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Ministry of Industry, Trade and SMEs



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Skills for Trade and  
Economic Diversification

Aid for Trade Initiative for the Arab States (AFTIAS)

# Skills for Trade and Economic Diversification (STED)

## In Egypt

### The case of the: Furniture Industry



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# **Skills for Trade and Economic Diversification (STED) in Egypt**

**The case of the:  
Furniture Industry**

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**January 2016**

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**Skills for Trade and Economic Diversification in Egypt: The Case of the Furniture Industry**

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## Foreword

“Skills development is [...] essential to address the opportunities and challenges to meet new demands of changing economies and new technologies in the context of globalization.” *Conclusions on skills for improved productivity, employment growth and development, International Labour Conference, 2008.*

“The strategic objective of the industrial development strategy is not only to offer job opportunities for the better-qualified, but also and more importantly to make available a wide pool of highly qualified labour at all skill levels, enough to propel the demanded industrial leap.” *Egypt’s Industrial Development Strategy: The Engine of Growth, 2006.*

This report presents an application of the International Labour Organization’s (ILO) Skills for Trade and Economic Diversification (STED) methodology to the furniture industry of Egypt’s economy. STED is a sector-based approach to identifying and anticipating the strategic skills needs of internationally tradable sectors. While being a relatively small industry contributing only around 2 percent of total Egyptian exports, the furniture industry has been chosen due to its potential for export and employment growth. Growth in exports between 2010 and 2014 was the second highest among all Egyptian industries at 39 per cent. Supporting the industry through actions on skills is likely to enhance their export competitiveness. The sector is composed mainly of small and medium enterprises overall employing 270.000 people that tend to have a wide range of skills challenges. Hence, it is very likely that the industry’s competitiveness would benefit from a good skills strategy, subject to effective implementation.

STED has been implemented as part of the Fast-Track-Project of the Aid for Trade Initiative for Arab States, under joint funding from Saudi Arabia, Kuwait, Sweden, Egypt, the Islamic Development Bank, the International Islamic Trade Finance Corporation, and UNDP.

STED has been developed in recognition of the fact that having the right skills among workers is crucial for firms or industries to succeed in trade, and vice-versa understanding trade is important to provide workers with the right skills. Availability of skilled workers contributes to higher and more diversified exports, more FDI, higher absorption of technology, and more sustainable growth and productive employment creation. At the same time, skills are the key determinant for a worker’s success in finding a good job and making a living. In order for skills supply to match skills demand in the labour market, it is necessary to take a forward-looking perspective, and to ask not just what skills are in demand today, but what skills will be in demand in the future. This is what STED does.

The methodology has been applied in two economic sectors in Egypt – Furniture and Food Processing, and has been implemented in close collaboration with the Ministry of Industry, Trade and Small Industries, the Sector Export Council and the Enterprise Training Partnership for the Furniture industry. The sectors were chosen in consultation with the ILO’s tripartite constituents in Egypt, and the STED process has been undertaken in collaboration with sector level stakeholder steering committees.

This report, and the companion report on the food processing industry, set out a range of recommendations that together amount to a strategic skills agenda for each of the two sectors covered. Implementation of these agenda depends primarily on Egyptian stakeholders at sector and national level, although there is room for development partners to play a supporting and enabling role. The project plans to follow up the reports by supporting implementation of a number of these recommendations in collaboration with stakeholders.

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Background research was conducted by the Enterprise Training Partnership (ETP) for the Furniture Sector. Logistical and administrative support was provided by Mariam Hanna and Basma Nafady (STED Project Assistant, ILO Cairo), and Mona Kamel (Assistant to the Decent Work Team, ILO Cairo), Marie-Helene Shala (Secretary, ILO Headquarters, Geneva), and Mariela Dyrberg (Secretary, ILO Headquarters, Geneva). Dahlia Roque edited the report, and Dahlia Wahib translated the Executive Summary into Arabic.

Many industry stakeholders from government, chambers, private sector, and trade unions generously gave their time and insights during workshops and interviews, reviewing the final draft report and through participating in the steering committee for STED work in the sector. All errors and omissions remain the responsibility of the authors.

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## List of acronyms

|               |                                                            |
|---------------|------------------------------------------------------------|
| <b>AFTIAS</b> | Aid for Trade Initiative for the Arab States               |
| <b>AUFSD</b>  | Association for Upgrading the Furniture Sector in Damietta |
| <b>AVE</b>    | Ad-volorem equivalent                                      |
| <b>CAGR</b>   | Compound aggregate growth rate                             |
| <b>CAPMAS</b> | Central Agency for Public Mobilization and Statistics      |
| <b>DCFTA</b>  | Deep and Comprehensive Free Trade                          |
| <b>EFEC</b>   | Egyptian Furniture Export Council                          |
| <b>EIDS</b>   | Egyptian Industrial Development Strategy                   |
| <b>EIU</b>    | Economist Intelligence Unit                                |
| <b>EN</b>     | European Norms                                             |
| <b>EOSQ</b>   | Egyptian Organization for Standardization and Quality      |
| <b>ETP</b>    | Enterprise Training Partnership                            |
| <b>ETTICs</b> | Egypt Technology Transfer and Innovation Centres           |
| <b>EU</b>     | European Union                                             |
| <b>FIRA</b>   | Furniture Industry Research Association                    |
| <b>FTA</b>    | Free Trade Agreement                                       |
| <b>FTC</b>    | Furniture Technology Centre                                |
| <b>GAFI</b>   | General Authority for Investment and Free Zones            |
| <b>GDP</b>    | Gross domestic product                                     |
| <b>GOEIC</b>  | General Organization for Export and Import Control (Egypt) |
| <b>IDA</b>    | Industrial Development Authority                           |
| <b>ILO</b>    | International Labour Organization                          |
| <b>IMC</b>    | Industrial Modernization Centre                            |
| <b>ISIC</b>   | International Standard Industry Classification             |
| <b>ISO</b>    | International Organization for Standardization             |
| <b>ITC</b>    | International Trade Centre                                 |
| <b>MENA</b>   | Middle East and North Africa                               |
| <b>MFN</b>    | Most favoured nation                                       |
| <b>MSME</b>   | Micro small and medium enterprise                          |
| <b>NGO</b>    | Non-Governmental Organization                              |
| <b>NVA</b>    | Net value added                                            |
| <b>QIZ</b>    | Qualifying Industrial Zone                                 |
| <b>RoW</b>    | Rest of the World                                          |
| <b>STED</b>   | Skills for Trade and Economic Diversification              |
| <b>SFD</b>    | Social Fund for Development                                |
| <b>TVET</b>   | Technical Vocational Education and Training                |
| <b>UAE</b>    | United Arab Emirates                                       |
| <b>US</b>     | United States of America                                   |
| <b>WTO</b>    | World Trade Organization                                   |



# 1. Introduction

In today's rapidly changing and highly integrated world, skills at all levels of the firm are becoming increasingly critical for performance and competitiveness. Globalization and technological change continue to increase the demand for skills and adaptation of workers to new challenges through life-long learning. The Aid for Trade Initiative for Arab States (AFTIAS) provides a platform for targeted trade reforms at regional and country levels. Through this initiative the International Labour Organization (ILO) has implemented the Skills for Trade and Economic Diversification (STED) methodology for two selected sectors.

The STED methodology is a sector level methodology that assists in the formation of skills development strategies that help countries become more competitive in the context of open markets and build or maintain a sound and diversified economic structure. Applying the STED methodology typically involves a combination of desk review and field research. This includes collection of relevant data, employer survey work and structured interviews with key informants. The outcomes of STED are recommendations at the policy, institutional and enterprise level. The process involved in designing the recommendations contributes to raising awareness and stimulating dialogue on skills development among key stakeholders within a sector. The main objectives include enhancing exports and economic diversification, enabling more and better jobs, and helping policy makers to ensure that firms find workers with the right skills and workers acquire the skills needed to find productive employment.

STED initiatives analysed skills needs and developed skills strategies in two export sectors in Egypt in 2014 through the AFTIAS's Fast Track Work Plan 2014. The furniture manufacturing industry was one of the two selected sectors. Furniture is a major industry employing about 270,000 in Egypt in 2013. The Arab region (22 states), as a group, is the biggest importer of Egyptian furniture exports. The region imported up to 85 per cent of the sector's total exports in 2013. The sector has potential to enhance regional trade integration, expanding intra-regional trade within the Arab region. It also has potential to grow exports outside the region, particularly to nearby markets such as the European Union (EU).

Important endeavours are already underway in areas including developing skills standards, reviewing curricula and developing training packages, driven by government and other stakeholders. However, Egypt lacks a strategic plan that comprehensively draws together trade-related development approaches and skills into a human resource development strategy for the sector.

Egypt is a lower middle-income country with a gross domestic product (GDP) of US\$272 billion in 2013. Annual real GDP growth averaged 4.3 per cent in the 1990s, and it improved to 4.9 per cent in the decade before the uprising in early 2011. Economic growth has remained weak since the uprising with real GDP growth averaging 2.1 per cent per annum during the last four years (2011-2014) and is forecast by the Economist Intelligence Unit (EIU) to rise slightly to 3.8 per cent in 2015. According to the EIU's recent analysis, business confidence has improved and investment is increasing<sup>(1)</sup>. Assuming there will be no political shocks, the EIU forecasts that economic growth will increase in future years, reaching 4.8 per cent in 2019.

The total population of Egypt has grown rapidly from 56 million in 1990 to 80 million in 2012 but the annual growth rate of population has slowed somewhat from 2 per cent in 1990 to 1.66 per cent in 2012. As of the end of 2015, the total population of Egypt reached 90 million.

This report describes the furniture industry in Egypt, presents the findings of the STED analysis conducted in 2014, including a skills establishment survey, and presents conclusions, strategies and recommendations based on stakeholder consultations and a final validation workshop on how to further develop the industry.

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(1) Egypt is likely to receive further support from Gulf donors such as Saudi Arabia and the UAE for infrastructure development.

## 2. Sector characterization

### 2.1 Overview

The Egyptian furniture industry is long established and is characterized by strong woodworking skills. Egypt's geographical location also provides good access to major markets, and relatively low costs for skilled labour. The sector has been exposed to numerous influences spanning centuries, and is known for wooden furniture with a distinct style – incorporating Islamic, British and French elements. Parts of the sector also focus on producing furniture in more international and modern styles. The sector started exporting in the 1960s and 1970s by targeting the Soviet Union and Eastern Europe. In the 1980s, it turned to Arab country markets to serve the increasing demand for furniture spurred by the region's high growth.

According to the latest Egyptian Economic Census (2013), the total production in the furniture sector represented 2.1 per cent of total Egyptian manufacturing production (estimated at EGP 666 billion). The total value added in the sector also represented 2.4 per cent of the Egyptian manufacturing net value added in the same year (EGP 297 million).

While the Egyptian furniture sector's contribution to GDP is relatively small, the sector accounts for a more significant share of workers and establishments. According to the Central Agency for Public Mobilization and Statistics (CAPMAS) data, the sector employed 270,222 workers across 104,250 establishments in 2013. This represented 11 per cent of total manufacturing employment and 27 per cent of manufacturing establishments in Egypt. There is an average of 2.6 workers per establishment, reflecting a high degree of fragmentation and very large numbers of micro-enterprises. The fragmentation and very small size of most enterprises present major challenges to developing the sector and improving its performance and productivity.

Over the last decade, the sector has expanded rapidly due mainly to increasing local consumption and exports mainly to Arab countries. Rapid growth in population and increasing per-capita income has led to a substantial expansion in domestic demand for furniture. Exports of furniture sector products have increased rapidly from US\$23 million in 2003 to US\$378 million in 2013. However, imports also greatly increased over the same period from US\$ 40 million to US\$ 288 million. In 2013, Arab countries imported US\$320 million worth of Egyptian furniture, while European countries and the United States imported US\$24 million and US\$4.4 million worth of furniture respectively. Egypt is well located with respect to European markets, and there is an ambition in the sector to take greater advantage of this.

### 2.2 Sector definition

The furniture sector principally includes companies that manufacture furniture and components of furniture. The International Standard Industry Classification (ISIC) Revision 4 categorizes the furniture industry as Division 31 (Manufacture of furniture) of Section C (Manufacturing).

It includes the following:

- manufacturing of chairs and seats for offices, workrooms, hotels, restaurants, and public and domestic premises
- manufacturing of chairs and seats for theatres, cinemas, etc.
- manufacturing of sofas, sofa beds and sofa sets
- manufacturing of garden chairs and seats
- manufacturing of special furniture for shops (counters, display cases, shelves etc.)
- manufacturing of furniture for churches, schools, restaurants
- manufacturing of office furniture
- manufacturing of kitchen furniture
- manufacturing of furniture for bedrooms, living rooms, gardens etc.
- manufacturing of cabinets for sewing machines, televisions etc.

- manufacturing of laboratory benches, stools and other laboratory seating, laboratory furniture (cabinets, tables, etc.)
- finishing such as upholstery of chairs and seats
- finishing of furniture (spraying, painting, French polishing, upholstering, etc.)
- manufacturing of mattresses
- manufacturing of mattress supports
- manufacturing of decorative restaurant carts (dessert carts, food wagons, etc.)

To define of the furniture sector in terms of trade classifications, it is necessary to refer to Chapter 94 of the Harmonised System (HS) code that defines furniture products. The following are the sections of Furniture chapter HS 94:

- HS 9401 Seats (excluding those of heading 9402) and seat parts
- HS 9402 Medical, surgical, dental or veterinary furniture
- HS 9403 Other furniture and parts thereof (wooden plastic, metal furniture used for office, bedroom and kitchen; and parts)
- HS 9404 Mattress supports, articles of bedding etc.
- HS 9405 Lamps, light fittings and parts etc.
- HS 9406 Prefabricated buildings

International trade data for Egypt and its major partners in furniture trade were obtained from the International Trade Centre's (ITC) Trade Map website based on these HS classifications.

## 2.3 Sector profile

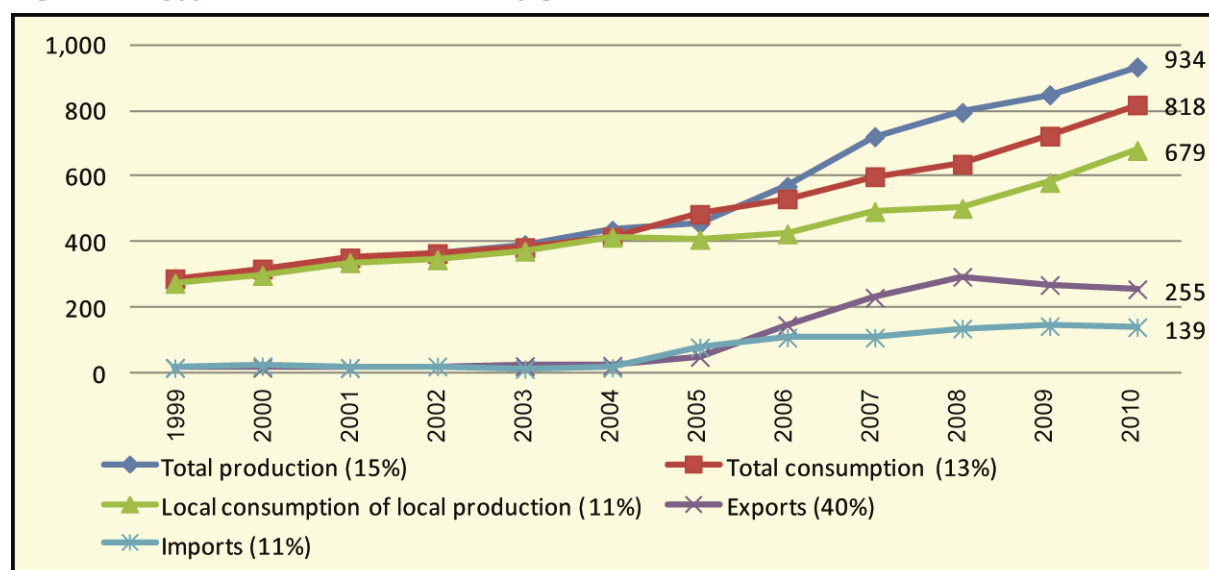
According to Egypt's Economic Census (2013), the furniture industry accounted for about 2 per cent of the country's total manufacturing production and 2.5 per cent of total manufacturing net value added (NVA). While the furniture industry makes a relatively small contribution to Egypt's overall manufacturing output, there has been rapid growth, especially in the last decade.

**Table 1: Net value added and production for selected manufacturing sectors, 2013**

| ISIC Division Code | ISIC Rev 4 Description                                                     | Net value added (NVA) |                          | Total Production    |                          | NVA/Product ion                  |
|--------------------|----------------------------------------------------------------------------|-----------------------|--------------------------|---------------------|--------------------------|----------------------------------|
|                    |                                                                            | Value (EGP billion)   | % of total manufacturing | Value (EGP billion) | % of total manufacturing | % of NVA out of total production |
| 10+11              | Manufacture of food products and beverages                                 | 33.2                  | 12                       | 117.4               | 18                       | 28                               |
| 13                 | Textile                                                                    | 5.6                   | 2                        | 18.2                | 3                        | 31                               |
| 14                 | RMG                                                                        | 10.6                  | 4                        | 21.4                | 3                        | 50                               |
| 19                 | Manufacture of coke and refined petroleum products                         | 102                   | 37                       | 140.3               | 21                       | 73                               |
| 20                 | Manufacture of chemicals and chemical products                             | 30.2                  | 11                       | 54.9                | 8                        | 55                               |
| 21                 | Manufacture of pharmaceuticals, medicinal chemicals and botanical products | 6                     | 2                        | 16                  | 2                        | 38                               |
| 23                 | Manufacture of other non-metallic mineral products                         | 19                    | 7                        | 46.9                | 7                        | 41                               |
| 24                 | Manufacture of basic metals                                                | 23.1                  | 8                        | 111.8               | 17                       | 21                               |
| 27                 | Manufacture of electrical equipment                                        | 5.6                   | 2                        | 16                  | 2                        | 35                               |
| 31                 | Manufacture of furniture                                                   | 6.9                   | 2.5                      | 13.6                | 2                        | 51                               |
|                    | Others                                                                     | 36.8                  | 13                       | ...                 | 16                       | 34                               |
|                    | <b>Total Manufacturing</b>                                                 | <b>279</b>            | <b>100</b>               | <b>666.3</b>        | <b>100</b>               | <b>42</b>                        |

Source: CAPMAS, 2014; Egypt Economic Census, 2013

**Figure 1: Egyptian furniture industry growth (US\$ million)**



Source: IMC and EFEC, 2010<sup>(2)</sup>

In 2010 the furniture sector's production output was valued at US\$934 million, having grown from US\$455 million in 2005, equivalent to a compound annual growth rate (CAGR) of 15 per cent per annum. The strong growth of the Egyptian furniture industry was due to both to growing local consumption and rising exports. Rapid growth in the population and increased per capita income led to a substantial expansion in domestic demand for furniture.

At the same time, exports grew with an annual growth rate around 40 per cent from US\$48 million (10 per cent of the total production) in 2005 to US\$255 million (almost one third of the total production) in 2010. The rapid increase of production and exports has been associated with the development of more large and medium-sized firms that are better able to address international markets than the micro and small enterprises (MSEs) that have traditionally accounted for most activity in the sector. According to the General Organization for Export and Import Control (GOEIC) (2014), exports grew further even at a higher annual growth rate for the period between 2010 and 2014. As presented in the table below the furniture sector's share of total exports is only 2 per cent. On the other hand, growth in exports between 2010 and 2014 was the second highest among Egyptian sectors at 40 per cent, indicating strong potential for further growth.

**Table 2: Egyptian non-oil exports, 2010, 2014**

| Industry                   | Export value in 2014 (US\$ million) | Export value in 2010 (US\$ million) | Increment rate from 2010-2014 (%) | Export distribution in 2014 (%) |
|----------------------------|-------------------------------------|-------------------------------------|-----------------------------------|---------------------------------|
| Chemical                   | 4 207                               | 3 909                               | 8                                 | 19                              |
| Building                   | 3 628                               | 5 015                               | -28                               | 16                              |
| Food                       | 2 936                               | 2 558                               | 15                                | 13                              |
| Engineering and electrical | 2 929                               | 2 223                               | 32                                | 13                              |
| Agro                       | 2 150                               | 2 024                               | 6                                 | 10                              |
| Ready-made garments        | 1 428                               | 1 388                               | 3                                 | 6                               |
| Weaving/spinning           | 968                                 | 801                                 | 21                                | 4                               |
| Home wear                  | 750                                 | 642                                 | 17                                | 3                               |
| Medical and pharmacy       | 544                                 | 372                                 | 46                                | 2                               |
| Furniture                  | 355                                 | 255                                 | 39                                | 2                               |
| <b>Total</b>               | <b>22 195</b>                       | <b>19 550</b>                       | <b>14</b>                         | <b>100</b>                      |

Source: GOEIC, 2014

(2) Compound Aggregate Growth Rates (CAGR) for the period of 2005-2010 are given in parentheses.

Although the furniture industry makes a relatively small contribution to Egypt's manufacturing output, the industry is the second biggest in manufacturing in terms of employment. In 2013, it accounted for 11 per cent of total employment in manufacturing and 27 per cent of manufacturing enterprises (Egypt Economic Census, 2013).

**Table 3: Number of establishments and employment by selected sectors, 2013**

| ISIC division code | Main industries by ISIC, Rev 4                                           | Number of Establishments | Share of total manufacturing (%) | Total employment | Share of total manufacturing (%) |
|--------------------|--------------------------------------------------------------------------|--------------------------|----------------------------------|------------------|----------------------------------|
| 10+11              | Manufacture of food products and beverages                               | 77 289                   | 20                               | 612 512          | 25                               |
| 31                 | <b>Manufacture of furniture</b>                                          | <b>104 250</b>           | <b>27</b>                        | <b>270 222</b>   | <b>11</b>                        |
| 14                 | Manufacture of wearing apparel                                           | 48 715                   | 13                               | 254 937          | 11                               |
| 25                 | Manufacture of fabricated metal products, except machinery and equipment | 53 065                   | 14                               | 184 926          | 8                                |
| 13                 | Manufacture of textiles                                                  | 10 481                   | 3                                | 184 684          | 8                                |
| 23                 | Manufacture of other non-metallic mineral products                       | 12 587                   | 3                                | 158 275          | 7                                |
| 16                 | Manufacture of wood and of products of wood and cork, except furniture;  | 38 855                   | 10                               | 98 766           | 4                                |
| 24                 | Manufacture of basic metals                                              | 1 518                    | 0                                | 87 650           | 4                                |
| 20                 | Manufacture of chemicals and chemical products                           | 1 903                    | 0                                | 75 846           | 3                                |
| 22                 | Manufacture of rubber and plastics products                              | 3 735                    | 1                                | 54 825           | 2                                |
|                    | <b>Total Manufacturing</b>                                               | <b>385 578</b>           | <b>100</b>                       | <b>2 416 460</b> | <b>100</b>                       |
|                    | <b>Grand Total</b>                                                       | <b>2 410 353</b>         |                                  | <b>9 351 137</b> |                                  |

Source: CAPMAS, 2014; Egypt Economic Census, 2013

According to the Egypt Economic Census (2013) and as noted in Table 3 above, the furniture industry comprises of roughly 104,000 establishments in Egypt, employing approximately 11 per cent of all employed persons in the manufacturing sector. This equates to about 270,000 employed people in the furniture industry, of which almost half (48 per cent) are unpaid workers (Egypt Economic Census, 2013).

Just a small number of enterprises are medium sized and these are considered the core of the Egyptian furniture sector and account for the industry's entire exports. The greatest furniture production is in Damietta, the port city close to the Nile and the Mediterranean. Based on the Egypt Economic Census (2013) there are less than 50 enterprises in Damietta that employ 10 persons or more.

Historically, Damietta has been the leading centre for Egyptian furniture production. The Egypt Economic Census (2013) reveals that 64 per cent of employed persons in manufacturing activities in Damietta still work in the furniture industry, and 30 per cent of all employed persons in Damietta work in the industry. Damietta also accounted for 22 per cent of furniture establishments and 25 per cent of employees of the Egyptian furniture industry in 2013. The furniture industry in Damietta also accounted for approximately 50 per cent of the net value added of the entire manufacturing sector in Damietta, and 30 per cent of the net value added of the total furniture industry in Egypt (Egypt Economic Census, 2013).

