Turkey Resilience Project in Response to the Syria Crisis (TRP)

Sectoral Roadmaps: Textile Sector in Turkey
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Its contents do not necessarily reflect the views of the United Nations Development Programme (UNDP).

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INTRODUCTION

As one of the leading sectors of the Industrial Revolution, the textiles sector later became an indispensable sector for industrialized countries. Today, it continues to be an important sector for all countries with its diversified and functional products supported by technological advances.

The textiles sector encompasses a wide range of production and products including industrial fibres, yarns, woven and knitted fabrics, non-woven fabrics, dyeing and finishing, home textiles, technical textiles, clothes and carpets.

The increase in welfare around the world has increased the need for all types of textiles products and the sector is growing. Technical textiles – new materials and products produced for their technical and performance features, rather than for aesthetic or decorative purposes – are used in the industry in various forms. Because it supports a great variety of industries, technical textiles is a growing sector that will not only increase the productivity and sustainability of small and medium-scale enterprises (SMEs) but also create new job opportunities for both host community members and Syrians.
1.1 SUMMARY

Textiles is one of the largest and best functioning sectors in the Turkish economy and has accounted for an average of 7% of GDP over the years. Turkey is the fifth largest exporter of textiles/apparel in the world and the third largest in Europe. Textiles account for 3.9% of Turkey’s total exports.

The value of Turkish textiles and clothing products is growing significantly, with exports more than doubling since 2000. A large variety of textiles and items of apparel are exported to Germany, the United Kingdom, Spain, Italy and many other countries.

There are about 20,000 textiles manufacturers and 52,000 apparel manufacturers in Turkey. The annual turnovers of these two groups of manufacturers amount to around EUR 30 billion and EUR 22 billion respectively.

Textiles experts working in the European textiles sector recently evaluated the innovation trends that will shape the sector over the next ten years. While anticipating that the sector will face major challenges in the years to come, the experts pointed to the need to restructure the production process and the value chain through digitalization, cleaner production, and the use of high-technology in parallel with the use of new materials. Sectors such as construction, logistics, energy, health, sports, agriculture and fashion are expected to continue to offer major opportunities for innovative textiles products.

For this study, a team of experts prepared separate questionnaires for small and medium-scale enterprises and other stakeholders in order to gather detailed information about the textiles sector in the project region. They then carried out a literature review to grasp the point of view of the industry and identify the companies to be taken into consideration in each study area.

At the next stage, the experts met with stakeholders such as the provincial chambers of industry and commerce, and commodity exchanges. They went on to hold meetings with five small and medium-scale enterprises (SMEs) in Gaziantep, two in Adana, two in Hatay, two in Mersin and one in Kilis. The experts conducted a desktop study to enhance the analysis and their understanding of the findings before writing the strategic roadmap report.
THE STATE OF THE SECTOR

2.1 TURKEY

2.1.1 SECTORAL OVERVIEW - TURKEY

The textiles and apparel sectors encompass the processes that convert fibres and yarn to consumer goods. According to this definition, the sector involves fibre preparation, yarn, weaving, knitting, dyeing, printing, finishing, cutting and sewing. The processes from fibres to yarn and finished fabrics take place in the textiles sector, and the manufacture of clothing in the apparel sector. The final products of the sector are generally categorized as apparel, finished goods and technical textiles. Apparel includes products such as socks, pullovers, shirts, trousers and suits. Home textiles include curtains, bedcovers, carpets and other textile flooring, and other textiles products include nets, rope, cables, textile carrier bands, canvas, protective fabrics, filters, parachutes, brake cloth and felt.

State of the Turkish textiles sector

The large share of the textiles sector in the Gross Domestic Product (GDP) and employment, together with its high export potential, indicate that it is the engine of the Turkish economy. This sector accounts for 8.8% of the production value of the manufacturing industry and 9.9% of the value-added created in the manufacturing industry.

The current pace of development of the textiles sector has been achieved by producing goods for export to the US and EU markets. Since 1996, when the Turkey-EU Customs Union agreement took effect, it has been possible to export to the EU market without any tariffs or quotas. In 2007, China also started to export to the EU market free of quotas. Since then, the textiles sector in Turkey has started to focus on the production of high-quality, fashionable and branded products and on increasing value-added rather than engaging in price-based competition.

Over the last decade, the spread of stores in foreign countries has accelerated as major retail companies in Turkey have sold shares to international investment companies. The desire of international investment companies to partner with Turkish companies is an indicator of the widely recognised success of Turkish companies.

One of the most important textiles production centres in Turkey is Tekstilkent in Istanbul. The Tekstilkent Cooperative was founded in 1986 with the aim of solving problems such as insufficient infrastructure, transport and shipping challenges, irregular development and the lack of sufficient security in various other locations, particularly in the Sultanhamam and Osmanbey markets, which house wholesale textiles trading and small production units.

1 Analysis of Competitiveness Level of Turkish Textile and Apparel Industry, Istanbul Commerce University Journal of Social Sciences Year: 7 Number: 13 Spring 2008 p.265-300
Sub-Sectors and Interaction with Other Sectors

Taken together, textiles and apparel involve a long production chain from fibres to finished goods or final products. The two sectors broadly consist of the following sub-sectors: fibres, yarn, weaving, knitting, non-woven surfaces, dyeing, finishing and apparel.

The textiles sector interacts with the agriculture and livestock sectors and petrochemicals industries because of its need for natural and synthetic fibres such as cotton and wool. The sector interacts with the chemicals industry in terms of dyeing and finishing chemicals, and has a very close link with the apparel accessories industry. These sectors also have technical relations with many sectors such as the automotive industry, construction, heavy industry and medicine.

The retail sector, with its high value-added, plays a key role with the support of a strong logistics sector. The advantages resulting from Turkey’s geographical location are among the factors which have contributed to the development of the logistics sector.

Exports of the Turkish textiles sector

The exports of the Turkish textiles sector are analysed here under four main headings – namely, textiles exports at the global level, textiles exports by year, textiles exports by country and textiles exports by their province of origin.

Status of Turkish Textiles Exports in the World

The share of the textiles sector in exports was 6.9% in 2016, when Turkey’s total exports in all sectors amounted to USD 142 billion.

Textiles Exports by Year

Export figures for the textiles sector in Turkey and in the world by year are given in Table 1 below. The table shows that textiles exports declined during the global recession in 2009, increased again up to 2014, but have been following a weak declining trend since 2015.

While the share of the textiles sector in Turkey’s exports was between 7.2% and 7.9% in the years 2008-2016, it fell back significantly to 6.4% in 2017. Turkey’s share in world textiles exports was between 3.2% and 3.9% until 2016, but went up to 4.1% in 2017.

