CURRENT SITUATION of R&D and TAX INCENTIVES IN TURKEY

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ABSTRACT: Century which we are in the information age, countries having advance science and technology have continuously economic activity and competitiveness advantage. Catching this information age by our country, it is needed that high/advance technologies have to be used in order to catch sustainable economic growth, increase competitiveness power in international level, to get high exporting level for high/advance technologies instead of importing. Technoparks are places having companies that are inclined towards or presently using high/advanced technologies develop/produce technology or software by using facilities of a specific university or high technology institute or Research and Development (R&D) center or institutions. As a matter of benefits provided by technoparks; it is aimed to enhance cooperation between university and industry, to support investment possibilities in technologically intense areas, to convert the academic knowledge which produced by the university into technology and commercialize it, to increase competitiveness advantage of enterprises at national and international level providing technological infrastructure about R&D for them, and also to increase export. In this context, It is obviously seen that tax incentives supporting R&D activities are very important as a matter of creating resources. Concerning with the expenditure within the context of R&D, tax incentives are taken places; a) income tax and corporate tax law and communications and circulars related with this law, b) tax exemptions specified in 4691 law for R&D activities in Technology Development Zones and its regulation

Key words: Reserach&Development, Innovation, Technoparks, Incentives

ÖZET: Bilgi çağına girilen içinde bulunduğumuz yüzyılda, ileri bilim ve teknolojiye sahip ülkeler ekonomik etkinliğe ve rekabet üstünlüğüne sahip durumdadırlar. Ülkemizin bu bilgi çağını yakalaması, ileri teknolojiyi ithal eden değil ihrac eden konuma gelmesi, uluslararası rekabet gücünü artırmak, sürdürülebilir bir ekonomik büyüme yakalamak için ileri teknolojinin kullanılmasını zorunlu kılmaktadır. Teknokent; yüksek/ileri teknoloji kullanan yada yeni teknolojilere yönelik firmaların, belirli bir üniversite veya ileri teknoloji enstitüsü ya da Ar-Ge merkez veya enstitüsünün olanaklarından yararlanarak teknoloji veya yazılım ürettikleri/geliştirdikleri yerler olup, teknokent'lerin sağladığı yararlar açısından değerlendirildiğinde; üniversite ile sanayi arasında işbirliği sağlamak, teknoloji yoğun, üretim ve girişimciliği desteklemek, teknoloji-yoğun alanlarda yatırımı teşvik etmek, üniversitede üretilen bilginin teknolojiye dönüştürülerek ticarileşmesini sağlamak, bölgedeki kuruluşlar için araştırma geliştirme, konusunda gerekli teknolojik altyapı ve üstyapıyı oluşturarak, üreticilerin uluşal ve uluşlararası alanda rekabet güçünü artırmak, dolayısıyla ihracatı artırmaktır. Bu bağlamda Ar-Ge faaliyetlerini destekleyen tesvikler

açısından vergisel teşviklerin kaynak yaratma bakımından önemli olduğu ortadadır. Ar-Ge faaliyetleri kapsamında yapılan harcamalarla ilgili vergisel teşvikler, Gelir Vergisi ve Kurumlar Vergisi kanunuyla bu kanuna bağlı tebliğ ve sirküler ile Teknoloji Gelistirme Bölgelerinde yer alan Ar-Ge faaliyetlerine ilişkin vergisel teşvikleri düzenleyen 4691 sayılı kanun ve bu kanuna bağlı olarak çıkarılan yönetmelikle yapılan düzenlemeler içerisinde yer aldığı görülmektedir.

Anahtar Kelimeler: Araştırma&Geliştirme, Yenilikçilik, Teknoparklar, Teşvikler

1. GENERAL INSTITUTIONAL FRAMEWORK

In Turkey, scientific and research activities are conducted mainly by universities and public research institutions. The initiatives aiming at the enhancement of cooperation in scientific and technological research between universities, research institutions and industry have been launched and the cooperation is gradually increasing. General institutional framework of R&D and Innovation in Turkey is given in detail in Table 1(İşletmeler ve Sanayi Politikalar Faslı, 4-5 Mayıs 2006, Innovation Policy, http://www.abgs.gov.tr/tarama/tarama.html. Date:17.10.2006).