## 2.4 Industry enterprises and employment

Despite the existing discrepancies between data sources, certain assertions can be made about the furniture and woodworking industry in Egypt such as the dominance of micro and small sized enterprises (MSMEs) and the industry's concentration in three main centres: Damietta, Cairo and Sharkya.

Based on the Economic Establishment Surveys (2006, 2013), the total number of furniture manufacturing enterprises both publicly and privately owned has increased from 89,000 enterprises employing around 255,000 to more than 100,000 with about 270,000 employees between the years 2006 and 2013. The Egyptian Furniture Export Council (EFEC) and the IMC have played an important role in enabling the developments in the industry that have underpinned this growth.

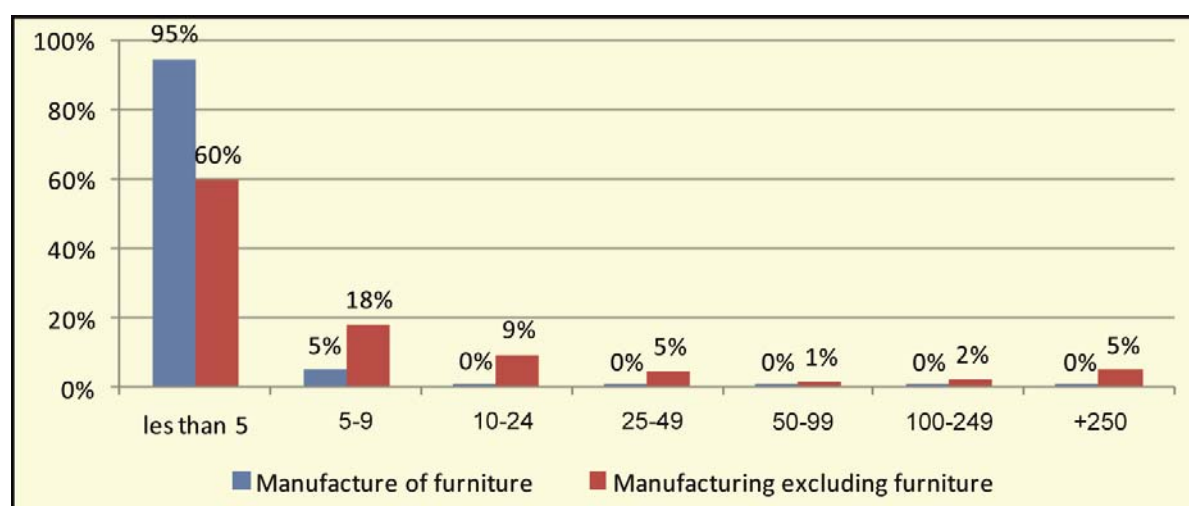
**Table 4 : Distribution of enterprises and employed persons in furniture industry by employee category, 2006, 2013**

| Year | Total number of employed persons | Total number of enterprises | No of enterprises according to employee category |               |                 |                 |               |
|------|----------------------------------|-----------------------------|--------------------------------------------------|---------------|-----------------|-----------------|---------------|
|      |                                  |                             | Less than 5 employees                            | 5-9 employees | 10-24 employees | 25-49 employees | 50+ employees |
| 2006 | 255 065                          | 89 209                      | 8 729                                            | 7 069         | 285             | 70              | 56            |
| 2013 | 270 222                          | 104 250                     | 98 728                                           | 5 006         | 369             | 56              | 91            |

Source: Economic Establishment Survey, 2006; Egypt Economic Census, 2013

As with the rest of the Egyptian manufacturing industry, the furniture industry has a large number of MSMEs which represent 99 per cent of the total number of enterprises in the industry. The size distribution within the furniture industry is even more skewed towards micro enterprises, with 95 per cent employing fewer than five people. This is far greater than the rest of the manufacturing sector whereby 60 per cent of enterprises employ less than five people.

**Figure 2: Size distribution of enterprises**



Source: Egypt Economic Census, 2013

The table below presents the number of employers in furniture enterprises employing more than 25 employees by occupational categories, ownership and sex. The overwhelming majority of employees in firms with more than 25 employees are male (99.3 per cent) and employed in the private sector.

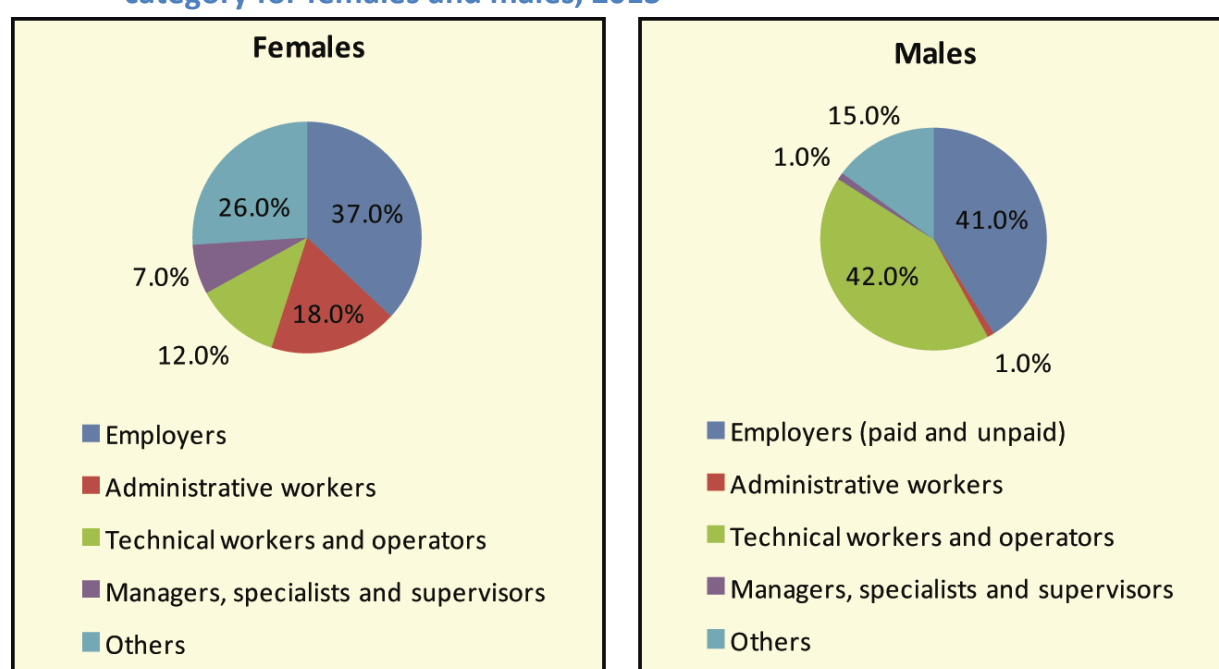
**Table 5: Employed persons in furniture enterprises by sex and occupational categories, 2013**

| Occupational categories         | Public sector | Private sector | Female      | Male           |
|---------------------------------|---------------|----------------|-------------|----------------|
| Employers                       |               | 112 142        | 655         | 111 487        |
| Managers                        | 11            | 890            | 61          | 840            |
| Specialists and technicians     | 1             | 1 787          | 34          | 1 754          |
| Administrative workers          | 5             | 1 645          | 322         | 1 328          |
| Supervisors                     | 2             | 832            | 24          | 810            |
| Technical workers and operators | 66            | 113 326        | 219         | 113 173        |
| Others                          | 24            | 39 491         | 446         | 390 69         |
| <b>Total</b>                    | <b>109</b>    | <b>27 0113</b> | <b>1761</b> | <b>268 461</b> |

Source: Egypt Economic Census, 2013

In terms of the furniture industry's employment characteristics, there are clear gender differences in the occupational mix. Most men employed in the industry are supervisors and technical workers (82 per cent), while just over a third of female workers are in the same classification, and more have an administrative role.

**Figure 3: Distribution of employed persons in furniture industry by occupational category for females and males, 2013**



Source: Egypt Economic Census, 2013

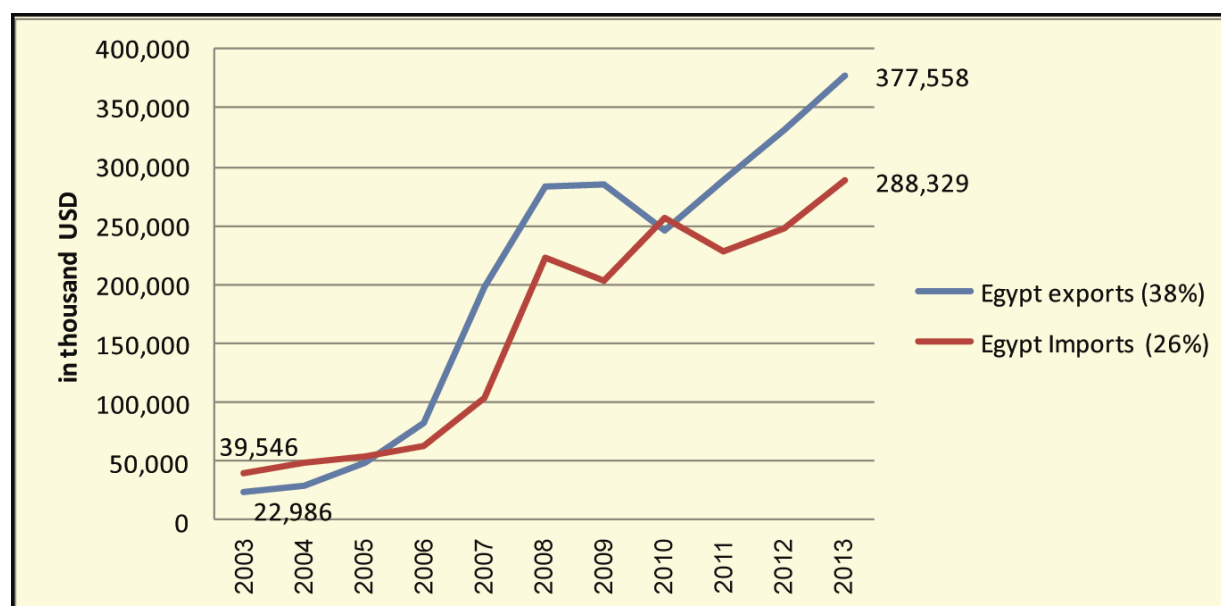
A key contributing factor to the industry's underperformance is the fact that the Egyptian furniture industry is dominated by family owned businesses (IMC and EFEC, 2010). The overwhelming majority of furniture manufacturers are micro and small family businesses. Even medium and large manufacturers typically started as small family shops some 30 years ago, and continue to be controlled and operated by second and third generation management.

Another characteristic of the Egyptian furniture industry is its large presence in the informal sector. Typically having no more than three or four workers, workshops and small establishments operate informally, occupying small venues in residential areas and catering mainly to local markets and individual customers.

## 2.5 Patterns and trends in trade

Both Egypt's exports and imports of furniture have increased significantly in the span of a decade between 2003 and 2013. Egyptian exports of furniture have annually grown at a rate of 38 per cent, from US\$23 million in 2003 to US\$40 million in 2013. Likewise, imports have increased at 26 per cent annually, from US\$378 million in 2003 to US\$288 million in 2013. Beside the burgeoning domestic market, the Egyptian furniture industry mainly caters to the furniture market of the Arab region. In 2013, the Arab countries imported US\$320 million worth Egyptian furniture, while European countries and the US imported US\$24 million and US\$4.4 million respectively.

**Figure 4: Egyptian exports and imports of furniture, 2003-2013**



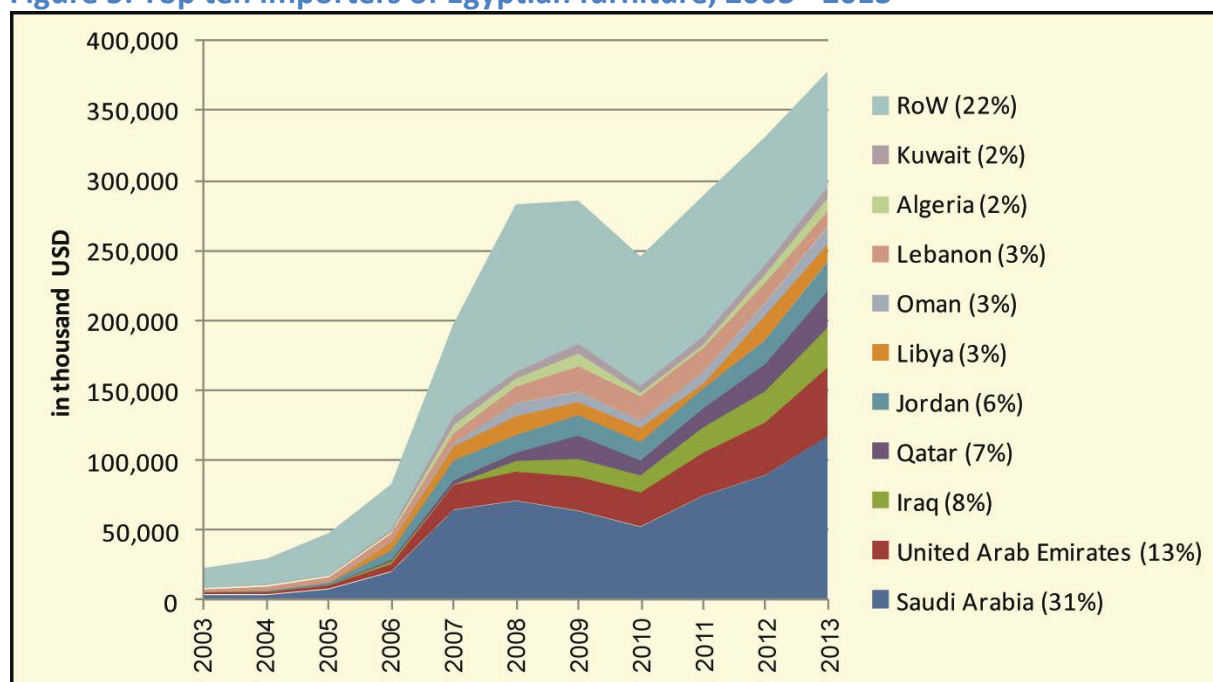
Source: ITC Trade Map<sup>(3)</sup>

The top ten importers of Egyptian furniture are all from the Arab region, and accounted for almost 85 per cent of total Egyptian furniture exports in 2013. As can be seen in the chart below, Saudi Arabia and the United Arab Emirates top the list of export destinations and their imports of furniture from Egypt continue to increase at the highest annual growth rates at 31 per cent and 13 per cent respectively.

As domestic purchases of Egyptian furniture have grown, imports of furniture have also increased. Chinese furniture is currently the greatest source of furniture imported by Egypt with an annual growth rate of 42 per cent, increasing from US\$9 million in 2003 to US\$122 million in 2013. Germany, Italy, Turkey and the US follow on the list of top furniture exporters to Egypt with more moderate annual growth rates in furniture imported by Egypt.

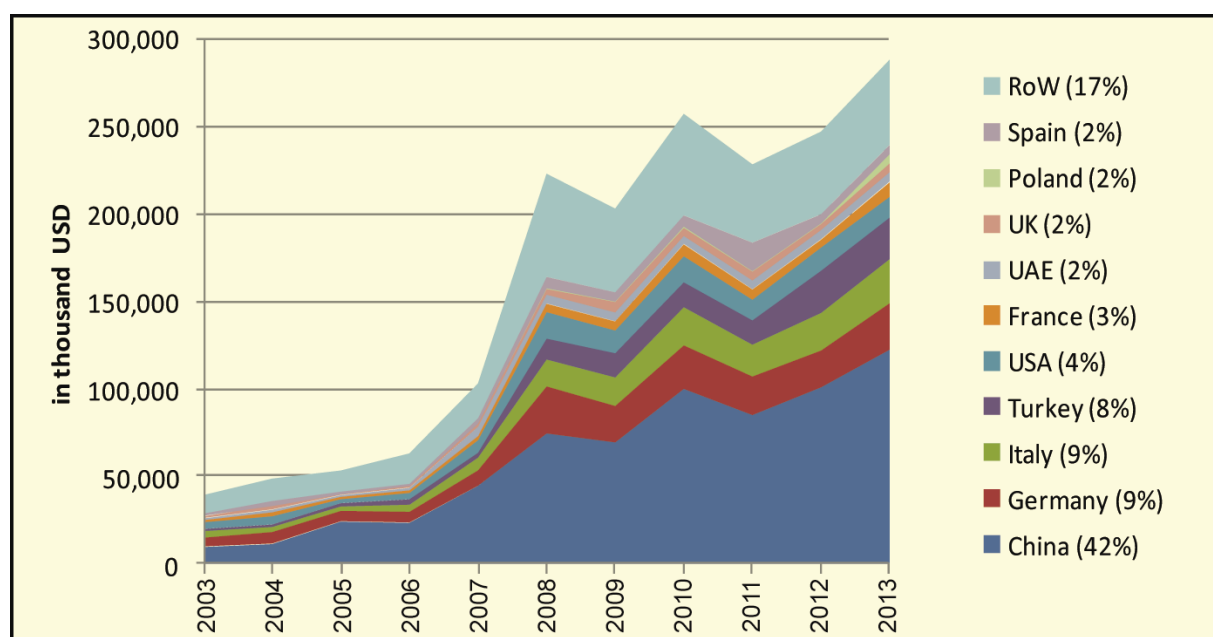
<sup>(3)</sup> Annual growth rates are given in parenthesis.

**Figure 5: Top ten importers of Egyptian furniture, 2003 - 2013**



Source: ITC Trade Map\*

**Figure 6 : Top exporters of furniture to Egypt, 2003 - 2013**

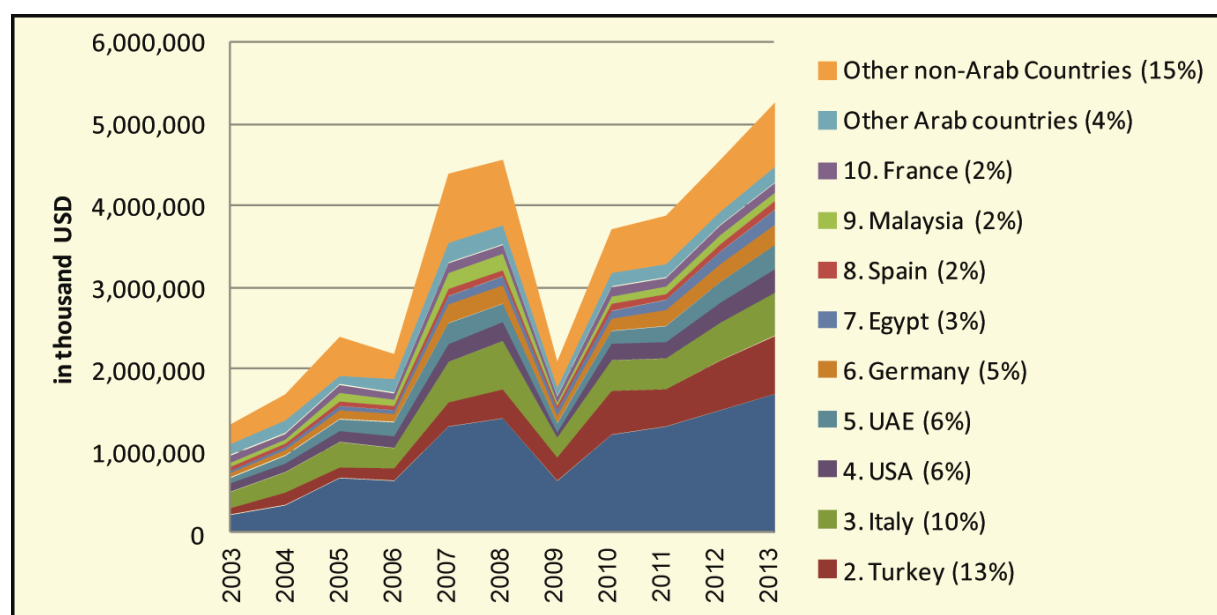


Source: ITC Trade Map\*

Egypt's main competitors in its top ten Arab destination markets are led by China, with a market share of 32 per cent of imports in 2013, followed by Turkey (13 per cent), Italy (10 per cent), the US (6 per cent), the UAE (6 per cent) and Germany (5 per cent). Egypt is the seventh biggest exporting country to its top ten Arab destination markets, with a market share of only 3 per cent.

\* Annual growth rates are given in parenthesis.

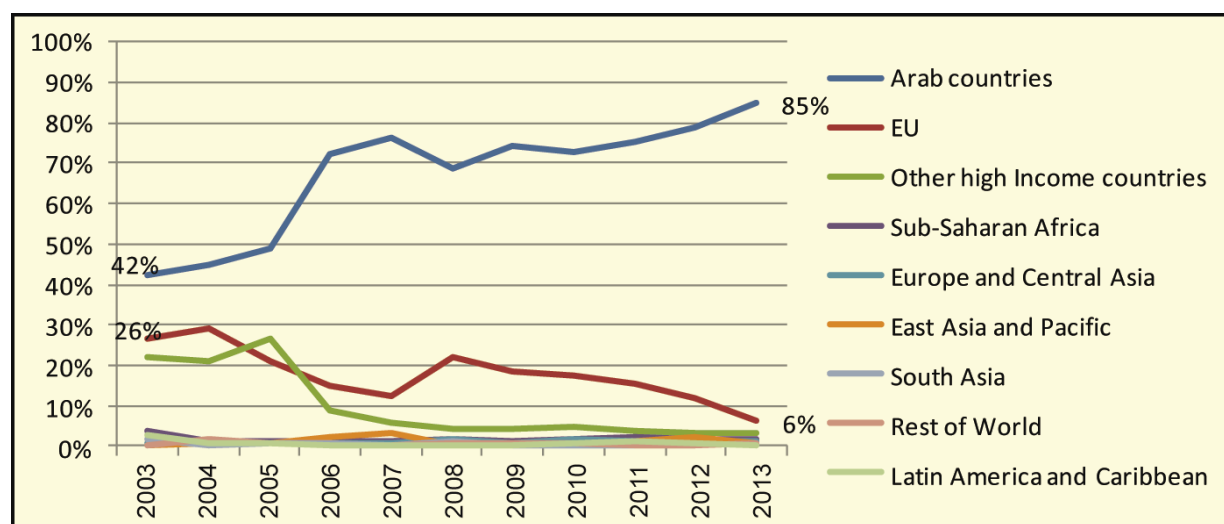
**Figure 7: Furniture imports of Egyptian top ten destination markets by source country, 2003 – 2013**



Source: Authors' calculations based on ITC Trade Map<sup>(4)</sup>

It is worth noting that exports to the EU have been declining while exports to Arab countries have been rapidly rising. The share of exports destined for Arab countries increased from 42 per cent in 2003 to 85 per cent in 2013. Comparably, exports to the EU have decreased from 26 per cent in 2003 to just 6 per cent in 2013. As will be examined later, the major underlying factor behind this decrease in European exports is due to Egyptian furniture gaining a reputation for being of poor quality. While most furniture exports destined for the Arab region consist of finished products, a large portion of furniture exports to the EU markets consist of unfinished products that are sourced by European manufacturers and are finished at destination (IMC and EFEC, 2010).

**Figure 8: Egypt furniture exports by destination region (%), 2003 – 2013**



Source: Authors' calculations based on ITC Trade Map<sup>(5)</sup>

<sup>(4)</sup> Total import shares are in parenthesis.

<sup>(5)</sup> Total import shares are in parenthesis.

The furniture industry in Egypt is primarily oriented towards the production of wood-based furniture. In trade statistics, wooden furniture is often classified into four broad categories: wood furniture for offices (HS 940330), wood furniture for kitchens (HS 940340), wood furniture for bedrooms (HS 940350) and other wooden furniture (HS 940360). Other wooden furniture includes furniture for dining rooms, living rooms and shops, and accounts for 80 per cent of Egypt's furniture exports.

The following table lists the top ten exporting products of the Egyptian furniture industry in 2013 along with the main destination markets.

