,818,104	86,364,266	54,140,612	257,159,350

**Source:** Ministry of Economy

Following the removal of the abovementioned objective, policy-makers made important regulations to reduce domestic sales by promoting exports. In this context, wages of labours employed by the producers are exempted from income tax but only for firms which export more than 85% of the FOB value of the commodities they produce in the zones. Afterwards, following the amendment in Law on Free Zones in 13 January 2010; while special account fee collected for goods brought into the Zone from abroad is decreased from 0.5% to 0.1%, for goods sent to Turkey is increased from 0.5% to 0.9%.

Following these amendments, as it is seen in Graph 2, in 2011 free zones' exports to third countries exceeded its sales to Turkey for the first time since the foundation of the free zones and more than half of the sales of free zone firms have been made to foreign countries. Thus, the positive contribution of the amendment was recognized as the share of free zones' exports reached 54.4% in total sales of the zones.



**Graph 2. Comparison of Firms Sales to Turkey and Third Countries**

**Source:** Ministry of Economy

In case free zones are considered as a part of Turkish customs border, positive conclusions of the zones on the net exports of Turkey become clear. In this respect, in order to insert free zones' exports to and imports from third countries in the calculation of Turkey's foreign trade statistics correctly, a calculation was made based on four assumptions:

- Free zones' exports to third countries were added to exports of Turkey,
- Free zones' imports from third countries were added to imports of Turkey,
- In order to prevent double counting, inflow from Turkey to free zones, which is actually a part of Turkey's exports, was subtracted from exports of Turkey and
- Outflow of free zones to Turkey, which is actually a part of Turkey's imports, was subtracted from imports of Turkey.

**Table 4. Exports and Imports of Turkey Taking Free Zones into Account (Thousand Dollars)**

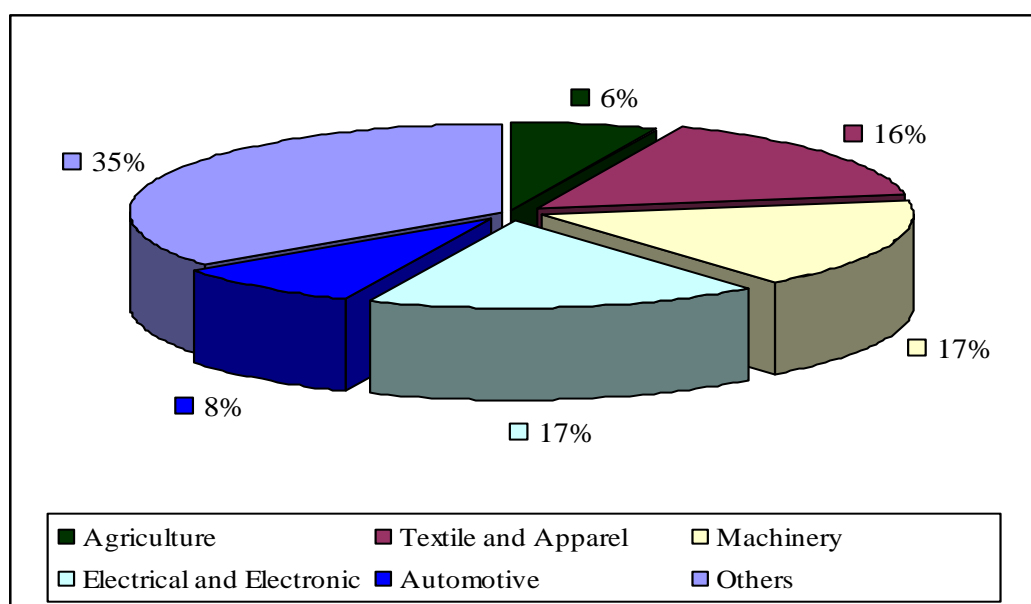
	2007	2008	2009	2010	2011
<b>Exports of Turkey</b>	107,271,750	132,027,196	102,142,613	113,883,219	134,906,870
<b>Exports of Turkey in case Free Zones are Included</b>	109,537,859	134,705,906	104,879,266	115,949,158	139,163,140
<b>Imports of Turkey</b>	170,062,715	201,963,574	140,928,421	185,544,332	240,841,680
<b>Imports of Turkey in case Free Zones are Included</b>	170,445,781	202,948,974	141,247,853	186,878,667	242,293,739
<b>Net Exports of Turkey</b>	-62,790,965	-69,936,378	-38,785,809	-71,661,113	-105,934,810
<b>Net Exports of Turkey in case Free Zones are Included</b>	-60,907,922	-68,243,068	-36,368,588	-70,929,509	-103,130,599

**Source:** Ministry of Economy

Accordingly, as it is seen in Table 4 which was prepared based on abovementioned assumptions, since export generation effect of free zones outperform the increase in imports, net exports of Turkey raise.

All in all, although free zones have served as a tool to supply raw-materials and intermediate goods necessary for the production of goods in Turkey rather than increasing exports in the 1985-2008 period; following the amendments in the Law in recent years, exports to foreign countries exceeded the sales to domestic market by 2011.

As for the sectoral composition of free zones' exports, as it is seen in Graph 4, technology intensive products get the main share in exports by 2011. Compared to Turkey, while the share of agricultural goods and textile and apparel products in free zones' exports are at a low level, the share of machinery, electrical and electronic and automotive industry products constitutes an important part of exports of free zone firms. The main export items of free zones are machinery products (17%) and electrical and electronic products (17%), while these sectors take only 8.6% and 6.6% share of Turkish exports respectively.



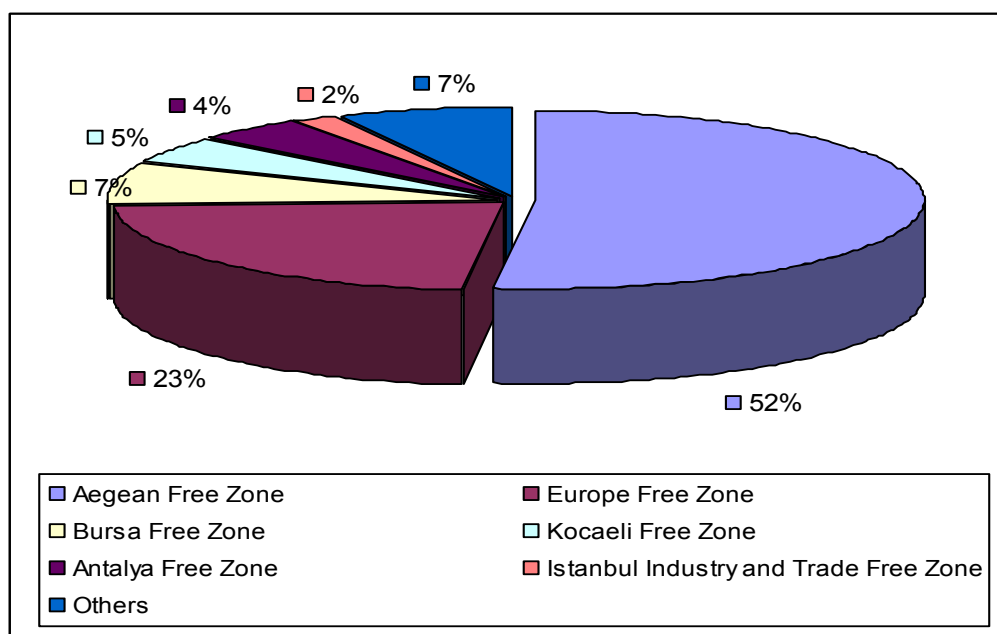
**Graph 3. Exports of Free Zones to Third Countries–Sectoral Breakdown**

*Source: Ministry of Economy*

### III-3b. Impacts of Free Zones on Foreign Direct Investments

Attracting foreign direct investments is one of the primary objectives of free zones due to their potential contributions to integrate domestic firms into global economy via linkages to a wider global market; increase competition; introduce high level technology; facilitate spillover effects through transfer of technology and know-how; generate foreign exchange earnings; and create new job opportunities.

By 2011, the share of foreign or foreign partnership firms in free zones is about 20%. While roughly 30,000 foreign-capital firms operate in Turkey, almost 500 of these firms operate in free zones. In this regard, while Turkey attracted 15.8 billion dollars of foreign direct investments in 2011, the share of free zones in Turkey's FDI inflow became 1.1% by 181 million dollars. Accordingly, cumulative foreign direct investments in free zones reached 1.3 billion dollars in 1988-2011 period.



**Graph 4. Each Free Zone's Share in Total FDI Inflow to Free Zones**

**Source:** Ministry of Economy

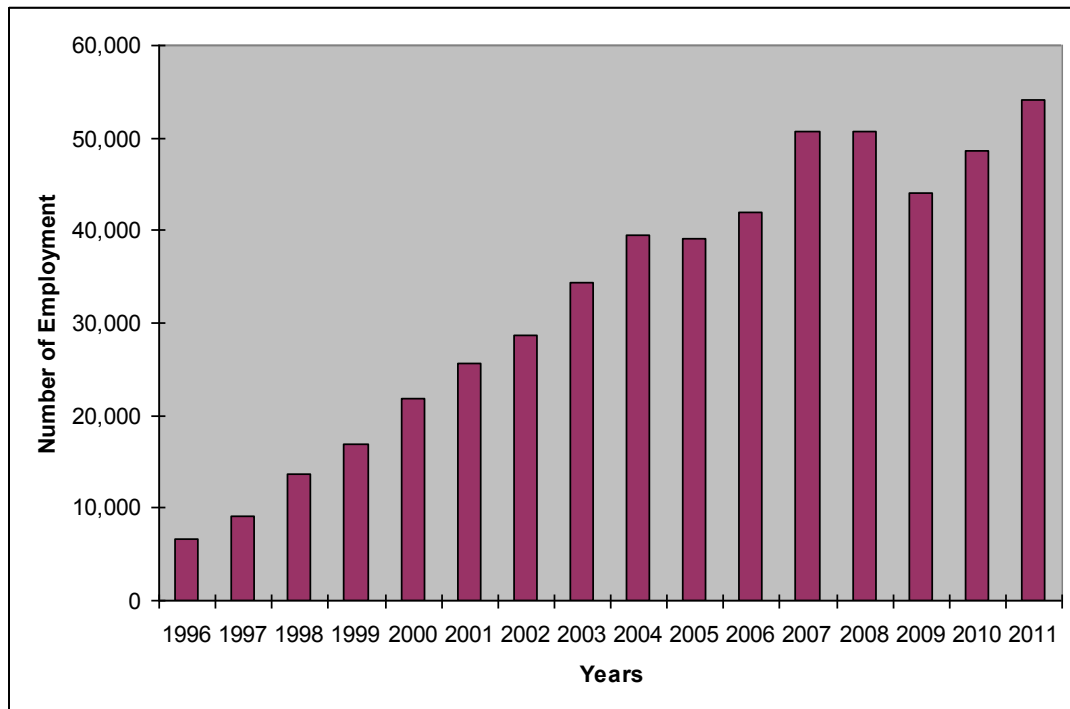
When the foreign direct investments in free zones are examined in detail, it comes out that investment of foreign companies concentrates in

certain free zones. As it is shown in Graph 3, Aegean Free Zone attracts more than half of the foreign direct investments in free zones. Furthermore, Aegean, Europe and Bursa Free Zones account for more than 80% of foreign direct investments attracted by 19 Turkish free zones. This could be interpreted as that rather than free zones and facilities provided in free zones, the features of regions in which free zones have been established attract foreign direct investments.

### **III-3c. Impacts of Free Zones on Employment**

Although employment generation is not stated amongst the establishment objectives of free zones, they have potential to increase employment opportunities in the country.

As it is mentioned in the previous parts, free zones create new job opportunities through attracting foreign direct investments and promoting manufacturing activities. As it is seen in Graph 5, since 1996, employment figures in the free zones have indicated an upward trend except for 2009, when the global economic crisis had resulted in a fall in production and employment. Besides, an amendment in Free Zones Law in 2008 affected the decrease in employment in 2009. While the wages of workers employed by users were exempted from income tax, by the amendment, only the wages of workers employed by the users that export at least 85% of the FOB value of the goods they produce in the free zones came to be exempted from income tax in 2008. Although this amendment aims to promote export oriented production in free zones, which is one of the main objectives of free zones stated in the Law, it has repercussions on employment rate of free zone firms.



**Graph 5. Employment in Free Zones**

**Source:** Ministry of Economy

According to the data of Turkish Statistics Institute, 23,678 thousand people are employed in Turkey while 2,576 thousand people are unemployed by 2011. By the same year, free zones employed 54,022 people and could make limited contribution to mitigate unemployment problem in Turkey. Besides, the percentage of foreigners in free zones was remained at 0.55% by 296 foreign employees. Furthermore, more than half of these foreign employees (54%) are high-level officials and most of the remaining employees are employed as office staff. Only in TÜBİTAK-MAM Free Zone, while two of the foreigners are high-level officials and one of them is office staff, remaining 28 employees are employed as skilled worker. On the other hand, there are no foreign unskilled worker in the free zones except for Aegean Free Zone, where the employees are not classified as skilled or not.

In addition to direct employment effect, free zones have potential to affect employment indirectly by increasing job opportunities in domestic economy through backward linkages established between firms in free

zones and home country. However, because of the lack of data and difficulties in measuring indirect and induced employment effects, total employment creation impact of free zones could not be estimated.

### **III-3d. Impacts of Free Zones on Sectoral Clustering**

Sectoral concentrations, which emerge through clustering of firms in certain sectors in delimited areas, provide firms with several advantages. These clusters present significant benefits by bringing together skilled labour, customers, competing and supplier companies. Thus, sectoral concentrations provide better access to employees and suppliers and enhance specialization and productivity. In this respect, existence of lots of firms producing similar products or using common inputs provides to decrease long-run costs through increasing productivity. Furthermore, clustering of multinational and domestic firms strengthen abovementioned advantages further through facilitating information and technology spillovers (Aggarwal, 2010)

In Turkey, free zones provide firms the opportunity to cluster in certain sectors. Within this context, some free zones appear as successful examples of sectoral concentrations in Turkey, like yacht industry (65% of all manufacturers in the zone) in Antalya Free Zone; automotive industry (52%) in Bursa Free Zone; vehicle parts and components industry (16%) and textile industry (15%) in Aegean Free Zone; electrical and electronic equipment industry (32%) and vehicle parts and components industry (16%) in İstanbul Industry and Trade Free Zone; leather industry (75%) in İzmir Free Zone; iron and steel industry (36%) in Kayseri Free Zone; vehicle parts and components industry (100%) in Kocaeli Free Zone; and textile industry (59%) in Mersin Free Zone.



### **III-3e. Impacts of Free Zones on Government Budget<sup>4</sup>**

Establishment and operation of free zones require investments of either government or private sector. In Turkey, especially at the beginning, free zones were founded by public-public model, which envisages infrastructure investments to be undertaken by public authorities and operations to be conducted through an incorporation established by the state. However, in the following period, free zones were founded and operated by private entities based on build-operate-transfer and build-operate model. As the number of free zones founded and operated by private sector increased, the burden on government budget has decreased. Since the foundation of free zones, while private sector has invested 434.8 million dollars for the establishment and operation of free zones, public investments in the zones have remained at 31.9 million dollars by 2011.

On the other hand, free zones provide tax exemptions for firms operating in the zones, and no customs duty is applied on the third country originated goods at the entrance into the free zones. Although these forgone tax and tariff revenues, in addition to expenditures for investments on the foundation and operation of free zones, may be considered as public expenditures; they could stimulate private sector investments, and thus could have positive contributions on both government revenues and economy of the country. Nevertheless, since it is difficult to measure the stimulation effect of expenditures, net effects of public expenditures of free zones on government budget are uncertain.

Despite the fact that free zones can be considered as a cost element due to public investments and forgone tariffs and taxes, they contribute to government budget through various revenue items. These include fees to be collected in applications submitted to the Zone Directorates in

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<sup>4</sup> The data on government income from free zones was taken from restricted fact sheet of Ministry of Economy, Directorate General of Free Zones, Overseas Investment and Services.

order to obtain Operating License, Open Area Use Permit and Warehouse Use Permit; the entire amount of the rent revenue of buildings and lands rented by Zone Directorates to users, fees to be collected for the granting of annual Entry Permits; special account fee collected for goods brought into the Zone from abroad and for goods sent to Turkey; profit shares received from operators' annual net profits; and special account fee collected on the revenues arising from the activities of banks and insurance companies.

In the 1986-2011 period, total revenue generated from abovementioned revenue items of free zones has reached 1,069 million dollars. The main sources of revenues are special account fees collected for goods brought into the Zone from abroad and for goods sent to Turkey (833.9 million dollars); rent revenues (113.3 million dollars); application fees for Operating License, Open Area Use Permit and Warehouse Use Permit (49.8 million dollars); and profit share received from operators (18.4 million dollars).

Accordingly, measured cost-revenue impacts of free zones on government budget prove that zones have positive net effect with 1,069 million dollars revenue as opposed to 31.9 million dollars expenditure.

## **CHAPTER IV**

### **QUESTIONNAIRE STUDY REGARDING THE PERCEPTION OF THE TURKISH FREE ZONE USERS ON THE SUCCESS OF FREE ZONES**

#### **IV-1. Purpose and Importance of the Research**

In Turkey, following the proliferation of free zones in different regions, the economic impacts of the zones have been analyzed in various studies. However, because of the constraints regarding the data collection and difficulties to make research by taking into account all of the 19 free zones operating in Turkey, there is limited number of studies examining the efficiency and economic impacts of the free zones. Indeed, most of these studies examining economic impacts of free zones are based on field research on a specific free zone which was chosen as the sample, rather than including all free zones. Other studies analyzing the economic impacts of free zones in Turkey are based on descriptive and theoretical analysis without field research. Furthermore, in the literature there is no study researching economic impacts and efficiency of free zones in terms of the free zones' establishment objectives which are specified in the Law on Free Zones.

In this context, the purpose of this questionnaire is to explore economic impacts of free zones and the free zone users' perceptions on the success of free zones by assessing "to what extent the establishment objectives of the free zones in Turkey have been realized".

Accordingly, this research is important to put forth the current situation in free zones, to determine whether views of the firms operating in free zones correspond with theoretical information and to fill the gap in the literature by exploring economic impacts of all 19 free zones in terms of objectives stated in the aforementioned Law. Besides, considering Turkey's current political and economic conjuncture, where efficiency and

future of the free zones are discussed, the conclusions of the study would be practical and beneficial both for policy-makers and economic operators. Furthermore, results of the study would be a guide for potential investors of the free zones in Turkey by setting forth the current and actual situation in the eyes of firms operating in the zones.

#### **IV-2. Methodology of the Research**

This study is an exploratory research which covers all active free zones in Turkey. In the context of this research, a questionnaire study was conducted with firms operating in 19 free zones in Turkey. The target group of the questionnaire is free zones' all users, which have Production, Purchasing & Selling, and Research & Development operating licences. Although the number of firms in the target group cannot be calculated exactly since Free Zone Directorates take the number of operating licences as basis rather than number of firms in their classifications; it is estimated that there are around 1050 firms in the target group (actively operating firms which have Production, Purchasing & Selling, and Research and Development operating licence) of the study.