Table 1. General institutional Framework

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Actors	Role and Responsibility
Supreme Council of Science and Technology (SCST)	Policy Making
State Planning Organisation (SPO)	Policy Making, Planning, Project Support
Turkish Scientific and Technological Research Council (TUBITAK)	Conducting Research, Policy Making, Project Support
Ministry of Industry and Trade (MoIT)	Policy Making, Project Support
Undersecretariat for Foreign Trade (UFT)	Provide Financial Resources
Undersecretariat for Treasury (UoT)	Provide Financial Resources
Small and Medium-Sized Enterprises Development Organisation (KOSGEB)	Project Support, Incubator Services
Turkish Technology Development Foundation (TTGV)	Project Support, Finance
Turkish Academy of Sciences (TUBA)	Policy Making
Research Centers of Ministry of Agriculture and Rural Affairs (MARA)	Policy Making
Turkish Patent Institute (TPI)	Industrial and Intellectual Property Rights
TUBITAK Marmara Research Center (TUBITAK-MAM)	Contract Research for Industry and Development of Innovative Products
National Metrology Institute (UME)	Measurements, Training, Consultancy
Turkish Atomic Energy Authority	Policy Making and Project Support

Innovation and R&D are the main elements of competitiveness and most of innovations emerge from R&D activities that create new know-how and technologies. But a potent R&D system alone is not enough for transformation of R&D results into innovation, also strog links between knowledge producers and industry are required as well as the relevance of research topics with industry's needs and demands. When we look at the basic policy documents which are given in Table 2 (İşletmeler ve Sanayi Politikalar Faslı, 4-5 Mayıs 2006, Innovation Policy, http://www.abgs.gov.tr/tarama/tarama.html. Date: 17.10.2006), basic objectives have been be taken in to consideration. They are given below;

- Increase awareness of the society on science, technology and innovation.
- Reseach projects mainly focused on priority areas,
- Increase the capacity of science, technology and innovation and transform this
- Capacity into socio-economic value added.
- Increase private sector's demand and strenghten its capacity for R&D,
- Increase university-public and private sector cooperation,
- Increase international cooperation, primarily with the EU,

Table 2. Basic policy documents on R&D and Innovation

POLICY DOCUMENT	DATE	COORDINATOR INSTITUTION	LEGAL STATUS	
9th Development Plan	2007-2013	SPO	Approved by the TGNA	
Medium-Term Programme	2006-2008	SPO	Decree of Council of Ministers	
2006 Annual Programme	2006	SPO	Decree of Council of Ministers	
SCST Decisions	2000, 2001,2002	TUBITAK	Circular of Prime Ministry	
National Science and Technology Strategy	2005-2010	TUBITAK	Circular of Prime Ministry	
Industrial Policy for Turkey	2003	SPO	HPC decision	
SME Strategy and Action Plan	2003	SPO	HPC decision	
Preliminary National Development Plan	2004-2006	SPO	HPC decision	

2. MAIN OUTPUTS for R&D and INNOVATION in TURKEY

The rapid implementation of research & development and innovation outputs in the economy is indispensable for increasing competitiveness.

a) R&D Expenditure

Observing the general picture of Turkey's R&D system with the aim of increasing the competitiveness of enterprises through research, technology development and innovation, it is seen that the ratio of the R&D expenditures to GDP is increased by a factor of two from 0.32% in 1990 to 0.64 in 2000. This value in the year 2002 is reached to 0.67%, the estimated value from the 9th development plan is around 0.8% for the year 2006, and the target value taken by SCST, which is the highest policy making body in science and research composing of representetives of the government, universities, industry and NGOs, is 2% for 2010 in order to achieve the overall Lisbon objectives. However, this is almost one-third of the EU-25 average, which is 1.9%.