Table 1. Textiles Exports by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Turkey’s Textiles Exports (USD Billion)</th>
<th>Turkey’s Total Exports (USD Billion)</th>
<th>Exports Share/Turkey (%)</th>
<th>World Textiles Exports (USD Billion)</th>
<th>Exports Share/World (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7</td>
<td>73.5</td>
<td>9.6</td>
<td>215.4</td>
<td>3.2</td>
</tr>
<tr>
<td>2006</td>
<td>7.6</td>
<td>85.5</td>
<td>8.9</td>
<td>230</td>
<td>3.3</td>
</tr>
<tr>
<td>2007</td>
<td>9.01</td>
<td>107.3</td>
<td>8.4</td>
<td>249.6</td>
<td>3.6</td>
</tr>
<tr>
<td>2008</td>
<td>9.6</td>
<td>132.0</td>
<td>7.3</td>
<td>259.6</td>
<td>3.7</td>
</tr>
<tr>
<td>2009</td>
<td>7.6</td>
<td>102.1</td>
<td>7.4</td>
<td>219.2</td>
<td>3.5</td>
</tr>
<tr>
<td>2010</td>
<td>8.8</td>
<td>113.9</td>
<td>7.7</td>
<td>260.3</td>
<td>3.4</td>
</tr>
<tr>
<td>2011</td>
<td>10.6</td>
<td>134.9</td>
<td>7.9</td>
<td>302.9</td>
<td>3.5</td>
</tr>
<tr>
<td>2012</td>
<td>10.9</td>
<td>152.5</td>
<td>7.2</td>
<td>292.6</td>
<td>3.7</td>
</tr>
<tr>
<td>2013</td>
<td>12.0</td>
<td>151.8</td>
<td>7.9</td>
<td>315.8</td>
<td>3.8</td>
</tr>
<tr>
<td>2014</td>
<td>12.5</td>
<td>157.6</td>
<td>7.9</td>
<td>323.4</td>
<td>3.9</td>
</tr>
<tr>
<td>2015</td>
<td>11.0</td>
<td>143.8</td>
<td>7.6</td>
<td>290.5</td>
<td>3.8</td>
</tr>
<tr>
<td>2016</td>
<td>10.9</td>
<td>142.5</td>
<td>7.6</td>
<td>284.0</td>
<td>3.8</td>
</tr>
<tr>
<td>2017</td>
<td>10.1</td>
<td>157.0</td>
<td>6.4</td>
<td>246.0</td>
<td>4.1</td>
</tr>
</tbody>
</table>

1 Total Textile and Raw Materials Sector, Export Performance, Report, ITHIB, 2019
Textiles Exports by Country

Table 2 below gives figures for the countries which import textiles from Turkey. The countries which imported the most textiles and textiles products from Turkey in US dollar terms in 2017 were Germany, Italy, Bulgaria, the USA, Iran, the UK, Spain, the Netherlands, Poland and Romania respectively. Most of these are European countries. Approximately 50% of the exports of the Turkish textiles sector went to these countries in 2016 and 2017.

In 2017, exports to all of the top ten markets except Spain and Romania increased at rates varying between 1.2% and 4.6% in comparison with 2016. The largest increase in exports was to Italy and the smallest increase was to the Netherlands.

While exports to Spain decreased by 1.8%, exports to Romania decreased sharply by 6.9%. Among EU countries importing textiles from Turkey, Bulgaria ranked third in 2017, surpassing France and Spain. Other countries which have become emerging markets for Turkish textile exporters are Poland, Kyrgyzstan, Jordan, Czechia, Azerbaijan and Tunisia.

Table 2. Textiles Exports to Top 10 Countries in 2016-2017

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>832</td>
<td>8.5</td>
<td>867</td>
<td>8.6</td>
<td>4.2</td>
</tr>
<tr>
<td>Italy</td>
<td>828</td>
<td>8.4</td>
<td>866</td>
<td>8.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>629</td>
<td>6.4</td>
<td>652</td>
<td>6.4</td>
<td>3.7</td>
</tr>
<tr>
<td>USA</td>
<td>557</td>
<td>5.7</td>
<td>582</td>
<td>5.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Iran</td>
<td>460</td>
<td>4.7</td>
<td>470</td>
<td>4.6</td>
<td>2</td>
</tr>
<tr>
<td>UK</td>
<td>391</td>
<td>4.00</td>
<td>405</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>Spain</td>
<td>334</td>
<td>3.4</td>
<td>328</td>
<td>3.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>315</td>
<td>3.2</td>
<td>318</td>
<td>3.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Poland</td>
<td>309</td>
<td>3.1</td>
<td>318</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Romania</td>
<td>303</td>
<td>3.1</td>
<td>282</td>
<td>2.8</td>
<td>-6.9</td>
</tr>
<tr>
<td>Total of Top 10 Countries</td>
<td>4,957</td>
<td>50.5</td>
<td>5,087</td>
<td>50.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Total Textiles Exports</td>
<td>9,820</td>
<td></td>
<td>10,113</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Textiles Exports by Province (Turkey)

Table 3 shows the textiles exports of the ten provinces in Turkey with the highest textiles exports figures. The three leading provinces are Istanbul, Gaziantep and Bursa. These three cities supply about 78% of all Turkey’s textiles exports. They are followed by Kahramanmaraş, Adana, Kayseri, Denizli, Izmır, Tekirdağ and Uşak. Each of these provinces accounts for between about 1% and 6% of Turkey’s total textiles exports.

Table 3. Textiles Exports by Provinces in 2016-2017

<table>
<thead>
<tr>
<th>Province</th>
<th>Exports in 2016 (USD Million)</th>
<th>Exports in 2017 (USD Million)</th>
<th>Change (%)</th>
<th>Exports Share(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>İstanbul</td>
<td>3,939.0</td>
<td>4,045.8</td>
<td>2.7</td>
<td>40.01</td>
</tr>
<tr>
<td>Gaziantep</td>
<td>2,598.1</td>
<td>2,854.8</td>
<td>9.9</td>
<td>28.23</td>
</tr>
<tr>
<td>Bursa</td>
<td>974.2</td>
<td>1,023.2</td>
<td>5.0</td>
<td>10.12</td>
</tr>
<tr>
<td>Kahramanmaraş</td>
<td>605.0</td>
<td>609.8</td>
<td>0.8</td>
<td>6.03</td>
</tr>
<tr>
<td>Adana</td>
<td>334.6</td>
<td>305.3</td>
<td>-8.8</td>
<td>3.02</td>
</tr>
<tr>
<td>Kayseri</td>
<td>303.2</td>
<td>287.6</td>
<td>-5.1</td>
<td>2.84</td>
</tr>
<tr>
<td>Denizli</td>
<td>274.1</td>
<td>286.7</td>
<td>4.6</td>
<td>2.84</td>
</tr>
<tr>
<td>Izmır</td>
<td>151.2</td>
<td>183.2</td>
<td>21.2</td>
<td>1.81</td>
</tr>
<tr>
<td>Tekirdağ</td>
<td>106.8</td>
<td>130.9</td>
<td>22.6</td>
<td>1.29</td>
</tr>
<tr>
<td>Uşak</td>
<td>122.4</td>
<td>125.0</td>
<td>2.1</td>
<td>1.24</td>
</tr>
<tr>
<td>Total of Top 10 Cities</td>
<td>9,408.6</td>
<td>9,852.4</td>
<td>55.1</td>
<td>97.42</td>
</tr>
<tr>
<td>Total</td>
<td>9,820</td>
<td>10,113</td>
<td>2.9</td>
<td>100</td>
</tr>
</tbody>
</table>
The Future of the Textiles Sector: Technical Textiles

Technical advances and R&D activities are more important in the textiles sector than in the apparel sector. Low-technology products tend to be replaced rapidly by new products and new processes relying on innovative technology. Globally, the market for technical textiles has been growing and a significant volume of trade has emerged.