Since there is no access to the exact list of target population and there is time limitation to complete the study, the questionnaire (Appendix I) was sent to free zone firms via Free Zone Directorates. Accordingly, the study used a sample where firms have to self select to respond to the questionnaire. In this respect, the results of the questionnaire should be evaluated taken into account the fact that the questionnaire study based on a self-selected sample.

Since the questionnaire was sent all firms in free zones, pilot study was not conducted. In this respect, with a view to eliminate possible deficiencies of non-application of pilot study, staff of the Ministry of Economy Directorate General of Free Zones, Overseas Investments and Services was consulted in each phase of preparation of the

questionnaire. Besides, the draft questionnaire study was sent to Mersin Free Zone Directorate and necessary amendments were done by taking into account the opinion and suggestions of the Zone Directorate's staff.

The limits of the questions in the questionnaire study are determined by the Law on Free Zones. In this regard, questions in the study focused on analyzing the perception of firms on free zones' success in directing enterprises to export and export-oriented production; attracting foreign direct investment; and transferring technology. On the other hand, in order to increase the rate of participation of the firms to the study, the number of questions was kept limited to eighteen. Besides, especially by taking into account the recommendations of the staff of abovementioned institutions responsible for free zones, the questions included in the survey was tried to be made as simple and understandable as possible that all firms could be able to respond easily.

The questionnaire sent to all Free Zone Directorates by e-mail, in which it was asked for delivering the forms to firms operating in their free zones. Besides, the questionnaire was requested by the firms' higher level officials, who have the control over their firms' all operational activities.

The questionnaire study was conducted between 13 and 24 August 2012 and 154 firms participated in survey. Accordingly, approximately 14.7% of target group responded to the questionnaire. Since the firms' identities are confidential, it could not be possible to examine characteristics of firms which did not participate in the survey. On the other hand, as there is no actively operating firm in Mardin Free Zone and it could not be contacted with two firms which are actively operating in Trabzon Free Zone during the aforementioned period; there is no participation from these zones in the survey. Furthermore, the number of firms participated in the survey per each free zones does not show perfect similarity to the distribution of firms in free zones. While participation of firms operating in İstanbul Industry and Trade, Aegean,

İstanbul Atatürk Airport Free Zones remained limited, rate of return of firms operating in Mersin Free Zone was realized very high compared to returns from other free zones. Therefore, with a view to avoid misinterpretation of the results of the study, all questions are examined again by excluding Mersin Free Zone and the results are compared. Although differences are noticed in very few questions, these differences are stated in the interpretation of the question.

### **IV-3. Results of the Research**

The responses given in the questionnaire were examined by using SPSS program. Within this context, reliability analysis and chi-square test of independence were performed in addition to basic tables and graphs which are presenting frequency distributions.

Chi-square test of independence is used to determine whether there is an association between categorical variables. In this regard, it analyzes the difference between the given phenomena's observed value and expected value. Accordingly, firstly hypothesis is set up as null hypothesis (assumes that there is no significant difference between the observed and the expected value) and alternative hypothesis (there is a significant difference between the observed and the expected value). Afterwards, chi-square statistics is calculated by using the following formula:

$$\chi^2 = \sum \frac{(\text{Observed Value} - \text{Expected Value})^2}{\text{Expected Value}}$$

The computed value of chi-square independence test is compared with the table value for the given degrees of freedom. If the value of chi-square test is greater than the table value (for 0.05 probability level), the null hypothesis is rejected and alternative hypothesis is accepted that there is a significant difference between the observed and the

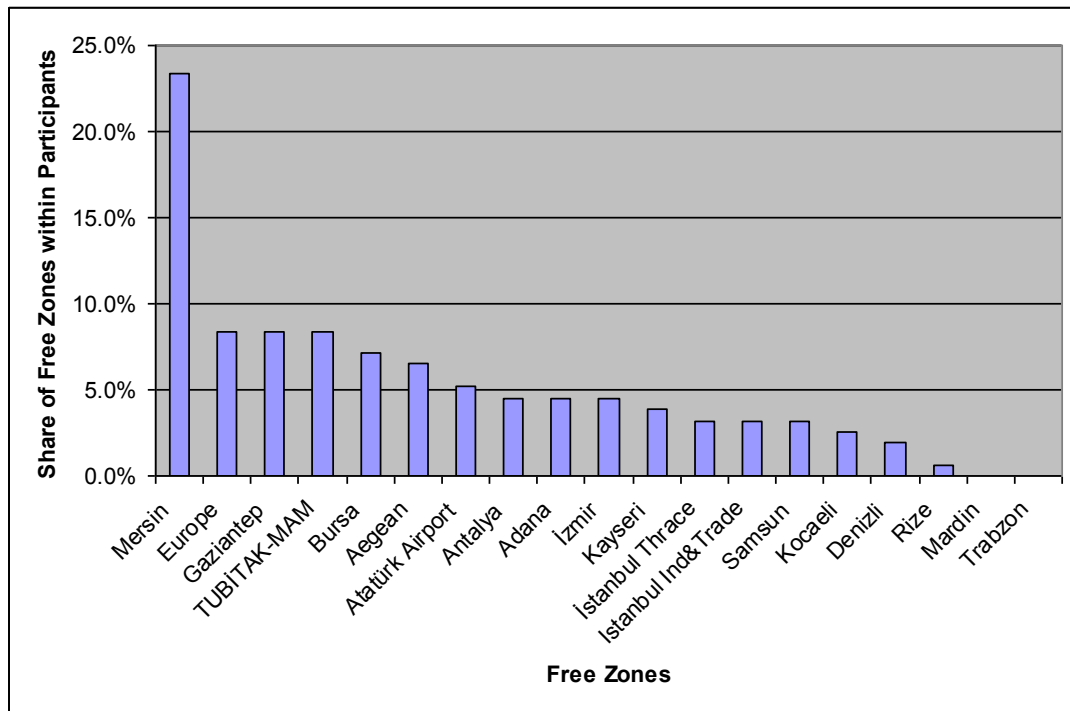
expected frequency or there is a significant association between tested two categorical variables.

As it is mentioned above, since the study used a self-selected sample, the results of the questionnaire, including the results of chi square test of independence, should be evaluated taken into account difficulties faced in sampling method.

#### **IV-3a. General Characteristics of Firms Participated in the Questionnaire Study**

First 14 questions of the questionnaire study aim to provide general information regarding the firms operating in free zones.

As it is seen in Graph 6, firms participated in the survey are mainly originated in Mersin Free Zone with 23.4%. Mersin is followed by Europe, TUBİTAK-MAM and Gaziantep Free Zones with 8.4%, Bursa Free Zone (7.1%) and Aegean Free Zone (6.5%). As it mentioned above, the share of free zones in the number of firms participated in the survey does not show perfect similarity to the distribution of firms in free zones as the participation of firms operating in İstanbul Industry and Trade, Aegean, İstanbul Atatürk Airport Free Zones remained limited.

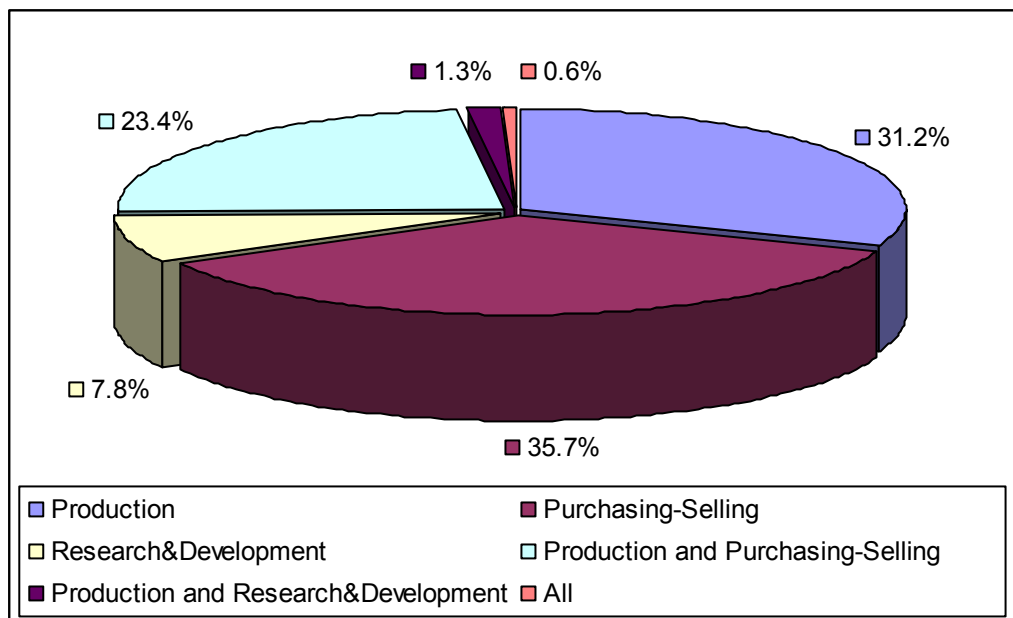


**Graph 6. Distribution of Free Zones of Firms Participated in the Survey**

The date of the beginning of operations of the firms participated in the questionnaire was classified as before and after 06/02/2004 and the number of firms which has begun their operations before (50.3%) and after (49.7%) 06/02/2004 are almost equal. However, it should be noted that this distribution was affected from high participation rate of firms in the questionnaire from Mersin Free Zone. As the oldest free zone of Turkey, 65% of respondent firms operating in Mersin Free Zone began their operations before 06/02/2004; while less than half of the respondent firms (45.7%) began their operations before this date. The importance of the date stems from tax advantages provided for firms operating in free zones. Although the income and corporate tax exemption for free zone users that have 'operating licence' before 06/02/2004 continues during the validity period of the operating licence; the free zone users that obtained operating licence after 06/02/2004 do not enjoy income or corporate tax exemption. This situation would potentially affect firms' perceptions on success of free zones in export promotion through tax incentives provided in the zones.



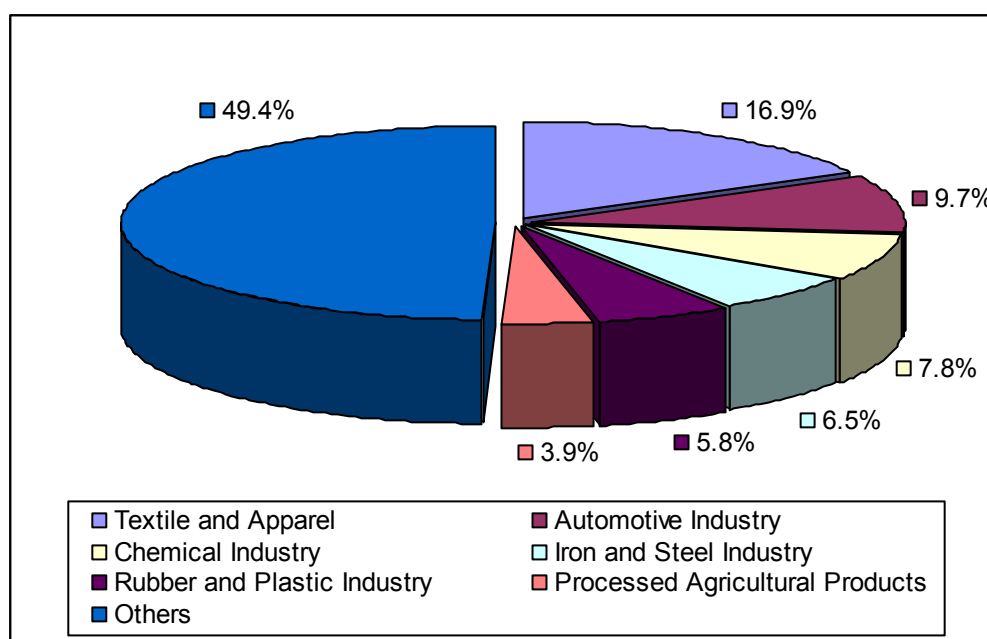
Similarly, type of operating licences is likely to have an effect on insight of firms. Since promoting export oriented production is one of the primary objectives of free zones in Turkey, incentives for firms having Production Operating Licence are more attractive than other types of operating licences. As it is seen in Graph 7, the share of firms having Production Licence is about 56% in total, while the share of firms have only Purchasing-Selling Operating Licence remain 35.7%. Firms which have Research & Development Operating Licence (7.8%) centre in TÜBİTAK-MAM Free Zone, which is the first technology park in Turkey and mainly concentrates on research and development activities.



**Graph 7. Type of Operating Licences**

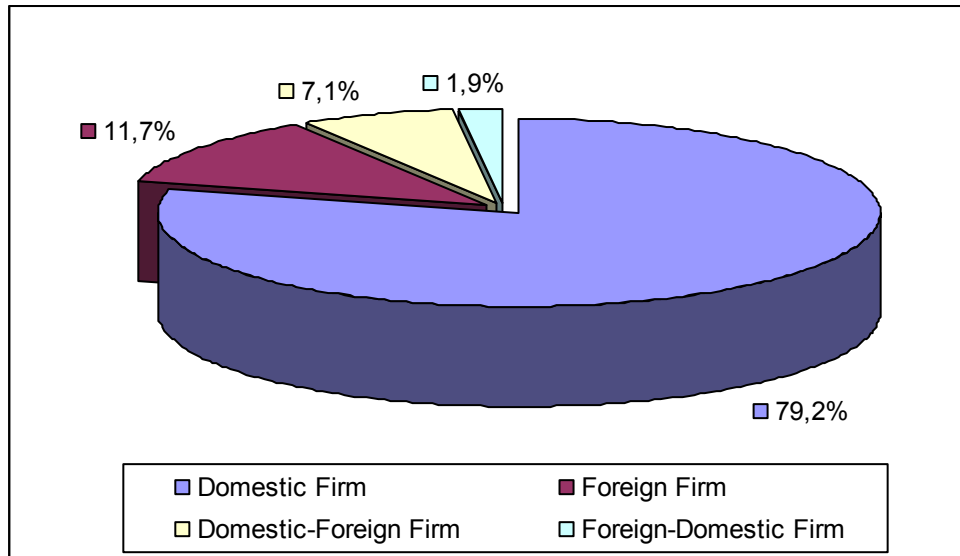
On the other hand, free zone users' status (investor or tenant) would have impacts on the viewpoint of firms. As investor firms' operating licences' validity periods are much longer than the tenant firms, investors' expectations and evaluations may differ from tenant firms. The ratio of respondent investor and tenant firms are about 56.5% and 43.5% respectively and it has equal proportion with distribution of these firms in Turkish free zones.

As for sectoral breakdown, sectoral classification of Ministry of Economy was used as a base in the questionnaire. As it is seen in Graph 8, respondent firms mainly operate in textile and apparel (16.9%) and automotive industry (9.7%). They are followed by chemical (7.8%), iron and steel (6.5%), rubber and plastic (5.8%) and processed agricultural products (3.9%) industries. On the other hand, as it was not included among the sectors section, more than 5% of the firms defined their sectors as yacht industry by checking 'the others' box.



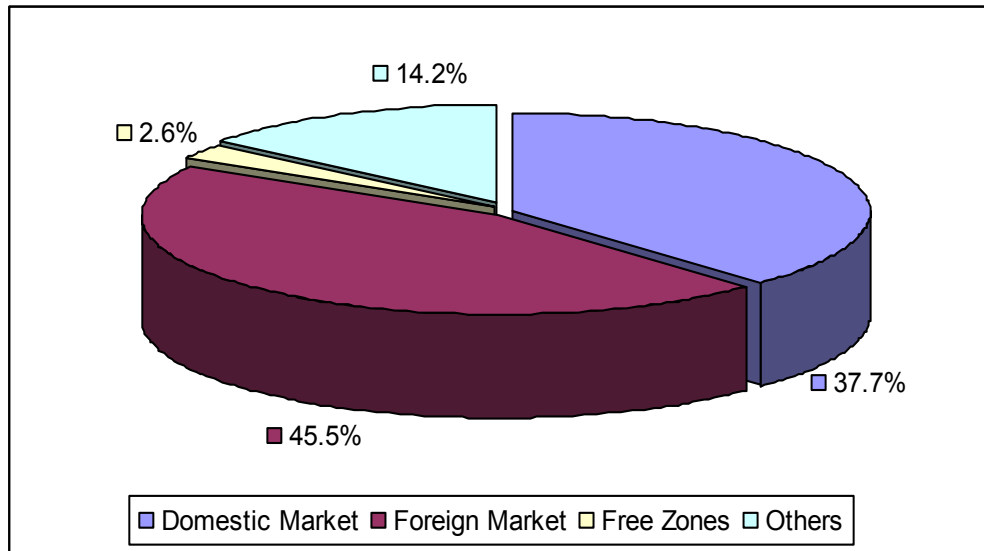
**Graph 8. Sectoral Distribution of Respondent Firms**

Although attracting foreign direct investment is one of the main objectives of free zones, share of foreign-capital firms remained limited in free zones. As it is indicated in Graph 9, almost 80% of firms participated in the questionnaire are domestic firms and the share of foreign-capital invested firms is about 20%, which is same with the actual share of foreign/foreign partnership firms in total firms operating in free zones. While 11.7% of these firms are purely foreign firms, 7.1% of them are domestic-foreign partnership with predominant domestic capital and only 1.9% of them are foreign-domestic partnership with predominant foreign capital.



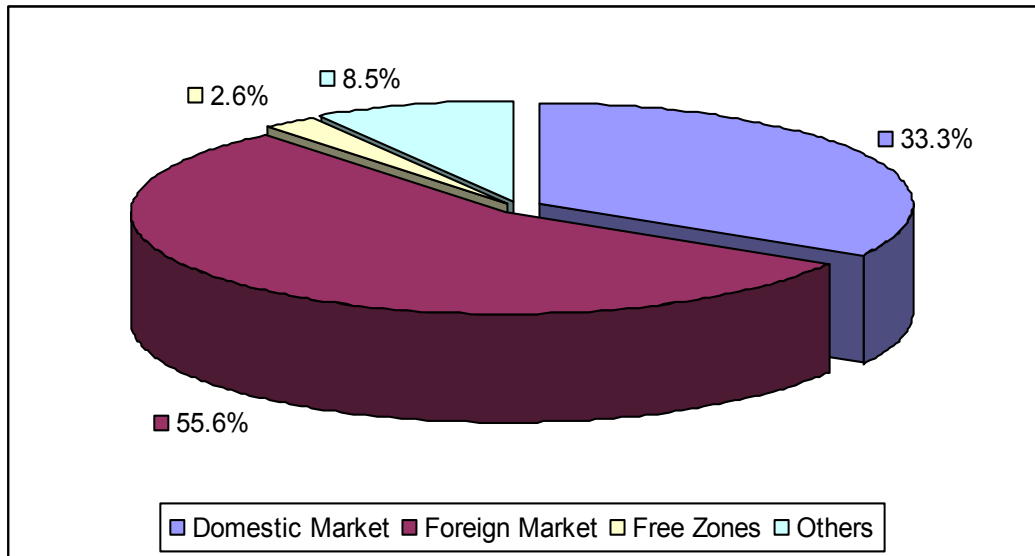
**Graph 9. Ownership Status of Respondent Firms**

In general, firms operating in Turkish free zones meet their input needs from third countries through importation. Although domestic sales to free zone firms increase the economic effects of the free zones for the home country, firms operating in free zones prefer mainly to import their inputs from foreign markets. As it is shown in Graph 10, the proportion of firms which are providing their inputs mainly from domestic market (37.7%) remained low relative to firms which are supplying their inputs primarily from foreign market (45.5%). Besides, a small number of respondent firms (2.9%) meet their required inputs mostly from free zones.