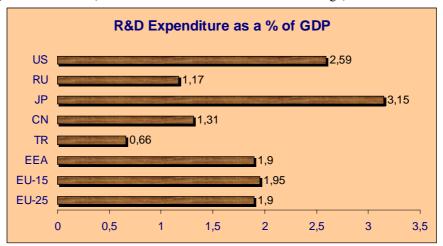


Figure 1. R&D expenditure as a % of GDP(Science and technology in Europe, 2006, ISSN 1725-5821, Office for Official Publications of the European Communities.)

Expenditure on R&D in Turkey is lesser than developed countries. Table 1 (OECD, Main Science and Technology Indicators, June 2006) gives the detail of breakdown of the expenditure on R&D as a % of GDP.

Table 1. The breakdown of the expenditure on R&D as a % of GDP

	Gross Domestic Expenditure on R%D					
	% finance	ed by				
	Industry	Goverment	Industry	Higher Education	Goverment	
Turkey	41.3	50.6	28.7	64.3	7.0	
EU-25	53.7	35.0	63.3	22.1	13.4	

Increasing the ratio of the R&D expenditures in GDP, It is important to increase the rate of R&D expenditure by private sector beside the supports and investments on R&D and Innovation by public institutions from the state budget. The share of higher education is 64,3%, the share of government is 7%, the share of private sector is also 28.7% in total R&D expenditure for the year 2002. It is aimed that private sector will realize at least 60% of R&D expenditure for the year 2013. In this context, supports providing by public institutions will enhance to increase the activities of private sector on R&D (9th Development Plan , 2007-2013, 2006).

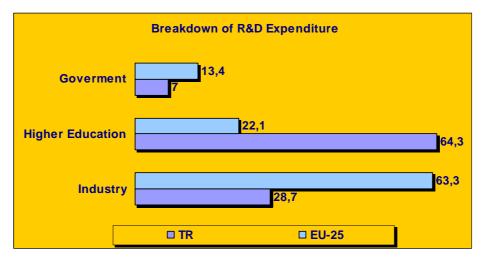


Figure 2. Breakdown of R&D expenditure as a % of GDP (OECD, Main Science and Technology Indicators, June 2006).

Most of R&D infrastructure established in universities and public research institutions and most of R&D activities are performed by universities and public research institutions. Because of insufficient cooperation between academia, public institutions and industry, the results of R&D activities performed by universities and research institutes cannot be commercialized or away from the needs and demands of the industry. Therefore Turkish Research Area, TRA, has been established which is coordinated by Scientific and Technological Research Council of Turkey (TUBITAK), aims at providing synergy among; Institutions carrying out R&D activities (universities, public research institutions and private firms), institutions demanding R&D (private and public sectors) and institutions funding R&D activities (public and private sectors).

In the innovation system, for providing protection of the Intellectual Properties, Turkish Patent Institute is founded in 1994. In the same year, the international TRIPS agreement has been signed. While the number of triadic patents in Turkey was 2 in 1994, it raised to 9 by 2002 (AR&GE istatistikleri, 2006, http://arbis.tubitak.gov.tr. Date: 17.10.2006). However, these numbers are still very low compared to EU and OECD countries.

b) R&D Personnel

Lack of human resources on R&D and Innovation is other main problem of Turkey. Total R&D personnel per thousand total employments is one of the lowest values in OECD countries, and most of these personnel are employed in universities contrary to situation in developed OECD countries. Also, the number of full time equivalent R&D personnel per 10.000 total employment is 13.6 for the year 2002 (9th Development Plan, 2007-2013, 2006).