The technical textiles sector has recently started to account for a considerable proportion of the growth in the textiles and apparel sectors. The sector is considered to be the most promising and dynamic field in the textiles sector. New products, new processes and new materials are constantly being produced and put on the market. Technical textiles have great potential because they enable the development of new products and the satisfaction of new needs, replacing conventional products and materials. This market is expected to grow faster than the market for conventional textiles products both in terms of total volume and with respect to fields of use.

There are 12 main categories of technical textiles as defined by their final fields of use. These are known as: Agrotech, Buildtech, Clothtech, Geotech, Hometech, Indutech, Medtech, Mobiltech, Packtech, Prototech, Sportech and Oekotech.

**Turkey’s Foreign Trade in Technical Textiles**

Investment in technical textiles has been rising incrementally in Turkey. Many companies in the business of technical textiles have become successful on international markets. The manufacture of technical textiles in Turkey and the diversity of the products manufactured have been increasing in keeping with developments in global markets. The types of technical textiles which are manufactured in the highest quantities in Turkey are automotive textiles, textiles used in the sanitation/cosmetics/hygiene industries and textiles used in packaging.

Exports of technical textiles products increased from USD 1.3 billion to USD 1.5 billion between 2014 and 2018.

**Figure 2. Turkey’s Technical Textiles Exports (2014-2018)**

![Turkey’s Technical Textiles Exports (2014-2018)](image)

The distribution of Turkey’s total exports of technical textiles products for the period between 2014 and 2018 by country is shown in Table 4.

### Table 4. Turkey’s Technical Textiles Exports by Country (2014-2018) (Top 20 Countries)

<table>
<thead>
<tr>
<th>#</th>
<th>Country</th>
<th>Exports (USD ‘000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Germany</td>
<td>437,012</td>
</tr>
<tr>
<td>2</td>
<td>France</td>
<td>280,709</td>
</tr>
<tr>
<td>3</td>
<td>Italy</td>
<td>250,086</td>
</tr>
<tr>
<td>4</td>
<td>USA</td>
<td>217,065</td>
</tr>
<tr>
<td>5</td>
<td>Iran</td>
<td>185,182</td>
</tr>
<tr>
<td>6</td>
<td>UK</td>
<td>189,346</td>
</tr>
<tr>
<td>7</td>
<td>Spain</td>
<td>156,572</td>
</tr>
<tr>
<td>8</td>
<td>Israel</td>
<td>123,070</td>
</tr>
<tr>
<td>9</td>
<td>Poland</td>
<td>130,631</td>
</tr>
<tr>
<td>10</td>
<td>Egypt</td>
<td>155,334</td>
</tr>
<tr>
<td>11</td>
<td>Netherlands</td>
<td>129,168</td>
</tr>
<tr>
<td>12</td>
<td>Iraq</td>
<td>91,405</td>
</tr>
<tr>
<td>13</td>
<td>Romania</td>
<td>115,483</td>
</tr>
<tr>
<td>14</td>
<td>Algeria</td>
<td>81,805</td>
</tr>
<tr>
<td>15</td>
<td>Export Processing Zones</td>
<td>83,583</td>
</tr>
<tr>
<td>16</td>
<td>Serbia</td>
<td>81,890</td>
</tr>
<tr>
<td>17</td>
<td>Bulgaria</td>
<td>75,974</td>
</tr>
<tr>
<td>18</td>
<td>Czechia</td>
<td>76,580</td>
</tr>
<tr>
<td>19</td>
<td>Morocco</td>
<td>61,003</td>
</tr>
<tr>
<td>20</td>
<td>China</td>
<td>43,488</td>
</tr>
</tbody>
</table>

**Table 5. Turkey’s Technical Textiles Imports by Country (Top 20 Countries) (USD ‘000)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>487,020</td>
<td>469,704</td>
<td>512,811</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>12,148</td>
<td>83,190</td>
<td>146,021</td>
</tr>
<tr>
<td>Germany</td>
<td>155,679</td>
<td>145,779</td>
<td>134,610</td>
</tr>
<tr>
<td>Italy</td>
<td>142,099</td>
<td>123,174</td>
<td>131,412</td>
</tr>
<tr>
<td>India</td>
<td>76,506</td>
<td>86,155</td>
<td>74,493</td>
</tr>
<tr>
<td>France</td>
<td>62,145</td>
<td>59,426</td>
<td>67,333</td>
</tr>
<tr>
<td>USA</td>
<td>35,200</td>
<td>39,248</td>
<td>44,922</td>
</tr>
<tr>
<td>Egypt</td>
<td>55,299</td>
<td>48,581</td>
<td>42,272</td>
</tr>
<tr>
<td>Czechia</td>
<td>37,751</td>
<td>32,597</td>
<td>33,288</td>
</tr>
<tr>
<td>UK</td>
<td>34,318</td>
<td>31,583</td>
<td>31,737</td>
</tr>
<tr>
<td>Poland</td>
<td>21,340</td>
<td>22,706</td>
<td>31,594</td>
</tr>
<tr>
<td>Korea</td>
<td>45,039</td>
<td>31,524</td>
<td>28,447</td>
</tr>
<tr>
<td>Spain</td>
<td>29,436</td>
<td>20,665</td>
<td>19,258</td>
</tr>
<tr>
<td>Vietnam</td>
<td>8,861</td>
<td>12,687</td>
<td>16,689</td>
</tr>
<tr>
<td>Thailand</td>
<td>9,179</td>
<td>14,681</td>
<td>14,499</td>
</tr>
<tr>
<td>Export Processing Zones</td>
<td>4,631</td>
<td>16,846</td>
<td>13,612</td>
</tr>
<tr>
<td>Netherlands</td>
<td>15,301</td>
<td>16,846</td>
<td>12,293</td>
</tr>
<tr>
<td>Norway</td>
<td>1,709</td>
<td>5,849</td>
<td>12,443</td>
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<td>Israel</td>
<td>16,260</td>
<td>14,272</td>
<td>11,284</td>
</tr>
<tr>
<td>Switzerland</td>
<td>10,007</td>
<td>10,336</td>
<td>9,053</td>
</tr>
<tr>
<td>World</td>
<td>1,456,487</td>
<td>1,485,969</td>
<td>1,594,215</td>
</tr>
</tbody>
</table>

As can be seen in Table 5 above, China, Bangladesh, Germany, Italy and India had the largest shares in Turkey’s imports of technical textiles in 2016, in that order. Technical textiles Imports from China were worth USD 487.0 million in 2014, USD 469.7 million in 2015 and USD 512.8 million in 2016.

The data illustrate that Turkey needs to try to increase its share of world trade through innovative, competitive, interactive technical textiles products with high technological content and value-added.

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2. Current Information on Technical Textile Sector, İTKİB, March 2015

The global technical textiles market was worth USD 234.715 million in 2017. This is forecast to increase by 45% to USD 334.938 million by 2025.