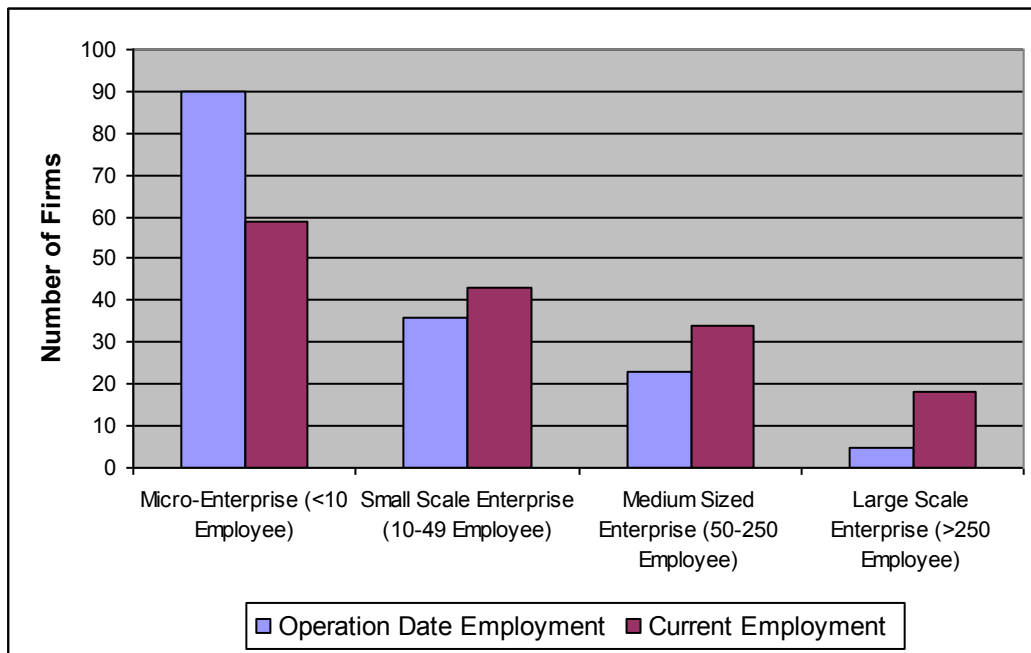
**Graph 10. The Source of Input Need of Free Zone Firms**

As regards the sales of firms operating in free zones, despite the objective of free zones to direct enterprises to export; main destination of these firms' sales are Turkey. Nevertheless, as it is mentioned in the previous chapter, in 2011 free zones' exports to third countries exceeded its sales to Turkey and more than half of the sales of free zone firms have been made to foreign countries for the first time since the foundation of the free zones. Following a similar trend, as it is seen in Graph 11, 55.6% of the respondent firms' main export destinations are foreign countries. On the other hand, it should be noted that one of the establishment objectives of free zones was "to provide cheap and continuous input supply to domestic economy" between 1985-2008 period. In this regard, although the objective was removed from the Law on Free Zones in 2008, existence of firms which serve this purpose lead to continue sales to Turkey. Accordingly 33.3% of respondent firms operating in free zones sell their products mainly to domestic market. Lastly, the proportion of firms which sell their goods mostly within free zones is 2.6%.



**Graph 11. Destination of Free Zone Firms' Sales**

As for the structure of the firms, free zones comprise of mainly small and medium sized enterprises. According to the definition of "Small and Medium Sized Enterprises Regulation" which was published in the Official Gazette on 18 November 2005, firms are classified as micro-enterprises (less than 10 employees), small scaled enterprises (10-49 employees) and medium sized enterprises (50-250 employees). Accordingly, total of these three categories of enterprises are defined as Small and Medium Size Enterprises, while firms with more than 250 employees are identified as large scale enterprises. As it is seen in Graph 12, more than half of the respondent firms (90 firms) had the characteristic of micro enterprises in the first year of the beginning of their operations. However, currently their quantity is as low as 59 since the number of employees in these firms has increased in the course of time.



**Graph 12. Employment Structure of Firms in Free Zone**

On the other hand, figures presented in Graph 12 put forth the employment creation effect of free zones. While in the first years of the beginning of the operations only 5 firms provided job opportunity for more than 250 employees (per firm), today their numbers have increased to 18. As the employment opportunities in firms operating in free zones have increased, the number of micro-enterprises has decreased while the quantity of small scaled (from 36 to 43), medium sized (from 23 to 34) and large scaled enterprises have increased.

In the questionnaire study, 11<sup>th</sup> and 12<sup>th</sup> questions have addressed to the free zone users with a view to reveal that which firms have started to operate in Turkey and have begun to export to foreign countries for the first time through their investments in free zones. These statistics are important to present the impacts of free zones on attracting foreign direct investments and promotion of exports. In this respect, when the results of the questionnaire study were observed, it brings out that almost half of the firms (48.7%) have begun to operate in Turkey for the first time. Furthermore, when the responses given for 11<sup>th</sup> question are examined parallel to responses given to 6<sup>th</sup> question by using Crosstabs

menu of SPSS program, it comes into the picture that 59.4% of these firms are foreign or foreign partnership firms. Although this figure could not prove the impact of free zones in attracting foreign direct investments alone, it could be analyzed in conjunction with the questions in the questionnaire regarding the foreign direct investments.

On the other hand, an important number of firms have experienced exports for the first time following their investments in free zones. Namely, 62.3% of respondent firms have exported their products for the first time to the foreign markets after they began to operate in free zones. Accordingly, it could be stated that this statistics supports the argument that free zones are successful in directing firms to exports.

Lastly, as regards the amount of exports of firms participated in the questionnaire, around 36% of firms did not give response to the related question. As for remaining firms' exports to foreign countries, while it is amounted 394.8 million dollars in the operation date of firms, in 2011 this amount increased to 661.9 million dollars. This increase in exports of respondent firms would be a supportive statistics which putting forth the impacts of free zones on export promotion.

#### **IV-3b. Results of the Questionnaire on Free Zones' Impacts on Export Promotion**

One of the primary objectives of establishment of free zones stated in the Law on Free Zones is to increase exports by directing firms to exports and increasing export oriented production and investments.

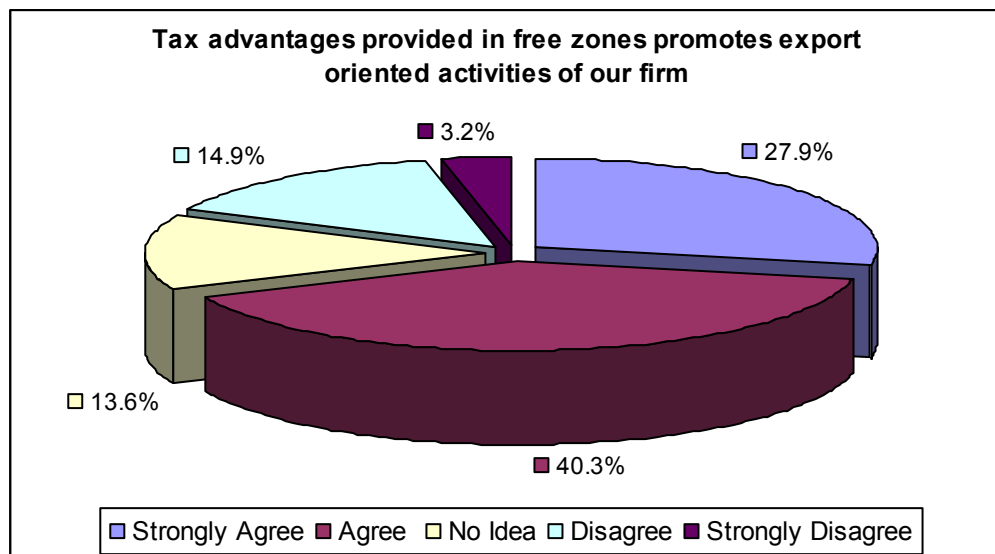
In this respect, 15<sup>th</sup> question of the questionnaire aims to observe the export promotion impacts of free zones. The question includes 6 items. Reliability of the question was estimated through SPSS program and Cronbach's Alpha is calculated as 0.741 which indicate that items have acceptable internal consistency.

**Table 5. Reliability Statistics of 15<sup>th</sup> Question**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.741	6

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
15.1	16.1104	12.883	0.532	0.688
15.2	16.3831	13.231	0.492	0.700
15.3	16.6948	13.429	0.479	0.703
15.4	16.3247	13.868	0.443	0.713
15.5	16.8117	13.566	0.487	0.701
15.6	16.9610	13.659	0.428	0.718

The first item tries to determine the impact of tax exemptions provided in free zones on promoting export oriented activities of firms. As it is shown in Graph 13, firms participated in the questionnaire clearly put forward that tax advantages in free zones encourage them to export their goods to third countries.



**Graph 13. Impacts of Tax Exemptions on Export Promotion**

As it is mentioned in the third Chapter, tax exemptions provided in free zones have changed in previous years for the purpose of directing firms to export and exports oriented production and decrease the share of sales from free zones to domestic market. In this respect, especially for the firms which have “producer operating licence” and for the firms



which export their products mainly to foreign countries, tax advantages in free zones became more attractive.

In order to analyze the relationship between operating licence and firms' views on impact of tax exemptions on export oriented activities, the operating licences were aggregated into two categories by using Transform Menu in SPSS program; firms having producer licence and firms having other operating licences. Afterwards, a Chi-Square Test of Independence was performed in SPSS program to determine whether there is a significant relation between the operating licence of firms and firms' views on tax advantages provided in free zones:

- $H_0$ : Operating licences of firms and firms' views on tax advantages provided in free zones are independent variables.
- $H_1$ : There is a significant relationship between the operating licences of firms and their views on tax advantages provided in free zones.

As a result of the Chi Square Test of Independence, the null hypothesis is rejected as the P-value (0.00) is less than significance level (0.05). Accordingly, it is concluded that there is a significant relationship between firms' operating licences and views on tax advantages provided in free zones. As it is seen in Table 6, the results suggested that 80.5% of the respondent firms which have producer operating licence agree that tax advantages provided in free zones promote export oriented activities of their firms. Although firms having other operating licences have relatively less tax advantages; 52.2% of these firms also state that aforementioned advantages in free zones encourage them in directing exports.

**Table 6. Results of Chi Square Test of Independence – Association between Firms’ Views on Tax Advantages and Their Operating Licence**

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.291(a)	2	0.000
Likelihood Ratio	30.933	2	0.000
Linear-by-Linear Association	4.716	1	0.030
N of Valid Cases	154		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9,14.

Operating Licence		Tax Advantages Provided in Free Zones Promote Our Firm's Exports			Total
		Strongly Disagree & Disagree	No Idea	Strongly Agree & Agree	
Producer	Count	16	1	70	87
	Expected Count	15.8	11.9	59.3	87.0
	% within operating licence	18.4%	1.1%	80.5%	100.0%
	% within tax advantage	57.1%	4.8%	66.7%	56.5%
	% of Total	10.4%	0.6%	45.5%	56.5%
Purchasing & Selling and Research & Development	Count	12	20	35	67
	Expected Count	12.2	9.1	45.7	67.0
	% within operating licence	17.9%	29.9%	52.2%	100.0%
	% within tax advantage	42.9%	95.2%	33.3%	43.5%
	% of Total	7.8%	13.0%	22.7%	43.5%
Total	Count	28	21	105	154
	Expected Count	28.0	21.0	105.0	154.0
	% within operating licence	18.2%	13.6%	68.2%	100.0%
	% within tax advantage	100.0%	100.0%	100.0%	100.0%
	% of Total	18.2%	13.6%	68.2%	100.0%

Similarly, a Chi-Square Test of Independence was performed to determine whether there is a significant association between the firms’ main direction of sales (Turkey or foreign countries) and firms’ views on tax advantages provided in free zones:

- $H_0$ : Main destination of firms’ sales and their views on tax advantages provided in free zones are independent variables.

- H<sub>1</sub>: There is a significant relationship between the main destination of firms' sales and their views on tax advantages provided in free zones.

**Table 7. Results of Chi Square Test of Independence – Association between Firms' Views on Tax Advantages and Direction of Sales**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.050(a)	2	0.001
Likelihood Ratio	13.580	2	0.001
Linear-by-Linear Association	1.796	1	0.180
N of Valid Cases	154		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9,41.

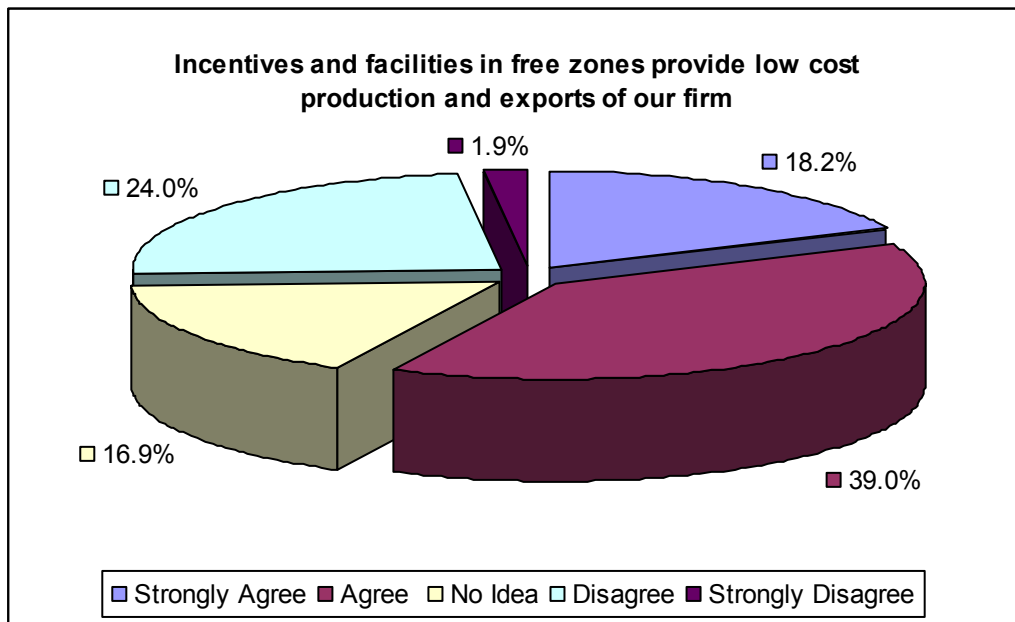
Direction of Sales		Tax Advantages Provided in Free Zones Promote Our Firm's Exports			Total
		Strongly Disagree & Disagree	No Idea	Strongly Agree & Agree	
Mainly to Foreign Countries	Count	16	4	65	85
	Expected Count	15.5	11.6	58.0	85.0
	% within direction of sales	18.8%	4.7%	76.5%	100.0%
	% within tax advantages	57.1%	19.0%	61.9%	55.2%
	% of Total	10.4%	2.6%	42.2%	55.2%
Others	Count	12	17	40	69
	Expected Count	12.5	9.4	47.0	69.0
	% within direction of sales	17.4%	24.6%	58.0%	100.0%
	% within tax advantages	42.9%	81.0%	38.1%	44.8%
	% of Total	7.8%	11.0%	26.0%	44.8%
Total	Count	28	21	105	154
	Expected Count	28.0	21.0	105.0	154.0
	% within direction of sales	18.2%	13.6%	68.2%	100.0%
	% within tax advantages	100.0%	100.0%	100.0%	100.0%
	% of Total	18.2%	13.6%	68.2%	100.0%

As a result of the Chi Square Test of Independence, the null hypothesis is rejected as the P-value (0.001) is less than significance level (0.05).

Accordingly, it is concluded that there is strong association between main destination of firms' sales and their views on tax advantages provided in free zones. In this regard, the results suggested that 76.5% of respondent firms which mainly export their products to foreign countries indicate that tax advantages support their export oriented activities. On the other hand, as well as foreign exporters, 58% of firms which sell their products mainly to domestic market defined tax advantages as encouraging in directing their firms to export.

Based on abovementioned conclusions, it is noteworthy that in addition to producer firms and firms which export their products mainly to foreign countries; firms in the other categories, which have less tax exemptions, agree that tax advantages provided in free zones promote export oriented activities of firms operating in Turkish free zones.

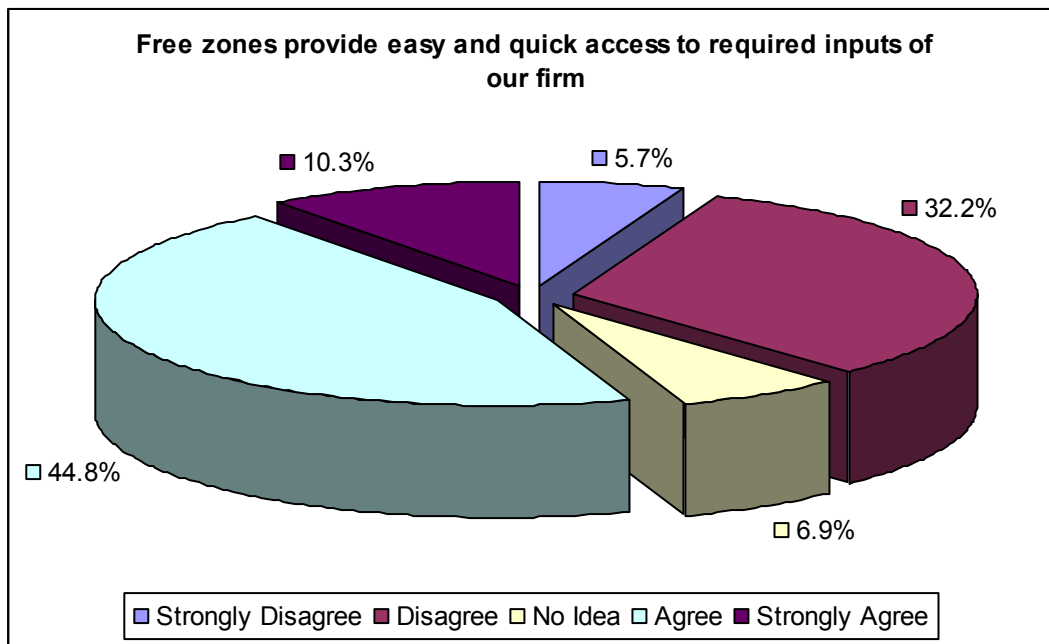
As for the second item of the 15<sup>th</sup> question, free zones provide certain advantages to firms such as to control free customs duty procedures in trading and buying goods from Turkey without paying value added tax. These advantages are expected to facilitate foreign trade and input supply and thus to provide low cost production, which would increase the capability of free zone firms to compete in world market and thus exports. Accordingly, the second item of the 15<sup>th</sup> question aims to determine the impacts of advantages in low cost production and exports of firms operating in free zones.