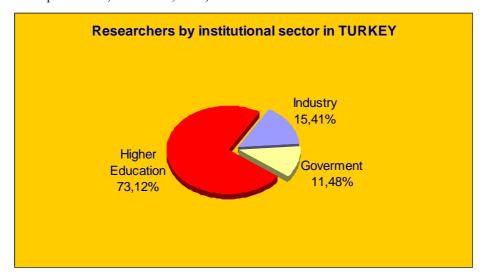


Figure 3. Researchers by institutional sector in Turkey (Science and technology in Europe, 2006, ISSN 1725-5821, Office for Official Publications of the European Communities.

The number of full time equivalent R&D personnel in Turkey is around 24000, in which the proportion of full time equivalent researchers in the business sector is approximately one sixth, 3700. This value is well below the EU-25 average, which is nearly 1.2 million. Figure 3 shows the breakdown of the researchers considering with the each sectors (Private, public and higher education). The target value of full time equivalent R&D personnel of Turkey is defined by SCST as 40.000 (half of it from private sector) for 2010 in order to achieve the overall Lisbon objectives.

As can be seen from Figure 3, 73.12 % of the researchers in Turkey is from higher education in spite of that around 40% of researcher in EU-25 (Science and technology in Europe, 2006, ISSN 1725-5821, Office for Official Publications of the European Communities). Comparing the values between EU-25 and TR, It is obvious that the number of researchers in private sectors in TR is quite lower than EU-25. This is because of the low level of awareness for science and technology within private sector. Parallel to this, the companies are not considering the R&D and innovation activities as their major source of competitiveness.

The low wages and the unsatisfactory level of research environment conditions in Turkey carry the threat of "brain drain", quality deterioration and migration of R&D personnel, since the demand for highly qualified research & development experts is growing intensely world-wide.

Turkish universities, public research institutions and industry through their knowledge and research experience, take part in different research programs of the European Union. In 2003, Turkey joined the EU's 6th Framework Program, by which the integration of TRA with ERA has been initiated. Turkey has obtained a participation rate of 15% within the total number of proposed projects which can be regarded as reasonable in total project pool (TUBİTAK AB Çerçeve Programları ve Türkiye Raporu, 2006). Turkish R&D is not capable of participating efficiently and with mutual benefits in R&D co-operation structures and networks operated by the EU. One of the main reasons of this phenomenon is the lack of quantity and quality of researchers.

3. CO-OPERATION BETWEEN SCIENTIFIC INSTITUTIONS and INDUSTRY

In Turkey, cooperation between universities and enterprises are generally in a low level. Usually university and other scientific institutions intensify their studies on theoretical subjects and this situation makes industry far from those researches. However for sustainable studies, these activities should be inevitably integrated to industrial applications. There exist some mechanisms to encourage both sides for collaboration.

In order to increase the innovativeness of private sector and its cooperation with the universities, there are several on-going support mechanisms such as Technology Development Zones (TDZs) executed by Ministry of Industry (MoIT), project-based grants and credits, tax exemptions, incubators and risk capital.

MoIT is one of the executer of these mechanisms through financing R&D, innovation and technological cooperation activities. The Law of Technology Development Zones promotes the use of high/advanced technologies and the development/production of technology or software in technology development zones, and the related R&D capabilities, through cooperation between universities, research institutions, and production sector.

The main aim of the the development of Technology Development Zones is;

- to increase synergy between universities, research institutes and industry,
- to create convenient environments for the high-tech firms to conduct their R&D studies
- to increase international competitiveness and export potential of industry by adapting/developing high/advanced technologies,

- to stimulate science-based technological innovations and to foster the technologies of the future,
- to commercialize technological knowledge and academic research,
- to support technology based entrepreneurship and to stimulate the formation of start-up new-technology-based firms
- to create investment opportunities in technology intensive areas,
- to create employment and consultancy opportunities for qualified people and researchers including the academic staff and students
- to help technology transfer, especially from academic institutions to park firms
- to provide technological infrastructure attracting foreign capital and international firms providing high/advanced technologies, most of which are some common for establishing technoparks all over the world.

