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PLASTIC AND RUBBER PRODUCTS MANUFACTURING INDUSTRY

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Executive Summary

Plastic and Rubber Products Manufacturing Industry is a sector that generally produces intermediate goods. This sector is a very important supplier of the service industry with products such as packaging materials etc. along with the manufacturing industry which mainly comprises of the fields of construction, agriculture, durable consumer goods, automotive and electronics.

In terms of production, the Plastic and Rubber Products Manufacturing Industry becomes more and more important in the manufacturing industry and in the national economy in general. Plastic and Rubber Products Manufacturing Industry had a rate of 4,02% in 2003 in the manufacturing industry. It increased this rate constantly, except from the year 2007 and made it 4,81% in 2008. The sector increases its weight in terms of its added value in the manufacturing industry. In 2008, the rate of the sector in the added value of the manufacturing industry increased by 13,1% when compared to the year 2004 and reached the level of 5,16%. The manufacturing industry was ranked the eighth among twenty three sectors in terms of its share in the total added value.

The proportion of the added value that the plastic and rubber manufacturing industry created in 2003 in the manufacturing of the sector was 28,19%. This share gradually decreased until the year 2007. It increased in 2008 to 21,08%. The fact that the share of the added value of the sector in manufacturing was over the average of the manufacturing industry proves its importance in terms of its contribution to the growth.

Plastic and rubber products manufacturing industry is one of the sectors that contribute to employment. It is ranked eighth among the twenty three sectors in terms of its share in the total employment of the manufacturing industry. The rate of the waged employees of the sector in the total manufacturing industry was 4,34% in 2003 and it increased to 5,12% in 2008. This trend indicates a growth rate of 18% in the rate of the waged employees.

In addition to its contributions in production, added value and employment, the sector has foreign trade surplus, thus it plays an important role in the fields of foreign trade and closing the current deficit, which are two of the most important the problems of Turkey. In 2010, the export of the plastic and rubber manufacturing industry was 5,3 billion US Dollars and its import was 3,9 billion US Dollars, therefore it had a foreign trade surplus of 1,4 billion US dollars. The total foreign trade volume of the sector reached 9,2 billion US Dollars and the import coverage rate of the export was 1,36. In the same year, the share of the plastic and rubber products manufacturing industry in the total export was 4,64% and its share in the total import was 2,1%.

The Research and Development Efforts of the Plastic and Rubber Products Manufacturing Industry

The sector has to use new technologies, develop new products, do innovations and increase the productivity in order to be able to produce and develop the products that are demanded in the market and increase its power of competition. We see the importance of the research and development efforts when we consider the search for new products, innovations and composite materials in the field of plastic and rubber products. However the current data indicate that the sector in Turkey does not attach enough importance to the research and development efforts.

The amount that the Plastic and Rubber Products Manufacturing Industry spent for Research and Development in 2008, proportioned to the population, was very low when compared to many developed countries. Among the countries that Turkey was compared with, Finland was ranked the first with 18,3 Euros, Japan was ranked the second with 15,4 Euros and Germany was ranked the third with 11 Euros of expenditure. The research and development expenditure of the sector per person in Turkey fell far behind these countries: it was 0,4 Euros in 2008. The situation was not different in terms of the ratio of the research and development expenditure of the plastic and rubber products manufacturing sector to the GDP. Japan was ranked first with the rate 0,06% in 2008. Finland was ranked the second with 0,05% and South Korea was ranked the third with 0,04%. However, Turkey's rate was only 0,01%. These data confirm the opinion that the research and development efforts of the sector are not enough.

When the research and development expenditure of the Plastic and Rubber Products manufacturing industry is calculated according to the purchase power standard that helps in evening out of the national price levels, Japan is ranked the first with a big difference from the others. According to this calculation, the total Research and Development expenditure made in plastic and rubber manufacturing industry in Turkey was 41,6 million SGS in 2008. This expenditure was 442,8 million SGS in South Korea and 866,3 million SGS in Germany. When we take these values into consideration, we see that the research and development expenditure of Germany was 21 times more and that of Korea was 11 times more than the expenditure of Turkey. For Japan, the same expenditure was 1,993 million SGS and it is 48 times more than the expenditure of Turkey.

