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Human Resource and Skill Requirements in the

Furniture & Furnishings Sector (2022)

– A Report



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Human Resource and Skill Requirements in the Furniture & Furnishing industry

Study on mapping of human resource skill gaps in

India till 2022

Table of Contents

1. Environment Scanning and Competitiveness of Furniture and Furnishing industry	5
1.1. Overview	5
1.2. Furniture industry.....	5
1.2.1. Domestic Consumption.....	5
1.2.2. Exports	6
1.2.3. Imports	6
1.2.4. Key Segments	7
1.2.5. Key demand drivers	8
1.2.6. State wise production of Furniture.....	10
1.2.7. Key Players	11
1.2.8. Key Success Factors.....	11
1.2.9. Key Risk Factors.....	12
1.3. Furnishing industry	12
1.3.1. Domestic Consumption.....	12
1.3.2. Exports	13
1.3.3. Imports	14
1.3.4. Major centres for Furnishings	14
1.3.5. Key Players	15
1.3.6. Key Success factors	16
1.3.7. Key Risk factors.....	16
1.3.8. Demand drivers	17
2. Human Resource and Skill Requirements.....	18
2.1. Human Resource and Skill Requirements in Furniture industry.....	18
2.1.1. Overview of Employment in Furniture industry	18
2.1.2. Value chain and core processes	18
2.1.3. Profile of Human resource in Furniture industry	22
2.1.4. Skill requirements and skill gaps in the Furniture Industry	24
2.1.5. Current Training & Education Infrastructure.....	31
2.1.6. Emerging trends in skill requirements	32
2.2. Human Resource and skill requirements in Furnishing industry	33
2.2.1. Overview of Employment in Furnishing industry	33
2.2.2. Value chain and core processes	34
2.2.3. Profile of Human resource in Furnishing industry.....	37

2.2.4.	Skill requirements and skill gaps	39
2.2.5.	Current Training & Education Infrastructure.....	45
2.2.6.	Emerging trends in skill requirements	45
2.3.	Projected Size and Human Resource Requirement.....	46
2.3.1.	Projected Size and Human Resource Requirement for Furniture Industry	46
2.3.2.	Projected Size and Human Resource Requirement of the Furnishing Industry	47
2.3.3.	Focus areas where skill building is required	48

List of Figures

Figure 1:	PFCE on Furniture, Furnishings & household equipment (in Rs crore at current prices).....	5
Figure 2:	Furniture Exports (Rs. crore).....	6
Figure 3:	Furniture Imports (Rs crore).....	7
Figure 4:	Furniture market Consumer segments	7
Figure 5:	Percentage Share of Women Employment Out of Total Employment in organised sector	9
Figure 6:	Share of different states in Furniture Production.....	10
Figure 7:	PFCE on Furnishings (at current prices)	12
Figure 8:	Furnishings exports (Rs. crore)	13
Figure 9:	Demand Drivers of Furnishing industry	17
Figure 10:	State wise employment in Furniture industry	18
Figure 11:	Value chain of Furniture industry.....	19
Figure 12:	Share of different raw materials in Furniture manufacturing	19
Figure 13:	Manufacturing process of Wood Furniture	20
Figure 14:	Manufacturing process of Metal Furniture	21
Figure 15:	Manufacturing process of Plastic Furniture.....	22
Figure 16:	Distribution of workers in wood furniture production	23
Figure 17:	State wise employment in Furniture industry	33
Figure 18:	Value Chain of Furnishing industry	34
Figure 19:	Production processes in Furnishing	34
Figure 20:	Value chain of mattress industry	36
Figure 21:	Manufacturing process of coir Mattress	37
Figure 22:	Profile of people employed	39
Figure 23:	Projected Size of Furniture Industry (Rs. billion)	46
Figure 24:	Skill Pyramid for the Furniture and Furnishing Industry	48

List of Tables

Table 1: Key players in the Furniture industry	11
Table 2: Key Success factors for the Furniture industry	11
Table 3: Key Centres for Furnishings	14
Table 4: Key players in Furnishing industry	15
Table 5: Distribution of Human Resource across functions in Furniture manufacturing	22
Table 6: Educational profile of workforce in Furniture manufacturing	23
Table 7: Skill requirements and skill gaps in the Furniture Industry	24
Table 8: Training courses for Furniture industry	31
Table 9: Types of Stitches	35
Table 10: Product categories in Furnishing	36
Table 11: Distribution of Human Resource across functions in Furnishing manufacturing	37
Table 12: Educational Profile of the workforce in Furnishing Manufacturing	38
Table 13: Skill requirements and gaps in Furnishing industry	39
Table 14: Human resource requirement in Furniture Industry (in '000s)	46
Table 15: Function-wise distribution of incremental human resource requirement (in '000s)	47
Table 16: Incremental human resource requirement in the Furnishing industry (in '000s)	47
Table 17: Function-wise incremental human resource requirement (in '000s)	47
Table 18: Education-wise incremental human resource requirement (in '000s)	48
Table 19: Focus areas where skill building is required (human resource requirement in '000s)	49

1. Environment Scanning and Competitiveness of Furniture and Furnishing industry

1.1. Overview

The domestic Indian Furniture and Furnishing market is estimated to be around Rs 69,000 crore in 2007-08 accounting for around 1.5 % of the GDP.

The domestic Furnishing market is valued at Rs 20,750 crore in 2007-08. India is a key player in international Home Furnishing market and Exports of Furnishings were worth Rs 7,400 in 2007-08.

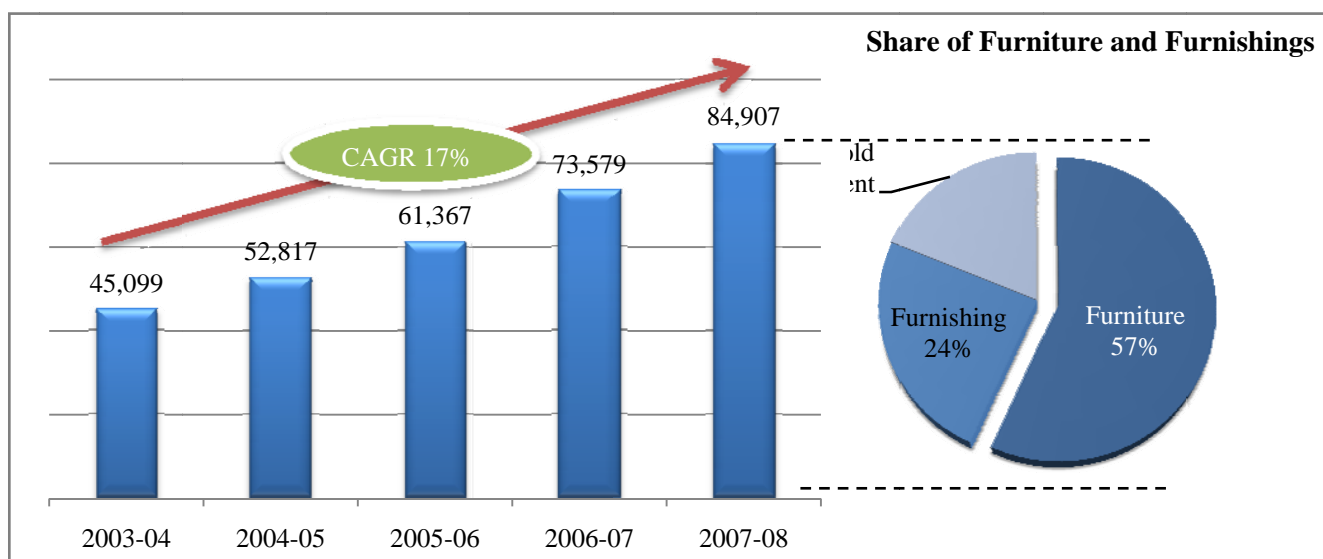
The domestic Furniture market is estimated to be worth Rs 48,200 crore with exports of Rs 1485 crore in 2007-08. India is a net importer of Furniture with imports worth Rs 1,791 crore for the same time period. The Furniture industry gives direct employment to 3 lakh people.¹

1.2. Furniture industry

1.2.1. Domestic Consumption

The private final consumption expenditure (PFCE) on Furniture, Furnishings and household equipment was Rs 84,907 crore in 2007-08. The PFCE on Furniture is estimated to be Rs 48,227 crore and on Furnishings to be Rs 20,750 crore for the year 2007-08. The Compounded Annual Growth Rate (CAGR) in PFCE on Furniture, Furnishings and household equipments was 17% for the period from 2003-04 to 2007-08.

Figure 1: PFCE on Furniture, Furnishings & household equipment (in Rs crore at current prices)



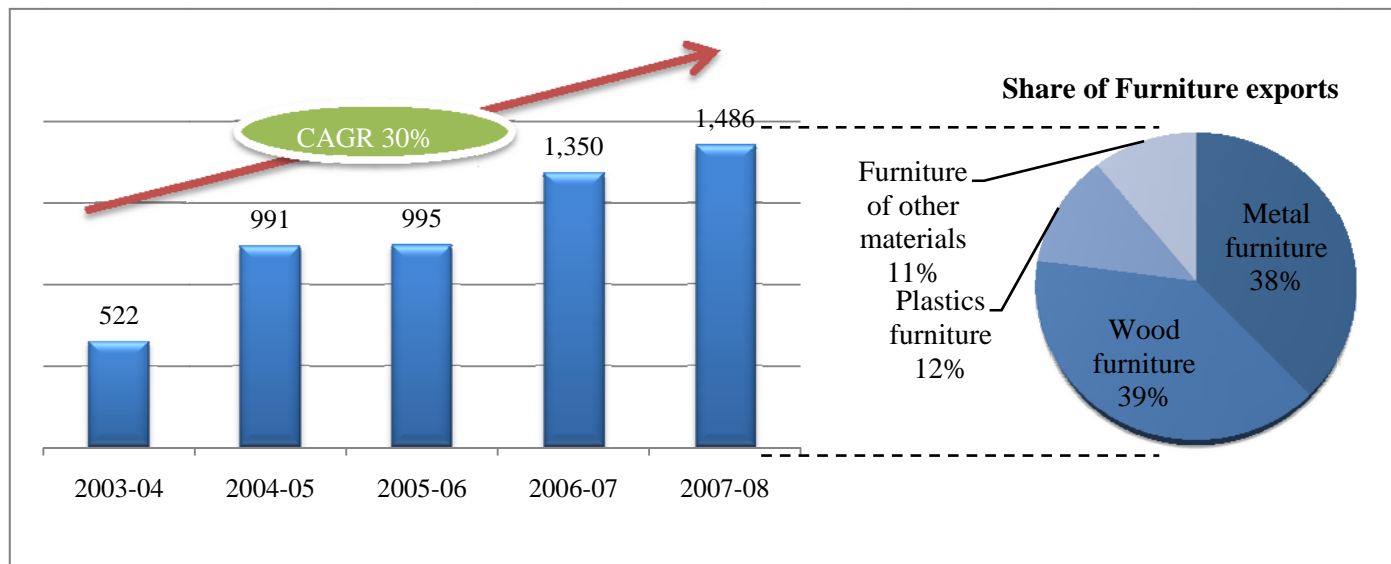
Source: Central Statistical Organisation (CSO), IMAcS Analysis

¹ IBEF report on Furniture industry

1.2.2. Exports

The Furniture exports are a small percentage of the domestic production. India's Furniture exports were worth Rs. 1,485 crore in 2007-08. However, the export value has grown with a CAGR of 30% from 2003-04 to 2007-08. The key export markets were US, EU, UAE and Australia.