Following tax exemptions and incentives for mobility of researchers in TDZs, also special permits are provided with the Law till the end of 2013:

- Income and corporate tax exemptions for the managing company of the zone,
- Income and corporate tax exemptions for the incomes generated from software development and R&D activities of the companies operating in these zones,
- Income tax exemptions for the salaries of the researchers, software development staff and R&D personnel working in these zones
- VAT exemptions for the software development activities
- Right of recruitment of individuals from government research organizations or universities in the zone with the approval of their organizations. (The income obtained in the zone by academicians or research personnel are exempted from the university revolving fund deductions)
- Legal permission for academicians to establish firms or become a partner of existing firms in the zones to commercialize their academic works (with the approval of their university).

Financial support is given by MoIT for land, infrastructure and construction of management building.

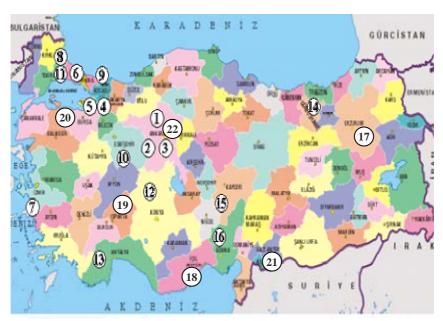


Figure 4. Distributions of Technology Development Zones in Turkey

There are 22 TDZs (shown in Figure 4) in Turkey that were established mainly by the universities in order to help closing the gap between the research units and production sector. Actually, half of them are operating and there are 463 firms totally in TDZs (388 of firms is domestic, 20 of firms are foreign and 55 of them are incubation firms). In total, 5266 R&D staff and 1677 support personnel are working in TDZs (İşletmeler ve Sanayi Politikalar Faslı, 4-5 Mayıs 2006, Innovation Policy, http://www.abgs.gov.tr/tarama/tarama.html. Date: 17.10.2006).

Another program executed by Ministry of Industry and Trade, in order to strengthen academia and business collaboration is the SAN-TEZ (Which is called "Industrial Thesis"). Through the program, graduate studies are executed to solve a specific problem in industry by the transfer of the academic knowledge into high-added-value technological products. Thus, the commercialization of the academic knowledge and strengthening research oriented SMEs are aimed.

Undersecretariat of Treasury provides loans to industry under the "Support for R&D Investment Program" covering 50% of machinery, equipment and software expenses. Undersecretariat for Foreign Trade also provides funding for research projects of private sector under the "State Support for R&D Program". 40% of expenditures of R&D can be deducted by Ministry of Finance from the declared income tax in the related year (İşletmeler ve Sanayi Politikalar Faslı, 4-5 Mayıs 2006, Innovation Policy, http://www.abgs.gov.tr/tarama/tarama.html. Date: 17.10.2006).

TUBITAK Industrial R&D Funding Directorate (TIDEB)'s vision is to strengthen industrial research and technological development ability in accordance with National S&T Policy. In order to develop and apply tools for the stimulation of industrial R&D, TIDEB support industrial R&D projects under different programs.

Another support mechanism which is called (USAMP) is The 'University-Industry Joint Research Centers Program', implemented by TUBITAK (Technology Forecasting and Assessment Directorate) since 1996. The centers are jointly funded by TUBITAK, the private sector and universities. 6 USAMP centers have been established with the aim of stimulating university - industry collaboration, concentrating on industry activated projects and also increasing and strengthening university research potential.

In order to increase the close cooperation between the research community and the business sector and to promote spin-offs and new technology based firms, one of the instruments developed by KOSGEB is "Technology Development Centers (TEKMERs)" and "Incubators without wall". Through these centers, additional to incubation service, SMEs' projects on R&D, innovation and new product/production technology development are supported financially. Currently, there are 18 TEKMERs and 10 "Incubators Without Wall" located in universities. In addition, there are also three private incubators established by Ericsson, Koç Holding and Siemens (İşletmeler Sanayi Politikalar Faslı, 4-5 Mayıs 2006, Innovation Policy, http://www.abgs.gov.tr/tarama/tarama.html. Date: 17.10.2006).