When we evaluate this situation with all the indicators, we see that the resources that the plastic and rubber products manufacturing industry businesses allocate for research and development are insufficient when compared to the competition countries. Therefore, it is clear that the sector needs to focus on Research and Development efforts in order to increase its competition power for the products with high added value.

Plastic Products Manufacturing Industry

Plastic Products Manufacturing Industry is a sector that produces intermediate products for the manufacturing industry including particularly construction, agriculture and food industry and the service sector. It simplifies the daily life with the finished products along with the intermediate goods that it produces.

Plastic products manufacturing industry increased its share of 3,15% in manufacturing industry in 2003 to 3,77% in 2008. This finding indicates that it increased its weight in the manufacturing industry in terms of production and that it has an important place in the manufacturing industry. Comparisons with the European Union countries verify this conclusion. The share of the plastic products manufacturing industry in the total manufacturing industry in Turkey is over the average of EU-27. Turkey is ranked the third in comparison with the seven EU countries in terms of the share of production of the plastic products manufacturing industry in manufacturing industry in total. The share of the sector in the total manufacturing industry was 3,1% in EU-27 and that share in Turkey changed between 3,4% and 3,8% in the same term.

Production of plastic layers, molds, tubes and profiles, one of the sub sectors in the plastic products manufacturing industry has been increasing since the year 2003. However, the share of the manufacture of plastic packaging materials has not been decreasing. The shares of the two other sub-sectors were nearly on the same level in the last three years.

The share of the plastic products manufacturing industry in the added value of the manufacturing industry is nearly on the same level with its share in the manufacture. The share of the sector, which was 3,26% of the added value of the manufacturing industry in 2003 increased to 3,78% in 2008. Even though the plastic products manufacturing industry in Turkey has a more important place in manufacture when compared to the average of EU-27, it cannot protect its status of its share in the added value. The share of the EU-27 plastic products manufacturing industry in the added value of the total manufacturing industry is nearly 3,5%, this share for Turkey is 3,3%. This finding clearly indicates that the competition power of the plastic products manufacturing industry in Turkey in creating added value is low when compared the EU countries.

The weight of the sub sector of manufacture of plastic layers, molds, tubes and profiles increases both in the manufacture and the added value of the sector. This sub sector got a share of 25,92% of the added value of the total plastic products manufacturing industry in 2003 and it increased this share to 35,35% in 2008. The share of second sub sector, which is manufacture of plastic packaging materials, was 30,02% in 2003 and this share decreased to 27,84 in 2008. The other sub sector which decreased to an important extent in terms of the share in added value was plastic construction materials manufacturing sector. The plastic construction materials manufacturing had a share of 27,52% in the added value of the sector in 2003. This rate decreased to 19,84 in 2008. The share of the other plastic materials manufacturing sub sector in the added value of the total sector changed in the term and it was 16,97% in 2008.

The need of the sector to increase the power of creation of added value becomes obvious in the comparison with EU-27 countries. In the comparison with EU-27 countries, Turkey was ranked the last in terms of its share in the manufacturing of the added value. Another point that attracts attention is that the rate in question in Turkey decreases gradually and the difference with the other counties of comparison gets bigger.

The total employment of the plastic products manufacturing sector increased by 50% between the years 2003 and 2008. This rate increases to nearly 100% in plastic layer, mold, tube and profile manufacturing and to 69% in plastic construction materials manufacturing industry. The lowest increase rate in employment in the same term was in packaging materials manufacturing sector: 14%. The share of the plastic products manufacturing sector in the employment of manufacturing industry is 3,8%. These rates are lower than the EU-27 average.