The global technical textiles sector is evolving continuously in terms of applications, technologies, innovation and performance. The demand for technical textiles is increasing constantly as new applications and end-user industries emerge in parallel with innovations in products and technological developments. A large proportion of the demand for technical textiles comes from sectors such as the automotive industry, sports equipment and clothing, environmental protection, construction, health, packaging, apparel and agriculture. The 12 commonly accepted categories of technical textiles are: Agrotech, Buildtech, Clothtech, Geotech, Hometech, Indutech, Medtech, Mobiltech, Packtech, Prototech, Sportech and Oekotech. Developing markets such as China and India have considerable growth potential, although the global technical textiles market is dominated by developed economies such as the USA and the EU. The global technical textiles sector is characterized by a high level of investment in R&D for the development of innovations and new products. Stable growth has been achieved in the production and consumption of final products. Technical textiles products are used as non-twist fibres, yarns and fabrics. The majority of technical textiles are end-used as fabrics. Clothtech, Packtech and Agrotech have the largest share in the global technical textiles market. The non-woven, composites, fibres and Medtech segments account for 75% of the investments in the sector. The growth of the Mobiltech and Geotech segments is expected to accelerate with the rapid growth of the automotive industry and the gradual acceptance of Geotech.
The USA is the largest market for technical textiles with a share of 23%, followed by Western Europe with 22%, China with 13% and Japan with 7%. The rest of the world has a 35% share in technical textiles consumption. Rapid growth is expected to be achieved in many segments of technical textiles in developing regions such as the Asia-Pacific region and Latin America. Countries such as China, India and Brazil are expected to lead their own regional markets and to generate significant growth in the technical textiles market.

Many countries satisfy their demand for enhanced textiles through imports from the USA. The major export markets for US companies are Vietnam, India, Taiwan and Brazil. Korea and Taiwan have emerged as powerful competitors for the USA by focusing on innovation.

Technical textiles materials contain natural and synthetic fibres such as Saran, Vinyon, Vinyon, Spandex, Modal, Twaron, Kevlar and Nomex. Most of these fibres have multiple applications on account of their special properties, which include higher resilience, enhanced mechanical resistance, superior insulation and higher thermal resistance. The synthetic fibres in question are produced from natural fibres. These natural fibres are processed using special materials to obtain the desired physical properties of technical fibres. The high resilience of these fibres when compared to conventional fibres accounts for their widespread use not only in the manufacture of apparel but also in the automotive industry, Medtech and so on.

The increase in demand for Geotech and the preference for non-woven technical fabrics in developing economies are important factors triggering the growth of the global technical textiles market. The demand for these products has risen further with the demand for Buildtech and the increase in government initiatives to encourage the use of technical textiles. However, the high costs of raw materials and finished goods, and the high use of toxicants during the production of these materials, are factors that may constrain the growth of global markets. On the other hand, improvements in the recycling of technical textiles are likely to play a key role in creating new opportunities in the market for the future.


The composite segment had a dominant position in 2017 which it is expected to maintain through to 2025. The demand for composites is expected to increase in the near future to meet the demand for glass fibres in the maritime industry and to meet increasing demand for enhanced composites in manufacturing and construction. The rise in the utilisation of composites in the aerospace industry will also contribute to the growth of the market.

The European technical textiles market is predicted to grow rapidly between 2018 and 2025 in parallel with the growth in end use applications in Indutech, Mobiltech and Oekotech. The rising use of technical textiles in the medical, industrial, home textiles and automotive sectors will also contribute significantly to the growth of the European market. New applications for technical textiles in industries such as apparel and construction will also support growth.

**New Applications in Textiles Products**

The downward pressure on the overall economy complicates the demand outlook for the technical textiles sector. Market demand in construction infrastructure, environmental protection and healthcare continues to drive high growth. However, there are areas such as artificial leather fabrics, transport textiles and tyre cords which are experiencing slow growth or are in decline.

China plays an active role in regional development and production as a result of the progress it has made in non-woven production. Shandong has become the largest non-woven production zone in China surpassing Zhejiang. The applications are concentrated in civil engineering and architecture, which make up 40% of the total production in the country. The rapid rate of growth has been maintained. The sector grew by 32.66% in 2015.

According to the National Statistical Bureau of China, non-woven fabric production increased by an annual average of 22.58% and by 177% in total during the period of the 12th Five-Year Plan (2011-2015).

The main problems referred to by the participating companies were as follows:

- Insufficient numbers of experienced personnel
- Inadequate rail network
- Insufficient R&D in technical textiles
- Lack of institutionalisation
- Low educational level of employees
- Insufficient competitive advantage in technological infrastructure
- Insufficient competitive strategies
- Insufficient projects for increasing productivity
- Insufficient awareness of innovation and creativity
- Insufficient cooperation between universities and industry
- Low satisfaction with refugees' performance at work
- Refugees' insufficient Turkish language skills
- Companies' lack of awareness of the assistance given to refugees

The challenges referred to by the participating companies were:

- Rise in the unemployment rate – resignations encouraged by the unemployment allowance
- Increasing disinformation about refugees
- Decline in demand for available goods due to climate change
- Return of Syrians to their home country which will result in loss of qualified human resources
- Lack of vocational training institutions (universities – technical high school)
- Rising prices because of a decline in the supply of raw materials
- Logistics / rising shipping costs (gas prices)
- Failure to keep up with current trends
- High labour costs (insurance costs)
- Failure to keep up with current technology
- Recruitment system and lack of standardisation
- Lack of competition, leading management to believe that "training is unnecessary"

Opportunities expressed by participating companies:

- Positive perception generated by refugees and branding
- Proximity to the target market
- Young labour force
- Links with Arabic speaking countries and Syrian diaspora
- Qualified refugees
- Accessibility (logistic centre)
- Adaptation speed (quick response to demand)
- Incentives available in the region

2.3 INTERVIEW AND RESEARCH RESULTS

During the study, the experts contacted representatives and managers of companies in the region and collected the necessary data/information using techniques such as questionnaires and face-to-face interviews. During the interviews, the available data was analysed, and additional information was gathered to be used as inputs for the report.

**FINFindings of the Two-Day Workshop**

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- Insufficient R&D in technical textiles
- Lack of institutionalisation
- Low educational level of employees
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2.4 SUMMARY OF KEY FINDINGS

**Major Findings of the Situation Analysis**

All of the companies visited operate as corporations.

About half of the companies visited operate in Gaziantep.
Most of the companies visited sell at the national and international levels. The shares of local and regional sales in total sales are relatively low.

The customers of the companies are mostly wholesalers and retailers.

All companies have an annual turnover of TRY 8 million or more or more.

Most exports are made directly to client companies.

The biggest problem of companies with exports is high input costs.

Companies mainly target increases in their sales.

More than half of the companies have no distinctive product.

Most of the decisions are made by the board and/or owner.

While half of the companies say their rivals are international companies, the other half say they are national, regional or local companies.

**Major Findings from the Human Resources Analysis**

The total numbers of workers in the companies are between 51 and 250. Fewer than half have a bachelor’s degree. The numbers of workers who speak a foreign language and the numbers of engineers are also low at most companies.

The companies have generally established separate departments in areas such as production, human resources, management and marketing.

Difficulties in acquiring qualified human resources are most likely to cause problems in the production, sales and marketing departments.

The proportion of refugees employed at most companies is below 5%. Woman refugees are only employed at a small number of companies.

Companies reach out to refugees via the people normally involved in their recruitment processes.

Most companies know little about the documents and methods needed to recruit refugees.

More than half of the companies do not plan to recruit refugees within the next 12 months.

**Key Findings from the Operational Capacity and Technological Performance Analysis**

For most companies, international rivals are the biggest obstacle to competitiveness. Other obstacles are production efficiency, lack of government subsidies and regulations.

Difficulties in accessing distribution channels are seen as the biggest obstacle faced by companies in global competition. This obstacle is followed by deficiencies in production and technology.