Figure 2: Furniture Exports (Rs. crore)



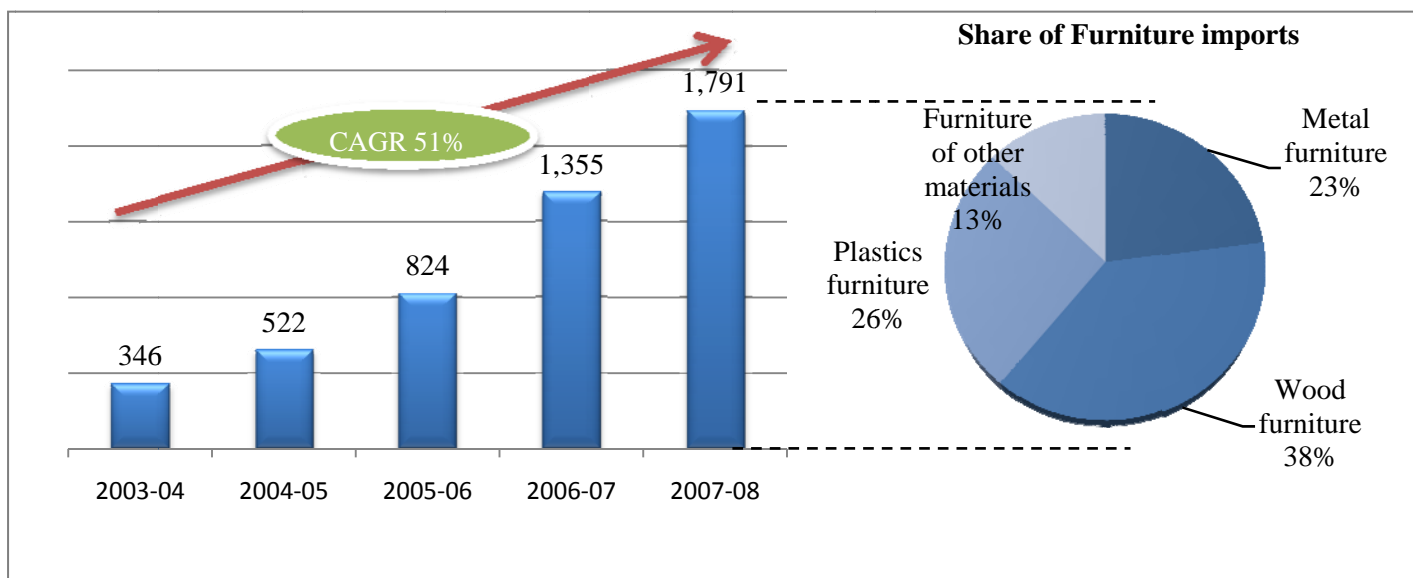
Source: DGFT, IMaCS Analysis

The Furniture exports were dominated by metal and wood furniture which accounted for around 80 % of the total Furniture exports.

1.2.3. Imports

India is a net importer of Furniture in value terms. The Furniture imports amounted to Rs 1,790 crore in 2007-08. The imports have grown with a CAGR of 50% from 2003-04 to 2007-08. Majority of the imports were from China, Malaysia, Italy and Germany. While the bulk of Furniture imported from China to cater to the lower end of the market, European imports from Italy and Germany are targeted towards high end of the market. Metal and wood Furniture accounted for around 60% of the imports.

Figure 3: Furniture Imports (Rs crore)



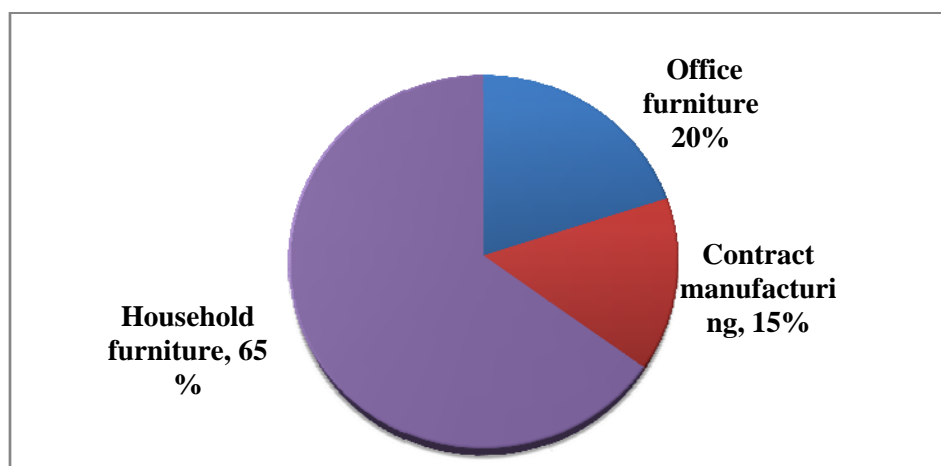
Source: DGFT, IMaCS Analysis

1.2.4. Key Segments

The key segments based on usage are **household furniture, office furniture, and contract manufacturing**. Household segment accounted for 65% of the Furniture market. The contract segment caters primarily to hotels, restaurants, etc.

The office furniture segment caters to the commercial and office space. Office Furniture includes seating, operative desking, executive furniture, others (cabinets and office storage, filing systems, wall-to-wall units, furniture for communication areas). 40% of the office Furniture market is operative desking. Office Furniture is characterized by contemporary aesthetics and style combined with functionality. The concept of modular furniture has caught on in the Indian market.

Figure 4: Furniture market Consumer segments



Home Furniture can be further segmented based on usage: Kitchen Furniture, Bedroom and Living room Furniture. The concept of modular kitchen is fast catching on in India. Children's Furniture is a whole new concept developed in tune with today's market demands and is a fast emerging segment. With the comforts of children being the top priority in almost all homes, a lot of thought goes into furnishing their rooms. The Home Furniture segment can also be segmented based on buyer profile in terms of 'first home' buyers and replacement buyers.

1.2.5. Key demand drivers

Real estate/housing boom

The key factor driving the demand for Furniture and Furnishings is the expansion of housing in both the major and smaller cities in India. Growth in both, housing and commercial development will have a positive effect on furniture demand, driven by the need to furnish new constructions. There will be demand for over 24.3 million new dwellings for self-living in urban India alone by 2015².

The rapid growth of the Indian economy has had a cascading effect on demand for commercial property to help meet the needs of business, such as modern offices, warehouses, hotels and retail shopping centres. Growth in commercial office space requirement is led by the burgeoning outsourcing and information technology (IT) industry and organised retail. For example, IT and ITES alone is estimated to require 150 million square feet across urban India by 2010. Similarly, the organised retail industry is likely to require an additional 220 million square feet by 2010³.

Growth in Tourism and Hospitality industry

Indian tourism industry has expanded rapidly over the past few years and is well poised to grow at a faster pace in the coming years underpinned by the government support, rising income level and various international sports events. Government of India's 'Incredible India' campaign launched in 2002 has also been quite successful.

The Travel & Tourism Competitiveness Report 2009 brought out by World Economic Forum, ranks India as 11th in the Asia-Pacific region and 62nd overall in a list of 133 assessed countries in 2009, up three places since 2008. The growth in both domestic and inbound international tourism has aided the growth of hotel industry. The foreign tourist arrival (FTA) has increased from 2.4 million in 1998 to 5.37 million in 2008. FTA registered a growth of 5.6% in 2008 over 2007. The domestic tourist visits to all States/UTs have risen from 168.2 million in 1998 to 526.6 million in 2007 at a compounded annual growth rate of 13.5%.

² 'Housing Skyline of India 2007-08', Indicus Analytics

³ IBEF

It is estimated that by 2010, an additional 125,000 hotel rooms would be required to cater to the needs of travel and tourism. The Furniture industry would benefit through the subsequent demand for Hotel Furniture.⁴

Organised Retail

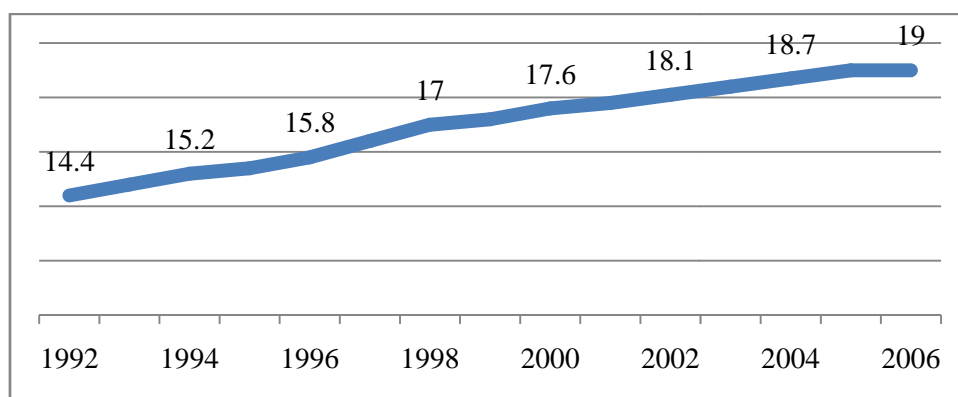
International retailers have mainly entered in the high-end market, through joint ventures with Indian retailers and manufacturers. They have targeted the premium segments for these turnkey solutions. The penetration of organised retail in the sector is more pronounced in the premium category such as high end modular kitchens, designer furniture, bathroom accessories etc. The major domestic players in this segment include Godrej Lifespace, Fabindia, Home Town, Style Spa, and Welspun.

Increasing Private Final Consumption Expenditure (PFCE) on Furniture and Furnishing

The PFCE on Furnishing and Furniture has been increasing on account of rising disposable incomes as well as changing lifestyles due to increasing participation of women in urban workforce and a young demography.

Share of Women Employment out of Total Employment has been showing an increasing trend over the years in line with the changing mindsets and increasing education levels among women. This has resulted in women having more impact on the purchase decision of household products as well as rising demand of products such as apparel, footwear, eyewear, jewellery etc. It has led to increased disposable household incomes for working couples and lifestyle changes. Women have less time to spend on household chores which has led to increased demand of household durables and out of home food services.

Figure 5: Percentage Share of Women Employment Out of Total Employment in organised sector



Source: Ministry of Statistics and Programme Implementation & Ministry of Labour, IMAcS Analysis

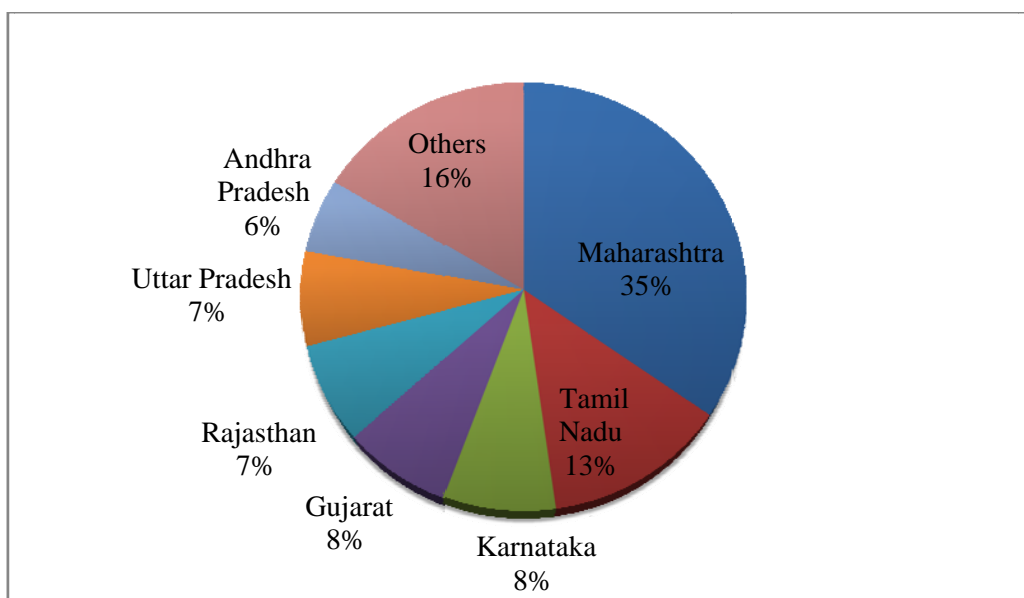
⁴ IBEF Furniture report

In India, the “demographic dividend” which manifests in the proportion of working age group of 15-64 years will be increasing steadily from 62.9% in 2006 to 68.4 % in 2026.⁵The age group of 15-40, which is the target segment for most of the marketers, accounted for 61% of the 46 crore economically active population in 2007⁶. The young demography has in turn aided the demand of aspiration and lifestyle products.

1.2.6. State wise production of Furniture

The Furniture industry is dominated by the unorganised sector which accounts for around 15% of the market. The share of unorganised segment is higher in case of wood furniture. The Furniture industry is spread across the country. A few centres have become famous for their exquisite carving, inlaying, turning and lacquering. Indian states well known for woodwork include Gujarat, Jammu & Kashmir, Punjab, Uttar Pradesh and Kerala. The state wise share in Furniture production is shown in the following figure. Maharashtra and Tamil Nadu account for nearly 50% of Indian Furniture production.