Foreign Trade

The import of Plastic Products in the World was 148,5 billion US dollars in 2004 and it increased by 33% to 197,3 billion US dollars in 2009. The product groups named “Other goods made of plastic” and “other plates, foils, pellicles and mounts made of plastic” comprised 22,3% and 19,6% respectively of the import of all the groups and were ranked the first and second among these groups. The share that the import of these products in Turkey got was 1,49% of the total import in the world.

In 2010, the foreign trade of plastic products of Turkey was nearly 6,0 billion US dollars, 3,41 billion USD of which was export and 2,58 billion USD of which was import. The foreign trade surplus, which was 41,7 million USD in 2004 increased to 827,5 million USD in 2010.

The export of plastic products in 2004 was 1,27 billion USD and it increased to 3,41 billion dollars in 2010 by multiplying by 2,7. The group “Plastic plates, layers, tubes and profiles, which got a share of 43% in the export of the sector in 2004, increased its share to 48% by increasing its export to 1,65 billion USD in 2010. The export of the group “other plastic products” which was 17,3% in the total export of the sector, reached 721,5 million USD in 2010, and its rate in the total export increased to 21%. The export of the groups “packaging materials: plastic bags, bags, nylon bags, sacs, boxes, carboys, bottles, reels etc.” and “construction materials” in 2010 was 525,8 and 516,6 million USD respectively and the share of these groups within total export was around 15%.

The import of plastic products, which was 1,23 billion USD in 2004 multiplied by 2,1 and reached 2,58 billion USD. The import of the products of the plastic products manufacturing industry had a share of 1,4% of the total import of Turkey in 2010.

Of the total import of sector products, the product group “other plastic products” was 49,4% and the group of “plastic plates, layers, tubes and profiles” was 39%. The biggest increase in import between the years 2004 and 2010 was observed in the product group “Other Plastic Products Not Classified Elsewhere”. The import of this group, which was 188,1 million USD in 2004 multiplied by 4,1 and increased to 776 million USD in 2010.

The import coverage ratio of the export, which was 103,4% in 2004 in the case of plastic products increased to 132,1% in 2010. The import coverage ratio was 428% in the group “Construction Materials”, 304,6% in the group “Packaging materials: plastic bags, bags, nylon bags, sacs, boxes, carboys, bottles, reels etc.” and 162,6% in the group “manufacture of plastic layers, molds, tubes and profiles”. The import coverage ratio of the export in the group “other plastic products” was 56,5%.

The Strategic Inputs of Plastic Products Manufacturing Sector

The power of competition of the sector is, to a great extent, dependent on the prices and the supply guarantee of the inputs because of the fact that the rate of the cost of the raw materials is high in the total cost. In this respect, we see that the sector is faced with important problems. It is not possible to say that Turkey is good enough in production of plastic raw materials. Turkey imported plastic raw materials worth 7,65 billion USD in 2010 and it managed to export 705 million USD worth of plastic raw materials. The export and import figures indicate that Turkey is dependent on foreign resources in terms of raw materials. The high rate of small and medium scale businesses in the plastic products manufacturing industry and the insufficiency of the domestic production indicate that the businesses have problems of amount and price in the process of supply of raw materials.

THE POWER OF COMPETITION OF THE PLASTIC PRODUCTS MANUFACTURING SECTOR

Despite the fact that it was considered in the recent years as a problematic sector because of environmental issues, Plastic Products Manufacturing Industry is indispensable with its products which are used more and more in every field. The increase in the power of competition of this sector, which has foreign trade surplus, will increase its contribution in

economical development. In order to increase the power of competition of the sector, it is necessary to protect its strong points and to improve its weak points.

The sector has important deficiencies in basic inputs compared to the competition countries. Raw material is the most important of these inputs. The monopolist structure in supply, along with access to the domestic raw material resources constitutes one of the most important bottlenecks. The dependence of the sector on the foreign resources for raw materials continues and the raw material costs, the energy costs -especially the electricity cost- and the quality of these are some of the important factors that adversely affect the power of competition of the sector.