The companies describe production, sales and marketing as their strengths.

The number of companies using lean production techniques is very low.

The quality of the companies’ products generally range from medium to high. Companies express their competitive advantages as fast delivery time and the ability to produce quickly and adapt easily. While the biggest obstacle to the operational processes of the companies seems to be country risk, the companies themselves list the obstacles as regional risks, cost-based problems and a lack of innovation in the sector.

The companies describe themselves as better competitors in Middle East and European Union markets. They characterise their technological levels as competitive by national and international standards.

Investment in R&D constitutes between 10% and 20% of most companies’ annual budget.

Most companies seem to be sufficiently competitive or more than sufficiently competitive at the regional and national levels when evaluated in terms of innovation competence. However, it is clear that they have room for improvement when it comes to international competition.

**Major Findings from the Value Chain Analysis**

Most companies are involved in the value chain as manufacturers.

Companies state that innovation competence is low and input costs are high.

Lack of R&D and economic problems emerge as the biggest challenges that the sector faces.

While the companies consider firms in China and Italy to be their main competitors, they also have rivals at the national level.

Even though the inputs of all companies depend on imports, they say that they would not have difficulty in finding local suppliers.

Transport, energy and storage are among the infrastructure problems the companies face.

Most companies have quality certificates, such as ISO.

Most companies carry out R&D activities, but these activities are limited to the company level.
3.1 NEEDS/GOALS FOR DEVELOPMENT

With the expiry of the deadline foreseen in the Agreement on Textiles and Clothing, international trade in textiles and apparel products was freed of quotas. However, the liberalisation of international trade in the textiles sector has always been a controversial subject, because both textiles and apparel are important sources of employment in developing and developed countries. There have been disruptions to the fully liberalised trade in these goods. Despite these problems, international trade in apparel products has tripled in value over the last twenty years; and doubled for textiles products.

The sector in Turkey has some room for improvement to properly proceed with internationalisation.

Marketing Opportunities and Branding

Companies of diverse sizes operate in the Turkish textiles sector. SMEs generally focus on sales in local and national markets. It is difficult for them to establish well-functioning departments to focus on international markets, as they know little about them. However, competitive advantages have paved the way for integration with global markets. Generally, companies are unable to succeed in exports without external support and consultancy services. Companies investing on internationalisation enjoy a greater advantage in global markets.

SMEs need more support from the government. Since government support is essential for the Turkish textiles sector, it is most effective in integrating SMEs into global markets. The establishment of Foreign Trade Capital Companies and Sectoral Foreign Trade Companies constituted a huge step in government sponsorship of industry. These steps were taken to support Turkish companies in specializing in foreign trade and becoming active and effective in global markets. It is now essential for the textiles and apparel sectors to follow a new and more effective marketing strategy in global markets.

Successful branding by individual companies will add to the positive perception of Turkish goods as a whole and facilitate marketing for all sectors in global markets. Because it has already lost the advantages of larger quantities and cheaper prices, Turkey should focus on producing higher value-added and higher quality products. Investment in R&D should be encouraged and steps should be taken to produce more functional technical textiles products.
Geographical Location and Quick Delivery

Geographical proximity, cultural affinity and a history of trade links are key factors that affect the prospects for foreign trade between any two countries. Geographical proximity is especially important as it determines shipping costs. Turkey’s proximity to the EU market results in favourable shipping and insurance costs by comparison with its biggest rival, China. The fact that Turkey continues to export to the EU without being a member state derives from its geographical proximity. Proximity also adds to efficiency, as less time is lost in transportation. Rapid shipment and delivery are significant competitive factors in global markets.

3.2 RECOMMENDATIONS

Concentrating on R&D and innovative, distinct and competent services in the development of SMEs

Adapting well to technology-intensive production methods to reduce labour costs and waste, and increase productivity

Providing more field-oriented and individualised services

Encouraging industrial cooperation

Expanding the use of clusters

Ensuring the commercialisation of public research

Increasing cooperation within the industry

Adaptation to e-commerce

SPECIFIC RECOMMENDATIONS FOR THE SECTORAL ROADMAP

■ Developing products in technical textiles:
  ■ Developing products for the automotive sector
  ■ Developing products for the cleaning/cosmetics/hygiene sectors
  ■ Developing products for the packaging sector
■ Creating a vision for the sector
■ Having a communication plan for the sector

Developing products by predicting demand

Preparing timelines with 2, 5 and 10 year perspectives

Choosing essential and developing technologies to ensure greater competitiveness against global industrial rivals

Identifying criteria for success (resources, time, investment etc.) and prioritizing potential technologies for reaching the intended goals

Developing skills for the needs of the labour market- planning vocational training for Syrian refugees and host community members

BRANDING

Successful branding can be supported through the following steps:

Identifying first the target market and then the requirements of customers based on the factors which are most influential on choices of brand and which primarily determine the value of a brand

Deciding which brand values to create

Taking competitors’ propositions and the perceptions of their brands into account while identifying needs

Positioning brands appropriately so that they respond to the needs and perceptive abilities of the customers in the market.

Conveying brand value to customers

Ensuring the value of the brand is supported over time

Keeping track of changes in the positions of the company and rival brands and updating the brand accordingly
### 3.3 ACTION PLAN

#### A. CAPACITY BUILDING

<table>
<thead>
<tr>
<th>SCALE</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Improving Access to Finance</td>
<td>A.1.1 Improving the financial planning and management skills of SMEs&lt;br&gt;A.1.2 Ensuring that support for SMEs extends to more areas&lt;br&gt;A.1.3 Increasing the number of briefings about government subsidies&lt;br&gt;A.1.4 Improving cooperation with chambers of commerce and industry to develop SMEs’ capacities to make use of funds&lt;br&gt;A.1.5 Analysing the needs of SMEs periodically&lt;br&gt;A.1.6 Providing training and/or one-to-one consultancy for SMEs to improve their skills in using financial instruments such as public offerings, corporate bonds, derivatives and futures markets&lt;br&gt;&lt;br&gt;<strong>RESponsible AGENCIES</strong>&lt;br&gt;- KOSGEB&lt;br&gt;- TÜBİTAK&lt;br&gt;- TOBB&lt;br&gt;- UN agencies&lt;br&gt;- Regional development agencies&lt;br&gt;- National banks&lt;br&gt;- European Bank for Reconstruction and Development&lt;br&gt;- Credit Guarantee Fund&lt;br&gt;- Companies</td>
</tr>
<tr>
<td>A2 Organising Vocational Training Programmes in the Textiles Sector</td>
<td>A.2.1 Cooperating with universities for vocational training programmes&lt;br&gt;A.2.2 Improving cooperation with directorates of National Education to organise Vocational Training programmes&lt;br&gt;A.2.3 Cooperation with İŞKUR for on-the-job training programmes&lt;br&gt;A.2.4 Establishing a Textiles Training Centre for inexperienced refugees and host community members and training of qualified personnel for the labour force&lt;br&gt;A.2.5 Encouraging SMEs to train their personnel through their own resources without external support and standardising these training programmes&lt;br&gt;A.2.6 Encouraging companies to develop software training and e-learning practices with the potential to affect design processes directly&lt;br&gt;&lt;br&gt;<strong>RESponsible AGENCIES</strong>&lt;br&gt;- TOBB&lt;br&gt;- Chambers of Commerce and Industry&lt;br&gt;- İŞKUR&lt;br&gt;- Ministry of National Education&lt;br&gt;- Textiles sector associations&lt;br&gt;- Companies</td>
</tr>
<tr>
<td>A3 Improving the Competitiveness of the Textiles Sector</td>
<td>A.3.1 Supporting the internationalisation of SMEs in textiles at the local level&lt;br&gt;A.3.2 Encouraging investment in the textiles sector&lt;br&gt;A.3.3 Improving the financial planning and management skills of decision makers and managers in SMEs&lt;br&gt;A.3.4 Providing consultancy services such as company analysis and market research&lt;br&gt;A.3.5 Supporting participation in workshops and training programmes abroad to improve international knowledge transfer through bilateral meetings, delegation visits and one-to-one exchanges of expertise&lt;br&gt;&lt;br&gt;<strong>RESponsible AGENCIES</strong>&lt;br&gt;- TOBB&lt;br&gt;- Chambers of commerce and industry&lt;br&gt;- Textiles sector associations&lt;br&gt;- Universities&lt;br&gt;- Companies</td>
</tr>
</tbody>
</table>
### B. Establishing a Network for Cooperation Between the Public and Private Sectors