**Graph 14. Impacts of Incentives and Facilities on Export Promotion**

As it is seen in Graph 14, while 25.9% (disagree 24%, 1.9% strongly disagree) of firms disagree, more than half of the respondent firms (57.2%; 39% agree, 18.2% strongly agree) express that incentives and advantages presented in free zones provide low cost production and exports of their goods.

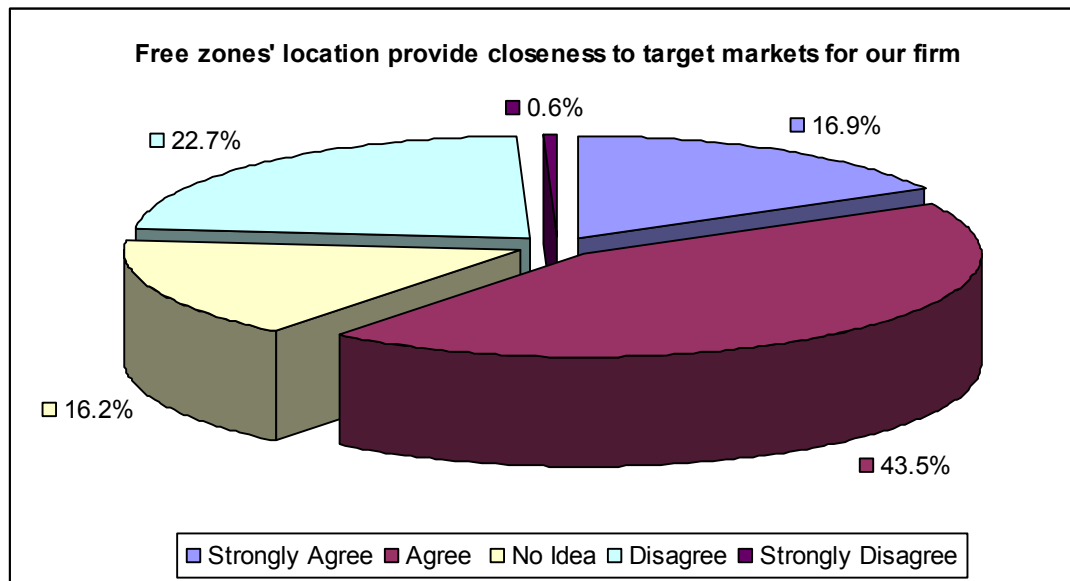
The third item of the 15<sup>th</sup> question also examines another facility provided in free zones to promote exports and exports oriented production. In this respect, easy access to domestic and foreign markets to supply input needs and storing opportunity is considered as one of the beneficial features of free zones due to the facility to store goods in free zones without any time limit. Thus free zone firms are expected to reach necessary raw materials and intermediate goods easily, in required amounts and without any waste of time owing to the abovementioned opportunities.



**Graph 15. Impacts of Easy Accessibility of Inputs on Export Promotion**

Since abovementioned facilities of the free zones mainly target the manufacturers who need inputs for their production, only responses of the producer firms are examined. In this context, estimation of the results of the item suggests that 55.1% (44.8% agree, 10.3% strongly agree) of firms having producer licence state that free zones provide easy and quick access to required inputs for their firms. On the other hand, still 37.9% (32.2% disagree, 5.7% strongly disagree) of producer firms disagree with the free zones' success in providing firms easy and quick access to raw materials and intermediate goods.

Item four of the 15<sup>th</sup> question approaches the success of free zones in directing firms to exports and export oriented production through emphasizing the location of the zones and proximity to target markets.



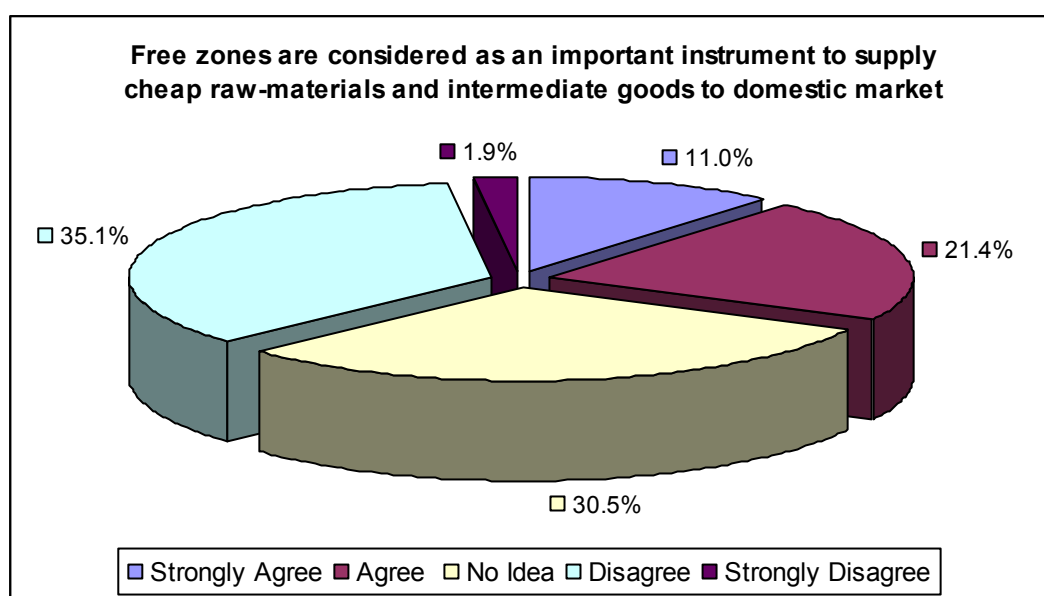
**Graph 16. Impacts of Free Zones’ Location in Export Promotion**

Taking into consideration Turkey’s geography, the location of Turkish free zones becomes advantageous in terms of closeness to significant neighbouring markets. As it is shown in Graph 16, free zones provide 60.4% (43.5% agree, 16.9% strongly agree) of the respondent firms proximity to their target markets.

As regard the 5<sup>th</sup> and 6<sup>th</sup> items of the 15<sup>th</sup> question, the role of free zones for firms operating in the zones are examined. As it is indicated in the previous Chapter, despite the “directing enterprises to export” objective of free zones; main destination of sales of free zone firms turned out to be Turkey. Accordingly, one can make an inference that free zones are considered as an instrument to provide low cost manufacturing through advantages presented in free zones and to sell their goods in domestic market, where less competitive conditions exist relative to the foreign markets.

In this regard, 5<sup>th</sup> item questions the statement that whether free zones are considered as an important instrument to supply firms operating in the domestic economy low cost raw materials and intermediate goods. However, as it is seen in Graph 17, 30.5% of respondent firms state that they have no idea regarding the perception of firms on free zones’ role to

supply cheap raw materials and intermediate goods to domestic market. In this point, the formulation of the question might be caused the high percentage of “no idea” responses. Although firms may consider free zones as an important instrument for sale to domestic market, they may not consider them as an instrument to supply cheap raw-materials and intermediate goods. On the other hand, 37% (35.1% disagree, 1.9% strongly disagree) of firms indicate that they do not see free zones as an instrument to sell their goods in domestic economy in order to meet low cost input requirements of domestic firms. However, there is a fact that almost one-third of the respondent firms (21.4% agree, 11% strongly agree) are considering free zones as a tool to supply domestic economy raw materials and intermediate goods imported from third countries.

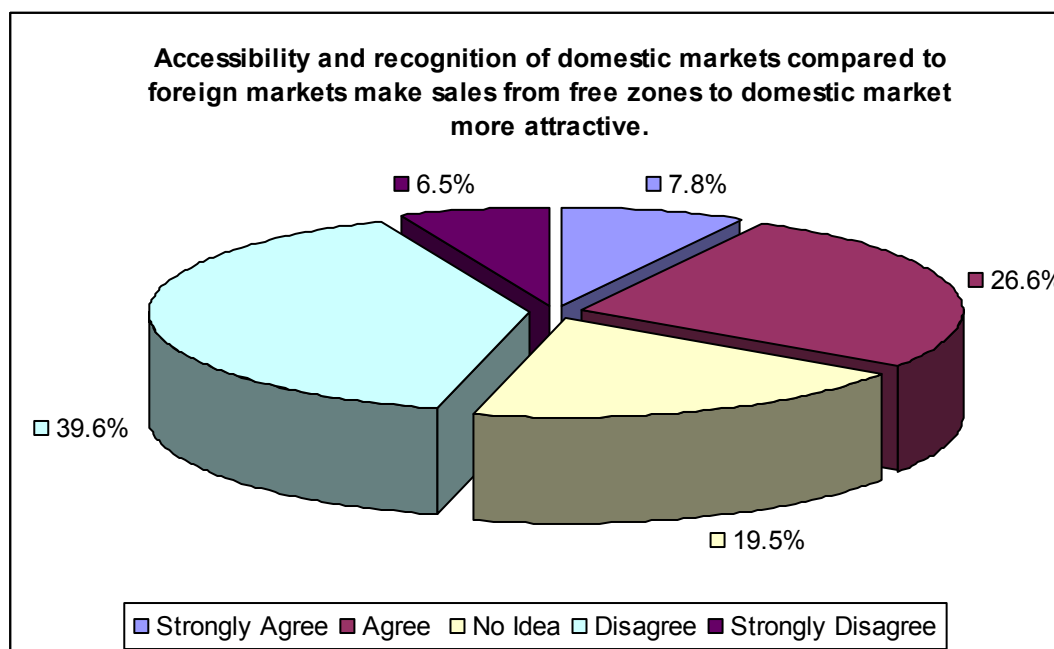


**Graph 17. The Role of Free Zones in Input Supply of Domestic Markets**

Similarly, 6<sup>th</sup> item questions the domestic sales of the free zones by stating that despite the incentives with a view to direct firms to export oriented activities, accessibility and recognition of domestic markets compared to foreign markets make sales from free zones to domestic market more attractive. As it is shown in Graph 18, although 46.1% (39.6% disagree, 6.5% strongly disagree) of respondent firms do not evaluate domestic sales more attractive than foreign exports; 34.4%



(26.6% agree, 7.8% strongly agree) of respondent firms consider that despite the incentives provided in free zones, exports to foreign markets is less attractive than sales to domestic markets.



**Graph 18. The Role of Free Zones in Sales to Domestic Markets**

In this point, it should be reminded that, since “to provide cheap and continuous input supply to domestic economy” was one of the establishment objectives of free zones in 1985-2008 periods, existence of firms which serve this purpose lead to continue sales to Turkey. Therefore, still around 30% of firms operating in free zones consider domestic sales as their primary motivation in their operations in free zones.

Overall, responses of firms operating in free zones put forth the export promotion impact of free zones.

Free zones present more tax advantages for firms which have producer operating licence and export their products mainly to foreign countries with a view to direct firms to export and exports directed production. In

this regard, the results of the questionnaire study prove that tax advantages in free zones encourage firms' export oriented activities.

Furthermore, free zones provide easy access to raw materials and intermediate goods necessary for the production of goods to be exported. Besides, the results of the study support that the incentives and facilities provide low cost manufacturing for firms operating in the zones. These advantages in return are likely to increase the capability of firms to compete in the world market and thus promote exports.

Moreover, the results of the questionnaire study verify the fact that the location of Turkish free zones offers important advantages by providing proximity to target markets, which in turn present a potential to increase exports of the firms operating in free zones.

These results are also supported by the facts that 62.3% of respondent firms have exported their products for the first time to the foreign markets after they began to operate in free zones; and exports of respondent firms increased by 67.7% from 394.8 million dollars in the first years of the operation date firms to 661.9 million dollars in 2011.

However, it should be noted that despite the policies and incentives towards to promote exports of free zone firms to foreign countries, more than 30% of respondent firms consider exports to foreign markets as less attractive than sales to domestic markets and regard free zones as a tool to supply domestic economy raw materials and intermediate goods imported from third countries. Besides, in the last years, tax advantages for operating licences other than producer licence have been decreased with a view to promote manufacturing activities in free zones. However, this policy negatively affected firms which have purchasing and selling operating licence and free zones like Trabzon Free Zone in which firms mainly concentrate on trade activities rather than manufacturing. In this regard, it is important to underline that policy makers should take into account the repercussions of new policies for each of the objectives of

the establishment of free zones. These policies may have different impacts on different types of firms, henceforth different zones.

Accordingly, it could be stated that the questionnaire study support the argument that free zones are successful in directing firms to exports and export oriented production, despite the fact that there is still a room to expand incentives and facilities in free zones to direct firms to export oriented activities.

#### **IV-3c. Results of the Questionnaire on Free Zones' Impacts on Foreign Direct Investments**

Foreign direct investments are considered as an important instrument to generate foreign exchange earnings, create new job opportunities, integrate domestic firms into global economy, increase competition and transfer high level technology. Thus, especially developing countries, like Turkey, endeavour to attract foreign direct investments into their countries through a policy package including various incentives, facilities and advantages. In this regard, in Turkey free zones are considered as an important instrument to attract FDI through number of advantages presented in the zones.

As it is explained in the previous Chapter, one of the primary objectives of Turkish free zones is to attract foreign direct investments. In this respect, the purpose of the 16<sup>th</sup> and 17<sup>th</sup> questions in the questionnaire study is to determine whether the policies implemented in free zones are successful to attract foreign direct investments in Turkey.

By 2011, roughly 30,000 foreign-capital firms operate in Turkey and almost 500 of these firms operate in free zones. This means that around 20% of firms operating in free zones are foreign capital invested firms. In this regard, the aim of this study is to examine; to what extent the advantages peculiar to free zones have influenced these companies in

their investment decisions in the zones; and to what extent these policies are successfully implemented in the free zones.

The 16<sup>th</sup> and 17<sup>th</sup> questions are answered only by foreign or foreign partnership firms operating in free zones with a view to reach more accurate results. The 16<sup>th</sup> question includes 10 items. Following the reliability analysis which was estimated through SPSS program, Cronbach's Alpha is calculated as 0.660 which suggest that items have questionable internal consistency.

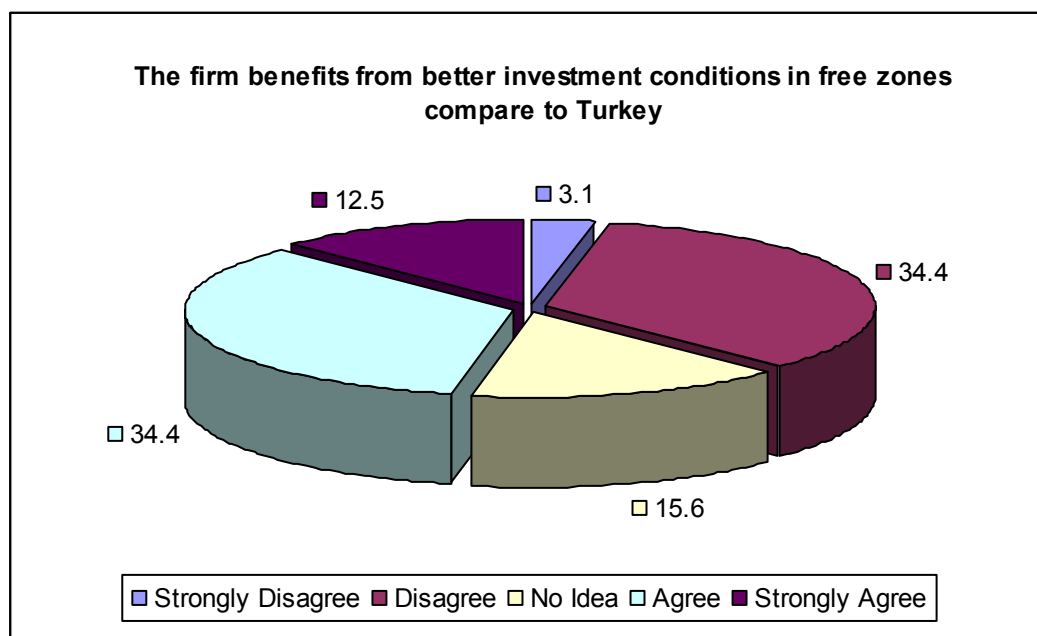
**Table 8. Reliability Statistics of 16<sup>th</sup> Question**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.660	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
16.1	27.0000	22.600	0.355	0.629
16.2	27.4839	25.591	0.203	0.656
16.3	26.4839	23.125	0.424	0.619
16.4	26.6774	25.226	0.198	0.658
16.5	27.0968	22.557	0.344	0.632
16.6	27.8065	22.761	0.369	0.627
16.7	27.0645	22.529	0.342	0.633
16.8	27.4194	22.918	0.327	0.635
16.9	27.3548	24.970	0.161	0.668
16.10	27.6452	21.237	0.494	0.598

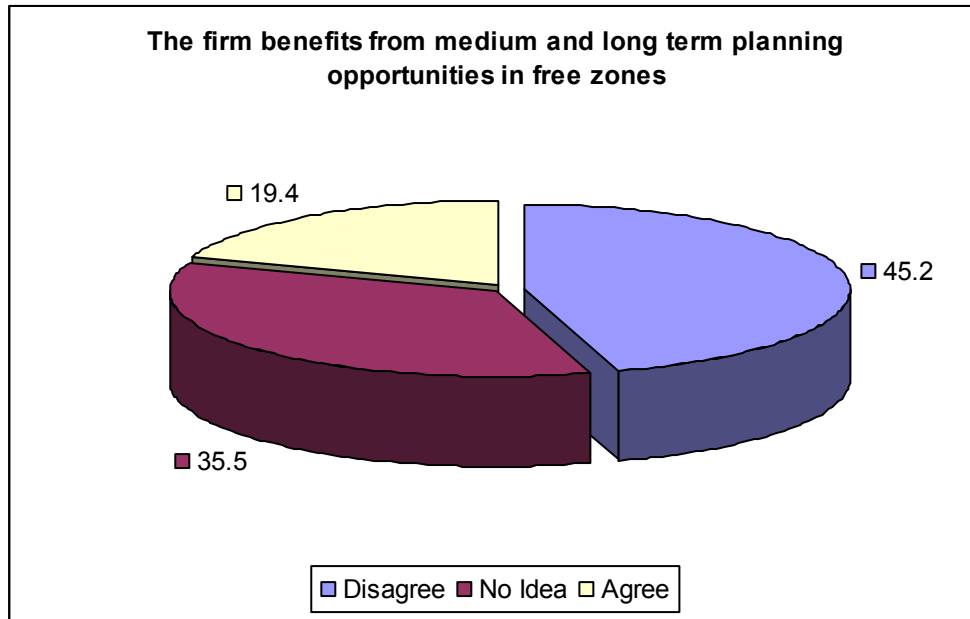
The first item of the question examines whether free zones have more favourable conditions than Turkey for the investment. As it is shown in Graph 19, 46.9% (34.4% agree, 12.5% strongly agree) of the respondent firms state that they benefit from positive investment climate in free zones compared to Turkey. At this point, it should be noted that, among the responses to this question, dissatisfaction of firms operating in Mersin Free Zones affected results of this item. Accordingly, when responses of firms in Mersin Free Zone are excluded, the share of firms express that free zones have favourable investment conditions than Turkey increases to 50%. In this regard, it could be concluded that

almost half of the foreign investors consider that free zones present more favourable investment conditions compared to Turkey, despite the problems in free zones indicated below.