The availability of the supplier of molds, the lack of domestic machine suppliers and lack of qualified molders are the other factors that adversely affect power of competition and the power of creation of high added value of the sector. It has more advantages when compared to the developed countries, especially the EU countries, in terms of the cost of labour. However it is not possible to mention about such superiority over China, India and similar countries in the case of the same product groups. Entrepreneurship, flexible production skills, experience and accumulation of knowledge are considered among the factors that increase the power of competition of the sector. However it is necessary to remedy the deficiency in the fields of mold technology, corporate memory, installed capacity, production technology and cooperation in the sector. The deficiency in Research and Development and Product Development efforts adversely affects the competition power and it prevents focusing on the areas with high added value in the sector.

The investor climate, investments and other incentives are among the factors that adversely affect the investors in the sector and that cause the loss of power of competition when compared to the competition countries. The black economy, bureaucracy and the economic stability which was successful in the recent years but which was destabilized with crises and foreign exchange rate policies adversely affect the sector in the international sphere in terms of competition.

The biggest strengths of the Turkish plastic products industry are the product and service quality factors. The sector is on a better level when compared to the competitors in terms of the product quality and standards. It is superior to the competition in terms of domestic market potential of the sector, marketing efforts, proximity to the markets, geographical position, marketing and sales costs. These advantages play an important role in the success that the sector has in export. Financing is one of the most important main factors that have adverse effects on the power of competition of the sector.

The tendency of Turkey to be an international player in the construction and automotive sectors, for which the plastic products manufacturing industry provides input, will do important contribution to the development of the sector. As a result of the changes in the country administrations in the close and neighbouring markets, the tendency of liberalization in these economies and in the foreign trade regimes may create opportunities for the sector.

Despite all the negative perception, there is the tendency to use the sector products more commonly because of the light weight and flexibility. The plastic and composite products have a wide area of usage in automotive, construction, space crafts, white appliances and furniture with the purpose of saving energy. In general, partial plastics and polymer composite products are used in many products such as land, sea and air vehicles etc. with the

purpose of saving energy. There are new opportunities in the market for products with high added value depending on Research and Development.

The tendency of the international capital in the region to do investment in the field of petrochemistry is an important opportunity for the sector in terms of access to raw material and raw material guarantee. One of the most important threats against the Turkish plastic products manufacturing industry is that there is still the problem of not being able to do investment because of licensing and the requirement of a high amount of capital for new investments and replacement investments in the field of domestic production of raw material.

The continuation of the reluctance of the businesses to invest in and bear costs for Research and Development may create in the future the problem of not being able to pass on to the products with high added value. The fact that stability is not yet established in the administration of the neighbouring countries is an important threat for the Turkish plastic products manufacturing industry. It is possible for the businesses which have focused on these markets to have problems in the short term.

THE STRATEGIES OF THE PLASTIC PRODUCTS MANUFACTURING INDUSTRY

The main purpose of the plastic products manufacturing industry should be: "development of a structure that has power of competition in the international sphere in the products with high added value, based on new utilization areas and the superior features of the plastic. The other most important target that is complementary to the main purpose is being a plastic products manufacturer that offers competitive prices and high quality for the sector, that is searched for in the international markets, that is keeping up with the rapidly developing technology, that performs Research and Development activities on an international level, that has reached its economy of scale and that has established the supply guarantee.

Human Capital for the Needs of the Sector: In the plastic products manufacturing sector, as in all the sectors, there are problems faced in terms of qualification in the human capital. When we take into consideration its demographical structure, we see that Turkey has a high power of competition in terms of human capital. The fact that technical education is appealing is one of the important privileges. In the developed countries, the demand for technical education gradually decreases and the human resource to be employed in the sector is limited because of the demographical structure. This development comes to the forefront as one of the most important opportunities that might create superiority in the future for Turkey.

A fair, rapid and competitive atmosphere of entrepreneurship: The regulatory mechanisms should be formed and applied in a way to make it possible for the entrepreneurs to compete in a fair atmosphere. The central and local administrations have important duties in this respect. No monopolist practices should be allowed in the process of the supply of raw materials.