Another important implementing body to strengthen the cooperation between academia and business sector is State Planning Organization (SPO) which contains guidelines for research, technology development and innovation. SPO also provides financial support for research projects as well as for research infrastructure in public universities.

One of the most important mechanisms is Technology Development Foundation of Turkey (TTGV), which is a non-governmental and an independent non-profit organization (as an NGO) in the science and research sector, in order to support projects coming from the corporate sector. In order to increase competitiveness of enterprises through research, technology development and innovation and to promote innovation culture in society, the foundation supports; Technology Development Projects Funding, Technoparks and Technology Centers, Venture Capital Funds, Start-up Funds, Joint Technology Development Project Supports, Commercialisation of R&D Activities Supports, Risk Sharing Supports.

4- TAX INCENTIVES FOR R&D ACTIVITIES IN TURKEY

In Turkey, by the cooperation of universities, research institutions and industry, tax incentives is foresighted taken into consideration with the aims like providing high and advanced technology that will speed up foreign capital inflows, reaching competitive structure of Turkish industry, producing technological information. In this context, it is obviously seen that tax incentives supporting R&D activities are very important as a matter of creating resources. Concerning with the expenditure within the context of R&D, tax incentives are taken places; a) income tax and corporate tax law and communications and circulars related with this law, b) tax exemptions specified in 4691 law for R&D activities at Technology Development Zones and its regulation

a) Tax Incentives for R&D Expenditure

R&D¹ reduction which is given to taxpayer; by the income tax law, 40% of R&D expendetures² realized by the enterprises considering with the new technology and information can be deducted from the declared income tax in the related year.

As the tax-assesment belonging to the related periond is insufficient, sum which do not considered as a matter of reduction in the related period is transferred to the next account period with the new corparate tax law (Law Number:5520).

As a regard of this direction, 40% of R&D expenditures by the enterprises with in the frame of R&D activities forms the reduction of R&D. Taxpayer will reduce 40% of R&D expenditure calculated as a R&D reduction in the period according to the basic

innovation in terms of technological view. **Software:** Express all command series used for working and processing the data given of a computer or a communucation device or another device based on informational Technologies or all including knowledge and documents for programmes and their code list, operating and

^{&#}x27;R&D Expenditures: Expenditures accepted as R &D expenditures and recorded directly or with the depreciation are R & D expenditures. **R&D Deduction**: The deduction value obtaining from income and corporation income tax base computing by the rate of 40 %. **R&D Project**: A project that its object, scope (general and technical definition), duration, budget, specific conditions, monetary or non-monetary financial supports from other individual or institutions, consructed with the scientific and patent rights determination framework is a R&D project. **Technology:** Technical production and the knowledge of developing necessary tool machines and materials related with the implementation of this technic. **Innovation:** Transforming an idea into marketable state or new or developed method that can be used good or service production. **Innovation in Product:** In terms of technological view, comparing with the previous product generation, showing technological differnces with the material, parts, and functions. **Innovation in Production Methods:** A method not producing in traditional plants or a method used new products for producing new goods is an

user's manual.

² R&D Deduction cannot be computed from the taxpayers of income and corporation income tax's expenses which are not directly related with the R & D expenditures, and economic assets subject to depreciation not used in R & D activities. The Ministry of Finance is authorized to determine the scope of expenses subject to R & D deductions and the necessary documents and te procedures.

principles from the earnings. (Erdikler, 2004; http://www.erdikler.com/teknolojibolg.asp. Date:16.10.2006).

In the scope of the R&D expenditure, it is clearly defined that how R&D expenditures is formed with in this R&D concept in the communication numbered 86, with corparate tax law. The scope of R&D activities are given in detail. (Egemen, 2005; http://www.malihaber.com/modules.php?name=Kose_Yazilari&op=viewarticle&artid=547 Date: 25.09.2006).

b) Tax Incentives at Technology Development Zones

According to the Technology Development Law (Law Number is 4691), the provision of land which is necessary for establishment of the zones, infrastructure and construction of management building and the amounts of expenses that are not covered by managing companies can be covered by the subsidy of the ministry in a limited way. (Financial support is granted for land, infrastructure and construction of managing building).