**Table 6: Top ten products exported by Egypt and their top two target markets, 2013**

| Rank                 | Product code | Product description                                              | Exported value in 2013<br>(US\$ thousand) | Total export share in 2013<br>(%) | Most significant export destinations |
|----------------------|--------------|------------------------------------------------------------------|-------------------------------------------|-----------------------------------|--------------------------------------|
| 1                    | 940360       | Other wooden furniture                                           | 303 404                                   | 80                                | Saudi Arabica (34%),<br>UAE (14%)    |
| 2                    | 940591       | Lamps and glass light fittings                                   | 19 116                                    | 5                                 | China (13%),<br>Saudi Arabia (12%)   |
| 3                    | 940510       | Chandeliers and other electric ceiling or wall lighting fittings | 16 318                                    | 4                                 | SA (22%), UAE (17%)                  |
| 4                    | 940320       | Furniture, metal                                                 | 12 215                                    | 3                                 | SA (35%), Qatar (12%)                |
| 5                    | 940600       | Prefabricated buildings                                          | 9 528                                     | 3                                 | Algeria (69%), India (10%)           |
| 6                    | 940540       | Electric lamps and lighting fittings                             | 5 183                                     | 1                                 | Sudan (62%), SA (9%)                 |
| 7                    | 940390       | Furniture parts                                                  | 2 929                                     | 1                                 | SA (22%), Qatar (11%)                |
| 8                    | 940330       | Office furniture, wooden                                         | 2 411                                     | 1                                 | Qatar (26%), SA (25%)                |
| 9                    | 940310       | Office furniture, metal                                          | 1 457                                     | 0                                 | UAE (30%), SA (26%)                  |
| 10                   | 940350       | Bedroom furniture, wooden                                        | 853                                       | 0.2                               | SA (64%), Qatar (10%)                |
|                      |              | Other products                                                   | 4 139                                     | 1                                 |                                      |
| <b>Total exports</b> |              |                                                                  | <b>377 553</b>                            | <b>100</b>                        | <b>SA (31%), UAE (13%)</b>           |

**Source:** Authors' calculations based on ITC Trade Map data.

Furniture imports into Egypt are more diversified than those exported. In 2013, other wooden furniture (HS 940360) accounted for the top ten imported products comprising of 19 per cent of total furniture imports into Egypt, namely from China and Turkey.

**Table 7: Top ten products imported by Egypt and their top supplying markets, 2013**

| Rank                 | Product code | Product description                                              | Exported value in 2013 (US\$ thousand) | Total export share in 2013 (%) | Most significant import sources  |
|----------------------|--------------|------------------------------------------------------------------|----------------------------------------|--------------------------------|----------------------------------|
| 1                    | 940360       | Other wooden furniture                                           | 53 417                                 | 19                             | China (36%), Turkey (13%)        |
| 2                    | 940540       | Electric lamps and lighting fittings                             | 46 375                                 | 16                             | China (56%), Germany (11%)       |
| 3                    | 940600       | Prefabricated buildings                                          | 28 875                                 | 10                             | Italy (26%), China(16%)          |
| 4                    | 940320       | Furniture, metal                                                 | 19 950                                 | 7                              | China (35%), Turkey (11%)        |
| 5                    | 940510       | Chandeliers and other electric ceiling or wall lighting fittings | 16 357                                 | 6                              | China (68%), Italy (7%)          |
| 6                    | 940190       | Parts of seats other than those of No 94.02                      | 15 356                                 | 5                              | China (32%), India (25%)         |
| 7                    | 940330       | Office furniture, wooden                                         | 13 615                                 | 5                              | China (39%), Turkey (23%)        |
| 8                    | 940290       | Medical, surgical, dental or veterinary furniture and parts      | 13 142                                 | 5                              | Germany (22%), China (21%)       |
| 9                    | 940120       | Seats, motor vehicles                                            | 11 570                                 | 4                              | China (31%), Germany (29%)       |
| 10                   | 940599       | Lamps and lighting fittings                                      | 9 044                                  | 3.1                            | China (75%), Italy (11%)         |
|                      |              | Other products                                                   | 60 629                                 | 21                             |                                  |
| <b>Total Imports</b> |              |                                                                  | <b>288 330</b>                         | <b>100</b>                     | <b>China (42%), Germany (9%)</b> |

Source: Authors' calculations based on ITC Trade Map data

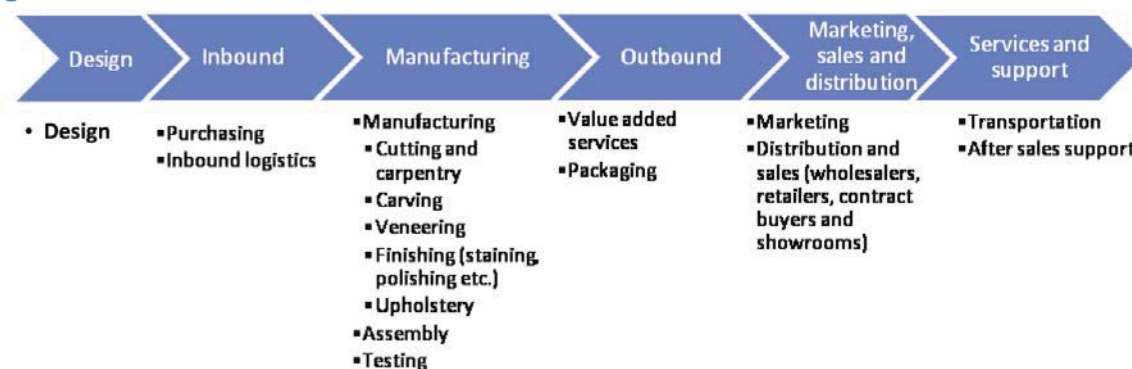
## 2.6 Value chains

The manufacturing of wooden furniture involves several stages of production, including woodcutting, carpentry, veneering, carving, staining and polishing, upholstery and assembly. Supporting industries can also be involved in the process, for example, the production of glass and marble components, or industries producing metal fittings and other accessories.

Even with core furniture manufacturing activities, elements of the value chain are typically divided between different business entities, with carving, veneering, assembling and finishing a piece of furniture often being undertaken by different shops. Often larger furniture firms and showrooms play a key role in coordinating furniture production, choosing designs, setting specifications and marketing the finished product. Larger firms also typically do more of this work in-house.

The furniture industry's value chain is both resource and labour intensive, with six primary stages as per Figure 9 below.

**Figure 9 : Furniture value chain**



Source: Authors' analysis, 2015

### 2.6.1. Design

Competing successfully in international markets requires the ability to produce furniture that is attractive to consumers in terms of meeting their taste and serving their needs and lifestyles. This also requires developing product lines to serve change in consumer tastes, needs and lifestyles. Furniture design involves both appearance and function. Firms in the Egyptian furniture industry attempt to satisfy these requirements primarily by basing the design of their products on classical designs that the industry has a history of success, and on furniture designs that seem to be successful in its target markets.

The Egyptian furniture industry is significantly constrained in design, both in terms of lacking design capability and in a lack of adequate professional design services available to furniture manufacturers. As firms largely react to what they see in the market rather than developing new designs, it is difficult for Egyptian furniture companies to position themselves to capture more value and to effectively compete with international firms whose design capabilities are stronger.

### 2.6.2 Acquisition of raw materials

With the exception of labour, Egyptian furniture manufacturing relies on importing all of its inputs such as raw wood, glues, paint, foam, stains and fittings.

#### Wood inputs

Since Egypt is not a significant producer of wood, the furniture industry has to rely on wood imported from abroad. Most of the wood imported by Egypt is softwood. Many studies have shown that one of the major problems facing the Egyptian furniture industry is the low quality of imported wood. These problems include high moisture levels in the imported wood, excessive knots and even insect infestation. Moisture content is a particular issue, with excessive moisture levels resulting in cracks, splits, failed glue joints and warped panels (El Meehy, 2002).

There have been various initiatives undertaken by different organizations to improve the quality of wood supplied to firms in the sector, however, the problem persists. Since wood accounts for a large share of the total cost of manufacturing furniture in Egypt, competitive pressures and low profit margins push firms to use the cheapest wood possible. Also, because most firms in the industry operate on such a small scale they cannot exercise effective leverage over the channels through which they purchase wood. The majority of firms in Egypt purchasing wood also often do not have the expertise in assessing the quality of wood. Firms in the sector attempt to improve the quality of the wood that they purchase by drying it, however this process is not always effective. For several years, the Association for Upgrading the Furniture Sector in Damietta (AUFSD) operated a drying facility at a cost for its members, but this facility eventually closed following the loss of some of its equipment.

The high price of good lumber, with a moisture content between 6 per cent and 8 per cent has been accentuated by several factors, including import tariffs, the rise in the US dollar exchange rate, the decline in global wood production and the application of sales tax in Egypt (El Meehy, 2002).

Consistent with the industry's increasing output, Egypt's imports of wood inputs have also increased from US\$474 million in 2003 to US\$1.4 billion in 2013. Egypt's main sources of wood inputs in descending order are Russia (comprising 26 per cent of all Egyptian wood imports in 2013), Sweden (18 per cent), Finland (18 per cent), China (9 per cent), Romania (8 per cent), Croatia (5 per cent), Latvia (3 per cent), Germany (2 per cent), Malaysia (3 per cent) and the US (2 per cent).

Table 8 below presents Egyptian wood import shares in 2013 for the top importing products which account for almost 95 per cent of the total wood imports of Egypt in 2013. According to a 2006 report by the US Department of Agriculture Foreign Agricultural Service, approximately 70 per cent of Egyptian softwood imports are utilized by the construction industry, while the remainder is used for making doors, windows and other items, including low quality furniture. The report also noted that imported hardwood is almost exclusively used for furniture manufacturing. Russia and Sweden are the main suppliers of softwood lumber in Egypt, Romania and Croatia are the main suppliers of beech wood, while the US and Croatia supply Egypt with oak wood.

Tropical hardwoods are used only in very small quantities for niche products in Egypt. The main tropical wood species used are teak, sapele, iroko and acajou. European hardwoods (oak and beech) tend to go into the production of upscale furniture. Most of it is imported from Romania, Croatia, Serbia and Montenegro and is sent to the furniture cluster in Damietta. Egyptian furniture producers also use considerable quantities of wooden panels and veneer. Veneer is both produced in Egypt and imported. Temperate hardwood veneer mainly originates from Europe and the US. The main wood species used for veneer are white and red oak, beech and walnut. Inconsistent grading rules and poor drying in Egypt are a cause for concern. Buyers are price-conscious, even if the quality of wood is superior.

**Table 8: Egypt's top imported woods, 2013**

| HS Code      | Product label <sup>(6)</sup>                                                   | Imported value in 2013 (US\$) | Total import share (%) | Top two sourcing countries |
|--------------|--------------------------------------------------------------------------------|-------------------------------|------------------------|----------------------------|
| '440710      | Lumber, coniferous (softwood) 6 mm and thicker                                 | 841 463                       | 58                     | Russia, Sweden             |
| '441231      | Plywood consisting solely of sheets of wood (less than or equal to 6 mm thick) | 208 586                       | 14                     | Russia, China              |
| '440792      | Lumber, Beech                                                                  | 156 036                       | 11                     | Croatia, Romania           |
| '441114      | Medium density fibreboard MDF of wood (more than 9mm thick)                    | 50 318                        | 3                      | China, Indonesia           |
| '440320      | Logs, poles, coniferous                                                        | 51 019                        | 4                      | Finland, Latvia            |
| '440890      | Veneer, non-coniferous (less than 6 mm thick)                                  | 44 904                        | 3                      | China, US                  |
| '441011      | Waferboard, including oriented strand board wood                               | 5 110                         | 0                      | Turkey, Romania            |
| '441294      | Veneered panels and similar laminated wood with blockboard or laminboard       | 14 644                        | 1                      | Indonesia, China           |
| '440791      | Lumber, Oak                                                                    | 10 169                        | 1                      | US, Croatia                |
| <b>Total</b> |                                                                                | <b>1 382 249</b>              | <b>95</b>              |                            |

Source: ITC Trade Map

### Other raw materials and inputs

Glue is key to the quality of finished furniture products, making it a vital input for the furniture industry, and accounts for between 5 and 10 per cent of the total production cost. Since locally made glue is not perceived to be of good quality, most Egyptian furniture manufacturers use imported glue. There are also issues with other furniture inputs, notably irregular supplies of electricity and water, which interrupts the furniture production process and causes problems for some of the equipment utilized.

### Machinery and equipment

The Egyptian furniture sector is highly labour intensive and extensively utilizes the use of manual craft skills. Such skills are most reliant on non-automated machinery, tools and equipment. However, many Egyptian furniture firms that are mostly involved in international trade have invested in modern machinery, including CNC machines<sup>(7)</sup>. The adoption of modern machinery is significant among large companies in the furniture industry and is also increasing among medium sized companies. In this, the

<sup>(6)</sup> HS code commodity classification, 6-digit

<sup>(7)</sup> Computer Numerical Control (CNC) machines are automated milling devices. They use coded instructions that are sent to a computer to allow for the accurate and quick production of parts.

industry is following a similar path to the major exporting furniture industries of other developing and emerging economies such as those of China, India and Vietnam, but still remains behind many of them and other developing countries with successful furniture industries.

In furniture manufacturing, productivity and product quality depend on the machinery and equipment used in production. Employer interviews and consultations with stakeholders undertaken through the STED methodology (2014) indicate that the Egyptian furniture industry is facing tough competition partly due to their greater use of modern technologies by its competitors that enable them to produce quality products at larger quantities and at relatively affordable costs. Many experts have highlighted the need to enhance and upgrade the mechanization and computerization of Egyptian furniture production in order to improve the competitiveness of the industry. Other mechanisms to improve production include avoiding wood waste, improving product quality and decreasing production costs.

### **Furniture manufacturing**

The Egyptian furniture industry focuses on labour intensive wood carving and veneer inlaying methods. The industry requires diverse species of wood in sawn lumber, veneer and wood-based panels (plywood) as inputs. For instance, in veneer inlaying work, contrasting colours and wood grains are needed to produce diverse patterns and ornate surfaces that are in demand.

The furniture manufacturing process is a complex multi-staged process that is traditionally divided among different sub-sectoral enterprises. Production activities include wood-cutting, carpentry, carving, veneering, assembly, staining and polishing and upholstery. The manufacturing process also involves other supporting industries such as glass, marble, traders, and manufacturers of metal fittings.

Larger enterprises often produce all furniture parts needed within their factories. However, in others such as the Damietta governorate in particular, many small workshops make either components or complete pieces of furniture such as chairs, for larger enterprises.

In cases where the network is not dominated by a large or medium sized manufacturing company, Egyptian furniture manufacturing networks usually have one dominant player, often the showroom owner. The showroom owner produces the designs, outsources the manufacturing of wooden parts to small workshops, gives credit to carvers for the purchase of wood, and clearly adds value by finishing and upholstering furniture pieces (ITTO and ITC, 2004).

### **Packaging**

Packaging is an important aspect of the furniture industry, since improper packaging can result in damage or quality deterioration of the product. In order to allow the product to reach the final user without damage, packaging must be done using appropriate materials.

### **Marketing, sales and distribution**

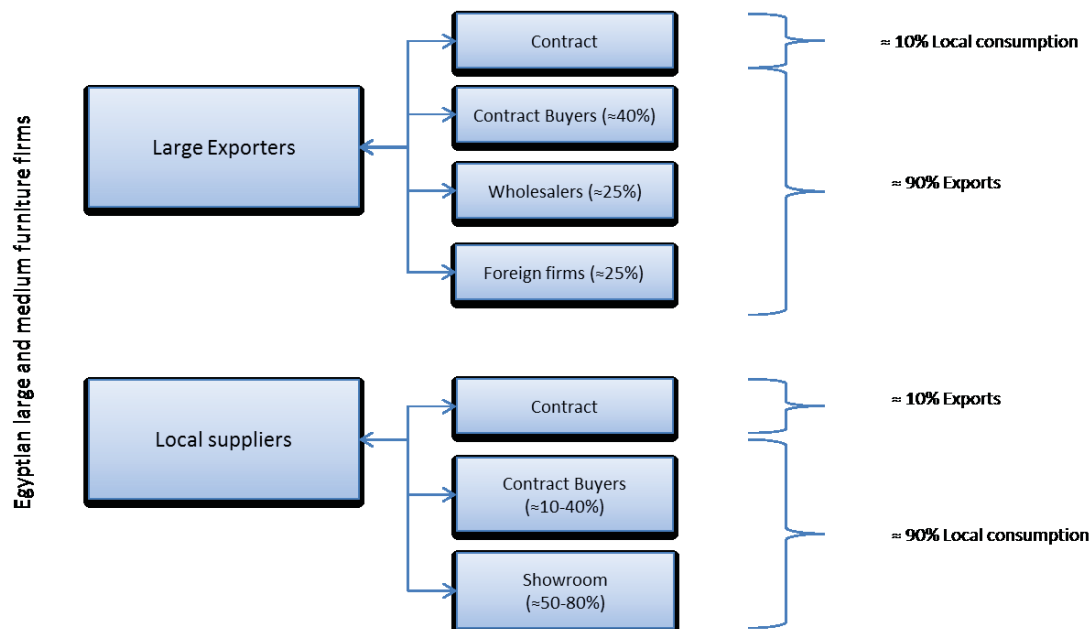
The majority of small enterprises in the furniture industry form part of the supply networks that sell to larger businesses (manufacturers or furniture showrooms) that integrate their outputs and take on the role of marketing to domestic and international markets. Firms operating as part of the local supply networks like these do not need sophisticated capabilities in sales, marketing and distribution. Larger suppliers of furniture components and accessories, some of which also provide services to manufacturers such as informing them on new products and techniques, have an industrial marketing supplier with their customers that require more sophisticated sales and marketing capabilities.

Firms in the furniture industry that are engaged in exporting or selling finished furniture domestically require strong capabilities in sales, marketing and channel management. These capabilities are mainly relevant to medium and large manufacturing firms that produce and market their own furniture, and to showrooms that lead networks of manufacturers.

Marketing ideally needs to start by identifying markets to be targeted, conducting market research on market needs, preferences, prices, and then designing products that fulfil the market demand. In addition, it has to be followed by marketing and advertisement efforts to inform and educate potential customers about the merits of the product through publications (brochures and catalogues and company profiles) or participating in the international furniture exhibitions and trade fairs.

Medium and large Egyptian furniture firms (with more than 20 employees) are broadly characterised by two types of manufacturers: (i) large firms exporting goods to international markets and which may also supply the domestic market and; (ii) local producers supplying mainly finished goods for the domestic market (local suppliers).

**Figure 10: Distribution channels for large and medium Egyptian furniture manufacturers**



**Source:** IMC and EFEC, 2010

Larger furniture companies export approximately 90 per cent of their total production and are bigger scale manufacturers in the industry. The main distribution channels they use are contract buyers, retailers and wholesalers, and sub-contracting clients. When using contract buyers (real estate developers, design consultants for hotels, restaurants, public areas, and private homes) for their distribution, manufacturers produce goods on a made-to-order basis. This type of production involves creating specific designs requested by developers and design consultants. Foreign wholesalers often order a representative sample of products to be presented in showrooms and shops. Products are then produced based on order demand from end-users, namely retail shoppers. Many foreign furniture firms (typically in higher cost countries) purchase handmade wooden frames as semi-finished products from Egyptian suppliers and finish them locally (IMC and EFEC, 2010).

### Services and support

The last stage of the value chain is services and support. It involves the transportation of products to their destination, as well as providing training to employees and after sales support.

## 2.7 Profile of companies surveyed

This section presents some key findings from the employers that took part in the STED skills establishment survey (2014). A total of 78 companies were selected to be interviewed representing main geographic regions in Egypt including Upper and Lower Egypt as well as urban governorates that produce the following types of furniture:

- Wooden bedroom furniture (HS 940350)
- Kitchen furniture (HS 940340)
- Office furniture (HS 940320)
- Seats (HS 9401)
- Doors and windows (HS 761010)
- Metal office furniture (HS 940310)
- Mattress supports and articles of bedding (HS 9404)
- Medical furniture (9402)
- Reproduction of antique furniture
- Furniture parts (940390)
- Lamps and light fittings (HS 9405)
- Aluminium for floor and walls.

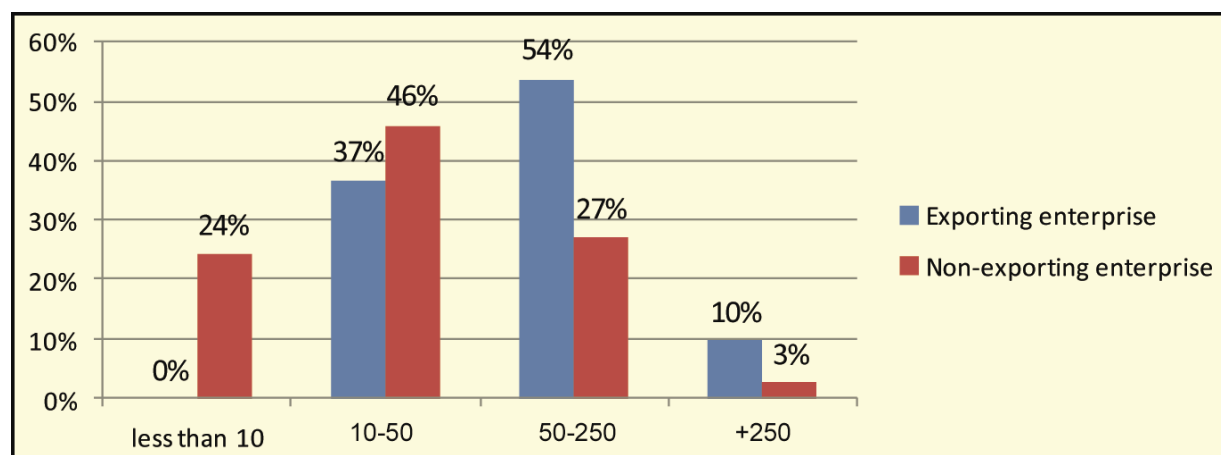
**Table 9: Geographical distribution of surveyed enterprises**

| Geographical location in Egypt | Exporting enterprises | Non-Exporting enterprises | Total     |
|--------------------------------|-----------------------|---------------------------|-----------|
| Urban governorate              | 12                    | 17                        | 29        |
| Lower Egypt                    | 25                    | 8                         | 33        |
| Upper Egypt                    | 4                     | 12                        | 16        |
| <b>Total</b>                   | <b>41</b>             | <b>37</b>                 | <b>78</b> |

Source: STED Survey, Egyptian Furniture Sector, 2014

Of the enterprises surveyed, just over half (52 per cent) were exporters with ten or more employees. More than half of exporting enterprises (60.9 per cent) were located in Lower Egypt, followed by urban governorates (29 per cent) and Upper Egypt (10 per cent).