Products that are innovative in design and application and that are targeted at new application areas: It may provide Turkey with a distinctive superiority if Turkish plastic products manufacturing industry improves its skill to produce high quality products that are innovative in design and application, that are designed for new utilization areas for the competition with EU Countries, China, Far Eastern countries and other competition.

Improvement of the productivity of the businesses active in the sector: The Turkish plastic products manufacturing industry has problems in terms of the share of the added value in production in general. Many factors such as the technological insufficiency, the problems in the supply costs depending on the scale of the business and the fact that the scales of the businesses are small shine out as the basic reasons for the unproductivity.

Efficient marketing and communication strategies: Turkey has an important advantage with its geographical location: it is close to the countries that will contribute in the development of the sector. In order to benefit from this potential, it is necessary for the businesses to develop their products, distribution channel and promotional strategies effectively. It is necessary to support these strategies with the communication strategies for the country image in the markets in question.

Improvement of the effectiveness of the recycling system in the sector: Among all the production costs in the plastic products manufacturing industry, the raw material has an important rate. Recycling the used products plays an important role in decreasing the production costs and usage of energy. It is necessary to review and improve the recycling system of the plastic products.

Support policies specific to the sector: The sector has to invest in new technologies in the field of production in order to protect its power of competition. The power of competition of the suppliers too has an important effect on the power of competition of the sector. Therefore, it is clear that it is necessary to encourage the suppliers such as molding and petrochemistry businesses in order for the sector to have a say in the international sphere. It is necessary to encourage primarily the investments for the production of raw materials such as pvc, polyethylene, polypropylene etc. that are also covered in the "Input Supply Strategy" carried out by the Undersecretariat of Foreign Trade of the Turkish Republic. Support for export, Research and Development is vital for the sector.

Rubber Products Manufacturing Industry

The Rubber Products Manufacturing Industry produces intermediate products for many sectors of the manufacturing industry of many products such as pipes, hose pipes, conveyor belts, straps etc. along with the sectors such as shoes and clothing sector. Another characteristic of the sector is that most of the products have the nature of finished products as most of them are also produced for the renewal market.

The sector had a share of 0,88% in the manufacturing industry in 2004, which increased to 1,04% in 2008. The rubber products manufacturing industry had a larger share in the manufacturing industry production than many main sectors such as tobacco products, leather and shoes, office machines and computers, medical and optical tools in 2008. The international comparisons also indicate that the sector has an important place in the manufacturing industry. The share of the rubber products manufacturing industry of Turkey in the production of manufacturing industry was on the same level with EU-27 average except from the year 2007. In 2007, the sector got a share of 0,98% in the production of manufacturing industry and its average got higher than the EU-27 average.

The production of inner tubes and tires is ranked the first in the rubber products manufacturing industry. Its rate in the sector production, which was 66,32% in the year 2003 decreased continuously to 49,37%. The group of other rubber products is ranked the second

in the rubber products manufacturing industry in terms of production. The rate of the sector production in the rubber products manufacturing industry, which was 31,87% in 2003, increased to 45,53% in 2008.

The share of the rubber products manufacturing industry in the added value of the manufacturing industry is much higher than its share in the manufacture. On the other hand, rubber products industry is among the sectors which increase their rates in the added value of the manufacturing industry. The sector in question increased its rate of added value in the manufacturing sector, which was 1,18% in 2004, to 1,38% in 2008. The rubber products manufacturing industry of Turkey is in better conditions compared to the EU-27 countries whose average rate in the added value in manufacturing industry between the years 2003 and 2007 was 1,0%.

Inner tube and tire manufacturing sub sector is ranked the first in the rubber products manufacturing industry in terms of its share in the added value of manufacturing industry just like in manufacturing. However, the share of this sector in the added value of manufacturing industry decreases gradually. In 2003, the inner tube and tire production had a share of 69,53% of the total added value created by the rubber products manufacturing sector and this share decreased to 48,97% in 2008. In the same period, the share of the group “other rubber products” increased from 29,37% to 47,58%. It was observed that the "other rubber products" production increased its weight in the rubber products and manufacturing industry.