<table>
<thead>
<tr>
<th>Scale</th>
<th>Action</th>
<th>Responsible Agencies</th>
<th>Schedule</th>
</tr>
</thead>
</table>
| B.1   | Improving Cooperation in the Textiles Sector by Establishing a Textiles Council | - Establishing an Advisory Committee to understand the needs of the sector
- Establishing a permanent Local Competitiveness Council (LCC)
- Forming work groups
- Improving cooperation between universities and the textiles sector, supporting the needs of the sector for product development and the resolution of problems | Universities
Chambers of commerce and industry
Textiles sector associations
Directorates of Trade and Industry | 2019 Q4 2020 Q1 2020 Q2 2020 Q3 |
| B.2   | Creating Regional Clusters for Direct and Indirect Textiles Businesses | - Briefings about advantages of clusters and incentives for clusters
- One-to-one meetings with companies that are likely to be chosen for clusters
- Field visits to observe best practices in regional clusters in Turkey
- Application for R&D support
- Industry research to discover new areas of symbiosis and enhancement of existing cases | Ministry of Trade
Development agencies
KOSGEB
Chambers of commerce and industry
Business associations
Exporters unions
Exporters associations | 2019 Q4 2020 Q1 2020 Q2 2020 Q3 2020 Q4 |
| B.3   | Establishing a Textiles Entry Point Network for Internationalisation | - Allocating an office for the Entry Point
- Training programmes for personnel
- Enhanced Services and Capacity Building Activities for SMEs and stakeholders | Chambers of commerce and industry
Textiles sector associations
Business associations
KOSGEB | 2020 Q1 2020 Q2 2020 Q3 2020 Q4 |
## Sectoral Roadmaps: Textile Sector in Turkey

### C. INNOVATION AND RESEARCH & DEVELOPMENT

<table>
<thead>
<tr>
<th>SCALE</th>
<th>ACTION</th>
<th>RESPONSIBLE AGENCIES</th>
<th>SCHEDULE</th>
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</thead>
<tbody>
<tr>
<td>C.1 Capacity Assessment Programmes about R&amp;D for SMEs</td>
<td>• Identifying analysis methods&lt;br&gt;• Visiting companies and undertaking analyses&lt;br&gt;• Consultancy services about analyses on current capacity and R&amp;D</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>C.1.1</td>
<td>• TÜBİTAK&lt;br&gt;• Development agencies&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)</td>
<td>2020 Q1</td>
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<td></td>
<td>C.1.2</td>
<td>• TÜBİTAK&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)</td>
<td>2020 Q3</td>
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<tr>
<td></td>
<td>C.1.3</td>
<td>• TÜBİTAK&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)</td>
<td>2020 Q4</td>
</tr>
<tr>
<td>C.2 Improving the Technological Skills of SMEs</td>
<td>C.2.1 Organising study tours for companies to observe good practices&lt;br&gt;• C.2.2&lt;sup&gt;2&lt;/sup&gt; Ensuring access to information for companies that need support for R&amp;D and design processes through joint facilities and one-to-one consulting&lt;br&gt;• C.3.1 Organising R&amp;D support briefings for SMEs and stakeholders&lt;br&gt;• C.3.2 Drafting applications for grants and funds for SMEs</td>
<td>• TÜBİTAK&lt;br&gt;• Development agencies&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)&lt;br&gt;• Exporters unions&lt;br&gt;• Exporters associations</td>
<td>2020 Q1</td>
</tr>
<tr>
<td>C.3 Developing an R&amp;D Support Mechanism at the National and International Levels</td>
<td>C.4.1 Organising training programmes about Sectoral Overview and Globalisation&lt;br&gt;• C.4.2 Organising training programmes about Business Development and Leadership&lt;br&gt;• C.4.3 Organising study visits for owners and managers of SMEs to countries that have good practices</td>
<td>• Development agencies&lt;br&gt;• KOSGEB&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)&lt;br&gt;• Exporters associations</td>
<td>2019 Q4</td>
</tr>
<tr>
<td>C.4 Developing the Capacities of Decision Makers and Managers of SMEs</td>
<td>C.5.1 Including textiles companies in a centre with a view to enhancing innovation and being able to access support for design and innovation. This should encompass both apparel sector design and technical textiles R&amp;D at regional level.</td>
<td>• Development agencies&lt;br&gt;• KOSGEB&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)&lt;br&gt;• Ministry of Industry and Technology&lt;br&gt;• Universities&lt;br&gt;• Exporters associations</td>
<td>2020 Q1</td>
</tr>
<tr>
<td>C.5 Establishing an Innovation/Design Centre for the Textiles Sector</td>
<td>C.6.1 Determining the location and participant organisations&lt;br&gt;• C.6.2 Preparing the infrastructure for the centre</td>
<td>• Development agencies&lt;br&gt;• KOSGEB&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)&lt;br&gt;• Ministry of Industry and Technology&lt;br&gt;• Universities&lt;br&gt;• Exporters associations</td>
<td>2020 Q2</td>
</tr>
<tr>
<td>C.6 Establishing a Regional Textiles Research Centre for Carpets and Non-Woven Products</td>
<td>• Development agencies&lt;br&gt;• KOSGEB&lt;br&gt;• Chambers of commerce and industry&lt;br&gt;• Local Consultancy Council (LCC)&lt;br&gt;• Ministry of Industry and Technology&lt;br&gt;• Universities&lt;br&gt;• Exporters associations</td>
<td>2020 Q1</td>
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<td>SCALE</td>
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<tr>
<td>D.1 Encouraging Investment</td>
<td>D.1.1 Cooperation with the Regional Development Agency Investment Support Office</td>
<td>• TUBİTAK</td>
<td>2020 Q1</td>
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<tr>
<td></td>
<td>D.1.2 Organising briefings about the advantages of investment incentives for potential SMEs</td>
<td>• Development agencies</td>
<td>2020 Q2</td>
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<tr>
<td></td>
<td>D.1.3 Facilitating foreign capital inflow to the country and ensuring that macro policies are developed to this end</td>
<td>• Chambers of commerce and industry</td>
<td>2020 Q3</td>
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<tr>
<td></td>
<td>D.1.4 Enhancing the capacities of companies in using financial instruments such as public offerings, the stock exchange and derivatives</td>
<td>• Local Consultancy Council (LCC)</td>
<td>2020 Q4</td>
</tr>
<tr>
<td>D.2 Improving Workers’ Skills</td>
<td>D.2.1 Providing basic skills training for self-development of SME personnel</td>
<td>• TUBİTAK</td>
<td>2020 Q1</td>
</tr>
<tr>
<td></td>
<td>D.2.2 Analysing each SME that is chosen through the Employee Motivation System</td>
<td>• Development agencies</td>
<td>2020 Q2</td>
</tr>
<tr>
<td></td>
<td>D.2.3 Analysing the employee turnover rate</td>
<td>• Chambers of commerce and industry</td>
<td>2020 Q3</td>
</tr>
<tr>
<td></td>
<td>D.2.4 Integrating e-learning into business processes</td>
<td>• Local Consultancy Council (LCC)</td>
<td>2020 Q4</td>
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<tr>
<td></td>
<td></td>
<td>• Exporters unions</td>
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<td></td>
<td></td>
<td>• Exporters associations</td>
<td></td>
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<tr>
<td>D.3 Organising Joint Marketing Plans</td>
<td>D.3.1 Analysing current marketing and business plans for SMEs</td>
<td>Development agencies</td>
<td>2019 Q4</td>
</tr>
<tr>
<td></td>
<td>D.3.2 Formulating marketing strategies with SMEs</td>
<td>• KOSGEB</td>
<td>2020 Q1</td>
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<tr>
<td></td>
<td></td>
<td>• Chambers of commerce and industry</td>
<td>2020 Q2</td>
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<td></td>
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<td>• Exporters associations</td>
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<tr>
<td>D.4 Providing Marketing Training Programmes for SMEs</td>
<td>D.4.1 Improving available support for training programmes</td>
<td>KOSGEB</td>
<td>2020 Q1</td>
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<tr>
<td></td>
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<td>• Development Agencies</td>
<td>2020 Q2</td>
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<td></td>
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<td>• European Bank for Reconstruction and Development (EBRD)</td>
<td>2021 Q1</td>
</tr>
</tbody>
</table>