Figure 6: Share of different states in Furniture Production



Source: Annual Survey of Industry, IMaCS Analysis

⁵ Economic Survey 2007-08

⁶ ILO Labour statistics

1.2.7. Key Players

Some of the major companies in this segment are:





Table 1: Key players in the Furniture industry

Company	Products	Category
Nilkamal	Plastic Furniture	Manufacturer/Retailer
Godrej	Home & office Furniture	Manufacturer/Retailer
Home Centre	Furniture & Furnishing	Retail
Home Town	Furniture & Furnishing	Retail
Damro	Home & office Furniture	Manufacturer/Retailer
Wipro	Office Furniture	B2B
Zuari	Home & office Furniture	Manufacturer/Retailer

Note: This is not an exhaustive list

1.2.8. Key Success Factors

Table 2: Key Success factors for the Furniture industry

Innovative designs and solutions to cater to the premium segment both in the home and office segments.	
Offer complete solutions and concepts, rather than piece-meal sales	
<i>Invest in brand building:</i> Brand values have increasingly played a vital role in consumers' purchase decisions in Furniture and Furnishings. A strong brand is a must to succeed in the office Furniture segment.	
<i>Penetrate rural market:</i> The urban area has been the focus of organised retail which has led to increased competition. Rural India is home to 720 million consumers across .6 million villages. 17 % of these villages account for 50 % of the rural population as well as 60 % of rural wealth	



Critical



Important

1.2.9. Key Risk Factors

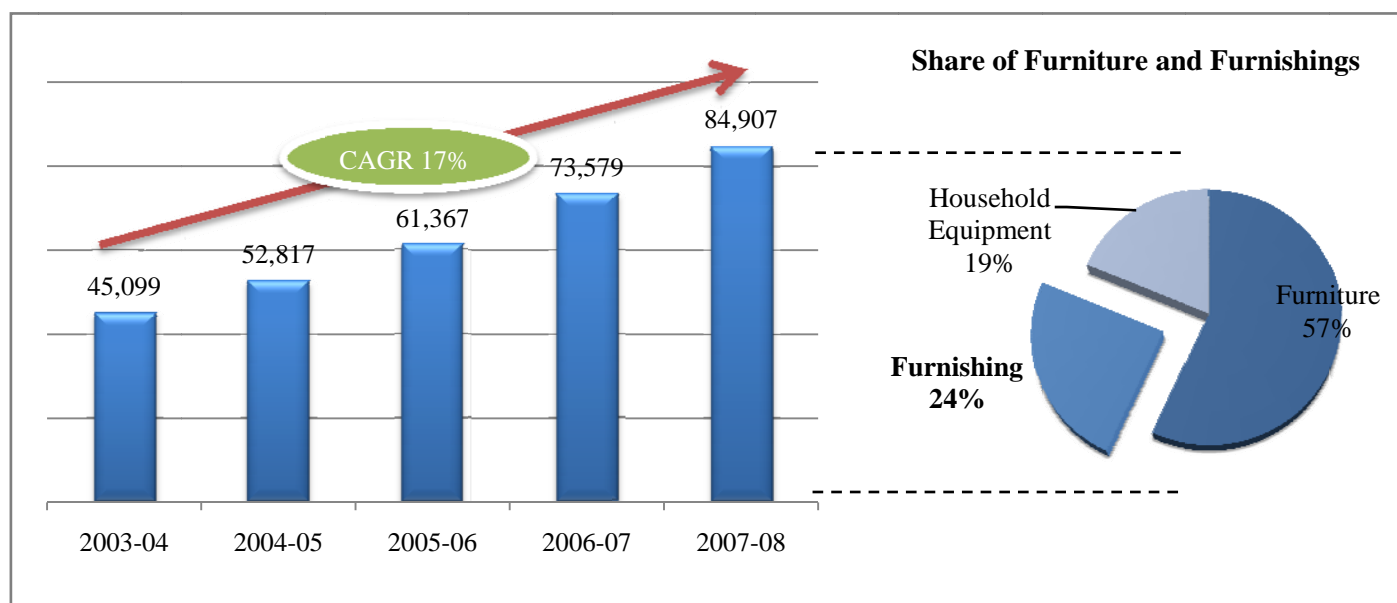
- *Threat of imports:* The Furniture imports in the country have been growing steadily. The imported products are offering stiff competition in both the premium and mass market Furniture segment.
- The increase in prices of commodities such as steel, glass, wood and plastic is a cause of concern for the Furniture industry. Environmental concerns are likely to affect the availability of wood.
- The continuation of the economic slowdown will affect the demand in the domestic market

1.3. Furnishing industry

1.3.1. Domestic Consumption

The private final consumption expenditure (PFCE) on Furniture, Furnishings and Household Equipments was Rs 84,907 crore in 2007-08. The PFCE on Furnishings is estimated to be Rs 20,750 crore for the year 2007-08.

Figure 7: PFCE on Furnishings (at current prices)



Source: Central Statistical Organisation (CSO), IMaCS Analysis

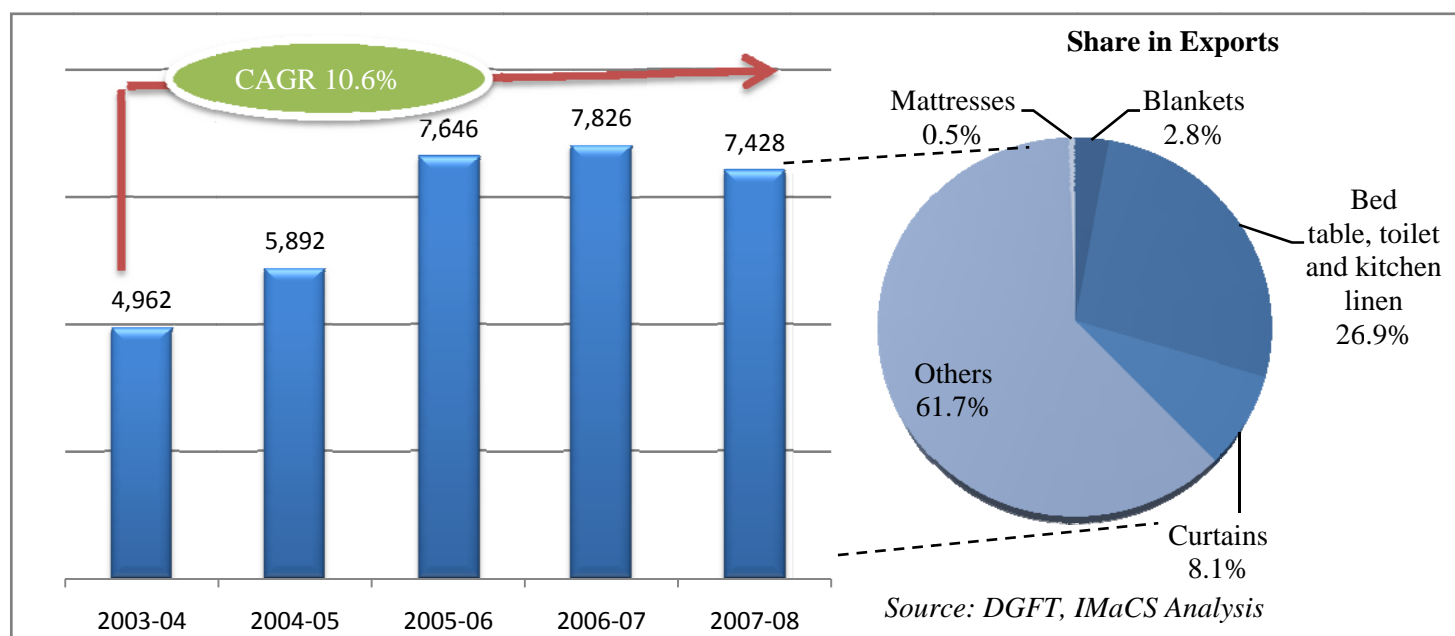
Major Furnishing product categories include:

- **Furnishing fabrics** :upholstery, curtain material, curtains, drapes, door curtains and fabric blinds
- **Bedding** : mattresses and pillows
- **Bed linen** :sheets, pillowcases, blankets, and quilts
- **Table linen** : tablecloths, table napkins, fabric place mats/settings
- **Bath linen** : towels and washcloths
- Other household textile items as shopping bags, laundry bags, shoe bags, covers for clothes and/or Furniture, flags, mosquito nets and sunshades

1.3.2. Exports

Exports of Furnishings items were worth Rs 7,400 crore in 2007-08. The major export markets were US and EU. The Furnishing exports have been stagnating over the last few years on account of increased competition in the international market.

Figure 8: Furnishings exports (Rs. crore)



“Others” include products such as Mosquito nets, Terry towels, Napkins, Pillow covers, Bed spreads, pillow cases, table cloth etc. and accounts for 62 % of the exports.

1.3.3. Imports

Furnishing imports are quite insignificant compared to the domestic market size. Furnishing imports were less than Rs 400 crore in 2007-08.

1.3.4. Major centres for Furnishings

Table 3: Key Centres for Furnishings

Centre	Brief Description
Karur	Karur is known for the production of pillow covers, bedspreads as well as kitchen and table linen. The home textile producers of Karur specialise in certain finishes, such as PVA, starch, stain repellent, water repellent and silicon finish. Some producers have begun the use of organic cotton and the use of different fabrics such as polyester, silk and poly cotton
Panipat	The city of Panipat located in the state of Haryana is a major producer of woollen home textile products. Producers in Panipat have of late started experimenting with different fabrics such as polyester, silk and poly silk. Some producers have also started the use of natural fabrics such as bamboo and soya.
Chennai	Home textile producers in Chennai usually source raw materials from Karur, to which value addition is undertaken. These producers are able to deliver better quality products within a shorter period of time with the benefit of technology and the services of experts.
Delhi	Delhi has emerged as one of the major production and export centres for home textiles. It has an efficient infrastructure and easy availability of skilled manpower. Most of the producers in Delhi source their raw material from Panipat, to which value addition is done.
Mumbai	Mumbai is also one of the major production and export centres for home textiles. Producers in Mumbai also source raw material from places such as Karur, Salem, Erode and Bangalore and add value to it. On account of the high operating costs in Mumbai, several producers have established plants in surrounding areas of Vapi and Solapur. The home textile producers in Mumbai have carved out a niche for themselves, particularly in case of bedspreads, pillow and cushion covers and bathroom textiles.
Jaipur	It is an important centre for the production of home textiles, especially those using the traditional techniques of tie-and-dye, block printing and

Centre	Brief Description
	appliqué.
Cannanore	Cannanore, located in South India, is another hub that is well known for the production of home textiles. About 60% of the textile production done in this area is home textile. Home textile producers in Cannanore are beginning to use fabrics such as cotton viscose, silk and cotton. Producers here are also adding value with the help of embroidery, bead work and sequin work.
Mirzapur and Badhoi	Mirzapur and Badhoi are small cities located in Uttar Pradesh, which are major centres for the production of floor coverings and carpets.

1.3.5. Key Players

Some of the major companies in this segment are:

Table 4: Key players in Furnishing industry

Company	Products	Category
Welspun	Terry towels, Bed Linen	Manufacturer/Retailer
Home Centre	Furniture & Furnishing	Retail
Home Town	Furniture & Furnishing	Retail
Bombay Dyeing	Bed linen, towels,	Manufacturer/Retailer
Fabindia	Bed, bath, table and kitchen linen, upholstery fabric, curtains, floor coverings	Retailer
Kurl-On	Mattresses	Manufacturer
Mahajan Overseas Limited	Cushions & Throw Pillows, KitchenLinens	Manufacturer

1.3.6. Key Success factors

The key success factors for the Furnishing industry are:

- Increasing productivity by leveraging technology
- Investing in brand building activities which in turn would improve the profitability
- Focusing on international markets other than the US and EU
- Obtaining international certifications to overcome entry barriers in the international market.
- Investing in IT would enable more efficient operations.
- Focus on product innovation to cope with the rising competition from other countries in the international market.