The plastic products manufacturing industry has values that are higher than the average of the manufacturing industry in terms of the factor costs and the share of the added value in production. However, a point that attracts attention is that this rate, which was 36,21% in 2003 decreased to 26,26% in 2008. The share of the added value of the sector in production is nearly 44% higher than the average of the manufacturing industry. However, the share of the added value created in the total production of the rubber products manufacturing is lower than the EU-27 countries. This rate was 36% in 2004 for the EU-27 countries, but it decreased to 33% later. In the same term, the rate of added value in the production of Turkish rubber products manufacturing industry decreased from 31,5% to 25%.

The number of the people who work in the rubber products manufacturing industry increased by 73% between the years 2003 and 2008. This development in employment made an important contribution to the solution of the growing unemployment problem. The rate of the rubber products manufacturing industry in the manufacturing industry employment which was 0,72% in 2004 increased to 0,93% in 2008. These rates are lower than the EU-27 average, which was 1,1%.

The “other rubber products” manufacturing sub sector played a very important role in the increase of employment in the sector. The “other rubber products” group was ranked the first in the total employment of the rubber products sector in 2008, with a share of 67,81%. Inner tube and tire manufacturing sector was ranked the second with a share of 24,29% and retreading and reprocessing sub sectors were ranked the third with a share of 7,9%. It does attract attention that the rubber products manufacturing sub sector is successful in employment along with production and added value.

Foreign Trade

The import of rubber products in the world was 74,5 billion USD in 2004 and it increased to 100,5 billion USD in 2009 with an increase rate of 35%. The import of the group of new tires

for automobiles was 28,6 billion USD in 2009, and was ranked the first in the import of all the rubber products. This product group gets a share of 28,5% in the world import of all rubber products. The groups named “other products made of vulcanized rubber” and “new tires for buses, trucks and planes” comprise respectively the 15,3% and 14,3% of all the import of the group. The share of the export of rubber products manufacturing industry in Turkey in the total import of the world was 1,47% in 2009.

The foreign trade of rubber products of Turkey reached 3,3 billion USD in 2010 with 1,9 billion USD of export and 1,35 billion USD of import. The foreign trade surplus, which was 135.7 million USD in 2004 increased to 557.6 million USD in 2010.

The export of rubber products which was 867,9 million USD in 2004, increased to 1,9 billion USD in 2010 by multiplying by 2,2 and got a share of 1,7% of the export of Turkey. The export of new and renewed rubber tires and inner tubes was 996,4 million USD in 2010, which comprised 52% of the export of the entire the rubber products manufacturing sector. The export of the second sub-sector in the rubber products, “other rubber products”, was 905,8 million USD in 2010 and increased its share in total export to 48%. The vulcanized rubber tubes, pipes and hosepipes were ranked the first in terms of the rate of increase of the export between the years 2004 and 2010. The export of this product group multiplied by 3,2. In the same term, the export of the group “products made of vulcanized goods not classified elsewhere” multiplied by 2,8 and the export of the group “new tires and inner tubes” increased by 85%.

The import of the rubber products, which was 731,5 million USD in 2004 increased to 1,35 billion USD in 2010 by multiplying by 1,8. The share of the sector products in year 2010 was about 0,7% in total import in Turkey.

The group of new and renewed rubber tires and inner tubes make up nearly the half of the imported products. The import of the rubber tires and inner tubes increased by 98% between the years 2004 and 2010 and the import of the sector products increased to 660 million USD in 2010. The sub group named “products made of vulcanized rubber- not classified elsewhere”, “products made of hard rubber” of the “Other rubber products”, which is the second sub-sector, got a share of 39% with 265,5 million USD in 2010.

The import coverage rate of the export of rubber products manufacturing industry shows a tendency to increase in years. This rate, which was 118,5 in 2004 was 141,5 in 2010. The rate, which was 150,7% in the group “New rubber tires and inner tubes”, which is one of the sub-sectors, was 132,4% in the group “Other rubber products”.