**Figure 11: Distribution of exporting and non-exporting surveyed enterprises by number of employee category**

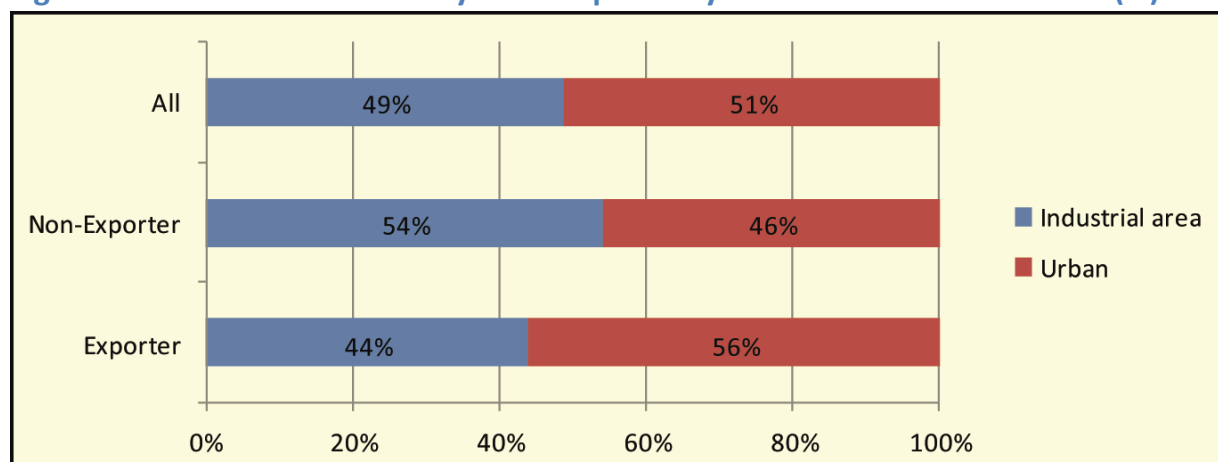


Source: STED Survey, Egyptian Furniture Sector, 2014

In terms of ownership, almost all enterprises surveyed have 100 per cent domestic investment with the exception of one exporting enterprise that had a joint investment. A third of the surveyed

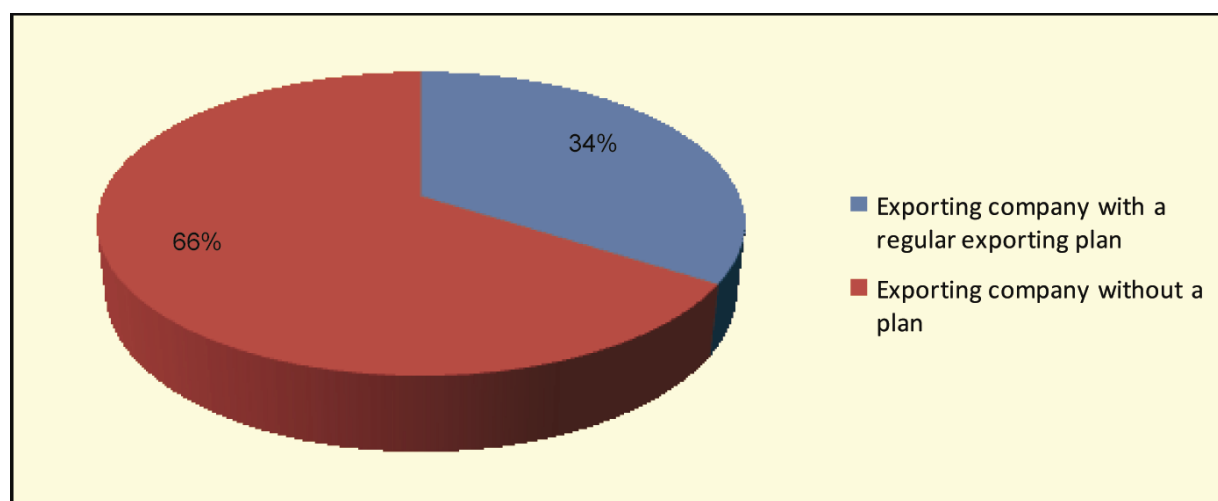
exporting enterprises had a regular plan for exporting. Approximately 49 per cent of enterprises surveyed were located in industrial zones.

**Figure 12: Distribution of surveyed enterprises by industrial and urban areas (%)**



Source: STED Survey, Egyptian Furniture Sector, 2014

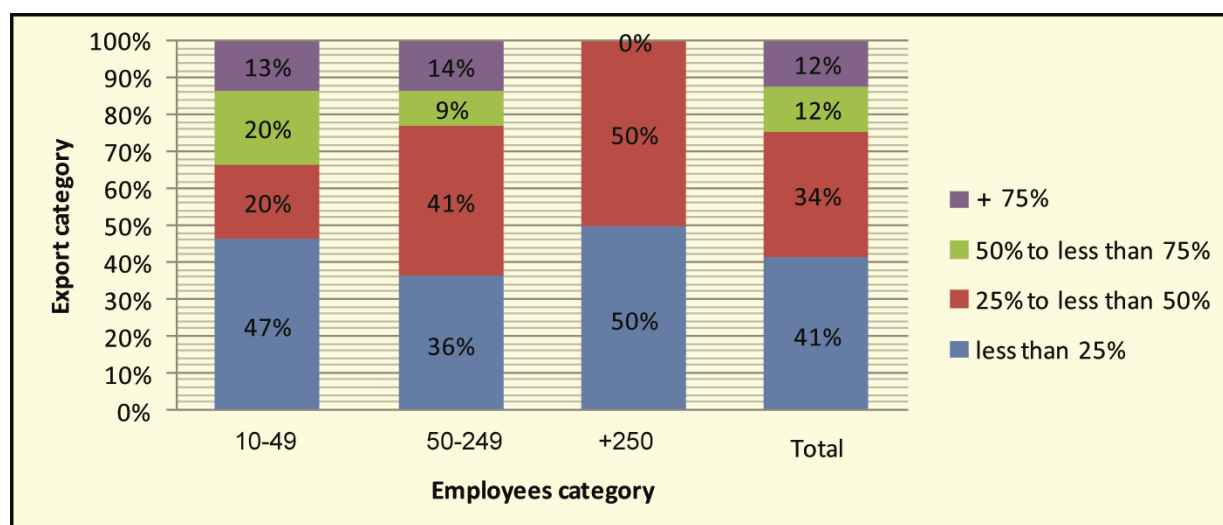
**Figure 13: Surveyed enterprises with and without exporting plans, 2014**



Source: STED Survey, Egyptian Furniture Sector, 2014

Figure 14 below presents the distribution of surveyed exporting companies by number of employee category (size) and by export share of total sales. Of those surveyed the larger exporting enterprises tended to export a smaller share of their production in comparison to smaller companies. For the sample as a whole, only 24 per cent of surveyed exporting enterprises exported more than 50 per cent of their total sales.

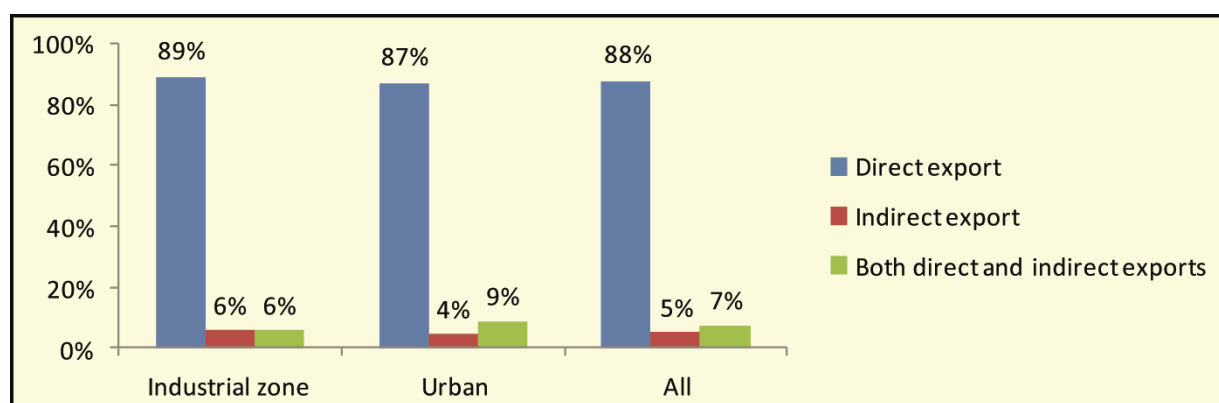
**Figure 14: Distribution of surveyed exporters by number of employee category and export percentage of total sales**



Source: STED Survey, Egyptian Furniture Sector, 2014

Around 88 per cent of exporting enterprises surveyed export directly without the use of an intermediary, while just 5 per cent export indirectly through an intermediary. The remaining 7 per cent use a combination of both channels.

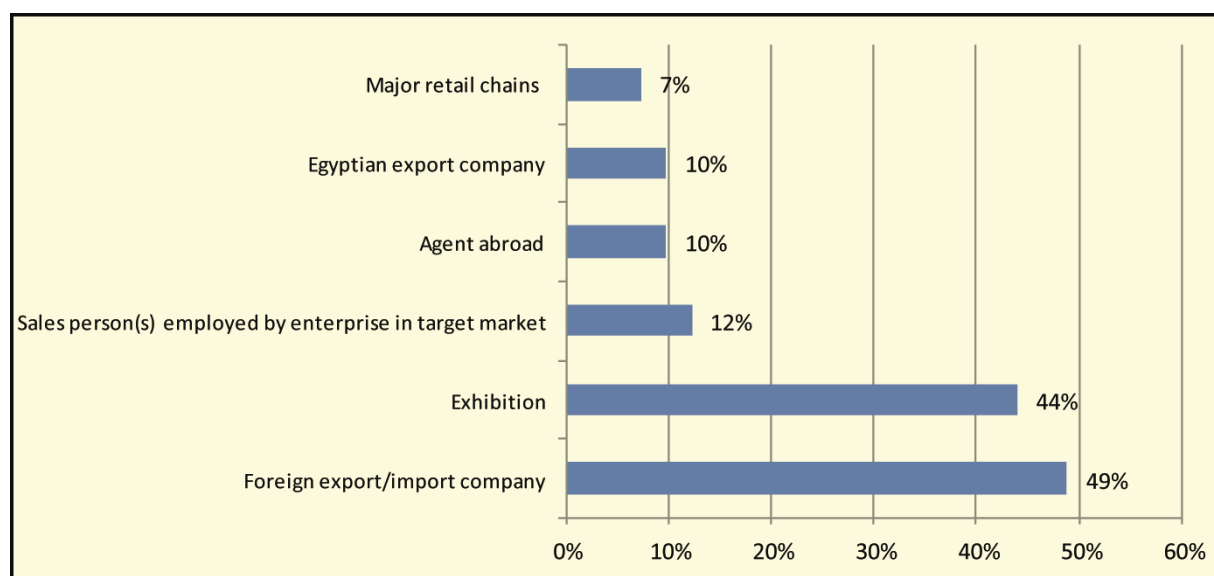
**Figure 15: Share of surveyed enterprises exporting directly versus indirectly through an intermediary**



Source: STED Survey, Egyptian Furniture Sector, 2014

The most commonly used channel for exporting used by surveyed enterprises is through a foreign export/import company, with almost 50 per cent utilizing this. The next commonly used type of distribution channel is through exhibitions, used by 44 per cent of surveyed enterprises. Compared to the distribution channels shown in Figure 10, the below graph (Figure 16) provides a more detailed insight into the different distribution routes utilized by furniture exporters.

**Figure 16: Distribution channels for export markets used by surveyed enterprises**



**Source:** STED Survey, Egyptian Furniture Sector, 2014

### 3. Business environment: strengths, challenges and drivers of change

#### 3.1 The strengths

The Egyptian furniture industry's strong growth, especially in exports over the last decade is based on a number of advantages that Egyptian furniture enterprises have enjoyed. These include (i) Egypt's strategic geographical location, (ii) strong woodworking skills, (iii) low labour and transportation costs, and (iv) increasing government support. These four areas, summarized below, also present potential for further future development of the furniture industry in Egypt.

##### Strategic geographical location

Egypt's geographical and cultural closeness to its main export markets, including the Middle East and North Africa (MENA) and European countries facilitates business operations and international trade. Egypt is located close to key MENA markets, and has close affinities with them in terms of language, tastes and lifestyles. Egyptian and European culture also share long-standing historical ties. English and French language are widely used in Egypt, and there are strong European influences on Egyptian lifestyles with many Egyptian businesses adopting European-style work environments. Egypt is in a strategic geographic location at the crossroads between MENA, Europe and Asian countries, giving it advantages in transportation costs<sup>(8)</sup>. The average time between Egypt and Europe is 3-4 hours and the time difference between the two regions is 1-2 hours, giving Egypt a potential advantage in European markets relative to its Asian competitors.

##### Woodwork expertise

The greatest strengths of the Egyptian furniture industry are in the strong woodwork techniques and know-how of craftsmen. Damietta has been known over the centuries for its craftsmanship, which has been handed down within families for generations. The industry is strong in elaborated woodwork (classic furniture), contract furniture (such as hospital and school furniture), assembled case goods (such as children's furniture), high-end sofas and metal furniture.

The Egyptian furniture industry essentially has a potential advantage in labour intensive products if it can achieve sufficiently high productivity. Although labour costs are higher than in Asia, Egypt has more flexibility in the sense that it can meet the demands of different countries, and it has a better geographic location for MENA and European markets.

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<sup>(8)</sup> The transportation cost is less than US\$900 for a 20ft container from Egypt to Western Europe.

**Table 10: Annual employee wages in furniture sector for selected countries**

| Manufactured furniture<br>(ISIC Rev 3) | Employee wages<br>(in US\$, at current prices) |           | Wages in percentage to the value<br>added |           |
|----------------------------------------|------------------------------------------------|-----------|-------------------------------------------|-----------|
|                                        | 2005                                           | 2010/2011 | 2005                                      | 2010/2011 |
| Egypt                                  | 1 220                                          | 2 048     | 34.6                                      | 39.1      |
| Morocco                                | 7 635                                          | ...       | 61.6                                      | ...       |
| Jordan                                 | 1 820                                          | 3 584     | 32.4                                      | 37.0      |
| Kuwait                                 | 6 967                                          | 9 051     | 51.6                                      | 51.6      |
| Oman                                   | 5 322                                          | 7 522     | 21.6                                      | 35.3      |
| Palestine                              | 1 747                                          | 3 570     | 26.4                                      | 49.4      |
| Turkey                                 | 5 075                                          | 6 516     | 48.6                                      | 44.3      |
| China                                  | 1 668                                          | 4 388     | 30.2                                      | ...       |
| France                                 | 30 818                                         | 40 958    | 58.1                                      | 53.8      |
| India                                  | 1 855                                          | 3 028     | 33.2                                      | 33.4      |
| Poland                                 | 5 481                                          | 9 928     | 40.7                                      | 46.1      |
| US                                     | 34 527                                         | ...       | 35.6                                      | ...       |
| Vietnam                                | ...                                            | 1 996     | ...                                       | 44.3      |

Source: UNIDO, 2011

### Low labour and transportation costs and flexibility

Table 10 illustrates that at an annual employee wage of US\$2,048, Egyptian labour costs remain lower than all other major furniture exporters, including India and China. The only exception is Vietnam where employees have an annual wage that is lower than Egypt's at US\$1,996. Shipping costs from Egypt to key destinations are also lower than average with an approximate 55-70 per cent cost advantage (IMC and EFEC, 2010). Transportation costs are also lower and transit times are shorter by at least three weeks compared to Asian competitors. Even if Asian countries have lower production costs, Egypt still has advantages in terms of greater flexibility in quantities produced and the ability to customize production. Enterprises often produce in response to demand, meaning that their designs, application and materials are tailored closely to the demand from the destination market, and that they are capable of producing large quantities with relatively little notice. This degree of flexibility gives Egypt a point of advantage in key market segments over European manufacturers who have less flexibility and higher labour costs.

### Government support

The Egyptian Ministry of Industry, Trade and Small and Medium Enterprises has been increasingly providing support to the furniture industry through its Industry Modernization Centre (IMC), funded by the Egyptian Government, the private sector and the EU. To achieve its goal of strengthening the competitiveness of Egyptian industries, the IMC provides technical assistance to industries to improve productivity, provide training for manufacturers and assistance in increasing production and exports. The IMC provides funds for provision of workers' training and subsidizes software needed for furniture design development. The Egyptian Government also supports technical testing centres through technology centres in collaboration with internationally recognized centres such as the UK's Furniture Industry Research Association (FIRA), the Italian Research and Certification Institute and test laboratory in the wood and furniture field, and Confemadera in Spain. In terms of legislation, the government has put in place copyright protection legislation to protect the designs of manufacturers. The Egyptian government has also created the Egyptian Furniture Export Council (EFEC) to support producers export capabilities. Since 2004, the EFEC has organized the annual Furnex exhibition, an international furniture show that enables local manufacturers to display their products and become international exporters.

### 3.2 The challenges

Despite the industry's strengths and its recent growth, it continues to face significant challenges. The following challenges were highlighted by employers and other stakeholders from the furniture industry, interviewed in the STED survey (2014).

#### Political instability

Survey participants expressed concern regarding political unrest in the region, since it disrupts confidence among exporters, and among their customers both within and outside of the MENA region. Within Egypt, it affects the ability of local businesses to deliver, and can drive frequent and unpredictable change in policies and regulations.

#### Industry fragmentation and low labour productivity

A high degree of industry fragmentation and low labour productivity impede the development of the furniture industry. There are not many large players in the industry since 99 per cent of enterprises employ fewer than 20 workers. According to Dossenbach (2001), firms that employ fewer than 20 workers are outdated, undercapitalized, unfocused and are unlikely to export. Given that the average firm in the country employs 2.7 workers (Egypt's Economic Census, 2013), it is evident that the size of enterprises has a negative effect on productivity and quality of production. Generally, only firms with 50 or more workers have up-to-date machinery and equipment, and the potential to successfully export.

A study of the furniture industry conducted by the Solway Brussels School of Economics and Management (IMC and EFEC, 2010) found a correlation between family businesses and slower sales and investment growth. Also small businesses were found to be more reluctant to explore external financing options and to use capital budgeting policies for financial stabilization instead of growth. Small businesses are family businesses inherited throughout generations and they employ mainly family members. Their small size and dependency on the entire family for success make it difficult for such enterprises to take on risks, be innovative, expand and grow. As a consequence of this, there is high fragmentation and low productivity and value added.

#### Complicated bureaucracy

Furniture enterprises revealed that they are affected by complicated administrative requirements, both in the establishment phase of an enterprise and during its operation. Obtaining construction permits for factories, employing new workers and enforcing contracts are all lengthy and burdensome procedures. Moreover, a total of 34 per cent of survey respondents agreed that technical regulations are burdensome. These difficult procedures also encourage the growth of the informal sector. If enterprises need to be committed to comply with all regulations, support from the government in doing so is crucial.

#### Lack of enforcement of copyright protection

Although Law No. 354 covers protection of copyright in original furniture designs, its enforcement remains weak. Firms are discouraged from investing in developing new designs due to the likelihood that they will be copied by other domestic competitors. Partly as a consequence of this, enterprises tend to stick to traditional designs they believe to be successful, despite having many competitors capable of producing similar products. Alternatively, they copy well-known French and Italian designs, still failing to find their own unique identity.

#### Frequent electricity supply cuts

Frequent electricity supply cuts slow down the entire supply chain, from the production of furniture, to communication with clients and intermediaries. This wastes time and resources and also makes manufacturers less reliable and causes uncertainty over delivery times.

#### Lack of international visibility

A number of employers consulted argued that the Egyptian furniture industry does not currently have good international visibility. They argued that despite efforts made by the Egyptian Furniture Export

Council, there is more that could be done by the government to promote the sector internationally through participation in international exhibitions and trade fairs, and through commercial support from embassies.

### **Weak quality assurance**

Weak quality assurance is challenging for the industry since Egyptian furniture has a reputation for quality problems with its products. Part of the underlying problem is with the sourcing of low quality inputs and the lack of local standards of raw material specifications. Most raw materials, such as wood, textiles, glue and machinery are imported. Egyptian furniture manufacturers are also very price conscious when purchasing wood, and for a number of reasons already noted earlier, the wood that they purchase is often of low quality in terms of moisture content and other factors, impacting on the final quality of finished products. Moreover, due to the complex multi-stage production process (wood cutting, carpentry, carving, finishing and upholstering) and other supporting industries (glass and metal fittings etc.), the value chain is rather complicated.

While larger enterprises are able to consolidate at least most of the above mentioned processes in-house, the vast majority of MSME furniture manufacturers are engaged in complementary relations with other manufacturers specialized in other aspects of the production process. This complex value chain results in poor quality products and poses an important challenge for quality assurance in the industry. Another factor that poses quality challenges is the fact that Egyptian furniture manufacturers are particularly reliant on high levels of manual skill, compared to that of other countries that use more mechanized and automated techniques for mass production. Low quality packaging has also often contributed to products being damaged while in transit. Good quality packaging is essential to reduce monetary losses arising from damaged products, and to improve Egypt's reputation as a reliable exporter of furniture.

### **3.3 Drivers of change**

Globalization is key when envisioning the future of the furniture sector in Egypt and internationally. It also implies both a bigger market and greater competition since the supply of workers, materials and final products themselves are being sourced from a much wider pool of countries. Globalization also has an impact on design, as consumer tastes are being influenced. The rate of population growth, urbanization and, in many cases, increasing incomes are also affecting the ways in which people live and make use of living spaces they have available. Furniture plays a vital role in making rooms adaptable to different functions, and therefore the global demand for furniture is expected to continue to grow rapidly.

Egyptian companies have an opportunity to take advantage of these trends and expand their sales export around the world. Egypt's low labour cost, traditional woodworking know-how, and strategic geographic position make it a good candidate for exporting affordable high-quality products. Exports within the MENA region are on a strong and upward trend. While overall exports to high income countries outside the region have been falling. It is reasonable to think that tackling deficiencies in quality, design and productivity could reverse this and drive significant growth in exports to Europe and perhaps North America.

**Table 11: Egyptian furniture industry SWOT analysis**

| STRENGTHS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | WEAKNESSES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Strategic position close to the EU and MENA region</li> <li>• Traditional woodwork expertise</li> <li>• Attractive cost structure (low costs of skilled labour and shipping)</li> <li>• Production flexibility and short turn-around time</li> <li>• Government support.</li> </ul>                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Industry fragmentation</li> <li>• Limited quality control</li> <li>• Limited domestic production of inputs and raw materials</li> <li>• Low productivity</li> <li>• Lack of quality and customer support from manufacturers</li> <li>• Outdated equipment and technology</li> <li>• Weak copyright protection</li> <li>• Lack of technology transfer through foreign direct investment</li> <li>• Lack of brands and original designs</li> <li>• Delivery delays</li> <li>• Malpractices of some exporters, which have created a bad image for Egyptian exports.</li> </ul> |
| OPPORTUNITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | THREATS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• Innovation in line with new market trends</li> <li>• Increasing demand with rising income and population</li> <li>• Exporting more within the MENA region</li> <li>• Taking better advantage of EU trade exemptions</li> <li>• Greater exports to North America</li> <li>• Gradual decrease in protectionism</li> <li>• Trade agreements (multilateral and bilateral)</li> <li>• Improved understanding of marketing and sales concepts</li> <li>• Investing in design.</li> </ul> | <ul style="list-style-type: none"> <li>• Political unrest and burdensome bureaucracy</li> <li>• Protectionism in significant markets</li> <li>• Increasing cost of raw materials, such as wood</li> <li>• Competitors with lower production costs, such as China and Vietnam.</li> </ul>                                                                                                                                                                                                                                                                                                                             |

Source: Authors' analysis, 2015

### 3.4 Egyptian institutional mechanisms

The Egyptian institutional framework governing furniture manufacturing is similar to that governing the other industrial sectors. The Government of Egypt has been allocating strong efforts to boost its industrial development through the Egyptian Industrial Development Strategy (2005-2025). The main goal of the EIDS is to sustain growth and provide employment through a significant increase in domestic investment.

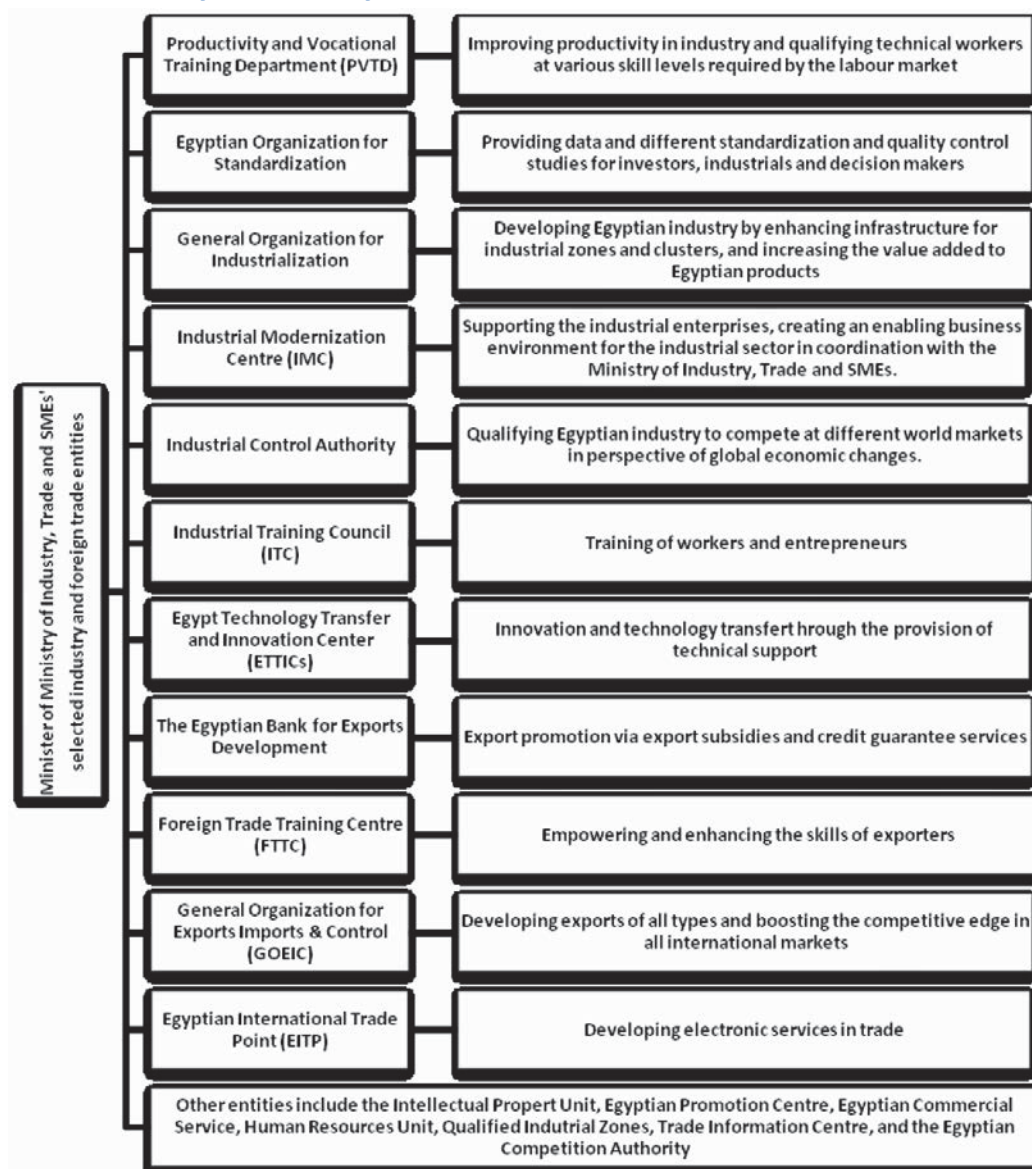
After the creation of the Ministry of Industry, Trade and Small and Medium Enterprises in 2004, along with the Ministry of Investment (MOI) and the Social Fund for Development (SFD), it became the principal players in Egyptian industrial policy. An overview of the agencies that belong to these three ministries and their activities is shown below in Figure 17.