1.3.7. Key Risk factors

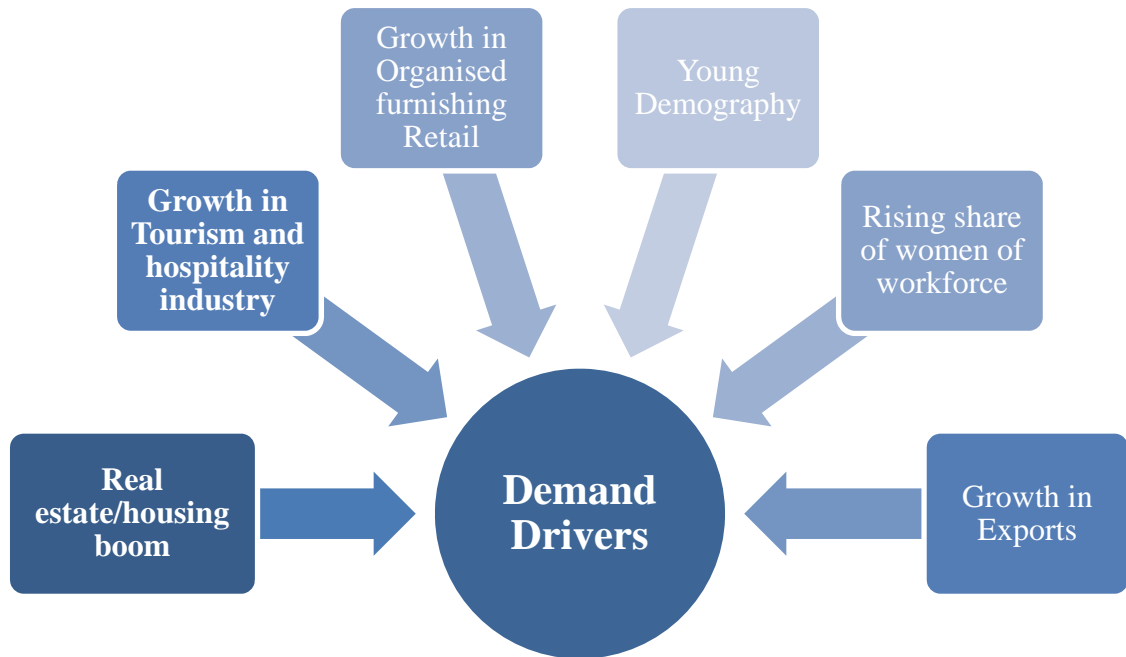
The major risk factors for the industry are:

- Dependency on EU and US markets
- *Raw material prices:* Failure of cotton crop and government policy in terms of minimum support prices and export incentives for cotton can push up the cotton prices and affect the entire value chain. The Man Made filaments/fibres are crude derivatives and move in line with crude oil prices
- *Exchange rate fluctuations:* Strengthening of Rs against international currencies would affect the cost competitiveness in the international market
- *Protectionist measures:* Countries are increasingly protecting their domestic industries from surging imports. After Turkey and Egypt in the last year, Peru is now planning to impose a safeguard on cotton yarn imports. Brazil has imposed anti-dumping duties on viscose yarn imports from Asia.
- *Subsidies/government support in competing countries:* Chinese government has raised the export rebate rate for textiles and apparels thrice, from 11% at the beginning of 2008, to 15% by February 2009, the highest level in 10 years. Vietnamese government has agreed to provide support to the country's T&C industry at a ratio of 40 Vietnamese dong per dollar of export value. Cash subsidy of 15% of the fabric cost is given to exporters in Bangladesh who source fabric locally.
- *Economic Slowdown:* The continuation of the economic slowdown will impact demand, both in the domestic and international markets.

1.3.8. Demand drivers

The demand drivers of the Furnishing industry are similar to the Furniture industry and are depicted in the following figure.

Figure 9: Demand Drivers of Furnishing industry



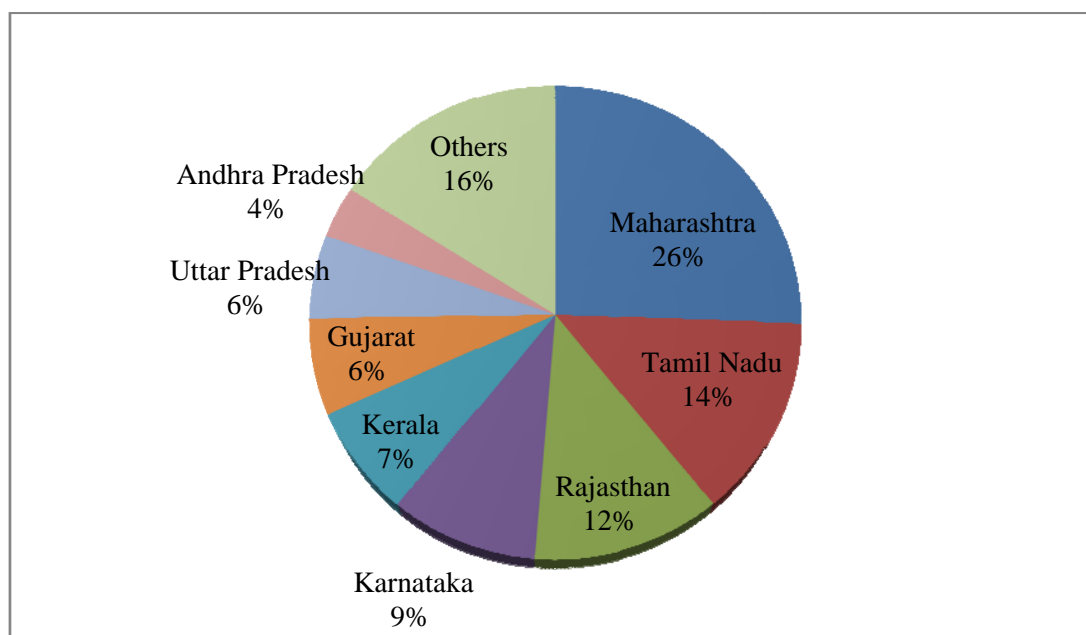
2. Human Resource and Skill Requirements

2.1. Human Resource and Skill Requirements in Furniture industry

2.1.1. Overview of Employment in Furniture industry

The employment in Furniture industry is estimated around 3 lakh in 2006⁷. Maharashtra and Tamil Nadu account for 40%.

Figure 10: State wise employment in Furniture industry



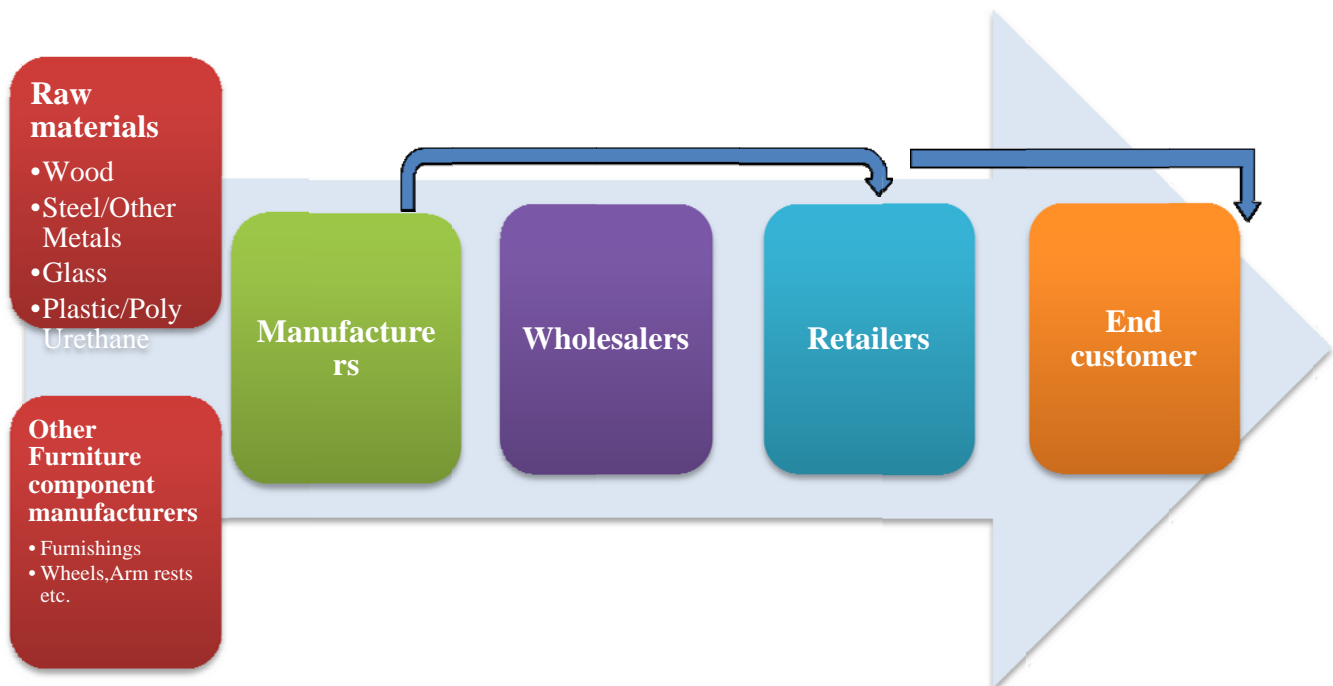
Source: Annual Survey of Industry and IMACS Analysis

2.1.2. Value chain and core processes

The value chain of the Furniture industry is depicted below. The typical processes involved based on the type of raw materials is also indicated. The wood furniture industry has number of manufacturer cum retailers. These units are typically located in a cluster.

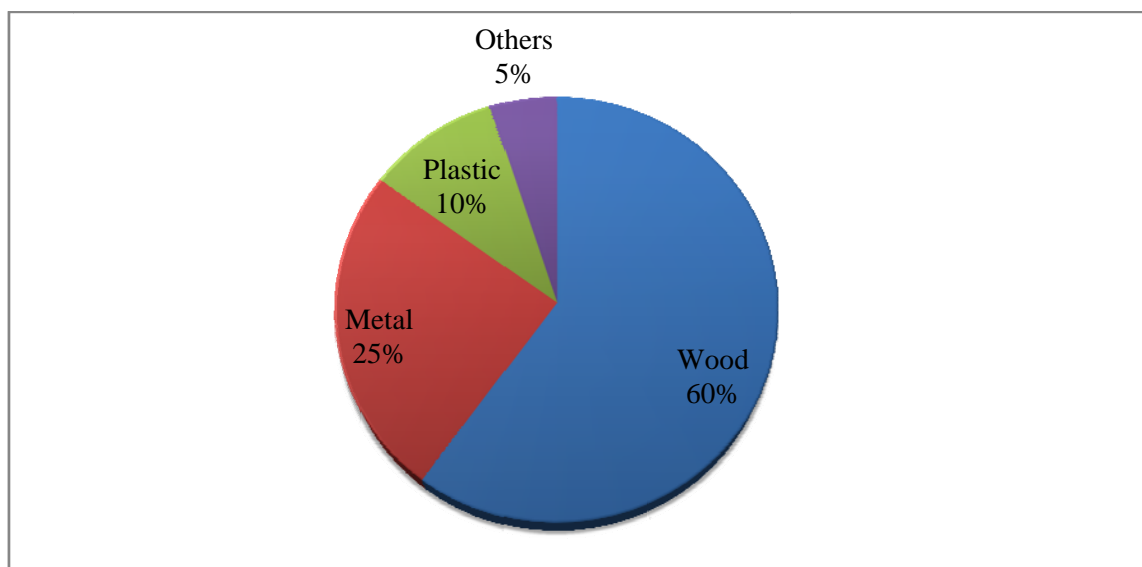
⁷ IBEF report on Furniture industry

Figure 11: Value chain of Furniture industry



Various types of raw materials are used for Furniture making in India. The key raw materials include wood, metal and polymers.