The Strategic Inputs of Rubber Products Manufacturing Industry

The basic inputs of the rubber products manufacturing industry are natural rubber, synthetic rubber, carbon black, etc. The most important problem of the sector is the dependency on foreign resources for the raw materials such as carbon black, synthetic rubber and rubber, which is the natural input. The most important threat against the rubber products manufacturing industry is that there is not enough future focused search, along with the lack of investment in the field of synthetic rubber production.

In 2010, Turkey imported 577,2 million USD of products such as synthetic rubber but could do 29 million USD of export. Naturally, the import coverage ratio of the export of synthetic

rubber is very low. These data clearly indicate the dependence on the foreign resources for the raw materials in question.

The import of natural rubber of Turkey was 432,2 million USD in 2010. It is not possible to eliminate the dependence on foreign resources for natural rubber. When we consider that the share of the natural rubber is 44% of all the world demand of rubber, including the synthetic rubbers, it is possible to say that the rubber products manufacturing industry depends heavily on this natural raw material.

THE POWER OF COMPETITION OF THE RUBBER PRODUCTS MANUFACTURING INDUSTRY

The Rubber Products Manufacturing Industry is a sector that produces products that do not have any alternatives for many sectors of the manufacturing industry along with the entire vehicles sector. This sector provides input for many industries including aircraft industry, shoe industry, machine manufacturing industry and furniture industry and produces many finished products that become parts of daily life. The Rubber Products Manufacturing Industry contributes to a great degree to the economical development with its consumption products and with the inputs that it provides for the high technology products.

The sector has important deficiencies when compared to the competition countries in the basic inputs such as synthetic rubber and chemicals. The monopolist structure in supply, along with the cost of the domestic raw material resources and access to these resources, constitutes one of the most important bottlenecks. The dependence of the sector on the foreign resources for the raw materials continues and the costs of raw materials, energy, reinforcing materials, and labour are some of the important factors that adversely affect the power of competition of the sector. The availability of qualified labour with technical skills is one of the negative factors that attract attention. When we take into consideration the demographic characteristics of the population and the fact that the quality of the available labour force is one of the positive factors in competition, it becomes obvious that this negative factor is a result of the education policies.

The sector is superior to its competition with its technological infrastructure, waste management and flexible production skills. The other superior aspects of the sector are the experience and skill, professional organization, culture of cooperation, entrepreneurship and compliance with the international standards. Along with the deficiency in the usage of capacity, the deficiency of the scales of the firms indicates that the level of productiveness of the firms is low. The insufficient Research and Development and Product Development efforts are some of the important obstacles that prevent the sector from breaking through.

We can also say that the sector has less favourable conditions in the regulatory mechanisms when compared to the competition. The factors here are the decreasing number of incentive practices due also to the international treaties, the investor climate and that there are no industry areas allocated for the sector.

One of the most important superior aspects of the rubber products manufacturing industry is the high quality of its products and services. The sector is better than its competition in terms of its quality, variety, trustability of the products, the quality of the pre-sale and after sale service, compliance with the time schedules, qualified export labour force, distribution network and image of country. However, the actors of the sector have not taken enough steps for branding in the fields other than the field of tire production with world brands. The

sector is in better conditions in terms of financing opportunities and access to these opportunities, when compared to its competition. In spite of this, the firms continue to pay higher costs than the firms in the competition countries.

Just like every sector, the rubber products manufacturing industry has important advantages in terms of geographical position. It is more privileged than its competition because of the fact that it is close to the production and consumption markets. The sector is affected to an important extent by the obscurity especially in the foreign exchange rates because of the dependency on foreign resources for raw materials, even though there have been positive developments in economical stability in the recent years.

The tendency of Turkey to be an international player in the automotive, machinery and construction sectors, for which the rubber products manufacturing industry provides input, will do important contribution to the development of the sector. The positive developments in the durable consumer products and machine manufacturing industries will create opportunities for the sector and a possible liberalization tendency in the foreign trades of the neighbouring countries, which are potential buyers, may have positive effects on the sector.