The industrial policy instruments implemented by the Egyptian government since 2004 remain active even after the revolution of January 2011 and subsequent political developments. In 2015, the government initiated a process to update its industrial policy.

## Ministry of Industry, Trade and Small and Medium Enterprises

The following agencies under the Ministry of Industry, Trade and Small and Medium Enterprises support the country's industrial development and export promotion.

Figure 17: Ministry of Industry, Trade and SMEs' selective entities



Source: Ministry of Industry, Trade and Small and Medium Enterprises, 2015

The **Industrial Modernization Centre (IMC)** is at the core of the EIDS and provides funds to companies for the following types of modernisation efforts:

- On-the-job training for workers
- Training for entrepreneurs
- Quality management (establishing standards, calibrating, laboratory upgrading)
- ICT systems upgrades
- Innovation, research and development
- Technology transfer
- Export development (e.g. market research and export strategies)

The **Industrial Training Council** was established to assess current and future training needs and to plan and coordinate national trainings in cooperation with other state agencies and the Federation of

Egyptian Industries. The Industrial Training Council therefore has a primary coordination role by outsourcing trainings to the most competent private and public training providers. The Council also implements active labour market programmes for unemployed youth that subsidize short, targeted trainings to enhance their employability and access to jobs in industry.

In order to improve the accessibility and quality of the physical and digital infrastructure for enterprises, the **Industrial Development Authority (IDA)** was assigned to (i) manage the state-owned industrial zones; (ii) provide land and infrastructure to enterprises in these zones; and (iii) facilitate cooperation between the zones so as to encourage formation of industrial clusters.

The **Egypt Technology Transfer and Innovation Centres (ETTICs)** are 12 non-profit organizations including the Furniture Technology Centre that were established for the purpose of upgrading the Egyptian industrial sector. This included upgrades from the industry being technologically excluded to being an effective technology adopter. The ETTICs, which charge for their service, provide Egyptian enterprises with appropriate technological solutions and know-how, either by establishing ties with Egyptian universities and research centres or by purchasing technology from abroad.

The Furniture Technology Centre (FTC) has two branches, one in Damietta and one in 10<sup>th</sup> of Ramadan City, that were established by the Ministry of Industry, Trade and Small and Medium Enterprises to develop and increase competitiveness of the Egyptian furniture industry. This is facilitated by transferring foreign experience and modern technology through training, consulting and furniture testing. The FTC in Damietta provides training and testing services. The overall vision aims to provide the following services:

- Technology transfer and technical consultancy to the furniture industry
- Advanced training courses on the various phases of furniture production as well as on computer programs for furniture design
- Product quality and durability testing as well as material and upholstery testing
- Provision of internationally recognized quality certificates
- Assisting small enterprises in introducing modern innovative designs
- Establishing a databank for the furniture industry including raw materials and accessories providers
- 

In addition, other actors have also established technology centres including centres for micro- and small enterprises run by the Social Fund for Development Fund (SFD).

To help Egypt export more manufactured goods, **Export Councils**, including the Egyptian Furniture Export Council (EFEC), were established. They initially provided grant subsidies for textile, engineering, chemical and food exports as a pre-specified percentage of the value of the exported goods. In addition, the Councils also offer financial and technical support to help exporters to develop strategies, and to present their products and services at international exhibitions. Their Board is composed of company representatives.

The **National Quality Council** monitors all the activities of the national quality system within which six main institutions operate. The role of the Egyptian Organization for Standardization and Quality (EOSQ) is to bring Egypt in line with international standards. The Egyptian Accreditation Council is responsible for accrediting bodies that assess conformity, including calibration and testing laboratories. The National Institute for Standards checks that the results of calibration and testing do not deviate from international norms. The Industrial Control Authority monitors the products of industrial companies to ensure compliance with national and international standards. The National Quality Institute raises awareness about existing standards and norms.

### Enterprise Training Partnerships

There are 12 sectoral Enterprise Training Partnerships (ETPs) in Egypt, among which the Enterprise Training Partnership for the furniture industry was founded through the Technical Vocational Education and Training (TVET) Reform Programme that began in 2005 (co-funded by the EU and

Egypt), and coordinated through the Industrial Training Council of the Ministry of Industry, Trade and Small and Medium Enterprises. The ETPs have been created as private-public training partnerships to help identify industry demands in terms of human resource development and training, coordinate skills provision and set skills standards with the aim to improve training for the workforce, and thereby enhance competitiveness.

### **Social Fund for Development**

The Social Fund for Development (SFD), which was founded in 1980 is still the main actor of micro- and small enterprise promotion in Egypt.

SFD financial services include:

- Micro-credits (between EGP 50,000 – EGP 2,000,000) through contracting banks and SME associations
- Insurance for credit failure, life and fire
- Funds to attend exhibitions and trade fairs.

The SFD also offers micro and small enterprises (MSEs) a range of non-financial services that resemble those that MOTI and its agencies offer to formal medium-sized and large enterprises. The SFD also runs an incubator programme, and has become the Egyptian national agency to implement the ILO's Start and Improve your Business (SIYB) toolkit for entrepreneurship promotion.

### **Ministry of Investment and the General Authority for Investment and Free Zones (GAFI)**

The Ministry of Investment was established in 2004 and is in charge of improving Egypt's investment climate. The Ministry of Investment is also responsible for attracting foreign investment through reforms in five areas (i) investment legislation, (ii) tax administration, (iii) monetary policies, (iv) trade policies, and (v) investment policies. Its main instrument is the General Authority for Investment and Free Zones (GAFI), which existed before the Ministry of Investment was created but was later transformed from a regulatory body into an investment-promotion body.

Since 2005, GAFI has had four main tasks (i) to attract foreign direct investors (ii) to simplify registrations and license new establishments (iii) promote and manage the free zones and the Qualifying Industrial Zones (QIZs), and (iv) to promote SMEs.

GAFI's main activities include one-stop-shops for registration and licensing services; the free zones; the QIZs; the MOI's efforts to develop Egypt's infrastructure; and the SME promotion programme.

#### **(i) One-stop-shops**

GAFI established and administers one-stop-shops that bring together representatives from different organizations to help facilitate the registration and licensing of companies.

#### **(ii) Free zones**

To date, there are ten public free zones and 32 privately administered free zones. Companies may settle in a free zone, or establish their own free zone, if they belong to one of the branches specified in the Investment Law and export at least 50 per cent of their products. Land in free zones is relatively cheap. Free zones offer a more competitive business environment through the provision of special fiscal, regulatory and financial incentives. In return, the projects established in the free zones and their profits are not subject to the provisions of laws of taxes and duties applicable in Egypt including import and export rules, customs procedures related to exports and imports. They also are not subject to the customs taxes, sales tax or any other taxes or duties.

#### **(iii) Qualifying Industrial Zones (QIZs)**

The QIZs have mostly been established under a protocol signed by Egypt, Israel and the US. The protocol offers quota-free and duty-free access to the US market for products from any company that manufactures in an Egyptian QIZ, provided that the combined value added in Israel and the Egyptian QIZ is at least 50.5 per cent (with a minimum of 10.5 per cent local Israeli content). As of 2015, Egypt

has four QIZs, with a total of 760 companies. The QIZs export mainly garments, but also dairy products, pharmaceuticals, cosmetics and dried vegetables.

#### **(iv) SME promotion**

Since January 2010, GAFI has also been active in SME promotion, with the aim of uniting SME development activities in a more comprehensive strategy that targets companies with capitalization of between EGP 2 million and EGP25 million. These companies tend to be larger than the SFD's usual targets and smaller than most of the IMC's targets.

The strategy includes three elements: Business Development Services; access to finance and; skills development. All three elements focus on industries that have a high potential to create jobs and increase output, but suffer from significant gaps in know-how and access to capital. These industries include agriculture and food processing, logistics, health and education services, lab analysis, renewable energies and water conservation equipment.

These instruments and policies have been assessed as being comparatively effective in promoting investment and exports, but much less in facilitating structural change. The generous transfers have made it easier for Egyptian exporters to compete in world markets but also reduced the incentive of firms to innovate and become more competitive. Moreover, these instruments have focused on medium-sized to large companies, and most of the funds have gone to companies that were already exporting, not to MSEs even where they were eligible for support.

#### **Institutions for furniture manufacturers**

The institutions with the mandate to protect the interests of furniture manufacturers seem somewhat ineffective, mainly because they are perceived to not be transparent and equitable. Larger businesses are well represented, whereas small ones have little say at the institutional level. This is the case of the two chambers of commerce in Damietta. Line ministries hire staff by appointing around 50 per cent of board members and by seconding employees. It follows that government influence is high and that small enterprises remain detached and out of discussions. Similarly, cooperatives established in the 1950s and 1960s by the government, largely remain under the control of the government and lack the collective nature that should define them.

Finally, non-governmental organizations (NGOs) are important stakeholders, but, are closely monitored by the government and are often institutionally fragile and have little on-the-ground knowledge (El-Meehy, 2002). A clear exception, however, is the Association for Upgrading the Furniture Sector in Damietta (AUFSD). The association was established in 2003 by a group of manufacturers with the aim of developing the industry and business environment in Damietta through enhancing education, training and marketing

### 3.5 World market trends

#### Global Imports

The global market for furniture stood at US\$209 billion in 2013, reflecting an annual growth rate of 8 per cent for the period between 2003 and 2013. The US is the world's leading global importer of furniture products, accounting for 25 per cent of all global imports. The EU, primarily Germany, France and the UK, also occupy the world's leading positions after the US. Canada rounds off the top five. Among the top ten importers, the Russian Federation (26 per cent) and Canada (9 per cent) have annual import growth rates that are higher than the global annual growth rate. Similarly, the Russian Federation also exhibits a significantly higher annual growth rate than that of the global annual rate.

**Table 12: World's leading furniture products importers, 2013**

| Rank                   | Importers         | Value imported in 2013 (US\$) | Average annual growth rate between 2003 and 2013 (%) | Share in world imports (%) |
|------------------------|-------------------|-------------------------------|------------------------------------------------------|----------------------------|
| 1                      | US                | 51 393 334                    | 5                                                    | 25                         |
| 2                      | Germany           | 18 932 754                    | 7                                                    | 9                          |
| 3                      | France            | 10 010 660                    | 6                                                    | 5                          |
| 4                      | UK                | 9 873 893                     | 4                                                    | 5                          |
| 5                      | Canada            | 9 020 162                     | 9                                                    | 4                          |
| 6                      | Japan             | 8 171 938                     | 6                                                    | 4                          |
| 7                      | Belgium           | 4 859 788                     | 6                                                    | 2                          |
| 8                      | Netherlands       | 4 783 760                     | 7                                                    | 2                          |
| 9                      | Switzerland       | 4 704 335                     | 7                                                    | 2                          |
| 10                     | Russia            | 4 672 474                     | 26                                                   | 2                          |
|                        | Rest of the world | 83 277 313                    | 11                                                   | 40                         |
| <b>Total/worldwide</b> |                   | <b>209 700 411</b>            | <b>8</b>                                             | <b>100</b>                 |

Source: Authors' calculations based on ITC Trade Map data

#### Global Exports

China is the leading global exporter of furniture products, accounting for 22 per cent of global exports in 2013 and having an annual growth rate of 22 per cent between 2003 and 2013. Germany, Italy, the US and Poland are the other leaders among the top five exporters. Vietnam is the only country in the top 10 leading exporters with a higher annual growth rate than China. Canada showed a decrease in exports over the period.

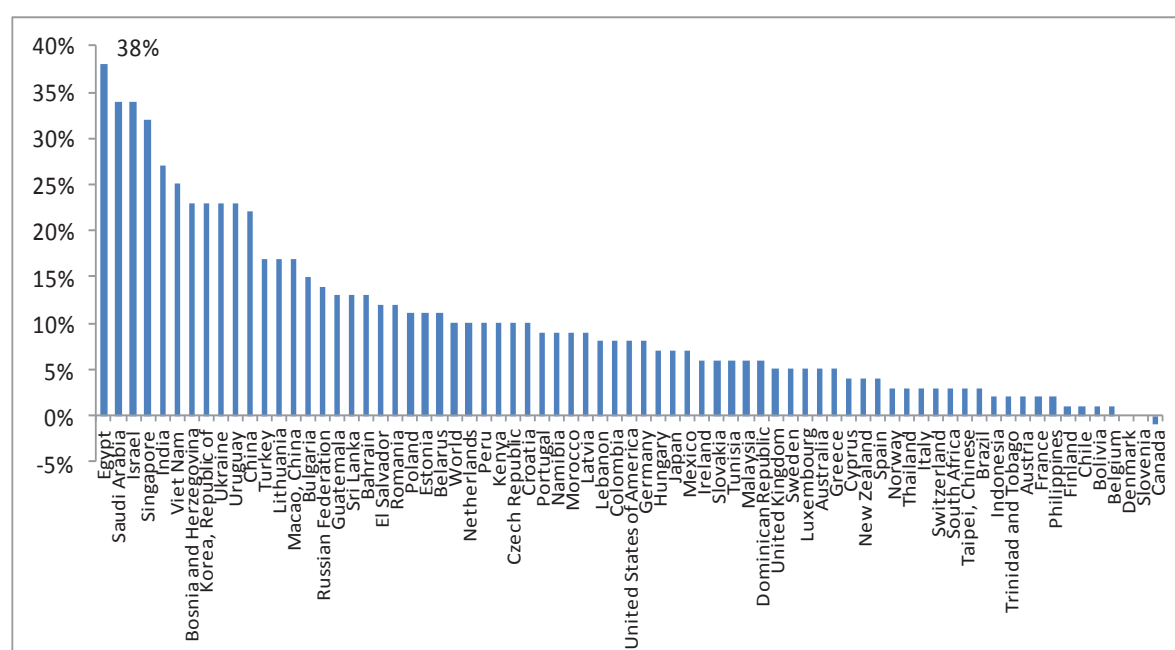
**Table 13: World's leading furniture product exporters**

| Rank      | Exporters         | Value exported in 2013 (in US\$ thousand) | Average annual growth rate between 2003 and 2013 (%) | Share in world exports (%) |
|-----------|-------------------|-------------------------------------------|------------------------------------------------------|----------------------------|
| 1         | China             | 86 414 579                                | 22                                                   | 38                         |
| 2         | Germany           | 17 370 119                                | 8                                                    | 8                          |
| 3         | Italy             | 13 981 872                                | 3                                                    | 6                          |
| 4         | US                | 11 074 424                                | 8                                                    | 5                          |
| 5         | Poland            | 10 397 896                                | 11                                                   | 5                          |
| 6         | Mexico            | 8 193 183                                 | 7                                                    | 4                          |
| 7         | Vietnam           | 5 666 266                                 | 25                                                   | 2                          |
| 8         | Canada            | 4 674 762                                 | -1                                                   | 2                          |
| 9         | France            | 4 086 295                                 | 2                                                    | 2                          |
| 10        | Czech Republic    | 3 794 377                                 | 10                                                   | 2                          |
| <b>47</b> | <b>Egypt</b>      | <b>377 558</b>                            | <b>38</b>                                            | <b>0.2</b>                 |
|           | Rest of the world | 61 513 607                                | 6                                                    | 27                         |
|           | Total/worldwide   | 227 544 938                               | 10                                                   | 100                        |

Source: Authors' calculations based on ITC Trade Map data

Despite the fact that Egypt ranks 47th with its share of world furniture exports being only 0.2 per cent in 2013, it is still the world's fastest growing furniture exporter for the period 2003 and 2013 (see Figure 18). Since its export value remains small, this momentum points towards great potential for continued future export growth.

**Figure 18: World's countries with greatest furniture export growth, 2003-2013**



Source: Authors' calculations based on ITC Trade Map<sup>(9)</sup>

<sup>(9)</sup> Countries with a starting export value of less than US\$10 million in 2003 have been excluded.

The furniture industry is becoming more globalized as richer countries source low-cost, but high-quality furniture from less developed parts of the world. China is the main exporter of this category and the US is the chief importer, with a third of all its furniture coming from abroad. Italy remains the top importer of higher quality and stylish furniture.

Countries such as Vietnam and China compete with Egypt in terms of labour costs, however, Egypt has an advantage over these countries owing to its central geographic location that substantially brings down the cost and duration of shipping furniture to European markets, potentially leading to an overall lower cost and greater responsiveness.

Turkey, whose positioning in Europe is, to a significant extent, similar to that of Egypt is a main competitor. Turkey also enjoys the benefits of a geographically strategic position being close to the EU and to the MENA region, but with greater progress in modernization than Egypt. The Turkish furniture industry also benefits from government support, including reduced corporate tax from 30 per cent down to 20 per cent, the passing of a new Research and Development law, the implementation of tax incentives for technology development, and the establishment of industrial and free zones which exempt the furniture industry from VAT payments.

### 3.6 Market access and trade agreements

Egypt has gradually moved towards a more liberalized trade regime. Since it became a member of the World Trade Organization (WTO) in 1995, it has committed to meet WTO obligations. Egypt revamped its tariff regime in 2004, as agreed in its accession agreement. Tariff and non-tariff barriers have been reduced substantially through trade agreements. The EU-Egypt Association Agreement entered into force in June 2004. The EU lifted all trade barriers to Egyptian industrial exports, while Egypt committed itself to removing all related trade barriers over a 12-15 year transitional period. In June 2013, the EU and Egypt began an explanatory dialogue on deepening trade and investment relations through possible negotiation of the Deep and Comprehensive Free Trade (DCFTA) that intends to extend the existing EU-Egypt Association Agreement. The EU is Egypt's largest trading partner, both in terms of exports and imports. This provides Egypt with a good opportunity to take advantage of the existing arrangements, and to export more furniture that matches European tastes.

Egypt has also signed a number of Free Trade Agreements (FTAs) to support Egyptian exporters to gain preferential access to international markets. These agreements include:

- The Pan Arab Free Trade Agreement (PAFTA)
- The Common Market for Eastern and Southern Africa (COMESA) comprising of 19 members,
- The Agadir Agreement with Morocco, Tunisia, and Jordan,
- The MERCOSUR (Southern Common Market)-Egypt FTA with Argentina, Brazil, Paraguay, and Uruguay
- The EFTA (European Free Trade Association)-Egypt FTA (with Iceland, Liechtenstein, Norway and Switzerland)
- The Egypt-Turkey FTA.

As mentioned earlier in this paper, Egypt also participates in a trade agreement with the US and Israel for products produced in Egyptian QIZ.

Tables 14 and 15 below present the average applied ad-valorem equivalent (AVE) tariffs imposed by Egypt on furniture and wooden products. It clearly indicates that Egypt has moved towards a more liberalized trade regime. In 2000, the furniture industry was one of the most highly protected industries in Egypt. While the mean average tariff for manufacturing activities in Egypt was just over 25 per cent, the tariff for furniture imports was 40 per cent, ranking fourth after automobiles, liquor and tobacco in 2010 (El-Meehy, 2002). In 2015, the average tariff for furniture products has reduced to 18 per cent with an average most favored nation (MFN) rate of 26 per cent. Tariff rates for different partner groups have been reduced further through the trade agreements mentioned above.

**Table 14: Egyptian average applied tariffs on furniture and wood products import by partners, 2015**

| Selected Partners                                      | Simple average ad valorem equivalents (AVE) tariff |                                     |
|--------------------------------------------------------|----------------------------------------------------|-------------------------------------|
|                                                        | Furniture products (Chapter HS 94) (%)             | Wooden products (Chapter HS 44) (%) |
| MFN rates                                              |                                                    |                                     |
| USA                                                    | 26                                                 | 5                                   |
| China                                                  | 26                                                 | 5                                   |
| Preferential tariff rates for                          |                                                    |                                     |
| EFTA countries                                         | 17                                                 | 3                                   |
| Preferential rates for Ethiopia under COMESA           | 23                                                 | 5                                   |
| Preferential rates for Uganda and Eritrea under COMESA | 5                                                  | 1                                   |
| Turkey                                                 | 8                                                  | 1                                   |
| EU countries                                           | 4                                                  | 1                                   |
| COMESA countries                                       | 0                                                  | 0                                   |
| PAFTA countries                                        | 0                                                  | 0                                   |
| AGADIR countries                                       | 0                                                  | 0                                   |
| <b>Total average</b>                                   | <b>18</b>                                          | <b>3</b>                            |

Source: ITC Macmap, 2015

**Table 15: Descriptive statistics of AVE tariffs, 2015**

| Variable                     | Number of tariff lines | Mean | Standard deviation (%) | Min (%) | Max (%) |
|------------------------------|------------------------|------|------------------------|---------|---------|
| Tariff on Furniture products | 81                     | 18   | 11                     | 0       | 26      |
| Tariff on Wood products      | 125                    | 3    | 2                      | 0       | 5       |

Source: ITC Macmap, 2015

In 2015, the average import tariff for wood products is 3 per cent with a maximum rate of 5 per cent. A duty drawback scheme is available for all exports<sup>(10)</sup>. However, studies report that the system is not functioning properly and very few exporters are actually using it.

The benefits derived from trade liberalization and the elimination of tariffs can be offset by non-tariff barriers. The WTO's Technical Barriers to Trade Agreement has been created in response to the misuse of technical regulations and standards. When technical regulations are applied in a discriminatory and non-transparent way, they are considered as barriers to trade under the Agreement, rather than as a legitimate tool to ensure human and environment safety and protection.

### 3.7 Technical regulations and standards in the furniture sector

Exporting to international markets requires alignment with international quality and safety measures. Technical regulations are imposed by the government of an importing country and are mandatory for market access. Standards are voluntary, but in many cases customers require that their suppliers comply with specific standards and can demonstrate that they do so. The WTO's Technical Barriers to Trade Agreement stipulates that the product characteristics imposed by technical regulations should be based on

<sup>(10)</sup> A duty drawback scheme means the refund of import duty already paid or the return of guarantee placed on imports that have undergone production, mixing, assembling, or packing and are then exported to foreign markets.

international standards. The Technical Barriers to Trade Agreement tries to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles to trade.

International and national furniture standards mainly concentrate on safety and health related aspects, test methods, dimensional coordination and terminology. To facilitate international trade and cooperation, the International Organization for Standardization (ISO) promotes standardization and related activities and is responsible for the harmonization of standards around the world<sup>(11)</sup>. The ISO's work results in international agreements published as international standards. Related to the furniture sector, the ISO has published the 24 standards listed in Table 16.