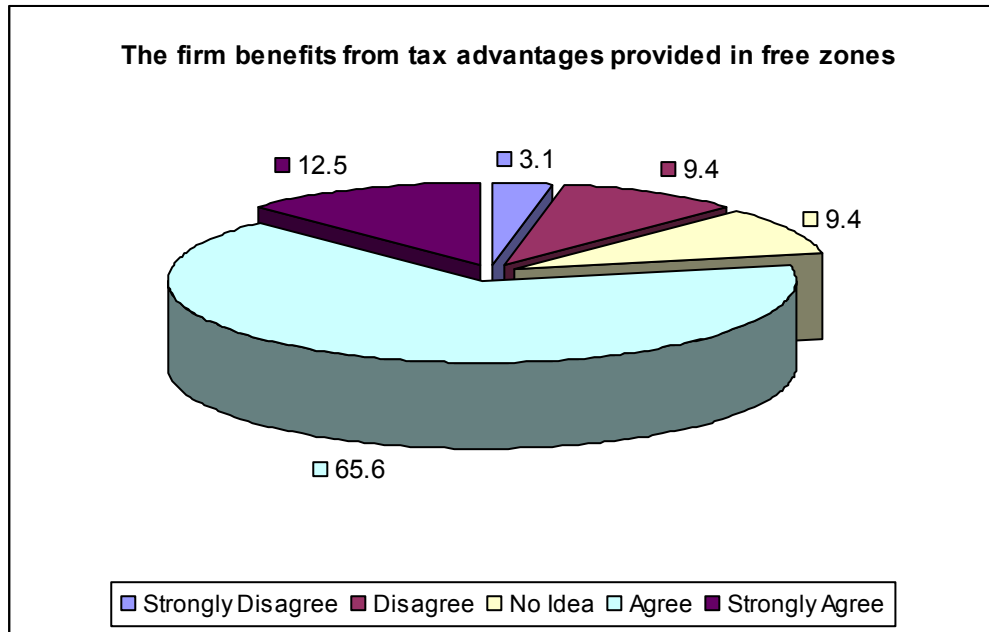
**Graph 19. Comparison of Investment Climate in Free Zones and Turkey**

As for the second item, medium and long term planning opportunities of free zones are examined. As it is presented in Graph 20, while only 19.4% of firms benefit from medium and long term planning opportunity in free zones, 45.2% of firms state that free zones do not provide future planning opportunity. Despite the long validity periods of operating licenses (15 years for tenant users, 20 years for manufacturer tenant users, 30 years for investor users, 45 years for manufacturer-investor users), firms do not precisely benefit from medium and long term planning opportunity of free zones because of the fact that advantages and rules which set out how to benefit from these advantages change frequently. Furthermore, within the process of Turkey-EU accession negotiations, the uncertainty regarding the future of the free zones decrease the reliability on the stability of policies on free zones.



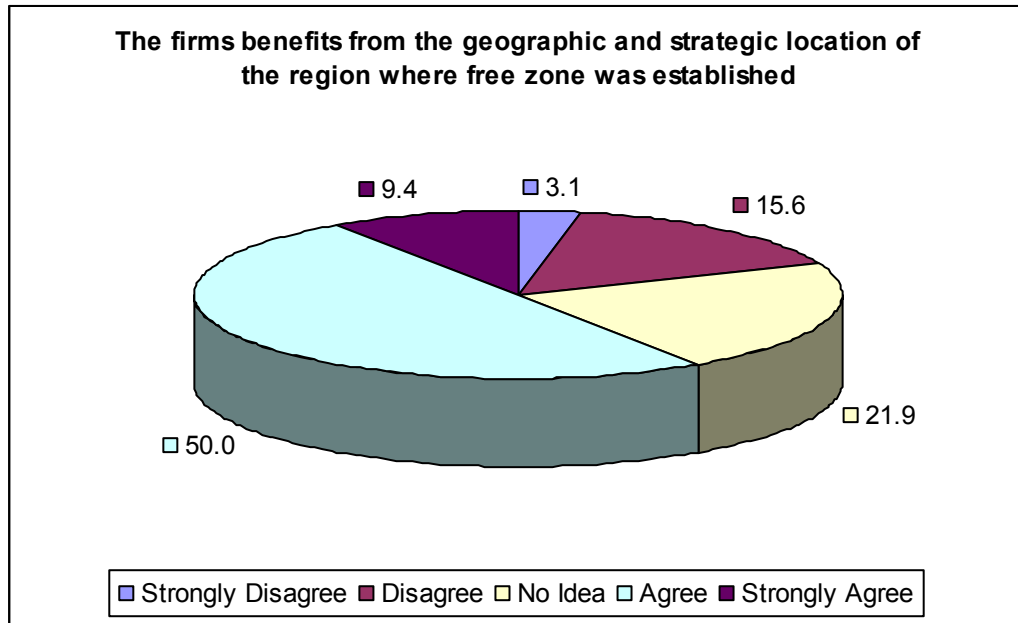
**Graph 20. Medium and Long Term Planning Opportunities in Free Zones**

As it is mentioned in the previous parts, various important tax advantages are provided for firms operating in free zones and these advantages encourage firms to invest in the zones. The results of the questionnaire also verify this argument. As it indicated in Graph 21, 78.1% (65.6% agree, 12.5% strongly agree) of firms benefit from tax advantages provided in free zones. As a feature peculiar to free zones, tax advantages can be considered as important determinants to invest in free zones rather than investing in home country (remaining parts of Turkey).



**Graph 21. Tax Advantages Provided in Free Zones**

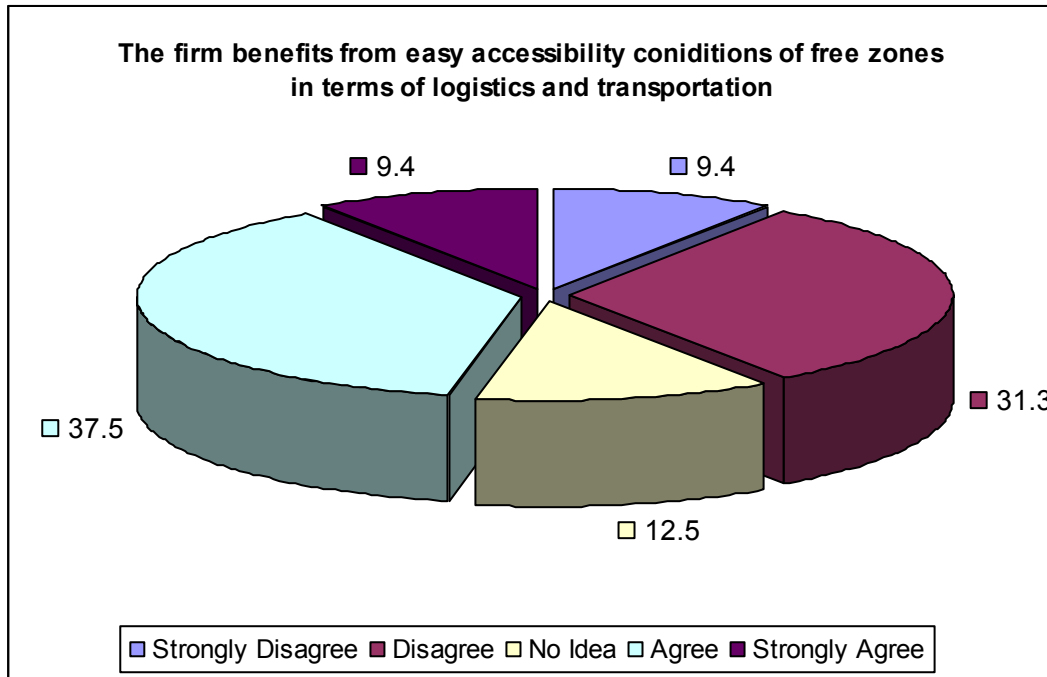
The geography of Turkey presents advantages for multinational companies which invested in Turkey as it is located at the crossroads of Europe and Asia. Similarly, Turkish free zones provide opportunity to benefit from the proximity to important foreign markets and to the major Turkish Ports on the Mediterranean, Aegean and Black Seas. In this regard, 4<sup>th</sup> item questions the success of free zones to provide geographic and strategic advantages for firms operating in the zones. As it is shown in Graph 22, the results of the questionnaire supported that firms benefit from the geographic and strategic location of free zones as 59.4% (50% agree, 9.4% strongly agree) of the firms agree with the statement.



**Graph 22. Geographic Advantage of Regions where Free Zones were Established**

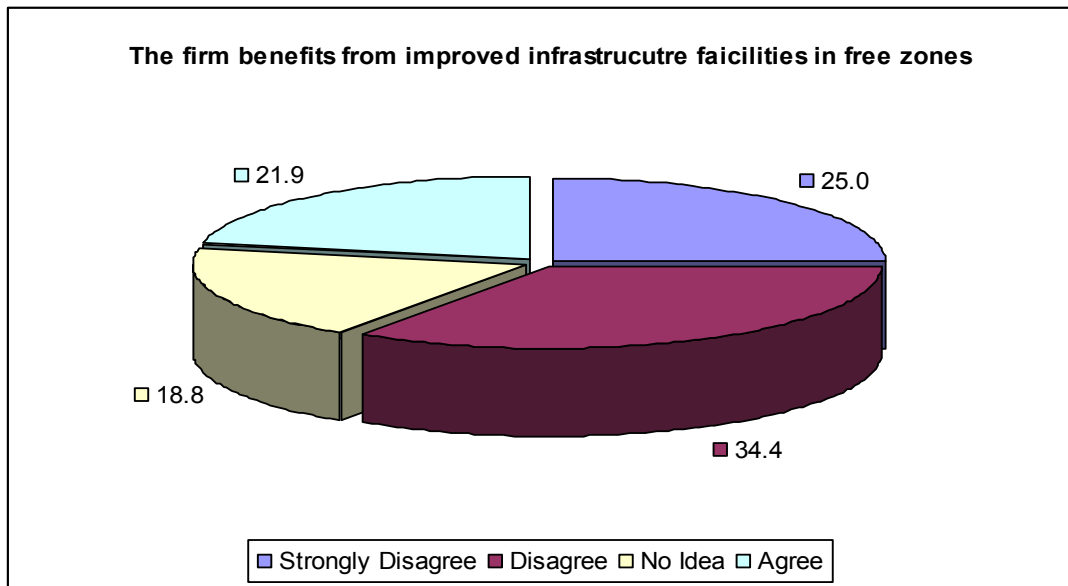
With reference to the fact that free zones are principally established in places where access is easy to ports, international airports and highways, 5<sup>th</sup> item of the question tries to examine the success of free zones in this point. As it is shown in Graph 23, while 46.9% (37.5% agree, 9.4% strongly agree) of firms operating in free zones utilize, 40.7% (31.3 disagree, 9.4% strongly disagree) of firms do not benefit from easy accessibility conditions of free zones. In this regard, results of the item do not give significant results to draw a conclusion regarding the transportation conditions of free zones.





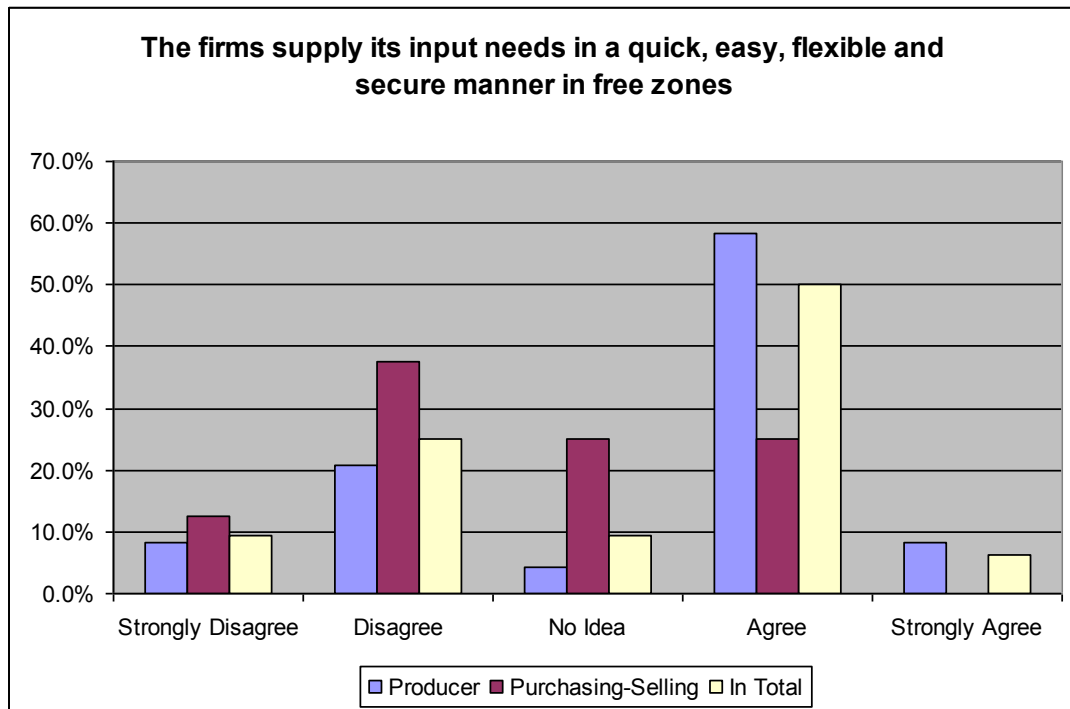
**Graph 23. Accessibility Conditions of Free Zones in Terms of Logistics and Transportation**

Although free zones are claimed to be competitive with the international standards in terms of infrastructure, as it is seen in Graph 24, sixth item of the question put forth the fact that 59.4% (34.4 disagree, 25% strongly disagree) of firms disagree with the statement that free zones present improved infrastructure facilities. The failure of free zones to provide well-developed infrastructure can be considered as an important obstacle in attracting foreign investments in the zones.



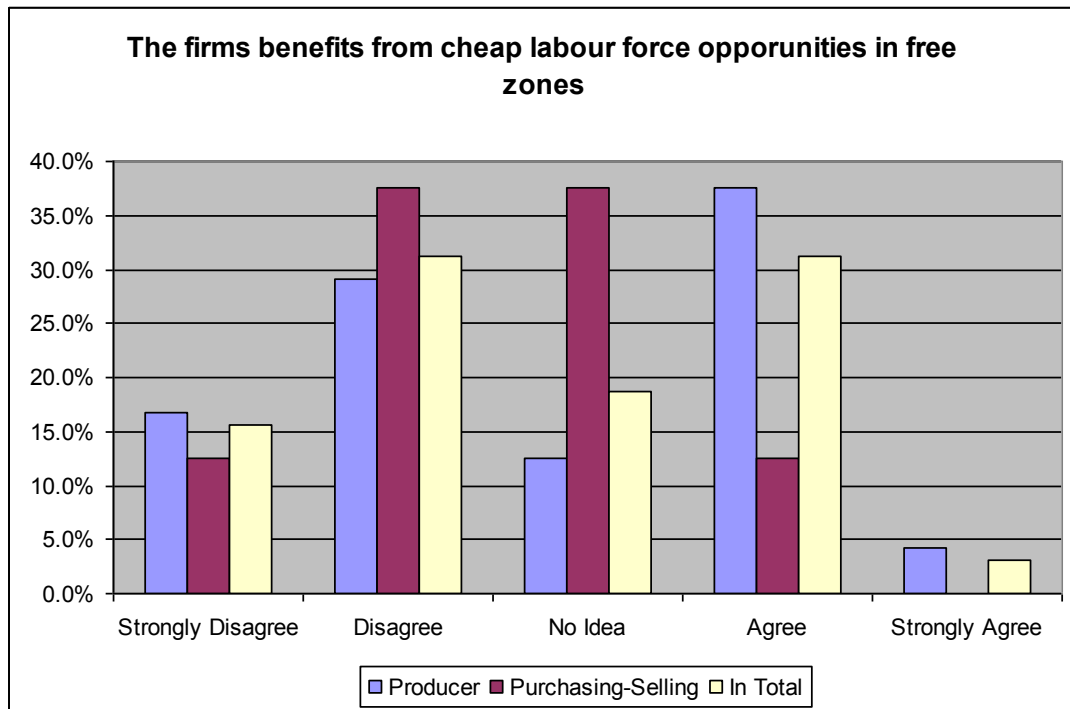
**Graph 24. Infrastructure Facilities in Free Zones**

During the last years, Turkey is considered as an attractive place to invest due to its liberal investment climate, geostrategic position, large domestic market and relatively cheap labour force. In addition to these advantages, free zones present opportunity for firms to import required inputs for their production without customs duties and procedures. This provides firms investing in free zones to supply their input needs in a quick, easy, flexible and secure manner. As it is indicated in Graph 25, the results of the 7<sup>th</sup> item of the questionnaire verified the positive role of free zones in input supply as 66.6% (58.3% agree, 8.3% strongly agree) of manufacturer firms agree with the statement.