Sectoral Roadmaps: Textile Sector in Turkey
### E. INTERNATIONALISATION

<table>
<thead>
<tr>
<th>SCALE</th>
<th>ACTION</th>
<th>RESPONSIBLE AGENCIES</th>
<th>SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E.1 Improving the Environment for Exports</td>
<td></td>
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<tr>
<td></td>
<td>E.2.1 Assistance with research</td>
<td>Development Agencies</td>
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<td></td>
<td>E.2.2 Improving communications</td>
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<td></td>
<td>E.2.3 Providing consultancy services (business plans etc.)</td>
<td>KOSGEB</td>
<td>2020 Q1</td>
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<td>E.2.4 Providing services to build websites that are professional and user-friendly</td>
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<td></td>
<td>E.2.5 Becoming a member of the Enterprise Europe Network to benefit from the opportunities provided</td>
<td>Chambers of Commerce And Industry</td>
<td>2020 Q2</td>
</tr>
<tr>
<td></td>
<td>E.2.6 Organising training programmes and/or one-to-one consultations on topics such as attaining international quality standards and the legal and commercial regulations regarding foreign trade</td>
<td>Local Consultancy Council (LLC)</td>
<td>2020 Q3</td>
</tr>
<tr>
<td></td>
<td>E.2.7 Support for advertising/promotion activities using non-conventional international digital platforms at the company level</td>
<td>Exporters associations</td>
<td>2020 Q4</td>
</tr>
<tr>
<td></td>
<td>E.2.8 One-to-one consultancy for international market research and development activities to locate potential markets and make them into strategic export destinations</td>
<td>Enterprise Europe Network (EEN)</td>
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<td></td>
<td>E.2.9 Increasing the number and scope of incentive mechanisms for marketing R&amp;D and representation expenses</td>
<td>Companies</td>
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</table>
3.3.1 RECOMMENDATIONS FOR THE SECTOR ON LABOUR ABSORPTION STRATEGIES

Textiles is a sector which has been influenced by the integration of Syrians. The index of the annual volume of production in the sector rose from 100 to 193 between 2005 and 2016. In view of this high growth, companies in the sector often have difficulties in finding workers. For example, İŞKUR’s 2016 Istanbul Labour Market Report anticipated a rise in the number of vacancies for sewing machine operators.

The position of sewing machine operator may be a suitable entry-level position for young Syrians as it requires limited language skills and a relatively low level of education. Although there are many entry-level positions in the textiles sector, young Syrians are mostly suited to production work. The job opportunities suitable for this target audience are detailed in the following table:

Table 6 Jobs with Potential for Syrian Employment in the Textiles Sector

<table>
<thead>
<tr>
<th>Description</th>
<th>Social Skills</th>
<th>Language Requirements</th>
<th>Level of Education</th>
<th>Average Monthly Salary</th>
</tr>
</thead>
<tbody>
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<td>Sewing Machine Operator</td>
<td>Hardworking, Determined, Flexible</td>
<td>Basic Turkish</td>
<td>Primary Education</td>
<td>TRY 1404 min.</td>
</tr>
<tr>
<td>Operator Assistant</td>
<td>Hardworking, Determined, Flexible</td>
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Syrians have the potential to establish SMEs in the textiles sector in the region. They also have opportunities to access grants and/or credit provided by local and international funds like the Small and Medium-Scale Enterprises Development Organisation (KOSGEB).

Figure 7. The Roadmap to Entrepreneurship

Application to Tax Office
Necessary Documents:
Application Form for Tax Identification Number, Lease Contract, ID photocopy, Certificate of residence
Application to the tax office in the region where the business is to be established

Registration with Chamber of Craftsmen and Artisans
Necessary Documents:
Identity Card, 5 photographs, tax certificate, master-of-trade certificate.
Application to the unit of the chamber concerned with the type of work in question

Application for Work Permit
A password from the post office for e-devlet (the online e-government portal)
Application for work permit on www.turkiye.gov.tr

Application for Municipal Business License
Completion of the application form for a business license and application to the licensing unit of the municipality.
### VOCATIONAL COURSES

**KOSGEB:** KOSGEB is a provider of training well-known for its Practical Entrepreneurship Programme. This training programme is mandatory for SMEs that want to receive state support. It is free of charge and lasts 32 hours. It can be provided by training contractors such as Lifelong Learning Centres at universities and NGOs as well as by KOSGEB itself. These training programmes offer a publicly-recognised certificate and Syrians are also accepted.

**İŞKUR:** İŞKUR is another public training provider that specializes in vocational skills training. İŞKUR assesses employers' needs for qualified personnel through annual reviews and to offer courses in the skills that the private sector demands. The courses are delivered through training contractors. This is one of İŞKUR’s legal responsibilities.

### 3.3.2 LOOKING AHEAD

#### THE CONTRIBUTION OF THE SECTORAL ROADMAP

**Organisation:** Permanence of the strategic roadmap for the Turkish textiles sector

**Short term:** Establishing a representative and effective structure which satisfies the expectations of the sector and stakeholders who implement, promote and sponsor the action plan.