**Table 16: ISO's 24 standards**

| Reference number |                  | Document title                                                                                                                    |
|------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1                | ISO 4211:1979    | Assessment of surface resistance to cold liquids                                                                                  |
| 2                | ISO 4211-2:1993  | Tests for surfaces – Part 2: Assessment of resistance to wet heat                                                                 |
| 3                | ISO 4211-3:1993  | Tests for surface finishes – Part 3: Assessment of resistance to dry heat                                                         |
| 4                | ISO 4211-4:1988  | Tests for surfaces – Part 4: Assessment of resistance to impact                                                                   |
| 5                | ISO 5970:1979    | Chairs and tables for educational institutions – Functional sizes                                                                 |
| 6                | ISO 7170:1993    | Storage units – Determination of strength and durability                                                                          |
| 7                | ISO 7171:1988    | Storage units – Determination of stability                                                                                        |
| 8                | ISO 7172:1988    | Tables – Determination of stability                                                                                               |
| 9                | ISO 7173:1989    | Chairs and stools – Determination of strength and durability                                                                      |
| 10               | ISO 7174-1:1988  | Chairs – Determination of stability – Part 1: Upright chairs and stools                                                           |
| 11               | ISO 7174-2:1992  | Chairs – Determination of stability – Part 2: Chairs with tilting or reclining mechanisms when fully reclined, and rocking chairs |
| 12               | ISO 7175-1:1997  | Children's cots and folding cots for domestic use – Part 1: Safety requirements                                                   |
| 13               | ISO 7175-2:1997  | Children's cots and folding cots for domestic use – Part 2: Test methods                                                          |
| 14               | ISO 7617-1:2001  | Plastics-coated fabrics for upholstery – Part 1: Specification for PVC-coated knitted fabrics                                     |
| 15               | ISO 7617-2:1994  | Plastics-coated fabrics for upholstery – Part 2: Specification for PVC-coated woven fabrics                                       |
| 16               | ISO 7617-3:1988  | Plastics-coated fabrics for upholstery – Part 3: Specification for polyurethane-coated woven fabrics                              |
| 17               | ISO 8191-1:1987  | Assessment of the ignitability of upholstered furniture – Part 1: Ignition source: smouldering cigarette                          |
| 18               | ISO 8191-2:1988  | Assessment of the ignitability of upholstered furniture – Part 2: Ignition source: match-flame equivalent                         |
| 19               | ISO 9098-1:1994  | Bunk beds for domestic use – Safety requirements and tests – Part 1: Safety requirements                                          |
| 20               | ISO 9098-2:1994  | Bunk beds for domestic use – Safety requirements and tests – Part 2: Test methods                                                 |
| 21               | ISO 9221-1:1992  | Furniture – Children's high chairs – Part 1: Safety requirements                                                                  |
| 22               | ISO 9221-2:1992  | Furniture – Children's high chairs – Part 2: Test methods                                                                         |
| 23               | ISO 10131-1:1997 | Foldaway beds – Safety requirements and tests – Part 1: Safety requirements                                                       |
| 24               | ISO 10131-2:1997 | Foldaway beds – Safety requirements and tests – Part 2: Test methods                                                              |

**Source:** ISO, 2015

<sup>(11)</sup> Egyptian authorities recognise foreign standards only when there is no Egyptian standard for the concerned goods and products. Therefore, all manufacturers and importers are required to abide by Egyptian standards. In cases where no mandatory standards exists, the following standards may be acceptable: the International Organization for Standards (ISO/IEC); the Egyptian Products Standards (voluntary); European Standards (EN), or in the absence of EN standards, British (BN), German (DIN) and French (NF) standards maybe applied; American Standards (ANS); Japanese Standards and; CODEX.

Besides ISO, European Norms (EN) are widely used in many countries. There are approximately 90 EN standards on furniture, which are all voluntary in nature. The objective of standardization is to ensure that all furniture available on the market is safe to use and is of solid and strong construction.

### Certification and labelling

Certification and labelling may influence the purchasing decisions of individual buyers. The procurement policies of institutional buyers<sup>(12)</sup> increasingly emphasise environmental performance and social accountability of furniture production. However, commercial and industrial enterprises are more likely to place emphasis on the safety, quality and functionality of furniture production when they make the buying decision. Retailers in the consumer market<sup>(13)</sup> are more sensitive about design, surface and other softer values. In order to ease customer concerns, some furniture chains have developed environmental management systems to monitor the origin of their products, and to some extent the raw materials.

### Quality management systems and standards

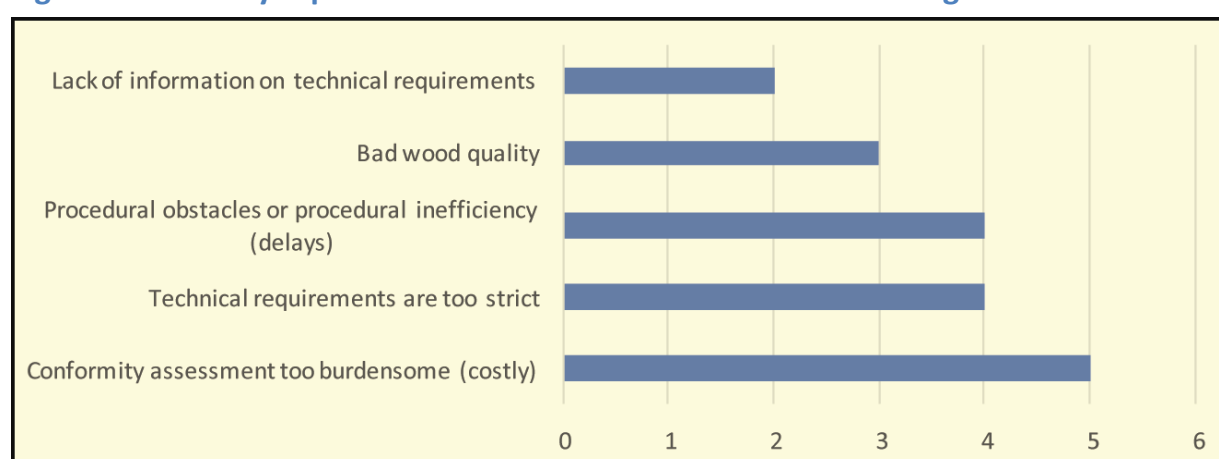
Many studies have shown that quality management systems help enterprises improve their product quality and productivity, while maintaining or improving their ability to compete. It is important for Egyptian furniture enterprises to implement strategies that could boost their productivity and competitiveness through the adoption of quality management and improvement systems. These are often implemented under the ISO 9001 standard for quality management systems.

Complying with a quality management standard demonstrates that the certified company has the ability to ensure that all products and services meet customer requirements. Application of a quality management certification such as ISO 9001 is particularly beneficial where customers in the target market anticipate that there might be deficiencies in the quality of products offered for sale.

### STED survey findings on technical regulations

The STED survey (2014) results showed that approximately one third of surveyed companies felt that technical regulations and related trade obstacles are burdensome for their business. Out of those that indicated the regulations as burdensome, the most commonly cited three reasons were (i) difficult conformity assessments (ii) strict technical requirements and (iii) procedural obstacles that were inefficient in the implementation of regulations.

**Figure 19: Primary reported reasons for burdensome technical regulations**



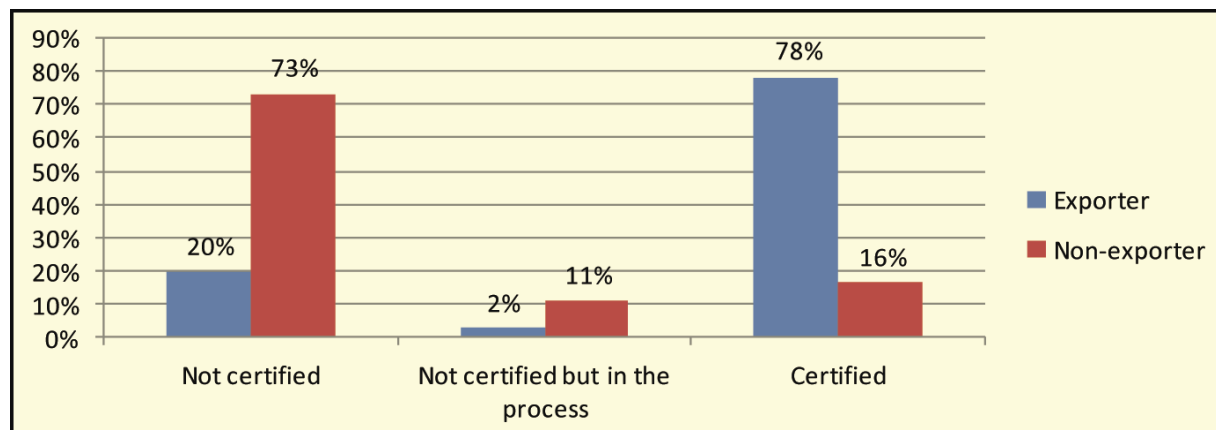
Source: STED Survey, Egyptian Furniture Sector, 2014

<sup>(12)</sup> The procurement policies of institutional buyers can include public building and construction companies demanding public premises, offices, schools etc.

<sup>(13)</sup> Mainly household furniture, ready-to-assemble furniture, small occasional furniture, etc.

Approximately 78 per cent of surveyed companies test their products before exporting them export, and most of these (four out of five) indicated that they test their products inside the company. Firms also use government and private testing facilities. This is mainly done where companies need testing to be conducted independently, and also where tests are required that are outside the capabilities of the firm's own laboratories. Almost 80 per cent of exporting companies surveyed have a quality certificate, while the share is only 16 per cent for the non-exporting enterprises surveyed.

**Figure 20: Company quality certification**



Source: STED Survey, Egyptian Furniture Sector, 2014

### 3.8 Skill supply

The formal supply of skills training for the furniture industry in Egypt is provided by a number of stakeholders including Ministry of Education (MOE), Ministry of Higher Education (MOHE), Ministry of Industry, Trade and Small and Medium Enterprises, Ministry of Manpower and Migration (MOMM), Ministry of Social Solidarity (MOSS) and the Supreme Council of Universities. However, much of the industry's requirement for skills is provided through informal apprenticeships, particularly at family-operated MSMEs.

Formal technical and vocational education and training (TVET) in Egypt is provided through technical secondary schools, vocational training centres (VTCs) and post-secondary education. The Ministry of Education (MOE) administers over 1800 technical schools, and the Ministry of Higher Education (MOHE) administers 68 post-secondary vocational education and training (VET) institutions, grouped into eight different categories (Alvarez-Calvan, 2015). The Ministry of Industry, Trade and Small and Medium Enterprises' Productivity and Vocational Training Department (PVTB) offers three-year courses that give diplomas equivalent to the ones issued by technical secondary schools. The third year is usually an apprenticeship within the industry of specialization, allowing students to gain more practical skills directly from enterprises. Vocational training of between four months to two years is provided at VTCs under the Ministry of Manpower and Migration, the Ministry of Social Solidarity, the Ministry of Housing and others.

#### Secondary technical education

Administered by the Ministry of Education, studies at technical secondary schools offer two education strands of different lengths and with different degrees of specialization. One prepares technicians via a three-year programme, and the other prepares senior technicians via a five-year programme. The graduates from both strands are entitled to enter higher education according to their results in the final exam. However, their transition rates are very low when compared to graduates from general secondary education and the vast majority join the labour market. The Ministry of Education administered 966 technical Industrial and vocational schools in the school year 2013/2014 with 794215 students enrolled.

Out of these technical Industrial secondary schools, there are 154 schools with carpentry sections and 44 schools with metal furniture sections across all 27 governorates. The carpentry sections are divided into four areas of specialization, namely wood finishing, upholstery, cabinet making and carving (ETP Furniture, 2014).

In addition, there is the successful cooperative model of technical education under the dual system (the former Mubarak-Kohl Initiative (MKI), which was signed between Egypt and Germany in 1992). During the academic year, students' time is split between technical secondary school and training in factories and companies. Graduates of the school are highly regarded by furniture sector employers.

According to the yearly statistical book of the Ministry of Education in 2013/2014, there are 49 MKI schools in Egypt with 16550 students. The number of MKI schools that offer apprenticeship in furniture are 9 schools located in five governorates including Cairo (two schools), Alexandria (one school), Menoufia (one school), Qalyubia (two schools), and Damietta (three schools). The total number of students in the furniture schools in 2013/14 was 2945 students. The three MKI schools in Damietta offer apprenticeships for joinery, wood construction, woodcarving, and general administration clerk for about 465 students.

### **Post-secondary VET system**

The Egyptian post-secondary VET system is comprised of 68 institutions<sup>(14)</sup> and serves five sectors in particular: (i) engineering/industrial, (ii) commercial, (iii) tourism and hotel services, (iv) medical, and (v) social work. Within these five sectoral areas, there are approximately 108 different technical programmes in 22 different disciplines. All institutes have two-year programmes that leads to a diploma. Only, the Industrial Education Colleges offer a Bachelor of Industrial Education degree through a four-year programme. In the year of 2009/2010, the total number of students enrolled was 127,440 (Alvarez-Calvan, 2015), in 2013/14 the number reached 145,737 (Ministry of Higher Education, 2015).

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<sup>(14)</sup> The number was 105 before grouping the previous 45 Technical Institutes into eight technical colleges.

**Table 17: Post-secondary VET institutes, 2013/2014**

| Post-secondary VET institutions                 | Public/Private | Number of institutes | Number of enrolled students 2009/2010 | % of total enrolment in post-secondary VET institutes | Number of enrolled students 2013/2014 | % of total enrolment in post-secondary VET institutes | Jurisdiction/supervision                                                              |
|-------------------------------------------------|----------------|----------------------|---------------------------------------|-------------------------------------------------------|---------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|
| Technical Colleges                              | Public         | 8                    | 73 952                                | 58                                                    | 73 542                                | 50                                                    | Supreme Council of Technical Colleges/Ministry of Higher Education                    |
| Technical Health Institutes                     | Public         | 12                   | 16 678                                | 13                                                    | 27 089                                | 19                                                    | Ministry of Health and Population                                                     |
| Technical Nursing Institutes                    | Public         | 17                   | 2 565                                 | 2                                                     | 4 903                                 | 3                                                     | Public University/Ministry of Higher Education                                        |
| PVTD/TCC                                        | Public         | 2                    | 277                                   | 0                                                     | 516                                   | 0                                                     | Ministry of Industry, Trade and SMEs, Productivity and Vocational Training Department |
| Private Middle Institutes                       | Private        | 13                   | 1 868                                 | 1                                                     | 16 193                                | 11                                                    | Council for Private Higher Institutes                                                 |
| Workers' University                             | Private        | 11                   | 13 406                                | 11                                                    | 20 210                                | 14                                                    | Egyptian Trade Union Federation                                                       |
| Integrated Technical Education Cluster          | Private        | 1                    | 227                                   | 0                                                     | NA                                    | -                                                     | Education Development fund                                                            |
| Faculties of Industrial Education <sup>15</sup> | Private        | 4                    | 6 467                                 | 5                                                     | 3 284                                 | 2                                                     | Public University/Ministry of Higher Education                                        |
| <b>Total number of institutions</b>             |                | <b>68</b>            | <b>127 440</b>                        | <b>100</b>                                            | <b>145 737</b>                        | <b>100</b>                                            |                                                                                       |

**Source:** Alvarez-Calvan, 2015; Ministry of Higher Education, Labour Market Observatory, 2015

Technical colleges are collectively by far the largest provider of post-secondary VET in Egypt and accounted for 50 per cent of enrolled students in the 2013/2014 school year.

The Technology Competency Centre (TCC) is the result of co-operation between the Egyptian and the German governments and is an industrial institute administered by the Ministry of Industry, Trade and Small and Medium Enterprises. Operational since 1996, the two-year institute provides training in mechanical engineering, mechatronics, in addition to leather and shoe manufacturing.

The Workers' University belongs to the Egyptian Trade Union Federation and has two divisions - technological development and industrial relations. The Egyptian post-secondary VET system is administered by a number of government agencies that often work independently.

### Other ministerial portfolios

Entry-level vocational training as well as in-service training (upgrading of worker skills) are provided to an additional number of trainees and workers in a number of Vocational Training Centres managed by different ministries outside the education portfolios.

### The Ministry of Manpower and Migration

There are 14 Vocational Training Centres for carpentry in 11 governorates under the administration of the Ministry of Manpower and Migration. They have a capacity of 15 trainees per training course. In 2013/2014, the total number of graduates in carpentry was 96 (36 in furniture carpentry, 11 in carpentry ornament, 31 in arabesque and 18 in carpentry), with another eight graduates qualifying in metal furniture (ETP Furniture, 2014).

### The Ministry of Social Solidarity (MOSS)

The Ministry of Social Solidarity, in collaboration with the Productivity and Vocational Training centre Department (PVTD) of the Ministry of Industry and Technological Development, has put in place an initiative to raise the professionalism of vocational trainers in training centres. Training courses in training centres managed by the Ministry of Social Solidarity are available in the fields of carpentry,

<sup>(15)</sup> These faculties train teachers and instructors for technical schools.

printing, refrigeration and air conditioning, repairing home appliances, acts sheets, gas welding, tailoring and winding motors.

The target groups for these vocational training centres are:

- Dropouts from basic education
- Repeaters in the assessment for the basic education certificate
- Holders of the basic education certificate
- Transformational training for young graduates from universities and medium schools
- All citizens, especially housewives, through the quick implementation of intensive training courses.

There are a total of 71 Carpentry Vocational Training Centres and 1,841 enrolled trainees in 2013/2014.

**Table 18: Vocational Training Centre (VTC) data, 2013/2014**

|                                                                   |                                     |
|-------------------------------------------------------------------|-------------------------------------|
| Number of Vocational Training Centres                             | 71                                  |
| Enrolled trainees in Vocational Training Centres (year 2013/2014) | 1841                                |
| Number of vocational trainers                                     | 382 trainers / 85 assistant coaches |
| Total cost                                                        | EGP 981 100                         |

**Source:** Ministry of Social Solidarity, 2015

### **The Enterprise Training Partnership for the furniture industry**

The ETP Furniture has developed in collaboration with industry experts a functional analysis of the industry, breaking down the industry into 16 sub-sectors, 88 units and 339 elements. These constitute the basis for skills standards in the sector and training packages have been developed that are offered as continuing training to workers in the industry. While standards were meant to influence curricula of public training providers, their full implementation still remains to be accomplished.

The 16 identified sub-sectors are Cabinet making, Upholstery, Chair making, Veneering, Wood machining, Wood Carving, Wood model making, Wood Pattern making, Wood finishing, Packaging, CNC Machines operators, CNC Machine Maintenance Engineer, Machines Mechanical maintenance technician, Machines Electrical maintenance technician, Ethnic design, Wood Production & furniture.

### **The Ministry of Industry, Trade and Small and Medium Enterprises**

The Productivity and Vocational Training Department (PVTD) of the Ministry of Industry, Trade and Small and Medium Enterprises implements the industrial apprenticeship scheme as described above. It is divided into eight training zones, with a total of 42 training centres that cover 17 governorates, in addition to training stations and training centres inside companies. It supplies the market with more than 10000 skilled graduates annually. The PVTD offers its students training on 42 different trades. It qualifies technical workers at various skill levels required by the industrial labour market. The PVDT also has a Staff Training Institute (STI) as well as the two Technology Competency Centres (TCC) (mentioned in Table 17) in co-operation with the Republic of Germany for the purpose of qualifying technicians.

Through the **Industrial Modernization Centre (IMC)**, the Ministry of Industry, Trade and Small and Medium Enterprises is implementing a number of local manufacturers' development programmes to increase and improve production. Under these programmes, targeted activities are implemented, including technical assistance to the production stage of local businesses. The programmes also contribute to developing engineering and technical institutions, in order to strengthen and broaden technical wood and furniture. The programmes aim to improve middle management and organizational development as well as to increase local production, and intensify exports. In order to achieve this they will also provide new workshop and incubator units to assist enterprises.

Together with the Egyptian Furniture Export Council (EFEC), the IMC also plans to certify Egyptian manufacturers that comply with international quality standards by establishing a quality certification body under an Innovation Enrichment Programme. This body will enable firms to have exports approved abroad and certified compliance with international standards, which should improve the reputation of Egyptian furniture. The EFEC and the IMC will also assist manufacturers on production-related issues and design innovation through tax incentives to promote the allocation of resources to design and innovation. To protect those who invest in this field they will also implement regulations to guarantee copyright protection over original furniture designs. They will also support research in other fields, such as the use of new materials, and the establishment of a new technical centre for research.

The **Foreign Trade Training Centre** is a non-for-profit organization established by the Ministry of Industry and Technological Development as the first specialized training centre in export promotion. The project started in 2001 in collaboration with the Japanese government, represented by the Japanese International Cooperation Agency (JICA) and the Japan External Trade Organization (JETRO). Trainers are both professional Egyptians with experience in exporting and in international trade, and foreign experts from several institutes around the world. They have a variety of courses in the following categories:

- Main export courses: basic export course; trade information analysis; product quality; export costing and pricing; and qualified export specialist.
- Export skill courses: English business and commercial correspondence; presentation skills; negotiation and contracting skills; business management systems and smart technology for a smarter business.
- Academic courses: Diploma in Export Development and; Masters of Business Administration in International Markets (covering economics, management, marketing, accounting).

### Non-governmental organizations (NGOs)

In addition to formal and non-formal TVET provision under the different ministries, there are NGOs offering non-formal vocational training courses in furniture-related trades, mainly in carpentry. However, aggregate numbers for trainees per year are not available at the national level.

### Informal apprenticeships

Given the long tradition of family-based furniture manufacturing in Egypt, particularly in Damietta, Cairo and Sharkeya, skills for furniture-related trades are still passed on through informal apprenticeship, usually in micro and small businesses. This form of skills acquisition takes place purely on-the-job, through observation, imitation and practice of work processes performed by an experienced craftsperson. Informal apprenticeships tend to last a number of years until the young apprentice is considered sufficiently skilled to either open up their own business, or become a skilled worker in the same or a similar small business. Although there is no official data on numbers of informal apprentices in the furniture sector in Egypt, if one estimates that every second micro and small furniture business had one apprentice, that would equate to roughly 50,000 informal apprentices.

## 4. Envisioning the future

This section takes a closer look at specific Egyptian furniture production issues with the potential to increase exports. These potentials include strengthening micro-manufacturers to export their products, supporting their position as suppliers to larger exporting companies and improving the capacities of larger producers to market their products to international markets.

Egyptian furniture production for both local and international markets is highly concentrated in the governorates of Damietta, Cairo and Sharkeya, and comprise of types of company structures from large companies relying on capital-intensive production, to micro enterprises based on manual work.

In Egypt, involvement in furniture exporting is heavily correlated with the production structure and size of the producer, with 90 per cent of furniture exports being produced by large enterprises. In these companies, the entire set of production processes often takes place in the same location, which is mainly due to two reasons. First, large firms have the means to access the technology required to produce efficiently. Second, in-house production is perceived as the most reliable way to deliver standardised products, which is especially important for international clients. Despite this, significant numbers of MSEs participate in exporting value chains by supplying larger firms with specialized and labour intensive inputs and services. In some cases, networks of SMEs provide large firms with a buffer of production capacity, allowing them to ramp up production to levels that they could not achieve internally when large orders are obtained.

Furniture produced for the local market is most often the product of a complex value chain in which products pass through several different service providers. For example, some larger companies are supplied by smaller workshops that carve furniture and finish it by upholstering and varnishing. In many cases, furniture showrooms have a key coordinating and integrating role in networks of manufacturing MSEs. These roles include producing and finishing furniture, specifying designs, coordinating the flow of components and work-in-progress, and (sometimes) providing finance for furniture that they will sell themselves. Traders also have a role in value chains, giving MSEs access to customers beyond their existing network relationships.

While exports are dominated by large firms, medium sized furniture manufacturing firms that coordinate intermediaries such as furniture showrooms and trading firms, also have a presence. Their value chains tend to be more complex than those of large manufacturing firms, with correspondingly greater involvement by MSEs. An additional factor that shapes the capability of a firm to export is the ability to access quality wood at a competitive price. Here, large firms enjoy a better bargaining position as they are able to buy wood in larger quantities and have the necessary instruments to control the quality of wood offered to them. Small furniture producers tend to be weak in this area.

Large companies also have direct access to end user markets, meaning they do not need any intermediaries to sell their products. On the other hand, small producers rely on other participants in the value chain that can exercise greater market power. Given their dependent situation, and competition from the large number of MSEs offering similar services at most stages of the value chain, MSE manufacturers are forced to accept prices that often barely cover production costs.