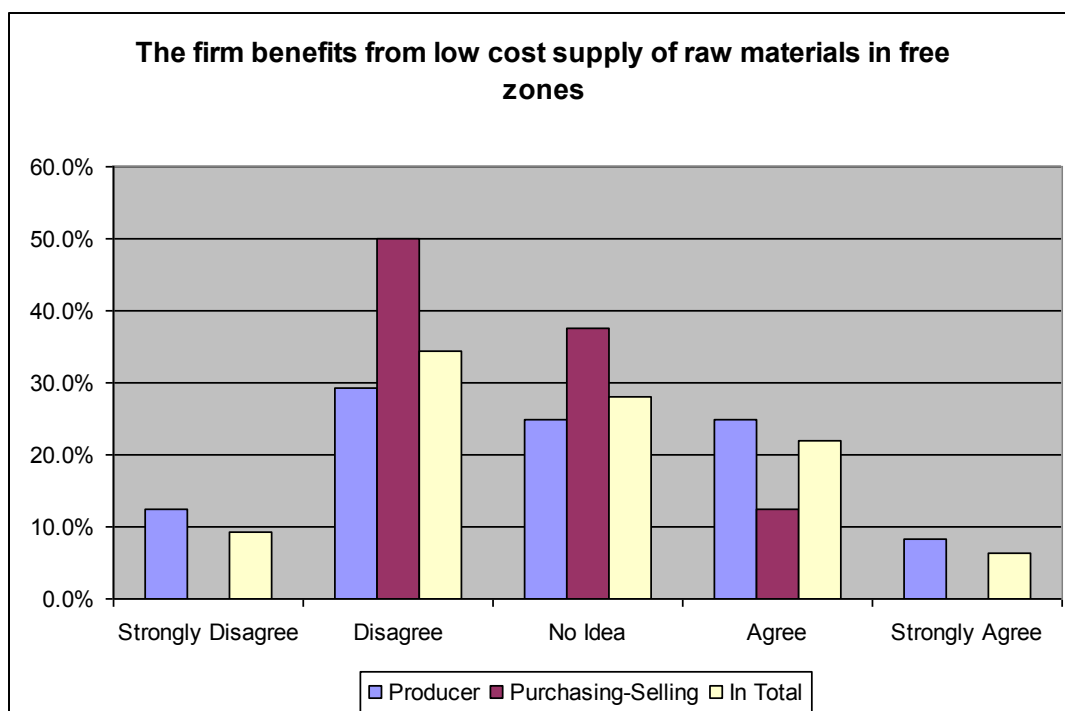
**Graph 25. The Role of Free Zones in Supply of Required Inputs of Firms**

Regarding the 8<sup>th</sup> item of the question, whether cheap labour force opportunity exists in free zones is examined. As it is shown in Graph 26, while 46.9% (31.3% disagree, 15.6% strongly disagree) of firms indicate that they do not utilize cheap labour force in free zones, 34.4% of firms agree that they benefit from low cost employment conditions. On the other hand, it is noteworthy that almost all of the firms which agree that there is possibility to utilize cheap workforce in free zones are producer firms. This could be explained through the tax advantages provided for producer firms. The wages of workers employed by the users that export at least 85% of the FOB value of the goods they produce in the free zones are exempted from income tax. Accordingly, free zones provide low cost employment opportunities but only for producer firms that sell 85% of their goods to foreign countries.



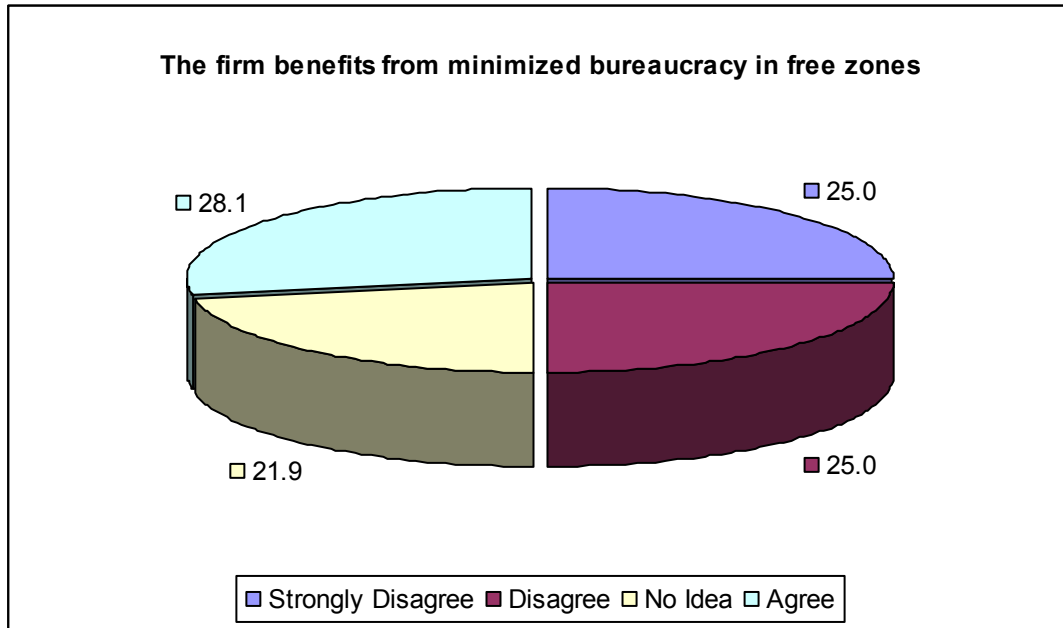
**Graph 26. Cheap Labour Force Opportunities in Free Zones**

On the other hand, free zones are expected to provide low cost raw materials for the firms operating in free zones due to advantages that firms in a free zone can buy their required inputs from Turkey without paying value added tax and from third countries without any import duties and customs procedures. In this regard, 9<sup>th</sup> item tries to examine whether free zones present supply of low cost raw materials. With a view to reach more accurate results, only responses of firms that have producer licence are taken into account. As it is indicated in Graph 27, while 42.9% (28.6% disagree, 14.3% strongly disagree) of manufacturer firms state that they do not benefit from the supply of cheap raw materials; 38.1% (28.6% agree, 9.5% strongly agree) of firms express that they reach cheap raw materials through opportunities presented in free zones. In this respect, the results do not give significant answers to draw a general conclusion regarding the opportunity to supply cheap raw materials in free zones.



**Graph 27. Opportunities to Supply Low Cost Raw Material in Free Zones**

Minimizing the bureaucracy has an important role in attracting investments in free zones. In this regard, policy makers commit to minimize red-tape with a view to attract foreign direct investments in free zones. However, 50% (25% strongly disagree, 25% disagree) of the respondent firms do not agree that bureaucracy is minimized in free zones. Although there are four equal pieces in Graph 28, the shape of the graph should not be misread. In this regard, it would be useful to remind that while none of the respondent firms strongly agree and only 28.1% of the firms agree that bureaucracy is reduced; in total 50% of the firms expressed that bureaucracy is not minimized.



**Graph 28. Bureaucracy in Free Zones**

After the examination of the success of the policies and opportunities in free zones to attract foreign direct investments, 17<sup>th</sup> question tries to determine the role of free zones in attracting foreign direct investments in Turkey.

When the results are examined in detail, it is seen that 37.9% of firms operating in free zones chose "benefiting from Turkey's geostrategic location and proximity to the target markets" as the primary objective of their investments in Turkey. This result verifies that regions, on which free zones are established, attract foreign direct investments rather than advantages provided in free zones. Therefore, foreign direct investments concentrate on a number of free zones which were established in certain regions. This conclusion is also supported by the fact that all respondent foreign firms operating in Mersin Free Zone specified location advantages of free zones as their primary motivation to invest in Turkey. Furthermore, the figures related to the foreign direct investments prove the importance of geographic advantages to attract foreign direct investments as Aegean Free Zone attracts more than half of the foreign direct investments in free zones and Aegean, Europe and Bursa Free

Zones account for more than 80% of foreign direct investments attracted by 19 Turkish free zones.

Secondly, 28.6% of firms state that they made the investment decision in order to benefit from cheap labour force and low cost raw materials. However, it is remarkable that even these firms stated in the previous question that free zones could not be successful in supplying low cost workforce and raw materials. Therefore, it can be indicated that free zones could not meet firms' expectations about their investments in free zones.

Lastly, the share of the firms which indicate that "advantages provided in free zones" was the primary motivation of their investment decision remained at 24.1%. On the other hand, 37.9% and 24.1% of the respondent firms define advantages provided in free zones as the second and third objectives, respectively, behind their decision to invest in Turkey. Accordingly, it can be asserted that some of the foreign firms operating in free zones have invested in Turkey independently from advantages provided in the zones.

Overall, the results of the questionnaire put forward that despite attracting foreign direct investments being one of the main objectives of the establishment of free zones; existing policies implemented and facilities presented in the zones are insufficient to achieve this objective.

As a matter of fact, almost half of the foreign investors consider that free zones present more favourable investment conditions compared to Turkey. Furthermore, while 48.7% of respondent firms have begun to operate in Turkey for the first time, 59.4% of these firms are foreign or foreign partnership firms. In other words, free zones achieved to attract new investments and especially foreign firms. Thus, it can be asserted that free zones originally have potential to attract foreign direct investments. Furthermore this potential is supported by certain advantages. Firstly, firms operating in free zones benefit from important

tax advantages. Besides, free zones present opportunity for firms to import required inputs for their production without any customs duties and procedures. This provides firms to supply their input needs in a quick, easy, flexible and secure manner. Since these features are peculiar to free zones, they can be considered as the most important determinants to invest in free zones rather than investing in home country (remaining parts of Turkey).

In spite of the potential of free zones, some of the major problems detain free zones from realizing their potential. The results of the questionnaire present that certain policies which were introduced to attract investments in free zones failed. First, although free zones secure long validity periods for operating licenses, this is not sufficient for users to benefit from medium and long term planning opportunities because of the uncertainties existing in free zones. The frequent changes in the legislation which set out how to benefit from advantages provided in free zones and the ambiguity regarding the future of the free zones within the process of Turkey-EU accession negotiations restrain the possibility for medium and long term planning.

Secondly, although the importance of well-developed infrastructure in attracting foreign direct investments is obvious and policy-makers claim that free zones are competitive with the international standards in terms of infrastructure; the results of the questionnaire put forth that firms face with important infrastructure problems in free zones.

Thirdly, in spite of the role of eliminated red-tape in attracting investments in free zones and the commitments of policy makers to overbear bureaucracy; the questionnaire indicates that firms operating in free zones do not benefit from reduced bureaucracy.

Despite the potential of free zones to attract foreign direct investments, because of the failed policies and deficiencies in abovementioned areas, free zones cannot be considered as successful in attracting foreign direct



investments. Although the geographical advantage of free zones in attracting foreign investors is strongly verified by the results of the questionnaire, this is not a peculiar feature to the free zones. Moreover, as the results of the questionnaire put forward, the first motivation behind the investments decision of the foreign firms is proximity of Turkey to the target markets, irrespective of advantages presented in free zones. Taking into account the fact that only 24.1% of the respondent firms' primary motivations are "advantages provided in free zones" behind their investment decisions in Turkey; it can be asserted that most of the foreign firms operating in free zones would invest in Turkey even if free zones did not exist.

#### **IV-3d. Results of the Questionnaire on Free Zones' Impacts on Transferring Technology**

Accelerating the transfer of technology is another establishment objective of free zones stated in the Law on Free Zones. In the world, decision makers hope to get positive spillovers of foreign direct investments including technology transfer through investments of multinational companies (Madani, 1999). Foreign direct investments are considered as an important instrument to improve the technology in country and one of the potential advantages of free zones is technology transfer through investments of multinational companies (Engman, Onodera and Pinali, 2007). Since the main source of the technology transfer is investments of multinational companies (Saggi, 2002; Borensztein, Gregorio and Lee, 1998); the success in technology transfer is directly and strongly related to the success in attracting foreign direct investments. However, as it is expressed in the previous part, investments of foreign companies cluster in certain free zones. Thus, only certain free zones have potential to promote technology transfer through foreign direct investments.

In this context, 18<sup>th</sup> question of the survey examines impacts of free zones on accelerating technology transfer. The question includes 6

items. Reliability of the question was estimated through SPSS program and Cronbach's Alpha is calculated as 0.894 which indicates that items have good internal consistency.

**Table 9. Reliability Statistics of 18<sup>th</sup> Question**

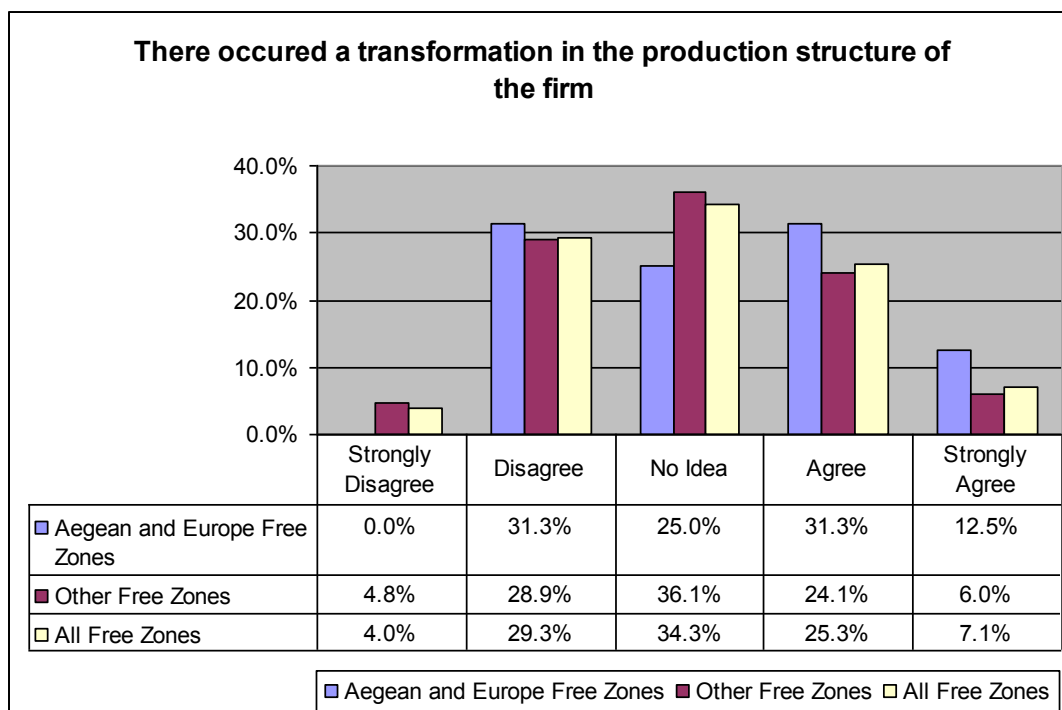
Reliability Statistics	
Cronbach's Alpha	N of Items
0.894	6

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
18.1	15.0325	15.352	0.731	0.873
18.2	15.0130	14.614	0.781	0.864
18.3	15.1883	15.618	0.724	0.874
18.4	14.8442	15.126	0.623	0.892
18.5	14.9610	14.404	0.804	0.861
18.6	15.1558	15.714	0.648	0.885

Since the impacts of technology transfer on purchasing-selling firms are negligible, responses of firms which have purchasing-selling operating licence are disregarded in the analysis of the question. Furthermore, as it is mentioned above, there is a direct relationship between the foreign direct investments and transfer of technology. Since Aegean and Europe Free Zones have attracted 75% of foreign direct investments made in Turkish free zones, the responses of firms operating in these zones (16 firms) are examined separately than firms operating in other free zones (83 firms). Besides, in order to explore the difference between responses of domestic firms (88 firms) and domestic-foreign partnership firms (11 firms); their responses are also examined separately.

Within this context, the first item of the 18<sup>th</sup> question tries to assess the transformation of production structure of firms. Through the transfer of technology, firms which are using relatively advanced technology are expected to increase the flexibility and quality in the production process. In this regard, as it is seen in Graph 29, production structures of 43.8% (31.3% agree, 12.5% strongly agree) of firms operating in Aegean and Europe Free Zones are transformed. On the other hand, share of firms

which are operating in other free zones with less multinational companies and whose production process is improved remains at 32.4%.



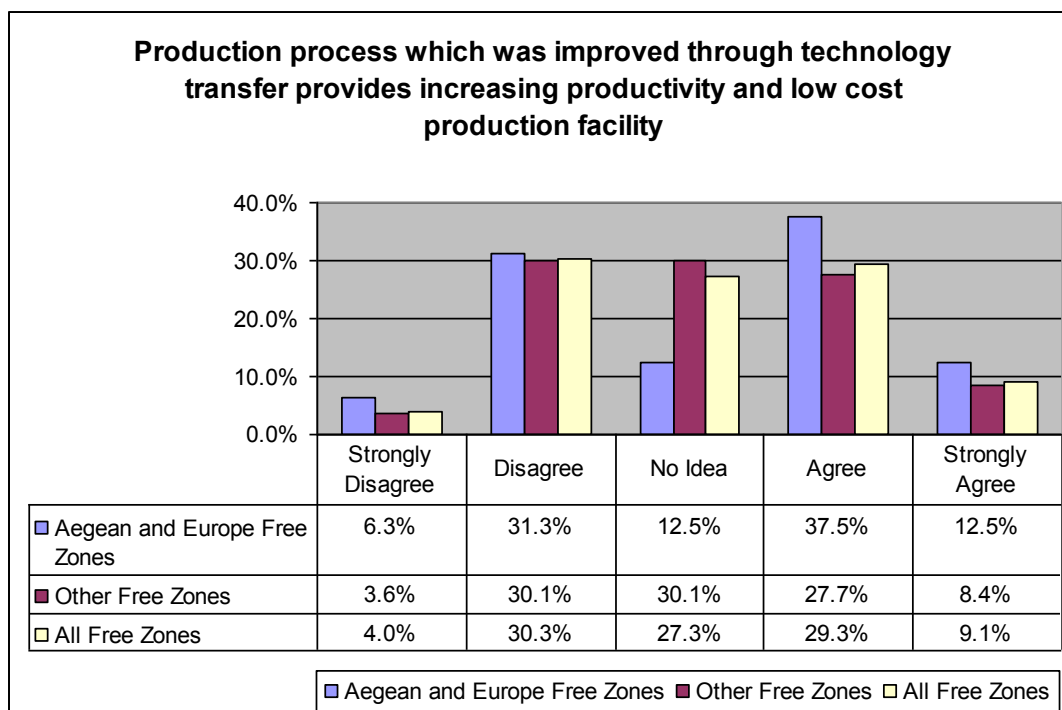
**Graph 29. Impact of FDI Inflow into Free Zones in Production Structure**

Furthermore, while 30.7% (25% agree, 5.7% disagree) of domestic firms expressed that they have experienced a transformation in production processes, this proportion increases to 45.5% (27.3% agree, 18.2% strongly agree) for domestic-foreign partnership firms.

Accordingly, it can be concluded that free zones have the potential to contribute to transformation in the production processes of firms (especially domestic-foreign partnership firms) by attracting multinational companies into the zones.

The second item of the question tries to examine impacts of free zones on firms' productivity and low cost production through improvements in their production processes thanks to the transfer of technology. As it is shown in Graph 30, 50% (37.5% agree, 12.5% strongly agree) of firms operating in Aegean and Europe Free Zones express that the improved

production process through technology transfer provides them increasing productivity and low cost production facilities in return.