Figure 12: Share of different raw materials in Furniture manufacturing



Source: IBEF Furniture report

Figure 13: Manufacturing process of Wood Furniture



Wood Furniture

Processed wood:

The traditional wooden furniture is made from natural wood such as Teak, Mahogany & Rosewood and plywood. Composites of wood such as particle boards, which are manufactured from wood particles, such as wood chips, sawmill shavings, or even saw dust, and a synthetic resin or other suitable binder, are also used. A major disadvantage of particleboard is that it is very prone to expansion and discoloration due to moisture, particularly when it is not covered with paint or another sealer. Therefore, it is rarely used for outdoor furniture. India is one of the largest consumers of wood in South East Asia. India imports wood from countries such as Malaysia, Indonesia, Myanmar, and Ivory Coast, etc.

Processed wood is sourced from the raw wood processors in the form of rectangular sheets, logs and other shapes. The type of wood depends on the specification of the retailer/customers which in turn depends on the cost and durability factors. The wood has to be free of defects such as swelling, termites, and other defects.

Processing:

The wood is further processed to improve its texture. The surface of the wood is smoothened. Various components of the Furniture are made and the same are assembled afterwards. Wood is cut into various profiles based on the design requirements. The worker has to ensure minimum wastage during this step. Both hand tools and machines are used for cutting purpose. Minute aspects of the design are best suited for hand cutting. Holes and slots are made into the various components and the same are assembled together. The processing of wood which transforms the wood to the skeleton Furniture is done by carpenters.

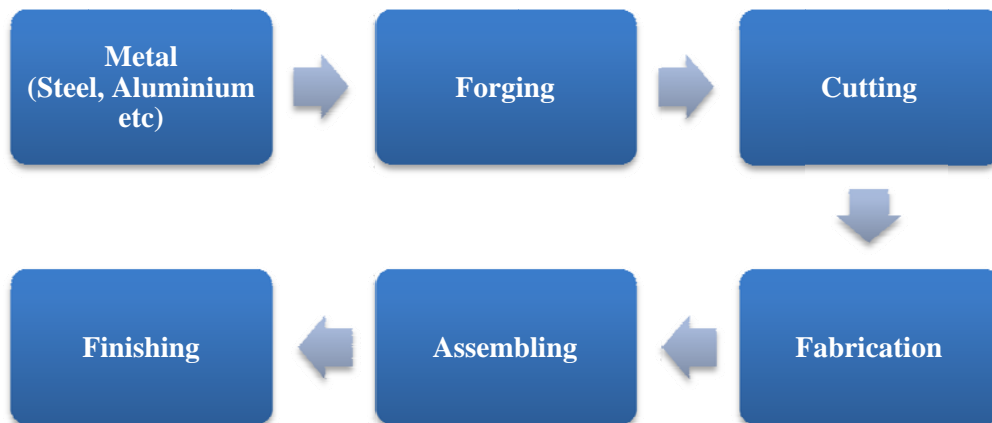
Finishing:

The assembled Furniture is polished to improve the look and feel of the wood. Common finishing materials include stains, basecoats, wash coats, glazes, fillers, sealers, highlights, enamels, and topcoats. During finishing, paste or diluted paste fillers may be required to level open grained and closed grained surfaces. Stains are applied to penetrate the wood and produce a desired colour. Some stains are solvent borne such as penetrating oil and alcohol, while other stains are water borne. Sealers and transparent films are shellacs, varnishes, or lacquers. Shellac is a natural resin which is combined with a solvent such as alcohol. Varnishes, slow drying coatings, are typically of polyurethane. Solvents found in varnishes include turpentine and xylol. Solvents used in lacquers include acetone and ethyl alcohol. Thinners used in lacquers include toluene, benzene and xylene. Major types of glue adhesives in the wood products industry include hot melts, polyvinyl acetates (PVA), ureaformaldehyde (UF) resins, and contact adhesives. This is followed by addition of Cushions and other furnishing material

Metal and plastic/polymer furniture are parts of the value chain of light engineering and plastic/polymer processing industries respectively. Manufacturing process of Metal and plastic Furniture are shown as below.

Metal Furniture

Figure 14: Manufacturing process of Metal Furniture



Various metals and alloys such as cast iron, steel, aluminium, etc. are used based on the desired performance characteristics. For e.g. aluminium may be used for non load carrying parts of the furniture as it is light weight in nature where as steel would be preferred where greater strength is required.

Plastic Furniture

Figure 15: Manufacturing process of Plastic Furniture



Polymers such as high density Poly-ethylene and Poly-urethane are used for making plastic Furniture. Components made of polymers such as hand rest, wheel base etc. are also used along with Furniture made of wood and metal. The polymer granules are melted and moulded through Injection moulding.

2.1.3. Profile of Human resource in Furniture industry

The distribution of human resource across functions in Furniture manufacturing is depicted in the following figure. Bulks of the people (80%-90%) people are engaged in the production function. Also, the small units do not have explicit demarcation of functions for sourcing, sales etc.

Table 5: Distribution of Human Resource across functions in Furniture manufacturing

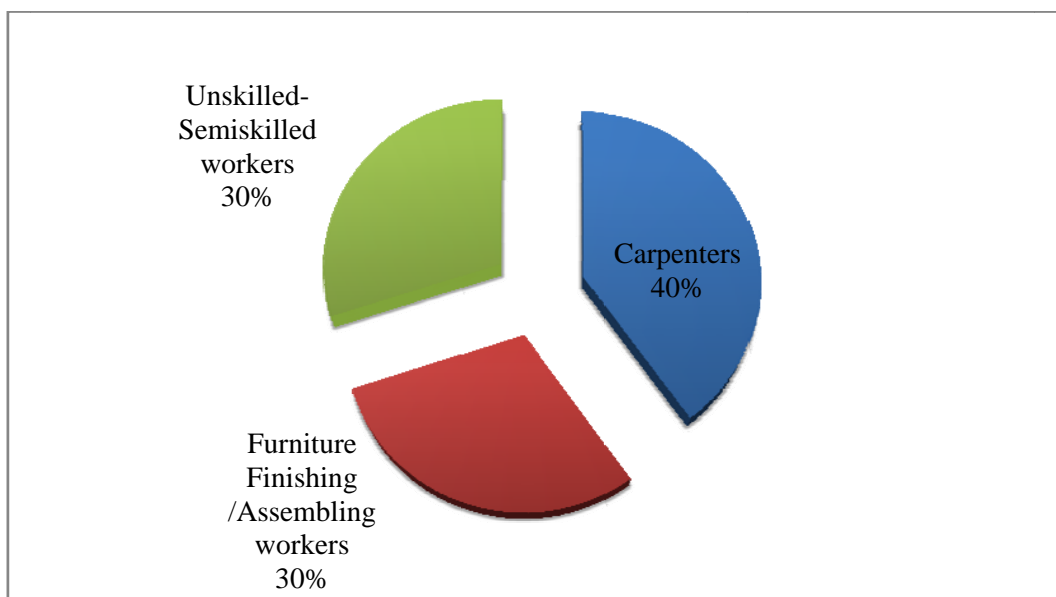
Functions	Percentage share
Production	80% - 90%
Sourcing/Procurement	2% -3%
Sales	2% -3%
Other functions*	5% -10%

Source: Industry inputs, IMAcS analysis

*Other Functions include Accounts, Administration, and Design etc.

The distribution of human resource within production function of wood based furniture is shown in the following figure.

Figure 16: Distribution of workers in wood furniture production



Source: Industry inputs, IMaCS analysis

In case of unorganised and small scale units the percentage of the Shop floor/Operators/Workers/Helpers can be as high as 95%.

The education-wise distribution of workforce in Furniture manufacturing segment is provided in the figure below. Around 95% of the workforce’s education profile is class X, XI or below.

Table 6: Educational profile of workforce in Furniture manufacturing

Educational Level	Percentage share
Class X,XII or below	90%-95%
Diploma/ITI	2%-5%
Others (MBA,CA, Engineers, Graduates)	2%-5%

Source: Industry inputs, IMaCS analysis

2.1.4. Skill requirements and skill gaps in the Furniture Industry

Table 7: Skill requirements and skill gaps in the Furniture Industry

Function	Level	Skills Required	Skill Gaps
Procurement	Purchase Manager	<ul style="list-style-type: none"> ▪ Knowledge of various types of wood (Teak, Rosewood, etc.) , plywood, polymer/plastic ,Metal components, furnishing material (Upholstery, Stuffing material such as foam) and chemicals used in processing (Thinners, Adhesives etc.) ▪ Knowledge of various types of wood defects - swelling, holes, fragile edges, knots etc. Quality of the wood is important as any defects at this stage would affect the quality of the final product. ▪ Awareness of the latest price trends. The Furniture market is very cost competitive and hence minimising the raw material cost is important for furnishing manufacturers. ▪ Negotiation and communication skills for negotiating pricing and delivery terms. It maybe required to negotiate higher discounts if the furnishing fabric and other raw materials are not of the specified quality. 	<ul style="list-style-type: none"> ▪ Inadequate knowledge of various types of raw materials such as wood, plastic & metal components and quality parameters. ▪ Negotiation and communication skills.
		<ul style="list-style-type: none"> ▪ Ability to calculate the requisite amount of wood and stuffing material required based on the order size and likely wastage. 	<ul style="list-style-type: none"> ▪ Insufficient knowledge of

Function	Level	Skills Required	Skill Gaps
	Purchase associate/ executive	<ul style="list-style-type: none"> ▪ Knowledge of various types of wood defects and other quality parameters. ▪ Liaison with the component manufacturers and ensure that the components are made to the specifications. This is required for companies which source non-wood components from outside. 	various types of wood defects and other quality parameters.
Sales	Sales Manager/Store Manager	<p><i>This function is critical for manufacturers cum retailers.</i></p> <ul style="list-style-type: none"> ▪ Understanding of various aspects of customer behaviour. For e.g. the profile of customer as user/buyer will have impact on his selection of furniture. ▪ Detailed product knowledge to train the sales associates. ▪ Knowledge of offerings of competing stores/brands. ▪ Ability to communicate the product knowledge in such a manner that an average customer can understand the same. ▪ Negotiation and communication skills - These skills are critical for firms focussed on office and institutional furniture. ▪ Ability to handle multiple accounts/customers ▪ Understanding of customer 	<ul style="list-style-type: none"> ▪ Insufficient ability to customise the offerings to the requirements of the customers. ▪ Lack of soft skills for interacting with institutional customers.

Function	Level	Skills Required	Skill Gaps
		<p>requirements of design and quality</p> <ul style="list-style-type: none"> ▪ Basic computer skills. Should be able to communicate the product offerings through emails. ▪ Knowledge of English is desirable for personnel in firms focussing on office Furniture segment. 	
	Sales Executive	<ul style="list-style-type: none"> ▪ Ability to assist in the sales process ▪ In depth knowledge of the store offerings. Should be aware of the offerings of competing stores/brands. ▪ Ability to work closely with other functions such as production ▪ Time management skills to handle multiple orders at the same time. ▪ Basic computer skills - Should be able to communicate the product offerings through emails. ▪ Knowledge of English is desirable for firms focussing on office Furniture segment. 	<ul style="list-style-type: none"> ▪ Lack of good communication skills and interpersonal skills ▪ Insufficient ability to communicate the quality price relationship to the customers as they do not understand the quality aspects. ▪ Less than adequate ability to customise the offerings to the requirements of the customers.
		<i>This function is critical for</i>	.