With regards to skills provision, larger companies are able to recruit workers from existing technical schools. However, smaller manufacturers still rely on workers who acquire their skills through informal apprenticeships, resulting in a skill base that is of uneven quality. This, combined with differences in technology between large and small firms, equates to significant differences in worker skills, depending on the size of the company they work in.

Many large furniture producers face difficulties in coping with large bulk orders from international clients. This could be addressed in part through greater horizontal integration, and through improved capabilities and quality management in smaller firms that could provide a more effective buffer of production capacity.

## 4.1 Future market position

The core of the vision for the future proposed by this report is that the Egyptian furniture sector will improve its competitiveness on a range of dimensions, allowing it to increase exports into priority markets in target product categories. This partly includes increasing market share, but is also about contributing to increasing the value of target markets by bringing higher quality and higher value added products to these markets with strong marketing and at competitive prices.

The furniture industry has potential to continue to increase exports within the MENA region and to also resume growth in export sales to the European market given its geographical location and its advantage in shipping costs to Europe. Both market share and the value of export sales to these markets could be increased by delivering products of improved quality and higher value added that better meet customer needs.

In terms of market position, this vision has two main strands:

1. The furniture industry will become more significant as a regional hub for production and supply of furniture, still primarily based on imported inputs. It will also continue to be a key manufacturer of furniture based on its design heritage will also focus on adapting traditional designs for modern lifestyles, and further diversify into less traditional types of furniture that are also in demand within the MENA region. The Egyptian furniture industry will improve its capabilities in wood finishing and will substantially increase the share of its finished furniture exports. As a part of this evolution, the industry will become more competitive in its domestic market in segments where imports have rapidly increased in recent years.
2. The Egyptian furniture industry will develop a stronger market position beyond the region, particularly taking advantage of its close geographic location to Europe. The industry will improve product quality, productivity, finishing, and design relevance in order to improve competitiveness and strengthening its connections and channels to the market. This means a greater focus on market segments supplied to Europe by furniture sectors whose underlying sources of advantage are comparable to that of Egypt, such as Turkey.

Overall, these two strands imply a resumption of significant growth in total exports of furniture, with a particular emphasis on quality and design innovation. They also denote that the industry's will improve its furniture products to its domestic market in terms of product quality, product sophistication and value for money, enabling it to grow the value of its domestic market sales in the face of competition from imports.

## 4.2 Beneficial impacts of future market position

The direct impacts of improving the position of the furniture industry in export and domestic markets will be increasing sales and to increasing value added by the industry. Increased sales will occur both as a consequence of the sector gaining market share in its target markets through improved competitiveness, and through strengthening its position in market segments which are currently weak. It is anticipated that this will directly benefit both large furniture manufacturers that dominate the export oriented part of the industry, and existing SMEs<sup>(16)</sup> that might grow into this large-firm tier of enterprises<sup>(17)</sup>. MSMEs are also expected to benefit since these anticipated initiatives will raise productivity, quality management and technological and management capacity of MSMEs. These improvements will make it more viable for enterprises to comply with product specifications consistent with export markets, thereby increasing their ability to participate in exporting supply chains. These benefits will be apparent through the following three channels:

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<sup>(16)</sup> Small enterprises are defined as comprising of between five and 49 workers, whereas medium sized enterprises have between 50 and 99 workers.

<sup>(17)</sup> Large enterprises are defined as comprising of more than 99 workers.

1. As large furniture firms experience significant variation in market demands, they are likely to outsource more of their export-related manufacturing work to MSMEs.
2. The scale barriers to furniture SMEs participating in export markets, directly or through marketing intermediaries, will be reduced. It is likely that there will be scope for SMEs to collaborate in marketing, manufacturing and purchasing, which will further reduce scale barrier and make it practicable for more SMEs to export. By exercising more control within their value chain, SMEs are likely to be able to capture more economic value and have more resources to reinvest. Participation of SMEs in export markets will also give micro-enterprises in their supply chains a route to export markets.
3. MSMEs in the furniture industry that are capable of efficiently delivering a high level of quality and consistency within the value chain will be attractive partners, and hence end exporters for which they manufacture are likely to wish to maintain stable relationships. As a consequence, they may obtain better margins than are currently typical for MSMEs.

Improving the market position is also likely to benefit employees. One of the major findings of research into the impact of trade is that exporting firms usually pay better than non-exporting firms in the same industry. With some exceptions, exporting sectors often also offer better working conditions, particularly where they must rely on the skills and commitment of their workers to deliver consistently high quality products, have high productivity levels and effectively use production technologies.

It is difficult to accurately model the net impact on direct employment in the furniture industry. Increasing sales will be offset to a significant extent by increasing labour productivity. However, as growing exports are currently accompanied by increasing furniture industry employment, there is good reason to anticipate that a continuation of the current upward trend in exports will be associated with significant employment growth, and that an increase in the rate of growth in exports will accelerate the growth rate of employment. Standing still on labour productivity is not an option, as the industry would lose competitiveness in both export and domestic markets, leading to significant employment losses. Increased employment and improvements in the quality of employment will also generate further employment in other sectors of the Egyptian economy induced by the spending of those employed both directly and indirectly.

### 4.3 Sources of greater competitiveness

Under this vision of the future, improved competitiveness is expected to come about through:

- increased productivity throughout the furniture value chain
- higher quality of products through improved compliance with technical regulations and standards required in target markets
- improved integration throughout the furniture value chain, with better coordination and information flow between different service providers
- enhanced capacity to meet end customer's design needs in Egypt and across the MENA region
- improved procurement of raw materials for furniture to overcome quality problems
- improved branding, marketing, sales and channel management in relevant markets.

### 4.4 Underpinnings of greater competitiveness

It is anticipated that enhanced skills will make a major contribution to improving competitiveness. This will partly be by reducing the extent of constraints that skills place on competitiveness, and partly by skills development as an essential component of other aspects of development.

The overall approach proposed is based on:

- an adoption of best international approaches to management, including approaches that involve collaboration between managers and workers

- stronger design, marketing, procurement and quality management to supply furniture that better meets the requirements of end customers and intermediaries in Egypt, MENA and in target markets such as Europe
- improved integration and collaboration throughout the value chain
- greater branding, marketing, sales and channel management in relevant markets
- the right skills to achieve these goals at all occupational levels
- a collaborative approach between government, industry and other stakeholders to achieve these goals and to build on existing initiatives to develop the industry, with support from development partners including the ILO.

#### **4.5 Potential for collaboration between enterprises**

An improvement in the marketing capabilities of larger enterprises is key to attracting more international orders. There may be scope for additional collaborative action on this, possibly extending to medium sized enterprises with growth potential, and to collaborating networks of MSEs.

MSMEs require a development framework that facilitates economies of scale in a range of areas, including purchasing wood, and in related areas including controlling wood quality and providing shared access to wood driers. An expansion of existing forms of collaborative training could improve the ability of workers to produce furniture that meets international standards. This, in turn, would enhance the collective capacity of furniture producing regions to cope with very large orders.

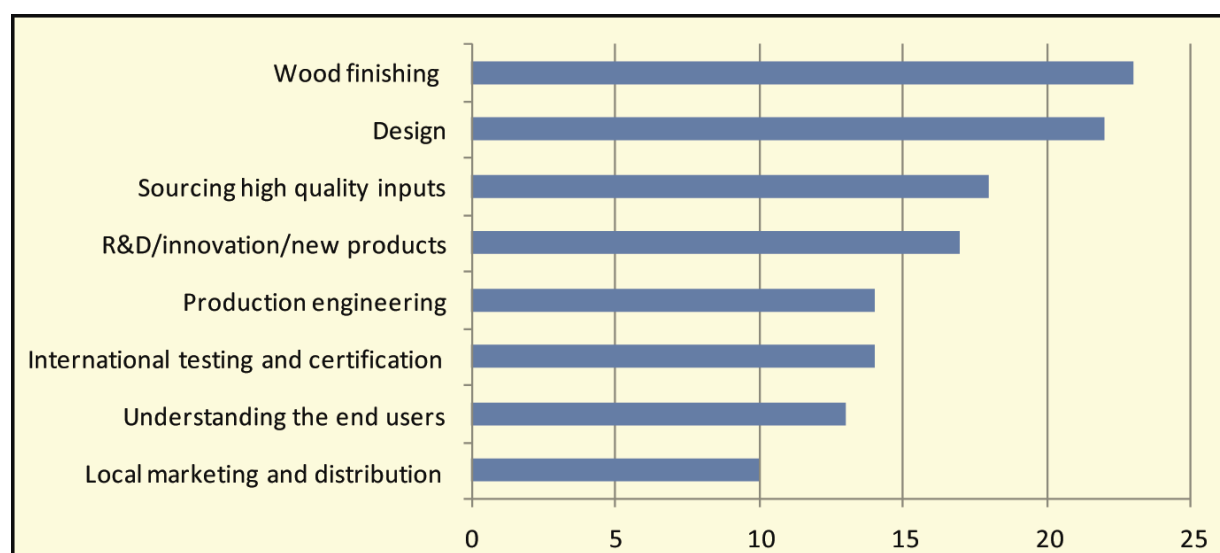
The Association for Upgrading of the Furniture Sector in Damietta (AUFSD) serves as an example of collective action for skills coordination. The AUFSD currently represents the private sector in Dual System schools that were established in the region, and have organized training in selected areas. Organizations such as the AUFSD could also serve as mechanisms for collective buying.

Better vertical and horizontal integration as well as improved manufacturing and marketing skills could enhance the ability of small manufacturers to produce quality furniture, whether as suppliers to large companies or being involved in value chain arrangements that are structured differently. This will serve employers in the sector through increased sales and profit margins while also benefiting logistics enterprises. These developments could also have a positive qualitative and quantitative effect on employment in these sectors with greater employment formality, better working conditions and improved incomes. Moreover, the development of existing associations may also be a useful tool to ensure the implementation of occupational safety and health (OSH) standards in production processes.

## 5. Gaps in business capabilities

A central element of the STED approach is to investigate what companies will have to improve if they are to be competitively successful into the future. The STED approach involves asking furniture enterprises what their own views are on what they need to improve in order to succeed, and also asked enterprises about the business capabilities they need for success, both as part of the interview survey and through other consultations. Figure 21 below summarises STED survey responses from the furniture industry.

**Figure 21: No. of surveyed enterprises that identifying areas of capability as crucial for their future success**



**Source:** STED Survey, Egyptian Furniture Sector, 2014

The main five themes that emerged from the responses concern the following areas that were deemed by furniture enterprises as critical for their future success in order of importance, (i) Wood finishing (ii) Design (iii) Sourcing high quality inputs (iv) Research and development, innovation, and new products and (v) Production management – linked to both quality and safety, and with a focus on production management and maintenance.

These themes are consistent with the priorities that were subsequently raised in workshops, and in other consultations with stakeholders in the furniture industry. They are also consistent with existing assessments of strategic priorities for the sector, as referenced elsewhere in this report. The survey undertaken for the study provides additional insights into some of these areas, as set out from Section 5.1 to 5.9 below.

### 5.1 Wood finishing

Wood finishing is centrally important to perceptions of quality and attractiveness of furniture among both international and domestic consumers and buyers. Once wooden furniture is complete and assembled, it is polished and stained to create the finished appearance of the product. However, there are significant problems with the quality of wood finishing in the furniture industry in Egypt, which undermines the industry's ability to supply markets with high quality finished furniture. Due to the problems with wood finishing in Egypt, furniture industries in several countries, among them Saudi Arabia, Turkey and Israel, import unfinished Egyptian furniture and finish it themselves.

## 5.2 Design

Even in the Egyptian domestic market, traditional highly ornate designs are losing market share. Many consumers prefer simpler and more practical furniture that does not involve as much carving. Design aims to meet the need for both the appearance and the intended practical use of furniture. It provides a route into market segments that are new to the Egyptian sector in both export and domestic markets. Furniture design also provides a basis for variation from competitors, creating scope to develop a competitive advantage and create more value. In order to add more value, furniture industry strategies should have a focus on product diversification through continuous innovation and good design.

Original design capability is necessary to adapting traditional types of furniture to meet modern needs, and to diversify Egypt's furniture products so as to compete in non-traditional product markets. Continuous monitoring of furniture and living concepts must be carried out to obtain a solid basis for innovation and design. Even where furniture designs that are new to Egyptian manufacturers are inspired by international competitors, there is a need for strong design capability in order to do more than make direct copies. With its high degree of operational flexibility, the Egyptian furniture industry has scope to gain advantage in the market by designing new collections at short intervals, enabling producers to keep pace with market opportunities.

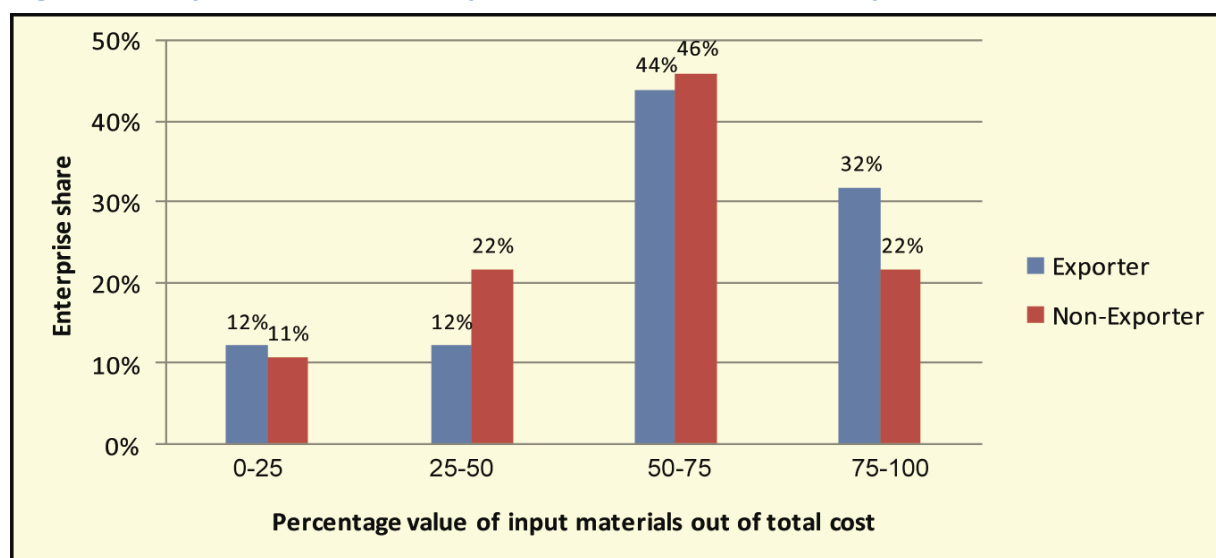
Strong design capabilities are critical for success in international markets, as good design attracts and retains the attention of consumers and international buyers. International furniture competitors, and indeed larger Egyptian companies, are increasingly relying on computer-aided design (CAD) and computer aided manufacture (CAM) applications to move efficiently from design concepts to the effective production of sophisticated furniture.

## 5.3 Sourcing high quality inputs

Egypt's international competitiveness of the industry increasingly depends on the efforts to improve its reputation for low quality among international clients. One key aspect of this challenge is to be able to source high quality inputs and raw materials.

Egyptian furniture producers lack access to forests and a saw milling industry, they are highly dependent on imported wood for raw materials. They also import the majority of other raw materials such as paints and varnishes, glues, metal fittings, woodworking electrical and non-electrical equipment, upholstery material and plastics. Materials account for a large share of costs, with the STED survey indicating that materials accounted for at least 50 per cent of costs for over 76 per cent of exporters and for 66 per cent of non-exporters.

**Figure 22: Exporters and non-exporters' share of costs for input materials (%), 2014**



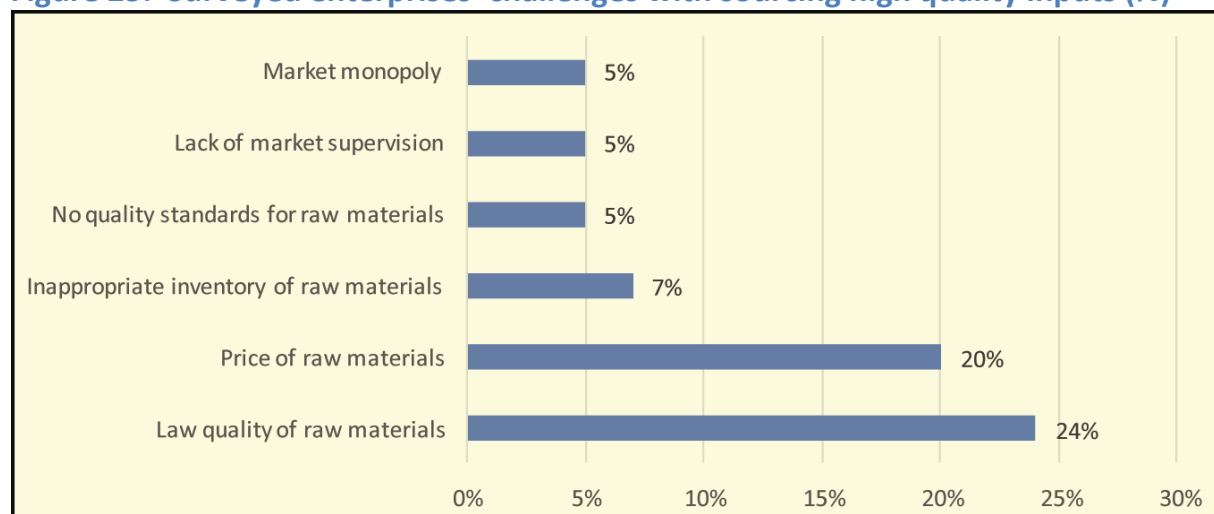
Source: STED Survey, Egyptian Furniture Sector, 2014

Many Egyptian furniture producers opt for low quality raw materials imports, partly to minimise cost, but also because they are not experts in sourcing and there are no clear specifications available that allow them to minimise costs while ensuring sufficient quality. Dossenbach (2001), reached the conclusion that the wood market in Egypt is more price-sensitive than quality-sensitive. The price of high-quality wood has been increasing, thus raising production costs. In addition to sawn wood, panel wood and veneer imports have also been assessed to be of low quality, with uneven thickness, wavy panels and voids in the material.

Other raw materials, such as glue and foam, are also important to the quality of the finished furniture product, as well as its durability and life span. Glue is a key input and foam is essential in upholstery. Glue and foam together are estimated to account for 15 per cent to 20 per cent of the total cost (El-Meehy, 2002) and both are mostly imported. Glue is used extensively, and alone accounts for between 5 and 10 per cent of the total cost of upholstered products, however it is also used in other products. Adhesives and sealants are mostly imported since locally produced glues are believed to be of poor quality. While the local production of foam is said not sufficient to meet demand.

The STED survey (2014) asked enterprises to what extent they considered sourcing good quality input materials as an obstacle to exporting. A total of 66 per cent of surveyed enterprises indicated that sourcing good quality raw materials represents between a moderate to a large obstacle. They also reported low quality of available raw materials, and high prices as obstacles to exporting. Some identified inappropriate inventory, the non-existence of quality standards for importing raw materials, the lack of market supervision and the presence of market monopoly as additional challenges to sourcing high quality raw materials.

**Figure 23: Surveyed enterprises' challenges with sourcing high quality inputs (%)**



Source: STED Survey, Egyptian Furniture Sector, 2014

## 5.4 Quality and standard assurance

While the quality of inputs is part of the reason for problems with product quality, there are other significant problems further along the value chain, including in woodcutting, carpentry, carving, staining and polishing, and upholstery. Larger firms are able to carry out some or all of these activities in the same location. However, smaller enterprises that mostly form part of the value chain where work is divided among multiple enterprises. This value chain is both vertical, with work in progress going through a succession of enterprises before being completed, and horizontally with multiple enterprises working on a stage of the manufacturing process in parallel.

Even though large enterprises face challenges with producing to a high level of quality all in one location and under a single management structure, these problems are far greater for fragmented networks, where supervision and coordination tend to be weak and often lack a consolidated systems for quality control and quality assurance. As a result, quality is often uneven, and quality assurance systems such as Total Quality Management or Kaizen are difficult to implement. Consequently, quality assurance certifications such as ISO9001 are effectively impossible to access for large parts of the sector.

Another quality-related problem in the furniture industry is the difficulty of producing standard units (i.e identical pieces of furniture) on a significant scale. Producing standard units is particularly difficult through networks of MSMEs that have limited use of modern machinery. When customers order a piece of furniture after having seen it at a show room for instance, they expect to receive exactly what was presented to them when they purchased it. Similarly when an intermediary buys in bulk to resell furniture it is important that all units they receive are similar in terms of specification, appearance and quality. The same is true of clients such as hotels since they require large quantities of the same piece of furniture and rely on their quality to provide all guests with a consistent experience. Given the importance and size of the tourism sector for the Egyptian economy, it is crucial that suppliers of furniture to the sector should meet these standards.

## 5.6 Research, design and innovation

In order to compete in international markets innovation is necessary to allow Egypt's furniture industry to expand beyond its existing zone of competence. The Egyptian furniture industry should be moving into developing new and modified products so that they better meet the requirements of export markets both inside and outside the region.

Successful product development in the furniture industry requires a combination of technical and business capabilities. Products should be produced efficiently and cost-effectively and meet market needs. In order to make these capabilities available to furniture enterprises that do not have the resources to develop them internally, the role of the Furniture Technology Centre needs to be enhanced to assist the industry with product development and transfer, and to diffuse technologies and innovations. An additional area in need of improvement is the enforcement of the copyright law (law no. 354), in order to better protect intellectual property and increase potential financial rewards from investments in innovation, research and design.

## 5.7 Production management and production effectiveness

Fundamental to the furniture industry's ability to compete both in domestic and international markets is efficiency in manufacturing furniture that meets quality and safety requirements. Both production effectiveness and high quality products are the outcomes of excellent management that combine well-designed production processes and procedures with appropriate and effective use of technology and implementation of product quality and assurance management systems.

Improvements in productivity and quality come from continuously and periodically re-examining production processes to find better and innovative ways to work. Producing high quality products necessitates that production and maintenance processes be fine-tuned. However, modern

approaches to work organization place much of the responsibility for this on technicians and production workers. This is due to the fact that the Egyptian furniture industry faces competitors with lower labour costs and with better efficiency arising from greater scale and more modern and automated machinery. Well-designed production processes should therefore be supported by effective quality management and assurance systems that are in line with international standards.

## 5.8 International marketing and managing international distribution channels

With close proximity to Arab countries and Europe, Egypt has preferential access agreements with the Arab countries and other regional markets. Egypt's geographical location also make it a strong marketing point. Egypt's furniture industry's marketing and distribution are primarily undertaken through the individual efforts of enterprises as well as through infrequent participation in furniture exhibitions abroad. Since the industry is highly fragmented with a great number of small sized enterprises, most enterprises are not directly involved in exporting. Only large firms have the resources to effectively market internationally. Assistance to firms in participating in international trade fairs is mostly focused on large companies, and intermittently on medium-sized enterprises.

Smaller businesses are often managed by people with low levels of education who tend to have good woodworking skills but little knowledge of marketing strategies and awareness of global trends. They also have limited resources and little bargaining power to address international markets.

Support enterprises often enable distribution, with wholesalers and retail chains acting as integrators among MSMEs in addressing the Egyptian market. Some support enterprises are already involved in exporting and could potentially play a greater role in connecting furniture MSMEs to export markets, enabling the distribution process. Sourcing offices also play a similar role. Key marketing mechanisms include showrooms and organizing exhibitions in order to showcase Egyptian furniture products.

There is scope for more activity to facilitate the industry as a whole in accessing export markets. Furnex, an Egyptian furniture exhibition that takes place once a year, has been a successful example of this, attracting 150 exhibitors.

There may also be scope to develop the "Made in Egypt" label, and transform it into an indicator of good quality and affordability. An effort both by individual enterprises and government entities could promote the entire sector. Publicity can also be found through trade publications and international furniture media. Relationships with these magazines and presence abroad need to be strengthened, for instance through "furniture houses" in France, Italy and other EU countries. Likewise, sales material and brochures should be consistent and informative. The effective use of new technologies, including the use of social media, will be an important component of successful marketing.

All of this requires significant professional capabilities in international marketing and distribution at three levels:

1. In furniture enterprises that export directly.
2. In enterprises that act as integrators and intermediaries to bring Egyptian furniture manufactured by others to export markets.
3. In organizations, including the EFEC, responsible for effectively enabling export marketing by the sector as a whole.
- 4.