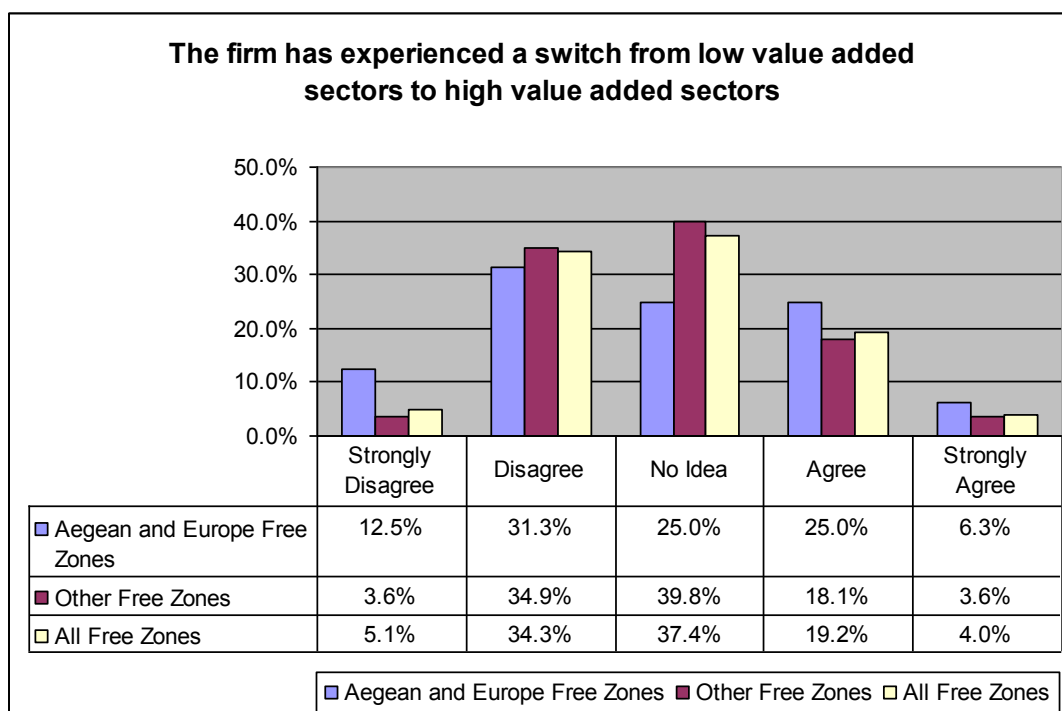


**Graph 30. Impacts of FDI Inflow into Free Zones on Productivity**

Moreover, similar to the previous item, while 36.4% (27.3% agree, 9.1% disagree) of domestic firms state that their firms' productivity and low cost production increased through improvements in their production processes; this share reaches 54.6% (45.5% agree, 9.1% strongly agree) for domestic-foreign partnership firms.

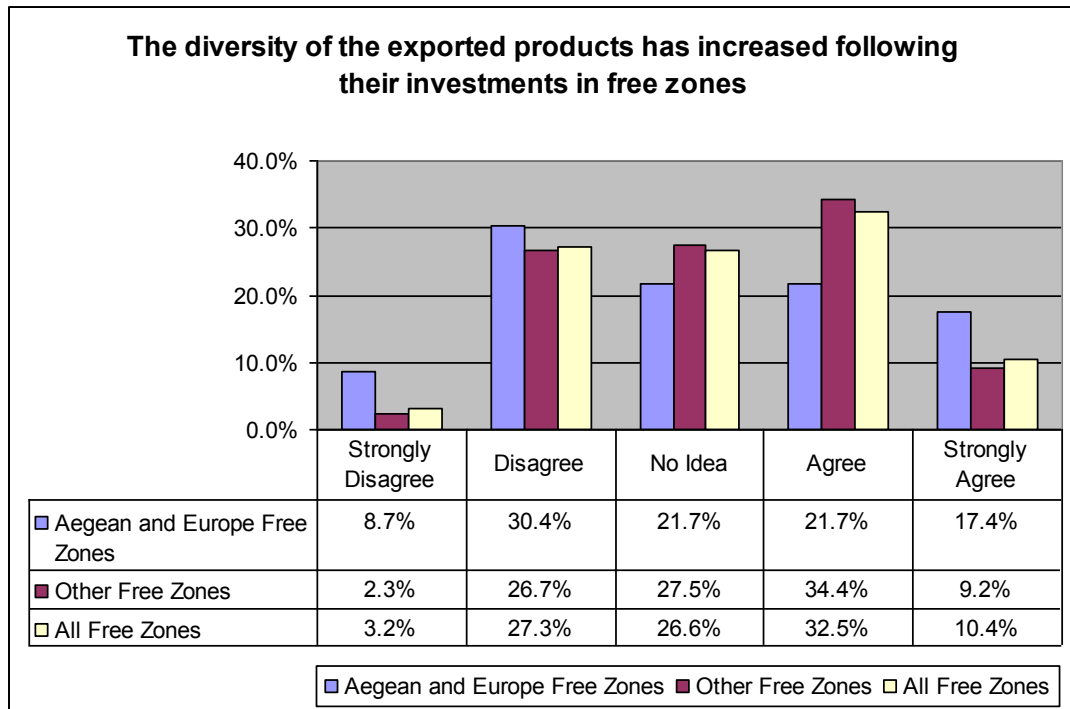
As it is indicated in the previous Chapter, by 2011 sectoral composition of exports of firms operating in free zones mainly consists of technology intensive products. Accordingly, free zone firms are expected to produce and export relatively more high value added products. In this respect, third item question the role of foreign direct investments inflow to free zones on the sectoral composition. However, it is noteworthy that the share of firms stating that they have experienced a switch from low to high value added goods remained very limited. Nevertheless, the difference between Aegean & Europe Free Zones and other free zones;

and domestic-foreign partnership firms and purely domestic firms draws attention. While the share of firms that switch to high value added goods in production is 31.3% in Aegean & Europe Free Zones and 36.4% for domestic-foreign partnership firms; it remains 21.7% in the other free zones and 21.5% for purely domestic firms, respectively.



**Graph 31. Impact of Free Zones on Sectoral Developments**

In addition to export promotion, diversification of exports is crucial for the economies of developing countries. Free zones are expected to stimulate non-traditional exports of a country by introducing new technology through FDI inflow to the zones. In this respect, 4<sup>th</sup> item questions whether the diversity of products exported to foreign markets has increased. Since the item covers trading activities of firms as well as production process, responses of firms which have purchasing-selling operating licence are included in the examination of the results. As it is shown in Graph 32, 42.9% (32.5 agree, 10.4% strongly agree) of respondents express that diversity of the goods exported by their firms increased in the course of time, while there is no significant difference between Aegean & Europe Free Zones and the other zones.



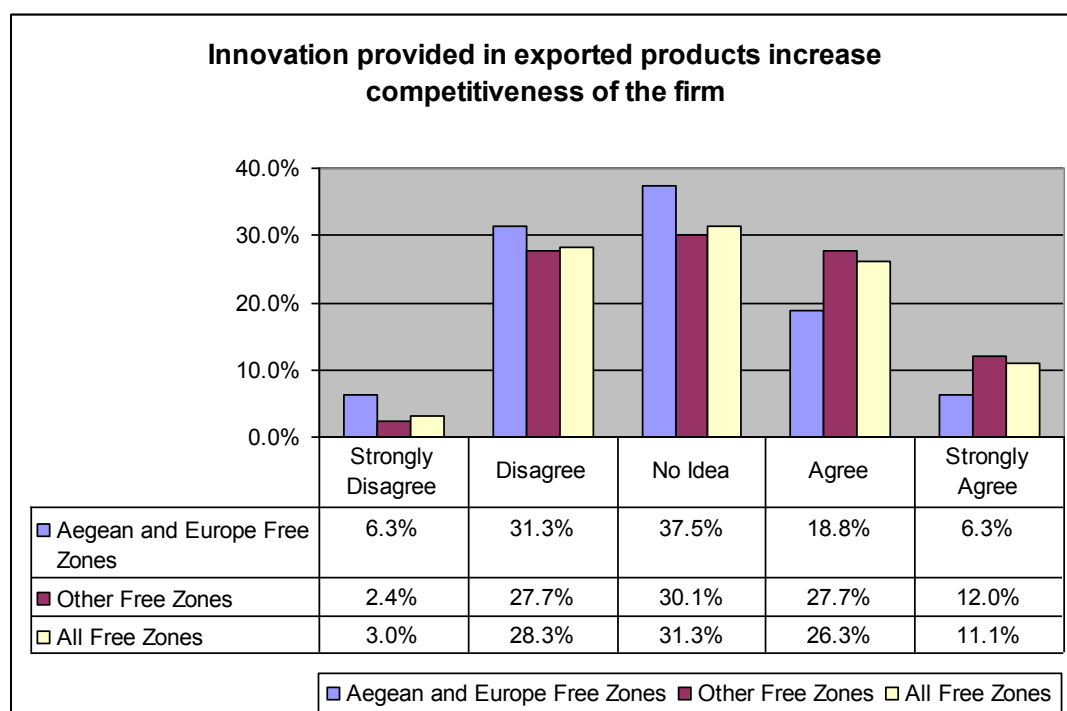
**Graph 32. Impacts of Free Zones on Export Diversification**

However, similar to the previous items, ownership status of firms makes a difference also in terms of free zones' impact on export diversity of goods exported. While 42.1% (32.1% agree, 10% strongly agree) of domestic firms indicate that their exports have diversified following the start of their operations in free zones; this proportion increases to 50% (35.7% agree, 14.3% strongly agree) for domestic-foreign partnership firms.

Accordingly, it can be concluded that firms (especially domestic-foreign partnership firms) operating in free zones has succeeded in increasing diversity of goods exported to foreign countries, as an indicator of technology transfer.

On the other hand, transfer of technology is likely to raise the competitiveness of the firms operating in free zones through technological improvement of exported goods. In this respect, 5<sup>th</sup> item of the question examines whether the competitiveness of firms has

increased through technology transfer. As it is indicated in Graph 33, 37.4% (26.3% agree, 11.1% strongly agree) of respondent firms state that foreign direct investments contributed to increase their competitive powers through innovations in export commodities. However, this time Aegean & Europe Free Zones make negative contribution as the majority of the firms disagree with the competitiveness impact of FDIs through technological advancements in export goods.

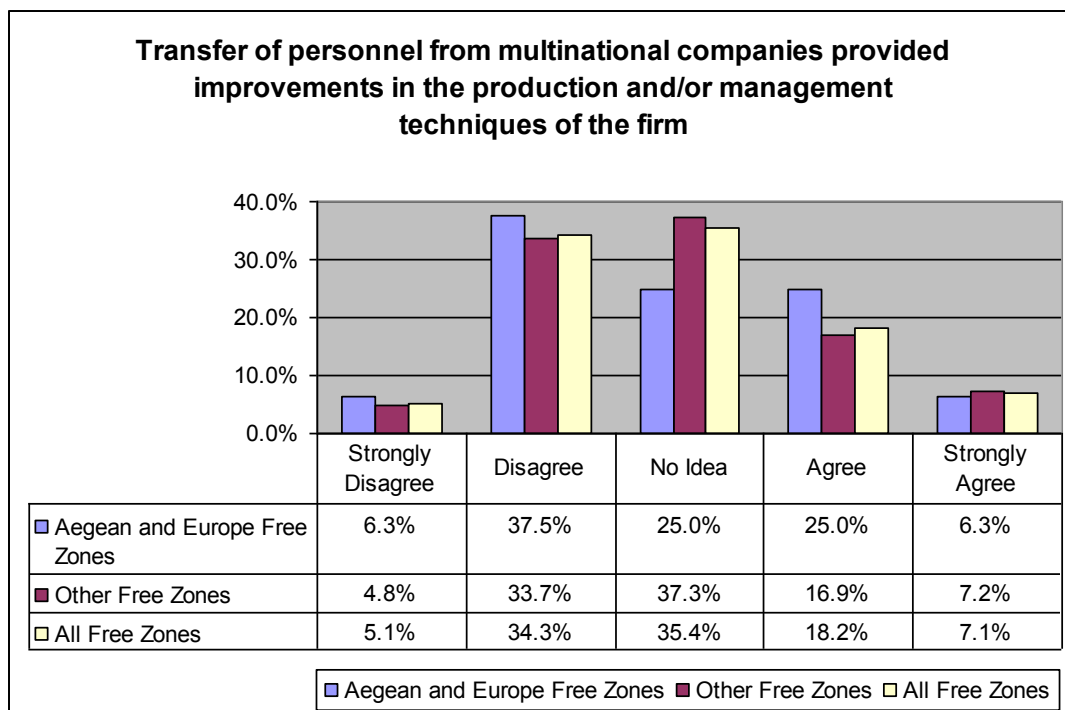


**Graph 33. Impacts of Free Zones in Competitiveness**

Nevertheless, similar to general trend, while the share of firms expressing that FDIs stimulate their competitiveness through innovations in exported goods is 36.3% (26.1% agree, 10.2% strongly agree) of domestic firms; it reaches 45.5% (27.3 agree, 18.2 strongly agree) for the domestic-foreign partnership firms. In this respect, it can be stated that technological innovations for exported goods remain limited with domestic-foreign partnership firms and do not diffuse into purely domestic firms.

Transfer of personnel from rival firms is considered as one of the basic ways of the transfer of technology. In free zones, transfer of staff

especially from multinational companies can provide improvements in production or management techniques of their new firms. Accordingly, 6<sup>th</sup> item of the question tries to examine the role of personnel transfer in Turkish free zones.



**Graph 34. Impact of Transfer of Personnel from Multinational Companies**

As it is seen in Graph 34, although most of the firms operating in free zones have not experienced such a transfer, 25.3% of firms stated that they have procured personnel from multinational companies and these personnel provide to improve their production and management techniques. This percentage is higher in Aegean & Europe Free Zones (31.3%) as it can be expected due to the existence of much more foreign companies.

Overall, the results of the questionnaire put forth that free zones create a room for the technology transfer via foreign direct investments attracted into the zones. The results bring out that firms operating in Aegean and Europe Free Zones, which attract 75% of FDI inflow into free



zones and domestic-foreign partnership firms are more active in transfer of technology. However, it can be stated that its spillover impacts on domestic economy remain limited if domestic firms do not get into a partnership with foreign companies. One of the main reasons behind the non-diffusion of technology is the interests of multinational firms. As a matter of fact, multinational companies do not invest in developing countries to transfer their technology to their local competitors, but rather to benefit from proximity to their target population, low cost labour force and raw materials (Glass and Saggi, 2008; Potterie and Lichtenberg, 2000). Therefore, rather than providing diffusion of technology, these companies may take measures to minimize technology transfer to their local competitors (Blalock and Gertler, 2005).

In this respect, it can be concluded that since technology transfer is directly related with the foreign direct investments, the success of free zones in attracting multinational companies determine the success of free zones in accelerating technology access.

#### **IV-3e. Existing Problems in Free Zones and Recommendations Based on the Results of the Questionnaire**

Although free zones present firms important advantages such as tax exemptions, control free customs duty procedures and storing facilities; existing problems restrain the success of free zones in realizing their establishment objectives.

To begin with, one of the most important advantages of free zones is tax exemptions. However, frequent changes in tax advantages and rules which set out how to benefit from these advantages affect the success of free zones in attracting new investors. Furthermore, since the free zones legislation has incompatible points with the EU legislation, especially regarding the tax exemptions provided in free zones, the EU-Turkey accession negotiations increase uncertainties in the zones. In this regard,

firms operating in free zones cannot benefit from medium and long term planning opportunities because of the uncertainties existing in the zones.

Secondly, taking into account the importance of improved infrastructure facilities for the investments of multinational companies and large domestic firms in free zones; current situation regarding the failure of free zones in providing well-developed infrastructure can be considered as an important obstacle in attracting foreign investments to the zones.

Thirdly, although minimizing bureaucracy is regarded as one of the advantages of free zones by the institutions and organizations responsible from the zones; the results of questionnaire put forward that most of the firms do not agree that bureaucracy is reduced in free zones. In this respect, similar to the infrastructure problems, red-tape is likely to prevent the success of free zones in attracting new investors.

Fourthly, statistics prove that investments of foreign companies concentrate in certain free zones. The main reason behind the clustering of foreign direct investments is the motivation behind the investment decision of multinational companies. Since most of these firms invested in Turkey mainly because of the geographic advantages of Turkey, irrespective of advantages provided in free zones, they preferred to invest in certain free zones like Aegean, Europe, Kocaeli, Bursa and Antalya Free Zones in specific regions. Thus, potential positive spillover effects of foreign investments remained limited with these zones.

In this regard, in addition to the aim of overcoming abovementioned problems, with the purpose of modernizing free zones; new policies should be developed. To that end, the concept of "free zone" should be discussed in detail. By examining successful examples of free zone experiences all around the world, the ideal type of free zone for Turkey should be determined. Although the examination of various implementations of free zones in the world may be a subject of another study; Shenzhen Special Economic Zone in China with its success in

switching from classical free zone understanding to special economic zone concept; free zones in Dubai where almost 80% of non-petroleum exports of the United Arab Emirates have been realized; Lodz Free Zone in Poland with its success in sectoral clustering should be observed. Afterwards, following the determination of the ideal characteristics of the new zone concept, for once only and radical change in the legislation should be done. Besides, in this process, opinions and suggestions of existing firms operating in free zones should be taken with the intent of not repeating mistakes in the past, removing current deficiencies faced by the firms and minimizing possible repercussions of the changes in these firms. Furthermore, in order to make a long lasting and consistent change, necessary consultations with the related EU services should be done and they should be included in the process.

Last but not the least, in the establishment of new free zones in case of necessity, policy-makers should pay attention to choosing establishment location of the zone since it is crucial to attract new investors and to increase the efficiency of existing users. For instance, Denizli Free Zone is 65 km. far away from the province. Similarly, there is only one firm operating in Rize Free Zone and operations of Eastern Anatolia Free Zone in Erzurum are stopped on the same grounds. On the other hand, some of the free zones face with problems because lands of these zones are not convenient to expand. For instance, although Samsun Free Zone has a significant advantage regarding its location due to its easy access to ports, international airports and highways; because of the limitations of the land, the zone cannot accept new investors. Furthermore, existing users cannot expand their facilities in the zone and this prevents firms to benefit from economies of scale. In this respect, the importance of the locations of the zones, not only in terms of their geographic advantages but also in terms of their feasibility to expand, should be taken into account in the establishment of free zones.

## **CHAPTER V**

### **CONCLUSION**

As many developing countries have moved from import substitution to export promotion economic policies after 1970s; as a part of their export oriented policies, free zones have proliferated throughout the world, including Turkey. In Turkey, Mersin Free Zone was established as the first free zone in 1985 and the number of free zones has increased to 19 in the following years.

In this study, economic impacts of free zones in Turkish economy and the success of free zones in achieving establishment objectives were explored. The establishment objectives of free zones are identified in the Law on Free Zones as "promoting export-oriented investment and production, accelerating the entry of foreign investment and technology, directing enterprises to export and improving international trade".

In addition to the descriptive statistics regarding each objective of the zones, a field research was conducted in the context of the study in order to explore to what extent these objectives have been realized. In this regard, a questionnaire study was carried out with firms operating in free zones. The target group of the questionnaire was free zones' all users, which have Production, Purchasing & Selling, and Research & Development operating licences. Approximately 14.7% of target group responded to the questionnaire, which is above the generally accepted 5% minimum response rate. However, response rate of firms operating in Mersin Free Zone was realized too high compared to returns from other free zones. Therefore, in order to avoid misinterpretation of the results of the study, all questions were examined again by excluding Mersin Free Zone and the results were compared.

The responses given in the questionnaire were examined by using SPSS program and in this context reliability analysis and chi-square test of independence were performed in addition to basic tables and graphs which are presenting frequency distributions.