Function	Level	Skills Required	Skill Gaps
Design	Designer	<p><i>Manufacturer cum retailers.</i></p> <ul style="list-style-type: none"> ▪ Design and develop Furniture designs. Modify existing designs to suit the current trends in the market. ▪ Should be creative and work with number of materials to enhance the appearance of the Furniture. ▪ Keep abreast with the latest trends in the market - should be aware of the designs, materials and colours which are in vogue. ▪ Knowledge of CAD /AUTOCAD ▪ Basic computer skills 	<ul style="list-style-type: none"> ▪ Insufficient knowledge of latest design trends ▪ Creative skills required to come up with fresh designs is inadequate
	Production Manager	<ul style="list-style-type: none"> ▪ In-depth Knowledge of Furniture manufacturing processing, finishing and inspection methods ▪ Process improvement skills - waste control, finding solutions to maintenance and engineering related problems as most of the units do not have a dedicated R&D for process improvement. Cost reduction through above mentioned measures aids in improving profitability. 	<ul style="list-style-type: none"> ▪ Lack of adequate knowledge of line balancing, work study, and Quality Control (this is because a large number of managers have been elevated by experience rather than by formal training). ▪ The person employed picks up the requisite skills with experience. ▪ Lack of man management skills to manage the shop

Function	Level	Skills Required	Skill Gaps
		<ul style="list-style-type: none"> ▪ Man management skills to manage shop floor workers who are mostly minimally educated. ▪ Awareness of quality requirements across various stages of production. ▪ Knowledge of Hindi/other vernacular languages is a must to interact with the shop floor workers. 	<p>floor people.</p>
	Line Supervisor/ Floor supervisor	<ul style="list-style-type: none"> ▪ Knowledge of production process involved in wood work such as cutting, sanding, polishing. ▪ Ability to estimate the number of pieces that can be cut from one piece of wood. ▪ Ability to minimise wastage ▪ Should be able to train and groom new recruits who do not have the relevant experience. ▪ Knowledge of different type of wood characteristics ▪ Knowledge of chemicals (Thinners, dyes, Varnishes, Adhesives, etc.) used during finishing and processing to guide the shop floor workers. ▪ Knowledge of various cutting and processing tools (saw machines, hammers, spanner, 	<ul style="list-style-type: none"> ▪ Lack of knowledge of various chemicals ▪ Lack of man management skills to manage the shop floor people. ▪ Ability to minimise waste by using the raw, semi finished articles by design modification. ▪ Knowledge of various types of chemicals.

Function	Level	Skills Required	Skill Gaps
		<p>drill machines, spray painting machines) to guide the shop floor workers</p> <ul style="list-style-type: none"> ▪ Good understanding of chemicals (Thinners, dyes, Varnishes, Adhesives etc.) used during finishing and processing. ▪ Good understanding of stitching processes (for cushions, etc.). ▪ Should be able to reuse/repackage faulty furniture articles by altering the design, finish. ▪ Man management skills to manage the shop floor where most of the workers are minimally educated - Should be able to motivate the workers in the challenging work atmosphere as the demand is seasonal and order driven. Also, the work environment has high levels of air and noise pollution. ▪ Knowledge of Hindi/other vernacular languages is a must to interact with the shop floor workers. 	
		<ul style="list-style-type: none"> ▪ Good machine control, knowledge of various cutting and processing tools (saw machines, hammers, spanner, drill machines, spray painting 	<ul style="list-style-type: none"> ▪ Lack of proper knowledge of machine operations ▪ Inadequate ability to work across different machines ▪ Knowledge of various type

Function	Level	Skills Required	Skill Gaps
	Operator	<p>machines)</p> <ul style="list-style-type: none"> ▪ Ability to size timber, mark and drill holes as per the design specifications of the various Furniture articles. ▪ Should be able to identify and use the right tool for a particular operation. ▪ Knowledge of chemicals (Thinners, dyes, Varnishes, Adhesives etc.) used during finishing and processing. ▪ Should be able to work on the various components of the Furniture being manufactured. ▪ Knowledge of various joints and their appropriate applications. Should be able to work on half lap, dove tail, tenon, mortise and other type of joints. ▪ Should be able to minimise wastage and dispose the waste materials. ▪ Ability to maintain various tools used in Furniture manufacturing. ▪ Ability to manufacture simple Furniture articles without much supervision. ▪ Should have good hand-eye coordination to work on intricate designs. ▪ Physical stamina as the work involves heavy articles. The person should not have any 	<p>of chemicals</p> <ul style="list-style-type: none"> ▪ Ability to make simple Furniture items without supervision.

Function	Level	Skills Required	Skill Gaps
		respiratory ailments. ▪ Discipline at shop floor, punctuality and regular attendance at workplace. ▪ Knowledge of maintenance requirements of various machine and tools.	

2.1.5. Current Training & Education Infrastructure

Directorate General of Employment and Training (DGET) offers the following Furniture specific courses.

Table 8: Training courses for Furniture industry

S. No	Institution/Framework	Name of Course	Minimum Educational Qualification	Duration of Training	Test/Course Fee (Rs)
1	Modular Employable Skills (MES) course	Basic Wood Work	5 th Standard	270 hours	2000 (Training Fee) + 800(Test Fee)*
2	Modular Employable Skills (MES) course	Wooden Furniture	5 th Standard	270 hours	2000 (Training Fee) + 800(Test Fee)*
3	Craftsmen Training Scheme (CTS)	Carpenter	8 th Standard	1 year	-
4	Craftsmen Training Scheme (CTS)	Cane Willow and Bamboo	8 th Standard	1 year	-

S. No	Institution/Framework	Name of Course	Minimum Educational Qualification	Duration of Training	Test/Course Fee (Rs)
		Work			
5	Craftsmen Training Scheme (CTS)	Interior Decoration and Designing	10 th Standard	1 year	-
6	Apprenticeship Training Scheme (ATS)	Carpenter	10 th Standard	3 years	-
7	Apprenticeship Training Scheme (ATS)	Furniture and Cabinet Maker	8 th Standard	3 years	-

*Candidates belonging to SC/ST category and women are given 25% exemption in fee.

2.1.6. Emerging trends in skill requirements

Change in Industry Structure

The Furniture manufacturing industry is predominantly in the unorganised sector. The organised sector accounts for around 15% - 20% of Furniture manufacturing.⁸ The share of the organised sector is expected to rise which would result in greater focus on standardisation and quality aspects. The consolidation has already begun in at the retail end with number of players in Furniture retailing space.

Increased usage of Polymers and Metals

As mentioned earlier, India is one of the largest consumers of wood in South East Asia. India imports wood from various countries such as Malaysia, Indonesia, Myanmar, and Ivory Coast, etc. MDF boards are imported from Europe, soft and hard wood are imported from Russia and other South East Asian countries. However, the supply of wood would be constrained and would not be able to keep pace with the increase in demand of Furniture. This would result in increased usage of other materials such as polymers, metals, glass etc. Also, non wood Furniture would help to make Furniture more

⁸ Annual Survey of Industry, IMA CS Analysis

affordable and cater to the entry level segments. Hence, the production and design personnel would need to possess the requisite knowledge to work with these materials.

Focus on solution selling

The retailers would have to focus on offering complete solutions for office and home Furniture requirements. Hence, Manufacturers cum retailers would require people with knowledge of various Furniture categories.

Level of technology

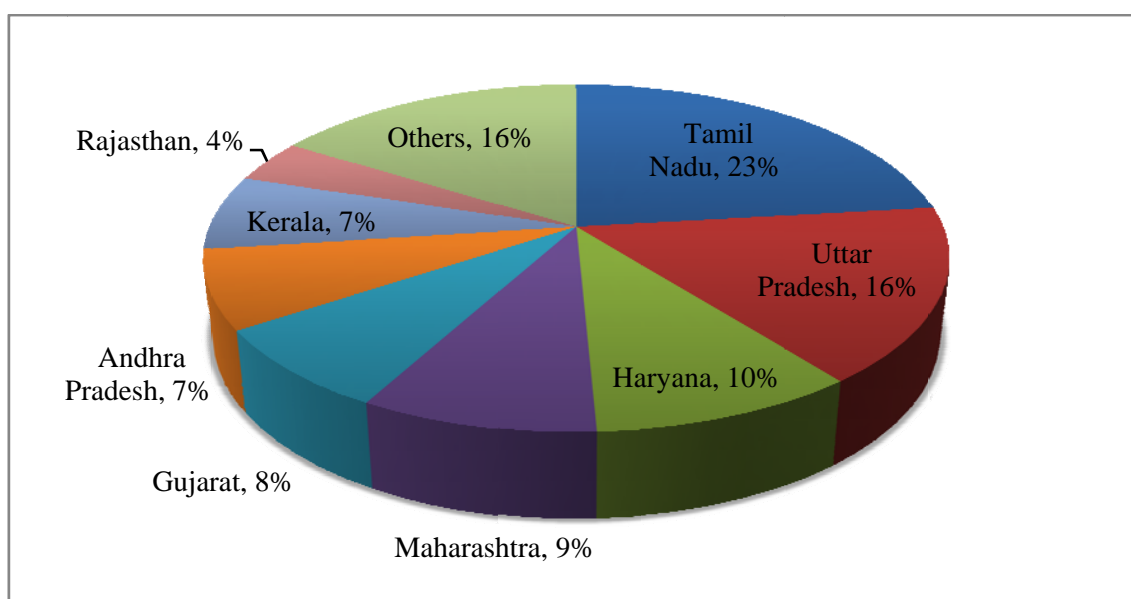
As mentioned earlier, most of the units in Furniture manufacturing do not have the requisite scale. Therefore they do not have the ability to absorb the latest technology and work with manual and small tools. The level of technology is expected to go up in line with consolidation in the industry and the operators have to be imparted the knowledge of automatic tools.

2.2.Human Resource and skill requirements in Furnishing industry

2.2.1. Overview of Employment in Furnishing industry

The Furnishing manufacturing industry employs 8-9 Lakh people.⁹ The state wise distribution of employment is shown in the following figure. Tamil Nadu, Uttar Pradesh and Haryana account for nearly 50% of the employment in the Furnishing industry.

Figure 17: State wise employment in Furniture industry

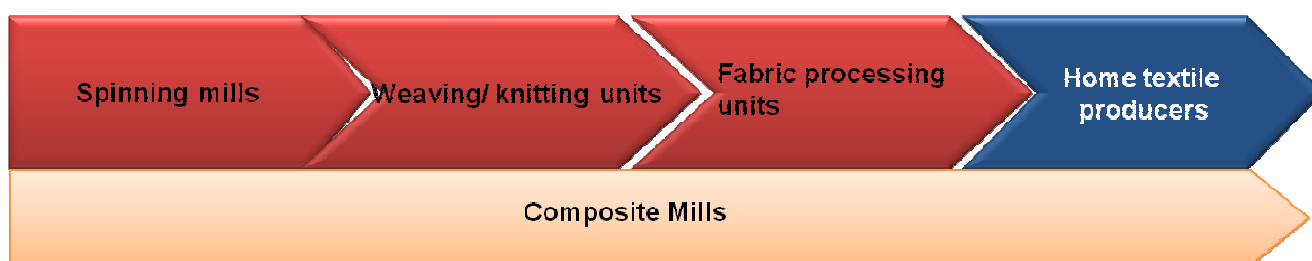
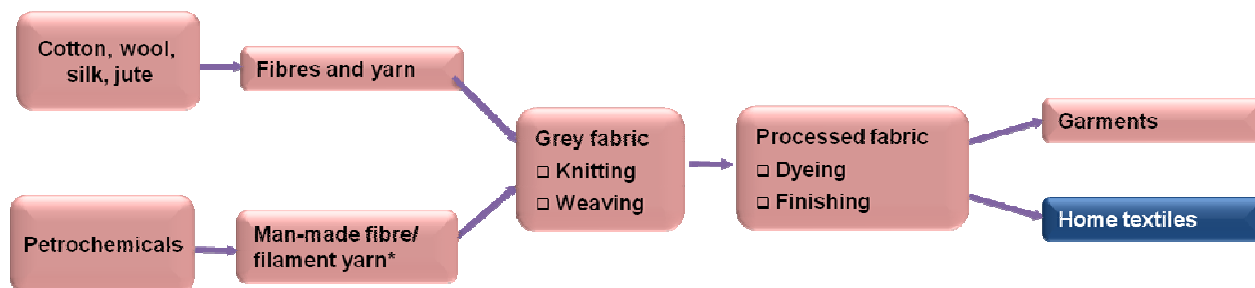


Source: Annual Survey of Industry, IMaCS Analysis

⁹ Source: ASI, IMaCS Analysis

2.2.2. Value chain and core processes

Figure 18: Value Chain of Furnishing industry



The Furnishing industry is a part of the textile value chain. The home furnishing products use variety of raw materials such as cotton, silk and fabric made of synthetic fibres and includes both knitted and woven fabrics.

Most of the furnishing articles such as curtains, bed sheets, etc. have relatively lesser value addition after the fabric manufacturing and processing stage. The processed fabric undergoes cutting, stuffing and finishing to make the requisite furnishing article.

The various activities involved in furnishing manufacturing are shown in the following figure.

Figure 19: Production processes in Furnishing



- Cutting

The fabric is cut as per the defined pattern. Markings are made on the spread fabric which is then cut/chopped in the cutting machine. Wastage reduction is a key consideration during this step.