The managing company is exempted from the consideration of every tax, duties and fees during the application process of this tecnolgy development zone's law. Municipalities do not get wastewater price from the technoparks that operate wastewater plants.

The income that the taxpayers at the technolgy development zones have obtained from the production activities based on the software and R&D is exempt from all kinds of income and corparate tax till the end of 2013.

Researchers, software engineers, and R&D personnel working in the zone are exempt from all types of tax until 2014.

Academic staff can build a company with the permission of Higher Education Council to make their research commercialization, and can also be the shareholder of an established company and /or may work in the management of these companies.

5 - RESULTS AND DISCUSSIONS:

As we check out the share of the resources allocated for A&D activities in GDP, it is seen that this share is very lower than EU Countries, USA and Japan having high/advance technology.

Especially, Technology level and usage amount are low among SMEs according to the low level of partnership between academia and business sector. They usually use old designs, inefficient production methods and old machines and equipment, thus they produce lower quality products and create less value added. R&D, innovation and technological activities and investments are very low in SMEs. Main output indicators present the need for increase in the R&D expenditures and qualified researchers, especially within the private sector. As a result of this, it is clearly seen that allocated resources for R&D activities in Turkey is very low level in private sector. Because of this, it is very important that supporting the activities that have done in the scope of the R&D as tax incentives considering with competitiveness. Several priorities had been taken on R&D and Innovation which are;

- Increasing the quality of life and public awareness on science, technology and innovation
- Improving the quality and quantity of scientists, professionals and technical personnel
- Supporting result-oriented research in line with the demand and needs of the private sector in order to strengthen the capacity of R&D and Innovation of private sector
- Improving the R&D and Innovation environment and infrastructure
- Enhancing the cooperation in R&D and Innovation at national and international level

In addition to this, measures which are given below are to be taken into consideration to support these priorities.

- TDZs, Technology and Incubation Centers should become a widespread of Turkey in order to increase partnership between R&D units and business sector,
- To organize industry-thesis market to selve industry problems
- To support sturt-ups, risk capital, spin off
- To support commercialization of R&D projects which have already been completed process of projects
- To nhance consultancy services directed towards innovation
- To improve infrastructure of TDZs, Technology and Incubation centers,
- To strengthen regional networks and clusters

REFERENCES

- 1. İşletmeler ve Sanayi Politikalar Faslı, 4-5 Mayıs 2006, Innovation Policy, http://www.abgs.gov.tr/tarama/tarama.html. Erişim Tarihi:17.10.2006
- 2. Science and technology in Europe, 2006, ISSN 1725-5821, Office for Official Publications of the European Communities.
- 3. OECD, Main Science and Technology Indicators, June 2006.
- 4. 9th Developmet Plan, 2007-2013, 2006.
- 5. AR&GE istatistikleri, 2006, http://arbis.tubitak.gov.tr. Erişim Tarihi:17.10.2006
- 6. TUBİTAK AB Çerçeve Programları ve Türkiye Raporu, 2006.
- 7. EGEMEN, Ali; "Ar-Ge' ye vergi kolaylığı" 14.01.2005 Tarhli Mali Yönetim Gazetesi.http://www.malihaber.com/modules.php?name=KoseYazilari&op=viewarticle&artid=547, Erişim Tarihi:25.09.2006
- 8. ErdiklerYeminli Mali Müşavirlik Limited Şirketi 2004, "Teknoloji Geliştirme Bölgelerinde Faaliyette Bulunan Mükelleflere Yönelik Vergisel Teşvikler" http://www.erdikler.com/teknolojibolg.asp. Erişim Tarihi: 16.10.2006).

Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, Cilt 15, Sayı 2, 2006, s.267-282