Besides all these positive tendencies, the tendency of China and India to increase their usage of raw materials, along with the increase in their investment in the sector is an important threat. The fact that the natural raw material resources are under adverse affect because of climate is one of the other threats in the supply process of inputs. Similarly, the depletion of the petrol resources is one of the adverse events that might have negative effect on the sector.

The fact that stability is not yet established in the country administrations of the neighbouring countries is an important threat for the Turkish rubber products manufacturing industry. Two other important threats that might affect the sector are the requirement for investment for the protection of the environment within the frame of EU harmonization process and the production of low quality products that might result from the usage of second hand machinery, which might be the case as a result of the fact that it became easier to invest in the sector with second hand machinery.

THE STRATEGIES OF THE RUBBER PRODUCTS MANUFACTURING INDUSTRY

The rubber products manufacturing industry is a sector that has contributed to the economical development of the country to a great extent with the added value that it created. The basic aim should be to turn the rubber products manufacturing industry into “the production centre depending on Research and Development with power of competition in the international sphere for technical, sensitive and specific products”. The sector should aim at being rubber products manufacturer that conducts Research and Development on an international level, that is good with the nature, organized in the international platform, powerful in terms of capital and that has reached its economics of scale.

In other words, the problems of raw material of the rubber products manufacturing industry affect the power of competition of the process of supply to an important extent. It is clear that it is necessary to encourage investments for the guarantee of supply based on the local resources in the synthetic rubber production. The sector needs to focus on products based on Research and Development. Finding the necessary financial resource for these efforts looks hard for the small and medium scale sector firms in the certain areas other than the areas in which the international capital is active. Therefore the firms need to focus on Research and

Development efforts among themselves and focus on being partners, on cooperation and finding foreign partners for scale economy.

Qualified human capital that provides distinctive superiority: Rubber products manufacturing industry is one of the sectors which need qualified human capital because of its nature. This sector employs technically skilled employees very frequently and one of the basic conditions of gaining power of competition in this sector is the presence of the infrastructure that meets this need of employee. It is necessary to meet the needs of this sector, including the industry of vehicle tires in which the technology is used intensely.

A competitive entrepreneurship environment: The present legal infrastructure and operation mechanisms should be formed and applied in a way that will make it possible for the entrepreneurs to compete in a fair atmosphere. The related agencies and institutes have important duties in this respect.

Technical, sensitive and specific products: The sector has to focus on products with higher added value in order to increase its power of competition in the international sphere. In order to be competitive in the technical, specific and sensitive products, the sector has to use new technologies and put more effort in Research and Development.

Strong and productive business firms: When compared to the manufacturing industry average, rubber products manufacturing industry in Turkey is in a good condition in terms of the share of the added value in production. The increase in the added value in production depends on whether there are productive firms in the sector or not. Many factors such as the technological insufficiency, the problems in the supply costs depending on the scale of the business and the fact that the scales of the majority of the business firms in the rubber products manufacturing industry are small shine out as the basic reasons for the unproductivity. The firms need to increase their productivity in order to be able to compete in the international market.

Efficient marketing and communication strategies: Turkey has very important superiority in terms of its geographical position for the rubber products manufacturing industry. It is in the middle of important production and consumption centres of both intermediate and final products. In order to benefit from this potential, it is necessary for the businesses to develop their products, distribution channel and promotional strategies effectively. In order for the businesses to be successful in these markets it is necessary to develop the image of the country and create the image that Turkey is the centre of rubber products manufacturing.

Support policies specific to the sector: The manufacturing of sensitive and technical products necessitates advanced technologies. Therefore, support for export, Research and Development and especially the replacement investments is vitally important for the sector. It is clear that the support should be widespread, varied and easily accessible. The investments for the production of raw materials such as synthetic rubber, carbon black, which weaken the power of competition of the sector, should be promoted within the frame of "Input Supply Strategy" carried out by the Prime Ministry Undersecretariat of Foreign Trade of Turkish Republic.