First, as one of the primary objectives, free zones' success in directing firms to export and export oriented activities was examined. In this regard, the results of the questionnaire proved that tax exemptions in free zones stimulate exports and export oriented activities. Furthermore, large majority of the firms expressed that free zones provided easy access to raw materials and intermediate goods necessary for the production of goods to be exported. Besides, they stated that incentives and facilities provided low cost manufacturing for their firms in the zones. Moreover, the results of the questionnaire study verified the fact that the location of Turkish free zones offers important advantages by providing proximity to target markets. The results were also supported by the fact that 62.3% of respondent firms have exported their products for the first time to the foreign markets after they began to operate in free zones; and exports of respondent firms increased from 394.8 million dollars in the first years of the operation date of firms to 661.9 million dollars in 2011.

However it is noteworthy that despite the incentives provided in free zones to direct firms to export; more than 30% of respondent firms considered sales to domestic markets more attractive than exports to foreign markets. Free zones' sales to domestic economy were explained through free zones' ex-establishment objective which envisages "providing cheap and continuous input supply to domestic economy". Although this objective was removed from the Law on Free Zones in 2008, existences of firms which serve this purpose led to continue sales to Turkey.

The result of the questionnaire regarding the export promotion effect of free zones was also supported by the descriptive statistics. Based on

trade figures, it was concluded that free zones have served as a tool to supply raw-materials and intermediate goods necessary for the production of goods in Turkey rather than increasing the exports in the 1985-2008 period, thus domestic sales were higher than exports. However, following the removal of the abovementioned objective in 2008 and as a result of the amendments in the Law in recent years in order to reduce domestic sales by promoting exports; in 2011 free zones' exports to foreign countries have exceeded sales to domestic market for the first time since the establishment of free zones.

As for the foreign direct investments, in Turkey free zones are considered as one of the important instruments to attract FDI by a number of advantages presented in the zones. Accordingly, in this study the success of free zones in attracting foreign direct investments was examined by focusing on to what extent the advantages peculiar to free zones have influenced foreign companies in their investment decisions in the zones and to what extent these policies are successfully implemented in the free zones.

The results of the questionnaire put forward that existing policies implemented and facilities presented in the zones are insufficient to achieve the "accelerating foreign direct investments" objective of free zones. As a matter of fact almost half of the foreign investors expressed that free zones present more favourable investment conditions compared to Turkey. Thus, the study concluded that free zones originally have the potential to attract foreign direct investments. Furthermore this potential is supported by certain advantages. First, firms operating in free zones benefit from important tax exemptions. Besides, free zones present opportunity for firms to import required inputs for their production without any customs duties and procedures and this provides firms to supply their input needs in a quick, easy, flexible and secure manner. Moreover, the geographical advantage of Turkey and free zones in attracting foreign investors was strongly verified by the results of the questionnaire.

However, in spite of the potential of free zones, the results of the questionnaire presented that uncertainties regarding the advantages presented in free zones hinder firms' ability for medium and long term planning. Moreover, despite the importance of well-developed infrastructure in attracting foreign direct investments; the results of the questionnaire put forth that firms face with important infrastructure problems in free zones. Besides, in spite of the commitments of policy makers to overbear bureaucracy; the questionnaire indicated that firms operating in free zones do not benefit from minimized bureaucracy. Furthermore, as the results of the questionnaire put forward, the first two motivations behind the investments decision of the foreign firms are the proximity of Turkey to the target markets and the supply of low cost raw materials and labour force, irrespective of advantages presented in free zones. Taking into account the fact that only 24.1% of the respondent firms' primary motivations behind their investment decisions in Turkey are "advantages provided in free zones"; it was asserted that most of the foreign firms operating in free zones would invest in Turkey even if free zones did not exist.

Lastly, the third objective of free zones "accelerating the transfer of technology" was examined. In this context, in order to reach more comprehensive results, the responses of firms operating in Aegean and Europe Free Zones, which have attracted 75% of foreign direct investments made in free zones, and the responses of firms operating in other zones were examined separately. Besides, in order to explore the difference between perceptions of domestic firms and domestic-foreign partnership firms regarding the technology transfer, their responses were examined separately.

As a result of the questionnaire, it was concluded that free zones create a room for the technology transfer via providing FDI flow into the zones. Furthermore, it was brought out that firms operating in Aegean & Europe Free Zones and domestic-foreign partnership firms are more successful

in transfer of technology compared to firms operating in other free zones and purely domestic firms.

However, the responses of firms proved that since investments of foreign companies cluster in certain regions, only free zones locating in these specific regions have potential to promote technology transfer through foreign direct investments. Furthermore, it was concluded that spillover impacts of foreign direct investments in terms of technology transfer remained limited for purely domestic firms. In this regard, it was stated that the main reasons behind the non-diffusion of technology was the interests of multinational firms, which hesitate to transfer their technology to their local competitors.

Accordingly, the results of the questionnaire put forth that since technology transfer is directly and strongly related with the foreign direct investments, the success of free zones in attracting multinational companies determine the success of free zones in accelerating technology access.

Overall, despite the deficiencies in the implementation of free zones, they have a potential to contribute the national economy by stimulating exports, attracting foreign direct investments and transferring technology. Moreover, free zones' positive contribution to the government budget should not be ignored in the discussions regarding the future of the zones. Since the establishment of free zones, while government expenditures have been realized as 33 million dollars, the revenues of the government from the zones have reached 971.4 million dollars by the end of 2010.

In this regard, for the purpose of getting maximum benefits from free zones for the national economy, existing problems in the free zones should be handled and new policies should be developed to modernize "free zone" concept. By examining successful points of different zones in all around the world, the ideal type of free zone for Turkey should be



determined. In this process, opinions and suggestions of existing firms operating in free zones should be taken with the intent of not repeating mistakes in the past, removing current deficiencies faced by the firms and minimizing possible repercussions of the changes in these firms. Furthermore, in order to make a long lasting and consistent change, necessary consultations with the related EU services should be done and they should be included in the process.

This research explored the economic impacts of free zones in terms of establishment objectives of the zones by conducting a field research in all 19 free zones. However, because of the difficulties to provide access to the exact list of the firms in free zones and time limitations, the questionnaire was conveyed to free zone firms via Free Zone Directorates. Thus, the study used a sample where firms have to self select to respond to the questionnaire. For further studies, more extensive field researches, which will provide to reach all firms operating in free zones or will provide the opportunity to make a random sampling, would increase the accuracy of the results. In this respect, different research teams established for each free zone can facilitate to make a comprehensive field research and thus can increase the reliability of results of the research.

In this regard, this study is important since it can be considered as a guide for further studies on economic impacts of free zones in Turkey. Besides, results of the study would be a guide for potential investors of the free zones in Turkey by setting forth the current and actual situation in the eyes of firms operating in the zones. Furthermore, this study would be helpful for policy-makers who discuss the success and future of free zones nowadays.

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Bursa Free Zone, <http://www.buseb.com/>

Denizli Free Zone, <http://www.denser.com.tr/>

Europe Free Zone, <http://www.asb.com.tr/>

Gaziantep Free Zone, <http://www.gasbas.com.tr/>

İstanbul Atatürk Airport Free Zone, <http://www.isbi.com.tr/>

İstanbul Industry and Trade Free Zone, <http://www.desbas.com.tr/>

İstanbul Thrace Free Zone, <http://www.isbas.com.tr/>

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## APPENDICES

### APPENDIX I

#### QUESTIONNAIRE

Sayın Yetkili,

TÜBİTAK'ın desteği ile, Türkiye'de faaliyet gösteren Serbest Bölgelerin kuruluş amaçları çerçevesinde ekonomik etkileri ve etkinliklerine ilişkin olarak hazırlamakta olduğum Yüksek Lisans Tez çalışmasında kullanılmak üzere aşağıdaki anket çalışması hazırlanmıştır. Anket sorularına verilecek cevaplar, çalışma dışında hiçbir şekilde kullanılmayacak ve paylaşılmayacaktır. Anket sorularına verilecek cevaplara dayanılarak ortaya çıkarılacak sonuçların, akademik bir boşluğu doldurmasının yanı sıra, politika yapıcıları yönlendirerek Serbest Bölgelerde faaliyet gösteren firmalarımız için olumlu sonuçlar doğurması beklenmektedir. Göstermiş olduğunuz yardımdan dolayı teşekkürlerimi sunarım.

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Prof. Dr. Uğur SOYTAŞ  
ODTÜ İİBF Öğretim Üyesi

#### ANKET FORMU

1. Firmanızın faaliyet gösterdiği Serbest Bölge:
2. Firmanızın Serbest Bölge'de faaliyete başladığı tarih: ...../...../.....
3. Firmanızın faaliyet alanı ( Faaliyet Ruhsatı türü) (Birden çok seçenek işaretlenebilir):  
( ) Üretim            ( ) Alım-Satım            ( ) Ar-Ge ve Ar-Ge'ye Dayalı Faaliyetler
4. Firmanızın statüsü:

( ) Yatırımcı ( ) Kiracı

5. Firmanızın faaliyette bulunduğu sektör:

- ( ) Tarım
- ( ) Maden ve Taşocakçılığı
- ( ) İşlenmiş Tarım Ürünleri
- ( ) İşlenmiş Petrol Ürünleri
- ( ) Kimya Sanayi Ürünleri
- ( ) Lastik Plastik Sanayi Ürünleri
- ( ) Deri-Kösele Sanayi Ürünleri
- ( ) Tekstil-Konfeksiyon Sanayi Ürünleri
- ( ) Cam-Seramik Sanayi Ürünleri
- ( ) Demir-Çelik Sanayi Ürünleri
- ( ) Demir Dışı Metaller Sanayi Ürünleri
- ( ) Madeni Eşya Sanayi Ürünleri
- ( ) Makine Sanayi Ürünleri
- ( ) Elektrik Sanayi Ürünleri
- ( ) Otomotiv Sanayi Ürünleri
- ( ) Diğerleri

6. Firmanız,

- ( ) Yerli firma
- ( ) Yerli sermaye ağırlıklı Yerli-Yabancı iştiraki
- ( ) Yabancı firma
- ( ) Yabancı sermaye ağırlıklı Yerli-Yabancı iştiraki niteliğindedir.

7. Firmanız Serbest Bölge’de girdi ihtiyacını ağırlıklı olarak,

- ( ) Yurtiçinden (Türkiye) sağlamaktadır.
- ( ) Yurtdışından sağlamaktadır.
- ( ) Serbest Bölgelerden sağlamaktadır.

8. Firmanız Serbest Bölge’de ürün/hizmet satışını ağırlıklı olarak,

- ( ) Yurtiçine (Türkiye) yapmaktadır.
- ( ) Yurtdışına yapmaktadır.
- ( ) Serbest Bölgelere yapmaktadır.



**9.** Firmanızın Serbest Bölge’de faaliyete başladığı tarihte firmanızda tahmini çalışan kişi sayısı,

- 1–9 kişi arasındadır.                       10–49 kişi arasındadır.  
 50–250 kişi arasındadır.                       250 veya daha fazladır.

**10.** Firmanızda hâlihazırda çalışan kişi sayısı,

- 1–9 kişi arasındadır.                       10–49 kişi arasındadır.  
 50–250 kişi arasındadır.                       250 veya daha fazladır.

**11.** Firmanız Serbest Bölge kullanıcısı olmadan önceki dönemde Türkiye’de düzenli olarak faaliyet göstermiştir.

- Evet                       Hayır

12. soruyu lütfen 11. soruya “Evet” cevabı verdiyseniz cevaplayınız.

**12.** Firmanız Serbest Bölge kullanıcısı olmadan önceki dönemde düzenli olarak ihracat faaliyeti gerçekleştirmiştir.

- Evet                       Hayır

**13.** Firmanızın Serbest Bölge’de faaliyete başladığı tarihte üçüncü ülkelere gerçekleştirdiği yaklaşık yıllık ihracat miktarı:

**14.** Firmanızın Serbest Bölge’de 2011 yılında üçüncü ülkelere gerçekleştirdiği ihracat miktarı:

15. Serbest Bölgelerde, firmanızın ihracata yönelik yatırım ve üretimini teşvik etmek ve firmanızı ihracata yönlendirmek üzere uygulanan politika ve teşvikleri değerlendiriniz.

	<b>Kesinlikle katılmıyorum</b>	<b>Katılıyorum</b>	<b>Fikrim yok</b>	<b>Katılmıyorum</b>	<b>Kesinlikle katılmıyorum</b>
Serbest Bölgelerde sağlanan vergi avantajları, firmamızın ihracata dönük faaliyetlerini teşvik etmektedir.					
Serbest Bölgelerde sağlanan teşvik ve avantajlar, firmamız için düşük maliyetli mal üretimini ve ihracatını sağlamaktadır.					
Serbest Bölgeler firmamızın ihtiyaç duyduğu bazı hammadde ve ara mallarının kolaylıkla, istenilen miktarda ve zaman kaybı olmadan temin edilebilmesine katkı sağlamaktadır.					
Serbest Bölgelerin konumu, lojistik ve stratejik olarak firmamızın hedef pazarlara yakınlığını sağlamaktadır.					
Serbest Bölgeler, firmamızın Türkiye’de yerleşik üreticilere ucuz hammadde ve ara malı tedariki için önemli bir enstrüman olarak görülmektedir.					
Serbest Bölgelerde, yurtdışına ihracata yönelik teşviklere rağmen, firmamız için iç pazarların dış pazarlara oranla erişim kolaylığı ve bilinirliği Bölge’den yurtiçine satış olanaklarını daha cazip kılmaktadır.					

16. ve 17. soruları lütfen yabancı sermayeli (tamamen yabancı sermaye veya yerli-yabancı iştiraki) bir firma iseniz cevaplayınız.

**16.** Firmanız/Firmanızın yabancı sermayeli ortağı/ortakları tarafından Serbest Bölgelerde yapılan yatırımları, Serbest Bölgelerde sunulan olanaklar çerçevesinde değerlendiriniz.

	<b>Kesimlikle katılıyorum</b>	<b>Katılıyorum</b>	<b>Fikrim yok</b>	<b>Katılmıyorum</b>	<b>Kesimlikle katılmıyorum</b>
Serbest Bölgelerin Türkiye'ye göre daha iyi koşullara sahip olan yatırım ortamından yararlanılmaktadır.					
Serbest Bölgelerde orta ve uzun vadede geleceği planlayabilme imkânlarından yararlanılmaktadır.					
Serbest Bölgelerde kullanıcılara sağlanan vergi avantajlarından yararlanılmaktadır.					
Serbest Bölge'nin kurulduğu yörenin coğrafi ve stratejik konumundan yararlanılmaktadır.					
Serbest Bölgelerin lojistik olanaklarından ve ulaşım kolaylığından yararlanılmaktadır.					
Serbest Bölge'nin sahip olduğu gelişmiş alt yapı olanaklarından yararlanılmaktadır.					
Yurtdışından girdi tedariki sırasında kolaylık, esneklik, hız ve güvence imkânlarından faydalanılmaktadır.					
Ucuz işgücü imkânlarından yararlanılmaktadır.					
Ucuz hammadde imkânlarından yararlanılmaktadır.					
Azaltılmış bürokratik işlemlerden faydalanılmaktadır.					

17. Firmanızın Türkiye’de faaliyet gösterme amaçlarını/sebeplerini öncelik sırasına göre belirtiniz.

(En öncelikli olana 1, ikinci derece öncelikli olana 2, ve devamla 3, 4 ve 5 gibi)

Firmanızın faaliyet gösterme amacı ile bağdaşmayan gerekçeleri işaretlemeyiniz.

	<b>Öncelik Sırası</b>
Türkiye’nin lojistik ve stratejik olarak hedef pazarlara yakınlığı	
İthalat-ihracat işlemlerinde kolaylık sağlamak	
Ucuz işgücü ve hammadde sağlama kolaylığı	
Serbest Bölgelerde sunulan olanaklar	
Siyasi ve ekonomik istikrar	

18. Serbest Bölgelere yapılan doğrudan yabancı yatırımların, firmanıza teknoloji transferi sağlanmasındaki katkılarını aşağıda yer alan sorular çerçevesinde değerlendiriniz.

	Kesinlikle katılıyorum	Katılıyorum	Fikrim yok	Katılmıyorum	Kesinlikle katılmıyorum
Firmamızın üretim ve sanayi yapısında dönüşüm yaşanmıştır.					
Teknoloji transferi ile geliştirilen üretim süreci, firmamız için verimlilik ve düşük maliyetli üretim imkânı sağlamıştır.					
Firmamız, üretimde düşük katma değerli sektörlerden, yüksek katma değerli sektörlere geçiş yapmıştır.					
Serbest Bölge'de faaliyete başladıktan sonraki dönemde, firmamız tarafından ihraç edilen ürünlerin çeşitliliği artmıştır.					
İhraç ürünlerinde sağlanan innovasyon (teknolojik yenilikler) firmamızın rekabet gücünü artırmıştır.					
Daha önce çok uluslu başka bir şirkette istihdam edilen teknik ve profesyonel özelliklere sahip personelin/personellerin firmamıza transferi, üretim ve/veya yönetim tekniklerinin geliştirilmesini sağlamıştır.					

**Anketi cevaplayan yetkilinin,**

**Görevi ve Unvanı:**

**Firmada çalışma süresi:** 1 yıldan az ( ) 1-5 yıl ( ) 5-10 yıl ( ) 10 yıldan fazla ( )

**Eğitim durumu:** Yüksek Lisans ( ) Lisans ( ) Lise ( ) Diğer: .....

Sayın Yetkili, göstermiş olduğunuz ilgiden dolayı teşekkürlerimi sunarım.

## APPENDIX II



### TEZ FOTOKOPİ İZİN FORMU

#### ENSTİTÜ

Fen Bilimleri Enstitüsü

Sosyal Bilimler Enstitüsü

Uygulamalı Matematik Enstitüsü

Enformatik Enstitüsü

Deniz Bilimleri Enstitüsü

#### YAZARIN

Soyadı : KAVLAK

Adı : Mehmet Emin

Bölümü : İşletme

**TEZİN ADI** (İngilizce) : Economic Impacts of Free Zones in Turkey: A Questionnaire Study Conducted with Firms Operating in Turkish Free Zones regarding the Perception of the Firms on the Success of Free Zones

**TEZİN TÜRÜ**: Yüksek Lisans

Doktora

1. Tezimin tamamı dünya çapında erişime açılsın ve kaynak gösterilmek şartıyla tezimin bir kısmı veya tamamının fotokopisi alınsın.
2. Tezimin tamamı yalnızca Orta Doğu Teknik Üniversitesi kullanıcılarının erişimine açılsın. (Bu seçenekle tezinizin fotokopisi ya da elektronik kopyası Kütüphane aracılığı ile ODTÜ dışına dağıtılmayacaktır.)
3. Tezim bir (1) yıl süreyle erişime kapalı olsun. (Bu seçenekle tezinizin fotokopisi ya da elektronik kopyası Kütüphane aracılığı ile ODTÜ dışına dağıtılmayacaktır.)

Yazarın imzası .....

Tarih .....