Successful marketing and distribution also requires developing a stronger understanding of export marketing requirements throughout, including areas that will serve export markets, even if done indirectly through supplying other businesses.

## 5.9 Regulatory compliance

Regulatory compliance is important to accessing export markets. Technical regulations and procedures include adhering to technical standards, conformity assessment to prove compliance<sup>(18)</sup>, and other procedures such as obtaining required certificates<sup>(19)</sup>. Compliance is made more complex by factors such as delays in official administrative procedures, short deadlines for completion of requirements, and inconsistencies in classification of products. An additional complexity is the large numbers of documents that must be completed, many of which are difficult to fill out in addition to difficulties with translation of documents from or into other languages.

There may also be a need to comply with specifications or standards agreed with specific customers. With furniture, the use of foams, adhesives and finishes that comply with regulations and standards is important from the perspective of access to markets and customer requirements. Safety and health regulations and standards are also important, including that customers are not exposed to any hazards, such as varnishes and other substances. Many countries are also imposing environmental standards in order to contribute to slowing down the process of climate change, which can limit the use of finishes that incorporate solvents. It is therefore important for the Egyptian furniture industry to have the capacity to manage compliance, and to manufacture and finish furniture in compliance with relevant regulations and standards.

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<sup>(18)</sup> This is done through testing in laboratories (for example, testing for fire resistance).

<sup>(19)</sup> For example, product certificates of origin.

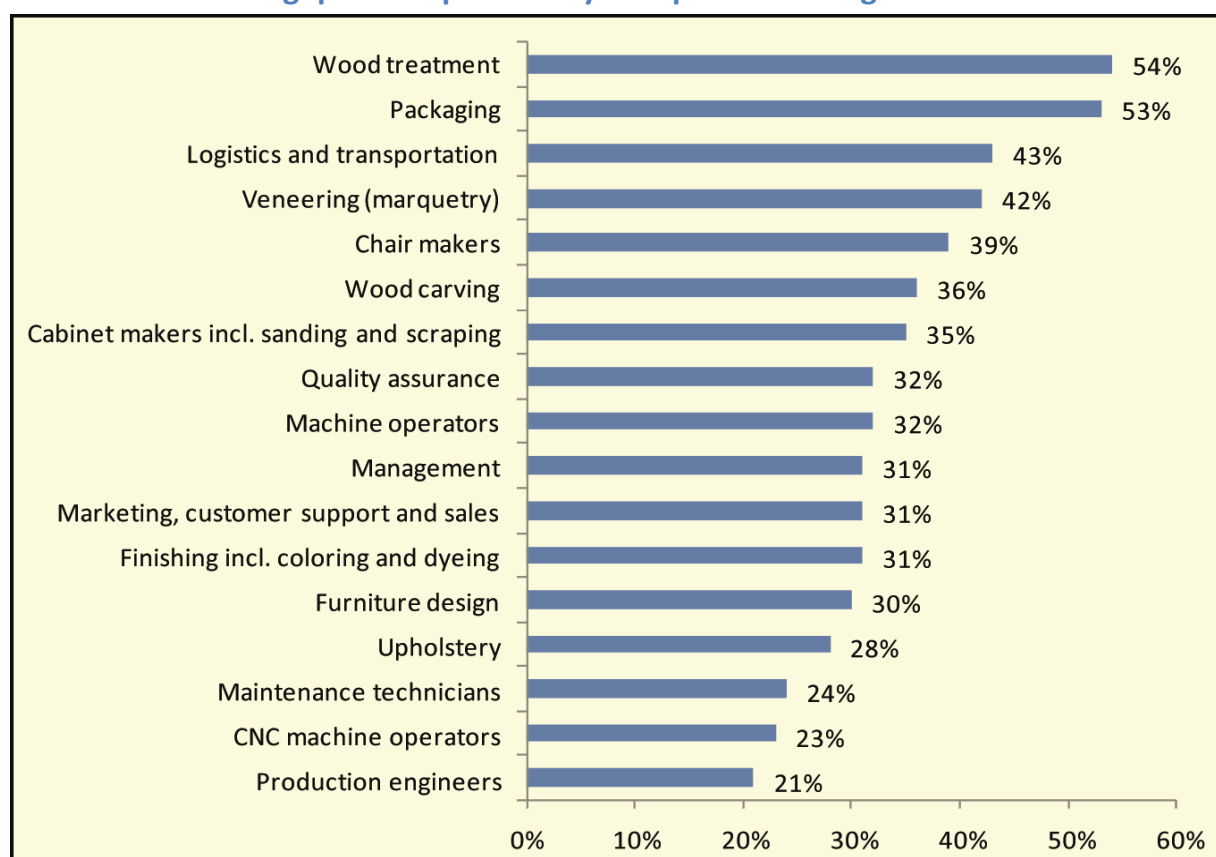
## 6. Implications for the skill types needed

This section identifies priority skills gaps for action based both on the priorities identified by employers, and on an analysis of the gaps in business capabilities of enterprises in the sector that will be necessary to bridge for future exporting success. This is based on a combination of information from the STED survey of employers, an analysis of skills gaps, and stakeholder consultations and workshops.

### 6.1 Existing skills gaps identified by employers

The majority of employers surveyed by the STED survey asserted that they have difficulty in filling vacancies in at least some occupations. Averaged across 17 occupations, 33 per cent of exporting employers said it was difficult to recruit qualified persons, and another 27 per cent said that it was not easy. For some occupations, over 50 per cent of employers reported it was difficult to recruit qualified persons. With over 40 per cent of employers stating that they have difficulty in recruiting, the leading five occupational areas identified as the most difficult in filling are in (i) wood treatment, (ii) packaging (iii) veneering (iv) logistics and transportation, and (v) chair makers. However, for all occupations more than 20 per cent of enterprises indicated that they had difficulty in recruiting qualified workers as illustrated in Figure 24 below.

**Figure 24: Percentage of surveyed enterprises that indicated they have difficulties in recruiting qualified persons by occupational categories**

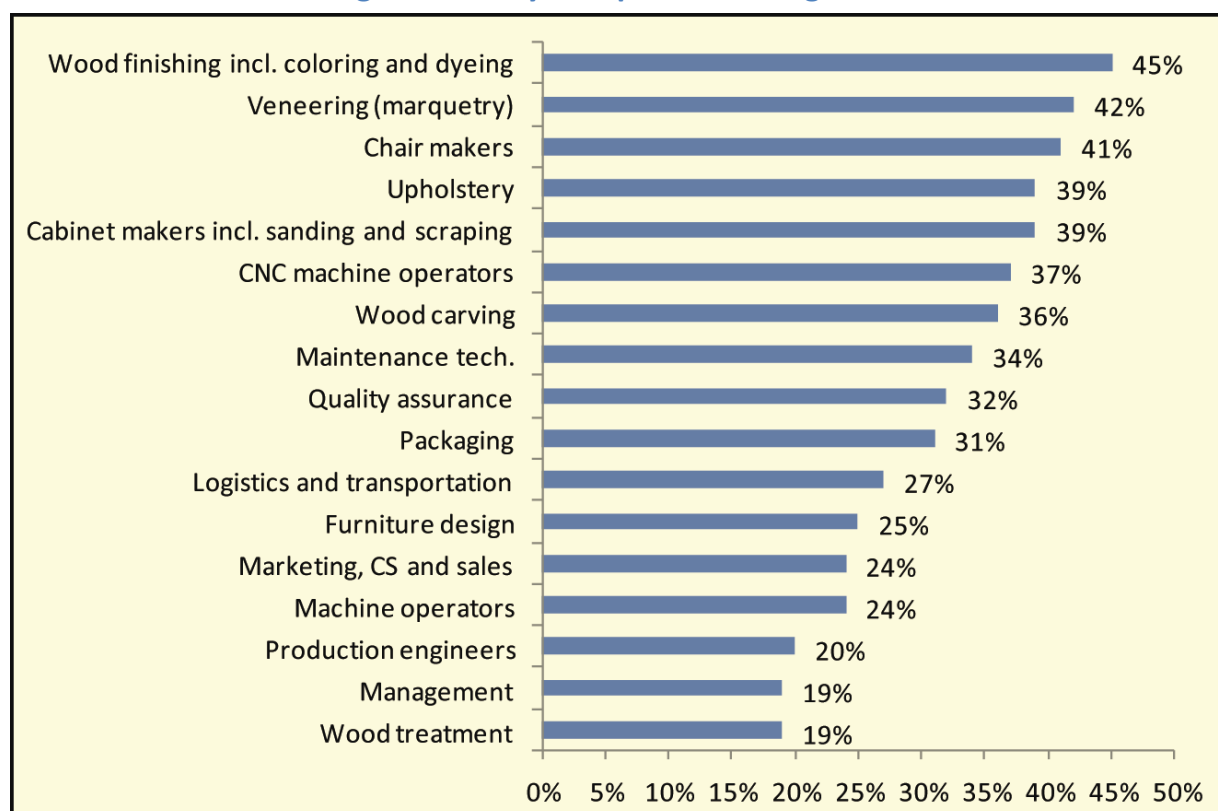


**Source:** STED Survey, Egyptian Furniture Sector, 2014

For some occupations, it is likely that the share of firms interviewed identifying a difficulty in filling vacancies is reduced by the fact that they are not required by all firms. For example, only large and perhaps medium-sized firms are likely to be able to afford to employ a designer, and it is mostly large firms that can afford to use modern CNC machines.

The STED survey (2014) also found that there is significant dissatisfaction with the qualifications of fresh graduates when they start working. Averaged across 17 occupations, 31 per cent of employers said they were not satisfied, and another 44 per cent indicated that qualifications were acceptable rather than satisfactory. For some core occupations, over 40 per cent of employers said they were dissatisfied, with the biggest dissatisfaction being in the area of wood finishing.

**Figure 25: Percentage of surveyed enterprises that reported dissatisfaction with skills of fresh graduates by occupational categories**



**Source:** STED Survey, Egyptian Furniture Sector, 2014

Across a wide range of areas of capability, a significant share of surveyed employers also reported that they would benefit from interventions that would assist them in developing or recruiting skilled persons.

## 6.2 Skills gaps associated with the industry's fragmented structure

A key skills challenge for Egypt's furniture industry lies in its highly fragmented structure, dominated by micro and small enterprises, and its reliance on informal apprenticeships for training. Worldwide, MSEs have difficulty in providing adequate training opportunities for managers and employees. As a means of providing initial training for craft workers, informal apprenticeships can be successful in teaching traditional skills to new generations, although the quality of the skills learned can be quite variable. However, MSEs are not effective for introducing new ideas, techniques and technologies, or providing new workers with a solid grounding in the skills they need for their own success and that of their employers. Vocational schools, particularly those operating in the Mubarak-Kohl dual framework, have demonstrated the value of more formal training. It is highly important that these opportunities be extended to a much wider population of new entrants into the sector.

A closely related skills challenge is that entrepreneurs who operate micro and small furniture enterprises are almost entirely from the same background and lack the training to effectively run their businesses. Other countries have tackled this issue by offering continuing training or mentoring, including master crafts training.

## 6.3 Skills gaps arising from a lack in business capabilities

The key gaps in Egypt's furniture business capabilities, both current and for the future have been identified as follows:

- Wood finishing
- Design
- Sourcing high quality inputs
- Research, design and innovation
- Production management and effectiveness
- International marketing.

### Skills gaps in wood finishing

The capability gaps identified in wood finishing arise from gaps in infrastructure, technology, skills and quality management. Investment in suitable finishing spaces and technologies are necessary in order to apply internationally standards to finishes such as nitrocellulose, catalysed lacquers or metallic coatings to a consistently high standard. There is also a major need to invest in skills to apply these technologies effectively, both in terms of applying them properly and in the complexities of getting pigmentation right. Even with these skills, it is important to develop strong capabilities in quality management to ensure that furniture is finished to a high standard. Finishing to a high standard included a durable finish that is consistent with the specification within and between production runs, and that the finish is safe for furniture users.

To reach specifications, it is necessary to develop stronger skills at a range of levels, including craft, technician and scientist/chemist. The gap between the skills available in the industry now and the skills that are needed for future competitiveness is substantial, both in terms of the quality of skills, and skills at MSEs level such as in finishing technologies. Such skills should be phased out, for example into types and techniques of painting and new upholstery techniques.

There are also non-skills related gaps in infrastructure that particularly affect MSEs that cannot afford facilities such as air-tight rooms. There may be scope for collaborative action between businesses to provide for these needs.

### Skills gaps in sourcing high quality inputs

The need to improve the sourcing of high quality inputs has skills implications for a number of professions within the Egyptian furniture industry, including:

1. Professionals in furniture enterprises responsible for sourcing and purchasing inputs.
2. Managers and professionals in intermediary companies that supply furniture enterprises with inputs.
3. Craftspersons in micro and small furniture businesses particularly affected by low-quality inputs.

The relevant skill needs for the above mentioned professionals would therefore include:

- Assessing the quality of materials, particularly of wood.
- Drying wood prior to use.
- Purchasing timber, in particular through collaborative approaches which includes knowledge on reliable purchasing channels
- Applying required environmental and regulatory standards.

### **Skills gaps in product innovation and design**

Both innovations in products and in production processes are highly skill dependent. Product innovation may involve creating products that are new to market, replicating products already on the market, and making incremental changes to existing products. Product innovation can also involve replicating existing products through acquiring or licensing technologies and intellectual property from others.

There is a shortage of local designers in Egypt, with professional designers often hired from abroad, if hired at all. Small furniture enterprises tend to stick to designs they have passed on through generations with only incremental change. Trained designers could be a key source of innovation, making Egyptian furniture relevant in the international market, without necessarily abandoning traditional features. With intensifying globalization, customers' preferences are becoming more uniform across the world, leading designs to be more similar and widening the competitive arena for furniture enterprises. Egyptian designers are required to enable the furniture industry to effectively respond to this trend. The ability to use new machines and coloring products will also be necessary since international competitors use computer aided design (CAD) and computer aided manufacture (CAM) applications to produce more sophisticated, precise and efficient designs.

To enhance and support the innovative capacities of Egyptian furniture producers, especially SMEs, it is crucial that they have access to highly skilled expertise in furniture design, technology and external business, such as the Furniture Technology Centres in Damietta and 10<sup>th</sup> of Ramadan City mentioned above.

### **Skills gaps in production management**

Business capacity gaps in furniture production are related to productivity and production capabilities. To a great extent, these areas are driven by technology and design operating processes. However, equally important is the adoption of modern forms of work organization, supported by forms of people management that seek to build commitment, collaboration and skills. Core skills and attitude to work are fundamentally important to the operation of modern forms of work organization, as are strong management and supervisory skills.

In addition to core skills, technical skills specific to each occupation are also essential in production at all levels of skill, including operatives, machine operators, craftspeople, supervisors, production managers and production engineers and scientists. Improving capabilities in production efficiency and product quality requires the development of skills at all levels within production operations. Most notably, these skills include operatives, craftspeople and supervisors in businesses of all sizes, and more specialised occupations in businesses large enough to employ them, including:

- quality control and quality assurance staff
- laboratory technicians
- production managers
- engineers and chemists
- trainers.

The IMC is already supporting many companies in the furniture industry to modernize their approach to production management, with a particular focus on larger enterprises. The STED survey highlighted particular gaps in wood finishing, veneering, chair making, upholstery, cabinet making and packaging skills.

### **Skills gaps in international marketing**

The STED survey identified marketing as a need for stronger capacity building. This was particularly noted by large and medium sized furniture enterprises. To a significant extent, marketing is related to building and exploiting a marketing infrastructure at the business and industry level. It can also be potentially carried out through joint marketing initiatives that cover businesses that do not have sufficient scale to effectively export on their own. At the business level, this infrastructure includes elements such as sales offices, agreements with marketing intermediaries and systems for collecting and exploiting market information. At the level of the sector, it includes elements such as attendance at trade fairs and joint promotional activities that are accessible to enterprises across the furniture industry. Joint marketing initiatives may also involve the creation of a jointly controlled exporting entity or working with an existing market intermediary.

The skills component in effective marketing is substantial as it covers a range of occupational levels, from telephone sales and customer support to commercial director or export manager. It also covers a wide range of activities, such as sales, after-sales support, sales management, commercial product management, advertising and promotion, strategic marketing, marketing inputs into product development, commercial management, and management of agents and other distribution channels. The key requirements for identified skills improvement are centred on the upper and middle areas of this spectrum of skill. As Egyptian furniture enterprises internationalize and face increased international competition in their domestic market, they must become more internationally competitive in marketing (and innovate according to international market requirements).

The toughest gaps to bridge are at the higher skill levels. Egyptian universities produce sufficient graduates in disciplines relevant to marketing so that the availability of people to fill entry-level positions is not a serious constraint. The challenge, however, is to upgrade the marketing capabilities of the management teams of furniture companies, with an emphasis on building talent and up-skilling existing managers and professionals.

Developing the marketing capabilities of businesses is already a high priority area for agencies that support the food processing sector's development, including the Egyptian Furniture Export Council and the IMC. The feedback from businesses is that they provide good and valued supports, including good training.

Discussions at stakeholder workshops indicated that principal Egyptian furniture exporters are making good progress in developing their marketing capabilities, both through their own resources and because they receive comprehensive support. These supports include training from the development agencies. However, the next tier of enterprises interested in exporting have less resources of their own to put into international marketing due to their smaller scale, and also receive less comprehensive support from development agencies. As a result, they have greater difficulty in developing their marketing capabilities. Experience from other countries shows that initiatives to develop the marketing capacity of medium-sized companies, based on providing education and training courses in international marketing to cross-company groups, can be both effective and cost efficient. Provision of seed funding and advice for joint marketing initiatives has also been found to be effective in assisting small companies in accessing international markets.

## 6.5 Conclusion on skills gaps

Furniture enterprises reported difficulties in recruiting qualified workers across a wide range of occupations. Over 40 per cent of employers surveyed indicated difficulty in recruiting for the occupational areas of wood treatment, packaging, veneering (including marquetry), and logistics and transportation. Many employers also identified problems with the quality of fresh graduates in a wide range of occupations, with the greatest number identifying problems in wood finishing, veneering, chair making and upholstery.

Micro and small enterprises face particular problems in obtaining the skills that they ideally require. Therefore, there is an urgent need to upgrade the existing informal apprenticeship system to enhance skills of apprentices and master craftspersons, raise productivity, improve working conditions and enable micro and small businesses to better position themselves in local, national and international markets.

The identified required business capabilities encompass significant related skills gaps. These are namely in finishing, product innovation and design, sourcing high quality inputs, production management, and international marketing.

## 7. Proposed responses to current and future skills needs

The main proposed recommendations are as follows.

### 1) Strengthen synergies and coordination between different actors in the sector and in related sectors

A skills strategy for the furniture industry requires greater collaboration between different actors in the sector, namely:

- The Ministry of Industry, Trade and Small and Medium Enterprises, Ministry of Manpower and Migration, Ministry of Education, Ministry of Higher Education, and the Ministry of Technical Vocational Education and Training
- Governmental agencies, including the Industrial Training Centre, and the Technology Centre
- The Chamber of Woodworking and Furniture Industries, the Woodworking and Furniture Enterprise Training Partnership, the Furniture Export Council
- Workers' organizations
- Public and private training providers, including technical schools and colleges, universities, TUV Nord (German Technical Inspection Association), SGS (General Inspection Society)
- Relevant civil society organizations.

The STED process has contributed to forming a joint vision for the development of the sector, and has highlighted priority areas for action. It is also apparent that the Egyptian furniture industry will only thrive if it closely coordinates with other sectors to improve the quality of inputs and ensure appropriate adoption, adaptation, implementation and maintenance of technology for improved productivity and competitiveness of the sector.

### 2) Launch a major initiative to improve TVET provision

A major initiative should be undertaken to improve TVET provision in the furniture industry that builds on initiatives already underway, and aims to modernise provision, level up standards, and make it accessible to the large numbers of entrants currently trained informally. Key elements to add to the work already underway include:

- Developing, making publicly accessible, and implementing modern occupational standards
- Updating curricula and assessment based on these standards, with a strong focus on the quality of qualifications
- Developing and implementing dual system quality apprenticeships to progressively replace informal apprenticeships.

Strengthening dual approaches in the furniture industry could greatly benefit from inter-company training centres, particularly suitable in the context of an industry that is dominated by SMEs. Initial work under this initiative, which would be undertaken collaboratively with the Ministry of Education and the Ministry of Manpower and Migration, would be in developing and piloting before deploying across the parts of the TVET system that support the furniture industry. This reform is a necessary complement to other efforts to improve the capacity of the TVET system, in order to contribute to tackling the productivity and quality issues that constrain the sector's competitiveness. It can also build on and learn from existing provision for the industry under the dual system.

### 3) Launch a coherent initiative to strengthen management skills in the sector

A coherent initiative should be undertaken to build general management, function management and supervisory management skills in furniture SMEs. While there is a well-justified strategic and institutional focus on building scale and capacity among the larger furniture businesses, there should also be scope to build the management capacity of SMEs using resource-efficient development strategies. This is relevant both to SMEs in the value chains that supply larger exporting businesses, which will benefit the competitiveness of the businesses they supply, and also to SMEs exporting on a

smaller scale or with export potential. The initiative should take into account existing work in this area, and should partner with the IMC and the sector's Export Council.

The types of activities to be piloted should include:

- The development and piloting of short courses to be provided by or through TVET providers.
- The development of employer networks with similar skills needs to overcome scale barriers to training access by working jointly with education and training providers and through jointly purchasing training services.
- A focus on training master craftspersons, supervisors and in-house trainers, with training priorities in:
  - production management and engineering
  - quality management and regulatory compliance
  - human resource management
  - exporting/international marketing
  - sourcing and procurement
  - design
  - financial management.

The work with TVET providers would include strengthening the capacity of providers to offer both initial and continuing training. Courses provided under this initiative would also include quality assurance satisfactory to the Sector Skills Council.

#### **4) Develop quick win interventions in priority areas**

The courses for quick win interventions identified by the analysis are in the following areas:

- Design
- Sourcing wood
- Regulatory compliance – domestic and for testing and certification for export markets
- Marketing for furniture SMEs
- Health and safety for furniture SMEs
- Production and people management for furniture SMEs

Courses could be made available through technical colleges or other TVET providers, and integrated into existing courses or on a stand-alone basis. Derivative self-learning materials could also be made available online and in print format to maximise outreach.

TVET providers should engage with employers in order to understand and respond to their skills needs. They should also track their graduates to better understand labour market demand. With that qualification, top priorities for more substantial TVET provision highlighted by the analysis include the following:

- Wood finishing – Painting and Upholstery
- Veneering and marquetry
- Packaging
- CNC machine operation

#### **5) Develop Enterprise Training Partnership (ETP) into Sector Skills Council**

The existing ETP should be developed into a proper Sector Skills Council (SSC) for the furniture industry. As a SSC, it can provide on-going leadership on guiding the development of the skills needs, improve coordination among stakeholders on skills, and to collaborate with existing institutions on skills aspects of sector development. It should also include a broad cross-section of stakeholder representation, including involvement from worker representatives, the range of relevant ministries (such as MoE, MoHE, MoMM, MTI), agencies and sector organizations (such as the Export Council), and maintain significant employer representation.

Institutional strengthening also requires a permanent legal status and a reliable funding base, both from public and private sources, which could be partly ensured through the payroll training levy. SSCs are a key component of the institutional arrangements underpinning sector competitiveness in an increasing number of countries. They generally offer a wide range of services that include labour market information on sector trends, skills needs, skills provision for the sector, career information on occupations, develop and promote skills standards and hence play a role in quality assurance of training provision.

#### **6) Implement a pilot export training programme for furniture enterprises**

A pilot export training programme will target furniture enterprises with potential for significant exports that are not already intensively targeted by development agencies. These enterprises should be selected from subsectors with strong potential for export development.

The aim of a pilot training programme is to enable participants to effectively marketing their company products by increasing current share or opening new export markets. It implies the following processes:

- Identifying products for export within the company
- Identifying, recruiting, and managing suitable distribution channels
- Pricing and negotiating contracts with agents, distribution channels and customers
- Leveraging export services provided by governmental and nongovernmental entities including freight services and other related service providers
- Making best use of air, marine, and land transportation
- Ensuring compliance with, and making best use of current trade agreements
- Ensuring standards, compliance and documentation in exporting.

A pilot programme is intended as a practical programme for a few furniture enterprises, leading to documented successes that can be brought to a wider population of furniture enterprises later.

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