- Stitching

A number of stitch and seam- types, and sewing machines are used for stitching the furnishing item. Stitch classification is based on the structure of the stitch and method of interlacing. Machine in each class may have the capability of producing several different types of stitches depending on the machine structure and how it is set and threaded.

Table 9: Types of Stitches

Stitch Class
100 (Chain Stitch)
200 (Hand Stitch)
300 (Lockstitch)
400(Multi chain Stitch)
500(over-edge stitch)
600(Flat Seam Stitch)

Source: ATDC

A group of stitches with specific purpose is called seam, or in other words a line of stitches. Seams are categorised into 8 classes and designated according to the types and minimum number of components within the seam.

- Assembling/Stuffing

This step is required in case of furnishing articles where foam, cotton or other stuffing materials are used. The stuffing material is added to the fabric skeleton and compressed. This is followed by stitching to close/seal the furnishing article.

- Finishing

Finishing involves the following operation:

- Removal of excess thread
- Washing

- Pressing/ Ironing
- Folding.

The value chain of the Furnishing industry varies depending on the product. As mentioned above, the various product categories in furnishings include:

Table 10: Product categories in Furnishing

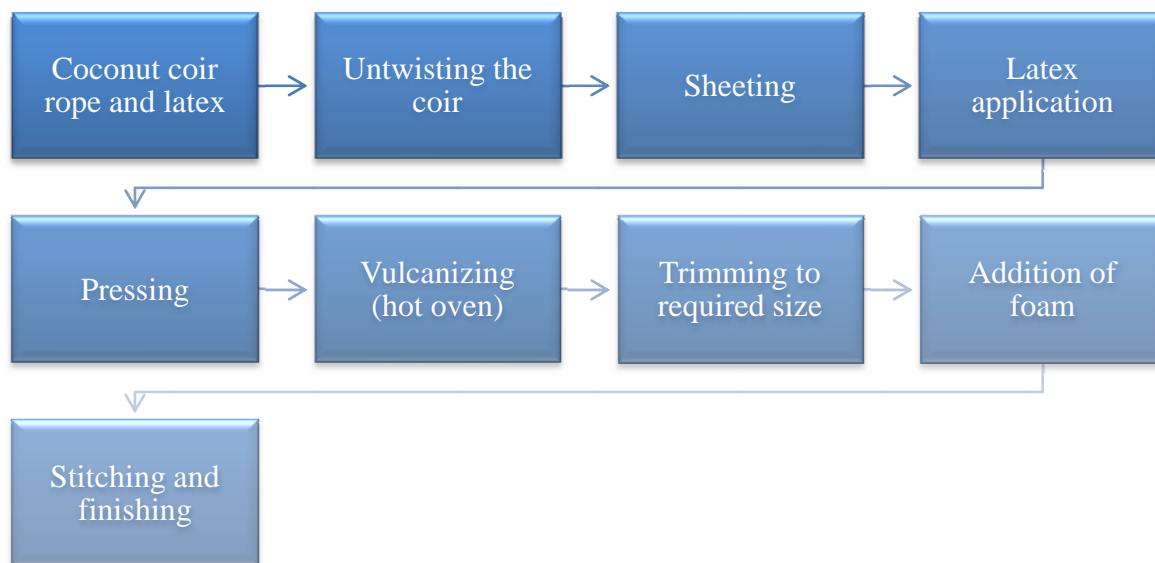
Product Category	Products
Furnishing fabrics	Upholstery, curtain material, curtains, drapes, door curtains and fabric blinds
Bedding	Mattresses and pillows
Bed linen	Sheets, pillowcases, blankets, plaids, duvets and quilts
Table Linen	tablecloths, table napkins, fabric place mats/settings
Bath Linen	Towels & Washcloths
Others	Shopping bags, laundry bags, shoe bags, covers for clothes and/or Furniture, flags, mosquito nets and sunshades

The value chain of the mattress industry is shown below

Figure 20: Value chain of mattress industry



Figure 21: Manufacturing process of coir Mattress



2.2.3. Profile of Human resource in Furnishing industry

The distribution of human resource across functions in Furniture manufacturing is depicted in the following figure. A large proportion of the human resource (about 80%) people are engaged in the production function. Also, the small units do not have explicit demarcation of functions for sourcing, sales etc.

Table 11: Distribution of Human Resource across functions in Furnishing manufacturing

Functions	Percentage share
Production	75%-80%
Sourcing/Procurement	2%-3%
Sales/Merchandising	3%-5%
Other functions*	5%-10%

Source: Industry inputs, ImaCS analysis

*Other Functions include Accounts, Administration, and Design etc.

In case of unorganised and small scale units the percentage of the Shop floor/Operators/Workers/Helpers can be as high as 95%.

The education-wise distribution of workforce in Furniture manufacturing segment is provided in the figure below:

Table 12: Educational Profile of the workforce in Furnishing Manufacturing

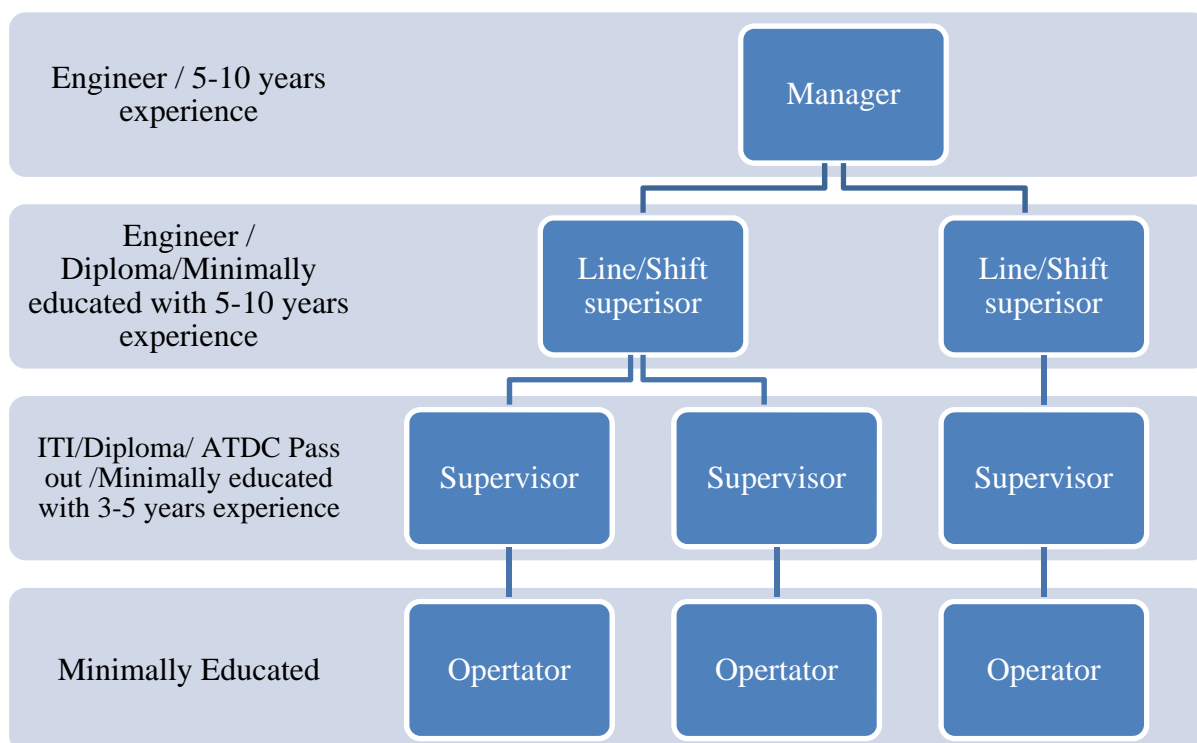
Educational Level	Percentage share
Engineers	3%-5%
Diploma or equivalent certification by other agencies	
ITI and other vocational courses/Certificates	8%-10%
Other graduates	2%-3%
CA/MBA/etc.	
12th/10th standard/Minimally Educated	85%-90%

Source: Industry inputs, ImaCS analysis

Profile of people employed

The typical profile of people employed in production function, which is the dominant activity in the furnishing manufacturing, is shown in the following figure.

Figure 22: Profile of people employed



Source: Industry inputs, IMaCS analysis

2.2.4. Skill requirements and skill gaps

Table 13: Skill requirements and gaps in Furnishing industry

Function	Level	Skills Required	Skill Gaps
	Purchase Manager	<ul style="list-style-type: none"> ▪ Knowledge of various types of fabrics (type of material, count/picks, dye requirements) and stuffing material (cotton, kapok, foam, fibrefill.) ▪ Knowledge of various types of fabric defects such as breakage of threads, missing threads, stains, patches and shade variation etc. Quality 	<ul style="list-style-type: none"> ▪ In-depth knowledge of the various types of fabric and quality parameters. ▪ Negotiation and communication skills.

Function	Level	Skills Required	Skill Gaps
Procurement		<p>of the fabric is important as any defects at this stage would affect the quality of the final product.</p> <ul style="list-style-type: none"> Awareness of the latest price trends in the fabric market. The furnishings market is very cost competitive and hence minimising the raw material cost is important for furnishing manufacturers. Negotiation and communication skills for negotiating pricing and delivery terms with the fabric manufacturers. 	
	Purchase associate/ executive	<ul style="list-style-type: none"> Ability to calculate the amount of requisite quality fabric and stuffing material required based on the order size and likely wastage. Knowledge of various types of fabric defects and other quality parameters. Liaison with the fabric manufacturers and fabric processors. This is required for companies which source the fabric and do the processing through other processing units. 	<ul style="list-style-type: none"> Insufficient knowledge of various types of fabric defects and other quality parameters.

Function	Level	Skills Required	Skill Gaps
Merchandising/ Sales	Senior Merchandiser/ Sales Manager	<ul style="list-style-type: none"> ▪ Understanding of various production activities as the merchandiser is the interface between the buyer and the company ▪ Negotiation and communication skills. These skills assume more significance for export oriented units. ▪ Knowledge of foreign languages such as French for better co-ordination with the buyer. ▪ Ability to handle multiple accounts/customers. ▪ Thorough understanding of costing. ▪ Understanding of buyer requirements of design and quality. ▪ Basic computer skills. Should be able to communicate the product offerings through emails. 	<ul style="list-style-type: none"> ▪ Lack of soft skills for interacting with buyers in the international market. ▪ Knowledge of languages is limited to English. ▪ Inadequate understanding of various factors affecting costing.
	Junior Merchandiser/ Merchandising executive/ Sales Executive	<ul style="list-style-type: none"> ▪ Understanding of various production activities. ▪ Ability to work closely with other functions such as production, purchase, etc. ▪ Time management skills to 	<ul style="list-style-type: none"> ▪ Understanding of various production activities.

Function	Level	Skills Required	Skill Gaps
		<p>handle multiple orders at the same time.</p> <ul style="list-style-type: none"> ▪ Basic computer skills 	
Design	Designer	<ul style="list-style-type: none"> ▪ Design and develop furnishing designs according to buyer requirements. ▪ Modify existing designs to suit the current trends in the market. ▪ The designer should be able to understand the impact of stuffing material on the final appearance of the furnishing article. ▪ Keep abreast with the latest fashion trends in the key markets. Should be aware of the colours, contours which are in vogue. ▪ Knowledge of Styling, Elements of Design, Basics of Costing, Fabric Study, Pattern Making. 	<ul style="list-style-type: none"> ▪ Understanding of buyer requirements is inadequate which leads to number of iterations before the sample is accepted. ▪ Knowledge of latest fashion trends in the international markets is limited
	Production Manager	<ul style="list-style-type: none"> ▪ In-depth Knowledge of production process and inspection methods ▪ Process improvement skills - waste control, finding solutions to maintenance and engineering related problems as most of the units do not 	<ul style="list-style-type: none"> ▪ Inadequate knowledge of speciality fabrics ▪ Lack of adequate knowledge of line balancing, work study, and Quality Control (this is because a large number of managers have been elevated by experience)

Function	Level	Skills Required	Skill Gaps
Production		<p>have a dedicated R&D for process improvement.. Cost reduction through above mentioned measures aids in improving profitability.</p> <ul style="list-style-type: none"> ▪ Man management skills to manage shop floor workers who are mostly minimally educated. ▪ Awareness of quality requirements across various stages of production. ▪ Knowledge of Hindi/other vernacular languages is a must to interact with the shop floor workers. 	rather than by formal training).
	Line Supervisor/ Floor supervisor	<ul style="list-style-type: none"> ▪ Knowledge of production processes such as cutting, stuffing, stitching and inspection methods ▪ Knowledge of different type of fabrics and stuffing materials. ▪ Ability to provide on the job training to the new recruits ▪ Man management skills to manage the shop floor. Knowledge of Hindi/other vernacular languages is a must to interact with the shop floor workers. 	<ul style="list-style-type: none"> ▪ Lack of knowledge of various types of sewing machines ▪ Lack of soft skills to manage the shop floor people.