**Medium term:** Presenting the sector with a progress report and an updated action plan.

**Long term:** Updating the strategic roadmap for the Turkish textiles sector.

**Innovativeness:** Supporting the industry in the transition from mass production to distinctive products that require design, improvement and commercialisation.

**Short term:** Developing a strategy to support industrial enterprises with growth potential which wish to enhance their R&D, innovation and commercialisation networks in conjunction with universities, sector associations and users.

Starting and establishing localisation projects involving many companies in large markets.

**Medium term:** Establishing a Textiles Innovation Fund and then making it known as an administrative interface at the national level and managing its first investment programme (e.g.: for the first five years).

Developing a technological intelligence and knowledge collection system about the latest and developing technologies.

**Long term:** Ensuring that improved technologies and products are commercialised on international markets through consortium projects.

Harnessing driving forces to develop leading products for the markets of the future.

**Short term:** Analysing the trends in demand in the markets where the sector operates.

Developing a strategy to support industrial enterprises with growth potential that targets emerging geopolitical development and sustainable development markets.

**Medium term:** Regularly contributing innovative products to the markets to satisfy the demands of target populations.

**Long term:** Requesting major contractors to execute procurement contracts with equitable specifications with the aim of sustainable development.

**Human Resources:** Securing the availability of qualified human resources to satisfy the demands of new industries.

**Short term:** Redefining the vision of human resources, textiles training and continuous training models.

**Medium term:** Ensuring that training propositions are available to satisfy existing demand and that they are being used.

**Long term:** Revising training activities based on changing needs.

** Partnerships:** Establishment of new partnerships

**Short term:** Profiling the Turkish textiles sector in detail.

Creating networks that encourage business partnerships among manufacturers.

Developing a virtual communication forum to encourage information interchange and to permit central access to all the programmes related to the sector.

**Medium term:** Updating and providing contact information periodically.

Sustaining the existence of network groups.

Ensuring that the virtual communication forum is self-financing and updating the information constantly.

Encouraging the formation of industrial groups to facilitate synergy between purchasing and marketing.

**Long term:** Updating and providing contact information out periodically.

Maintaining network groups.

Ensuring that the virtual communication forum is self-financing and updating the information constantly.

Providing textiles enterprises with access to large domestic and export markets.

**Short term:** Creating network groups and activities which encourage partnerships throughout the value chain (suppliers of materials and technology, operators and manufacturers, buyers, prime contractors, lawmakers and policy makers) in large markets.

**Medium term:** Sustaining network groups and activities that have common areas of interest.

Analysing the suitability of developing commercial markets as strategic markets for the Turkish textiles sector.

**Long term:** Ensuring that high-calibre actors emerging from within network groups in industrial sectors that serve large markets become well recognised.

Securing the long-term availability of commercial export offices.

**Communications and Image:** Recognition of institutions engaging in textiles.

**Short term:** Developing and applying the communication plan of the strategic roadmap.

**Medium term:** Updating the communication plan of the strategic roadmap.

Creating an original brand image for the sector which is known throughout Turkey.

**Long term:** Updating the communication plan of the strategic roadmap.

Creating an distinctive brand image for the sector which is known at international level.
The innovation trends which experts on the textiles sector agree will be valid for the next decade are listed below:

- **Smart, High-performance Textiles Materials**
  High-performance yarns made of carbon, glass, basalt, ceramic or metal have existed in the textiles sector for years. These yarns have been used in niche markets such as aviation, defence, construction and sports. However, the uses of these yarns has not expanded very much as they require complex production processes and are more expensive than conventional materials. A series of factors including developments in materials science, increased efficiency in production and rising demand has changed this situation. The demand from the aviation industry has tripled over the last 15 years. Demand from the automotive and construction sectors is also likely to increase the utilization of these high-performance materials.

- **Digitalization in Production, the Value Chain and Business Models**
  Industry 4.0 is a topical issue. All factories, machines, technological components and materials are expected to undergo radical transformation during the process of virtualization as a result of the digitalization and connectedness of industrial production. The textiles sector will be affected by this transformation in terms of the pace, efficiency and quality of production.

- **Resource Efficiency**
  Like other sectors, the textiles sector will also be transformed in terms of the use of resources such as materials, energy, water and chemicals, and in the way it presents its value-added products. Chemical inputs are used in various phases of production such as dyeing and finishing. Ecological and economic factors such as energy efficiency, carbon dioxide emissions, water usage, wastewater treatment and legal regulations to prevent air pollution will impose major limitations on the sector. Legal regulations and sustainability arrangements aimed at a better environment will become significant factors of competition in the textiles market.
4.1 PROBLEMS EXPRESSED BY SECTOR REPRESENTATIVES

BUSINESS A (Yarn Manufacturer)

-MAJOR PROBLEM-
DIFFICULTIES IN COMPETING

Inability to Keep Up with CHANGE

1. High labour costs
   * Lack of an efficient working environment
   * High cost of renewing machinery
   * Lack of local manufacturers

2. Inability to use up-to-date technology
   * Lack of training
   * Lack of professional management

3. Insufficient R&D activities
   * Lack of vision
   * Lack of training

1. Lack of trained personnel
   * Lack of training (practical)

2. Workers' resistance to change
   * Fear of unemployment
   * Inability to adjust to Innovations

3. Employer's resistance to change
   * Lack of awareness
   * Lack of professional management
   * Loss of qualified labour and ineffective use of labour

1. Lack of vision
   * Lack of knowledge about Turkish and world culture

2. Non-innovative companies
   * Lack of training

3. Unwillingness to meet promotion costs

1. Financing problems
   * Currency fluctuations
   * Economic uncertainties

2. Perception of the country
   * Domestic and foreign policies
BUSINESS B (Apparel Manufacturer)

-MAJOR PROBLEM-
LACK OF QUALIFIED PERSONNEL

Unavailability of Qualified Vocational High School Graduates
Lack of Systematic Manufacturing Methods
External Problems
Failure to Protect Employers’ Rights

1. Non-availability of job guarantees and lack of encouragement for vocational high school graduates
2. Lack of communication between Ministry of National Education and chambers of commerce and industry
3. Wrong production, wrong market (uninformed production)
4. Informal employment, including Syrians, prevents fair competition and social protection of employees from both refugee and host communities
5. Deficiencies in local government
6. Lack of communication between Ministry of National Education and chambers of commerce and industry
7. Insufficient vocational training programmes provided by stakeholder organisations
8. Casual dropout of personnel hired for vocational training programmes
9. Deficiencies in local government
10. Lack of information about incentives (Inability of funding agencies to reach target audience)

BUSINESS C (Apparel Manufacturing)

-MAJOR PROBLEM-
LACK OF QUALIFIED PERSONNEL

Vocational Training Problems
Infrastructure Problems
Cooperation Problems
External Problems

1. Insufficient vocational training programmes provided by stakeholder organisations
2. Lack of information about incentives (Inability of funding agencies to reach target audience)
3. Casual dropout of personnel hired for vocational training programmes
4. Insufficient vocational training programmes provided by stakeholder organisations
5. Lack of information about incentives (Inability of funding agencies to reach target audience)
6. Casual dropout of personnel hired for vocational training programmes
7. Insufficient interest of public education centres and universities in this area
8. Reluctance of people who were previously engaged in border trade to become paid employees following the decline in the trade
9. In the case of Kilis, the fact that it is a border province and has an insufficient population for labour
10. Deficiencies in local government