Function	Level	Skills Required	Skill Gaps
Quality	Operator	<ul style="list-style-type: none"> ▪ Good machine control. Knowledge of machines used for cutting, sewing etc. ▪ Knowledge of threading of sewing machine, stitching on different shapes, seaming components together to the design specifications. ▪ Knowledge of maintenance requirements of various machines and tools. ▪ Discipline at shop floor, punctuality and regular attendance at workplace. ▪ Good eye sight and hand-eye co-ordination 	<ul style="list-style-type: none"> ▪ Lack of proper knowledge of sewing machine operations and different types of seams and stitches ▪ Ability to work across different machines is missing
	Quality control/ Assurance Manager	<ul style="list-style-type: none"> ▪ Quality requirements are all the more important for companies focussing on international markets. Even small quality issues can lead to cancellation of order. ▪ Understanding of the customer requirements by interacting with the merchandiser. ▪ Knowledge of international standards is desirable. 	<ul style="list-style-type: none"> ▪ Knowledge of international quality standards is a significant gap.
		<ul style="list-style-type: none"> ▪ Knowledge of in line and final quality testing procedures. 	<ul style="list-style-type: none"> ▪ Knowledge of cause effect relationships of the various defects.

Function	Level	Skills Required	Skill Gaps
	Quality control Executive	<ul style="list-style-type: none"> ▪ Must be able to understand and prevent defects such as loose threads, stains, inconsistent filling, inconsistent stuffing etc. ▪ Should be able to understand the various quality parameters. 	

2.2.5. Current Training & Education Infrastructure

There are very few courses which exclusively cater to the requirements of the Furnishing industry. However, courses are available which impart training/education in textiles. Also, very few of the training initiatives are targeted at the shop floor level. The newly inducted workers learn through informal training and learning from the experience of the existing work force.

The ATDC, ITIs and NIFT annually train up to 50,000 workers. However, the students passing out of these courses are mostly absorbed in the garmenting sector.

2.2.6. Emerging trends in skill requirements

- The availability of merchandising and designing skills would be crucial for increasing share in export markets, tapping the potential in new markets and catering to the luxury /high end of the domestic market. Currently, design is not a focus area for the furnishing companies.
- The industry is likely to get increasingly consolidated in terms of scaling up of units, especially the units which are focussed on export markets. Furnishing retail would see increased penetration of organised retail and the focus would be on selling *complete solutions* i.e. selling multiple and related furnishing articles under one roof..
- Currently, Furnishing industry comes under the purview of Contract Labour Act, 1970 which prohibits contract labour for the work that is perennial in nature. The exporters find it difficult to manage the seasonal and order based volatility in demand on account of this. Change in the

current regulations can lead to opening up of more employment opportunities. Also, the current regulations prohibit women from being employed in night shifts. More flexible labour regulations will positively affect the industry.

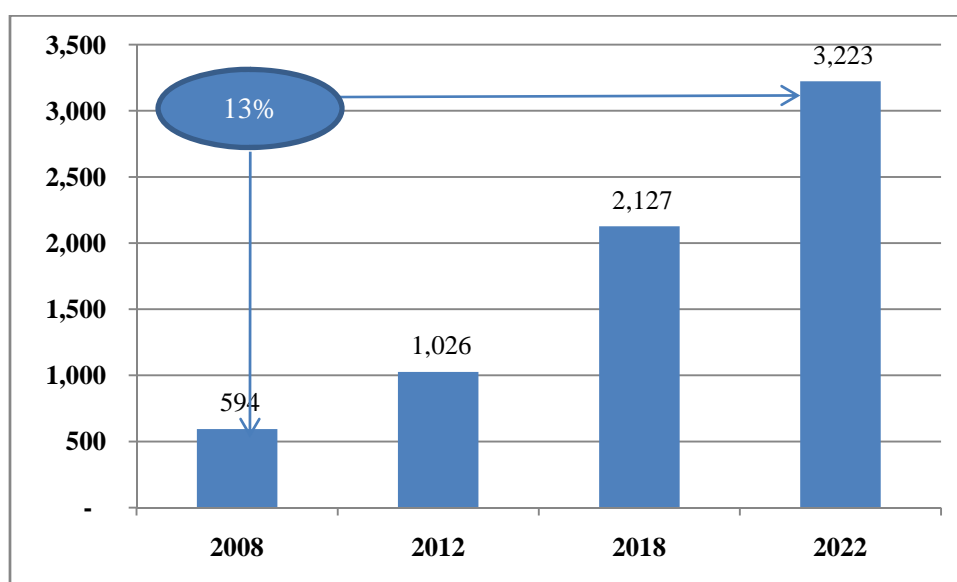
- The scheme of integrated textile parks and various SEZs would also affect the availability of labour.

2.3. Projected Size and Human Resource Requirement

2.3.1. Projected Size and Human Resource Requirement for Furniture Industry

The size of the Furniture industry is expected to grow from Rs. 594 billion currently to about Rs. 3,200 billion by 2022, growing at a CAGR of 13%¹⁰.

Figure 23: Projected Size of Furniture Industry (Rs. billion)



Source: IMAcS analysis

This industry would employ about 1.3 million persons by 2022, leading to an incremental employment generation of about 0.9 million persons.

Table 14: Human resource requirement in Furniture Industry (in '000s)

	2008	2012	2018	2022	Incremental
Furniture	380	571	963	1,271	892

Source: IMAcS analysis

¹⁰ Our overall approach to macro-economic modeling and forecasting is explained in a separate annexure

Table 15: Function-wise distribution of incremental human resource requirement (in '000s)

Function	Incremental human resource requirement (in '000s)
Designing	9
Sourcing	27
Production	
Carpenters	310
Finishing and other assembly line workers	233
Others (helpers)	233
Sales	36
Admin and other support	45
Total	892

Source: IMaCS analysis

The requirement for the skilled workforce consisting of carpenters and other operators engaged in finishing of furniture would constitute 0.5 million persons.

2.3.2. Projected Size and Human Resource Requirement of the Furnishing Industry

The Furnishing Industry is expected to grow at a CAGR of about 13% and clock Rs. 1,36,000 crore in revenue by 2022¹¹. This industry is likely to result in the creation of 2.5 million additional jobs till 2022.

Table 16: Incremental human resource requirement in the Furnishing industry (in '000s)

	2008	2012	2018	2022	Incremental
Furnishings	1,075	1,618	2,728	3,602	2,526

Source: IMaCS analysis

The profile of persons to be engaged in terms of function-wise and education-wise details is given below.

Table 17: Function-wise incremental human resource requirement (in '000s)

	Sales and others (merchandising)	Procurement	Production	Others (Purchase, logistics, admin)
Furnishing industry	126	76	2,147	177
Incremental human resource requirement		2,526		

Source: IMaCS analysis

¹¹ Our overall approach to macro-economic modeling and forecasting is explained in a separate annexure

Table 18: Education-wise incremental human resource requirement (in '000s)

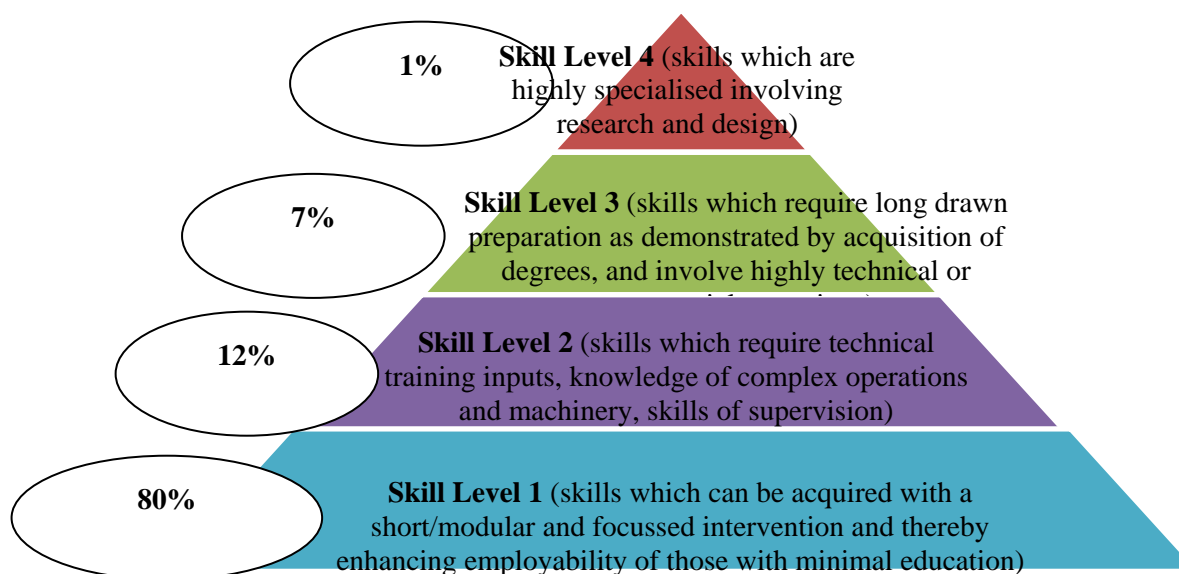
	Engineers and Diploma	Graduate	ITI	12th Standard
Furnishing industry	101	76	202	2,147
Incremental human resource requirement		2,526		

Source: IMaCS analysis

2.3.3. Focus areas where skill building is required

Given that the industry would required a varied profile of skill sets, the following figure presents an overview of the profile of skill requirements as derived from human resource requirements across different sectors of the Furniture and Furnishing Industry.

Figure 24: Skill Pyramid for the Furniture and Furnishing Industry



Source: Industry inputs, IMaCS analysis

The skill pyramid, in summary, captures where the Furniture and Furnishing Industry stands relatively in terms of skills (a function of activity, educational requirements, and amount of ‘preparatory’ time required to inculcate a specific skill) as compared to all other industries.

As can be observed, ‘Skill Levels 1 and 2’, have the highest incremental requirement of human resource. This indicates the requirement for persons trained in *carpentry, stitching and sewing operations* in the Furniture and Furnishing Industry.

Table 19: Focus areas where skill building is required (human resource requirement in '000s)

Sector	Areas where skill building is required	Incremental human resource requirement (in '000s)
Furniture	Carpenters	310
	Operators (finishing, etc.)	233
Furnishings	Stitching, sewing, stuffing, threading	2,147
Total		2,691

Source: IMaCS analysis

The total requirement of human resource across the above areas where skill building is required is about 2.7 million persons till 2022.

This report has been prepared by **ICRA Management Consulting Services Limited (IMaCS)**.

IMaCS is a multi-line management and development consulting firm headquartered in India. It has an established track record of over 15 years in consulting across various sectors and countries. IMaCS has completed over 950 consulting assignments and has worked in over 30 countries across the globe. Through the process of carrying out several assignments over the last decade and half, IMaCS has accumulated considerable analytical and consulting expertise, backed by the following capabilities:

- Deep understanding of policy formulation.
- Extensive and organised database on several sectors.
- Knowledge of key factors of success in different projects and programmes.
- Ability to research emerging trends in the economy, as well as in specific sectors.
- Insight into different programmes and organisational processes.
- Ability to carry out economic analysis, build quantitative and financial models to project future performance and identify imperatives.
- Ability to identify the various types of risks and suggest appropriate strategies to mitigate the same.

The Education and Skills practice at IMaCS focusses on identifying skill gaps, mapping future skill requirements, and formulating strategies to address them. Our service offerings encompass diagnosis, design and implementation of education and skill development interventions for government and private sector.



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