Micro-SMEs in the Furniture Sector: A Comprehensive Analysis of Türkiye, Greece, Netherlands, Spain, Portugal, and Estonia

Authors & Contributors

Assoc. Prof. Dr. Alper Güzel, Gazi University, Ankara, Türkiye

Assoc. Prof. Adem Tekerek, Gazi University, Ankara, Türkiye

Prof. Dr. Cevdet Söğütlü, Gazi University, Ankara, Türkiye

Prof. Dr. Hamza Çinar, Gazi University, Ankara, Türkiye

Prof. Dr. Seyhan Fırat, Gazi University, Ankara, Türkiye

Maria Dalakoura, Institute of Entrepreneurship Development, Larissa, Greece

Nikolina Zervou, Institute of Entrepreneurship Development, Larissa, Greece

Mehmet Altunbaş, Internationale Arbeidsvereniging (ILA), Amsterdam, Netherlands

Özüm Akdere Köşker, Ankara Ticaret Odası (ATO), Ankara, Türkiye

Jade Ilkay Rodrigo, Instituto Ikigai, Asociación Española para el Emprendimiento y el Desarrollo Personal y Profesional (IKIGAI), Zaragoza, Spain

Milagros Barrios, Instituto Ikigai, Asociación Española para el Emprendimiento y el Desarrollo Personal y Profesional (IKIGAI), Zaragoza, Spain

Asst. Prof. Susana Leal, Instituto Politécnico de Santarém (IPSantarém) Santarém, Portugal

Asst. Prof. João Nascimento, Instituto Politécnico de Santarém (IPSantarém) Santarém, Portugal

Asst. Prof. Sandra Oliveira, Instituto Politécnico de Santarém (IPSantarém) Santarém, Portugal

Asst. Prof. Ana Loureiro, Instituto Politécnico de Santarém (IPSantarém) Santarém, Portugal

Savvoula Oıkonomou, Huemaniser OÜ, Tallinn, Estonia

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1.2. Executive summary

This Consolidated State of the Art Report provides a comprehensive overview of the furniture industry at both the European and worldwide levels, with a specific focus on Türkiye, Greece, Netherlands, Spain, Portugal and Estonia. The report examines the existing situation of the furniture sector, the significance of micro-SMEs, vocational education and training (VET), and environmental concerns within each of these countries. The furniture industry plays a crucial role in the national economies of these countries, with micro-SMEs dominating the sector.

In terms of the EU furniture market, the sector employs approximately 1 million workers in 130 thousand companies and generates an annual turnover of around €96 billion(Strategy for Forest-based Industries, n.d.) [1]. Despite facing challenges during the economic crisis and the recent impact of the coronavirus pandemic, the furniture industry has demonstrated

[1] Strategy for forest-based industries. (n.d.). Internal Market, Industry, Entrepreneurship and SMEs. https://single-market-economy.ec.europa.eu/sectors/raw-materials/related-industries/forest-based-industries/strategy-forest-based-industries_en

resilience and recovery. It has also undergone significant transformations to become more export-oriented, gaining recognition globally for its quality and design.

The INT4FURN project is an Erasmus+ project that lasts 24 month and aims to promote entrepreneurship among micro-SMEs and young people and thus create high-quality new employment and internationalisation opportunities. The consortium consists of 7 organisations from Türkiye, Greece, Netherlands, Spain, Portugal, and Estonia, as the furniture sector plays a vital role in their national economies, with micro-SMEs dominating the industry. Vocational education and training (VET) are crucial for the development of the furniture sector. This project underlines the importance of creating vocational education and training (VET) programs that are aligned with the specific requirements of the industry. The countries participating in the project have a wide range of public and private institutions capable of providing tailored VET initiatives that meet the demands of the rapidly evolving industrial landscape, but nevertheless weaknesses and shortcomings are highlighted. The aim is to tailor these programs to meet the unique needs of industry, and to be able to effectively cultivate a skilled and competent workforce equipped to meet the challenges and opportunities in their respective sectors. Micro-SMEs are the backbone of the furniture sector in these countries, and fostering their growth and competitiveness is crucial.

Environmental concerns are also a key focus within the furniture industry. As a significant consumer of natural resources and a contributor to greenhouse gas emissions, the sector is increasingly embracing sustainability principles and initiatives in Türkiye, Greece, Netherlands, Spain, Portugal, and Estonia. Efforts are being made to incorporate eco-friendly materials, promote circular economy practices, and reduce the carbon footprint of furniture production.

The report provides a detailed analysis of each country's furniture sector, including factors such as production and consumption, market trends, regional distribution, technology activities, and export-import dynamics. It highlights the importance of joint curricula development, internationalization training for micro-SMEs, and collaboration between educational institutions and businesses.

In conclusion, this Consolidated State of the Art Report offers valuable insights into the furniture industry, focusing on the unique characteristics and challenges faced by Türkiye, Greece, Netherlands, Spain, Portugal and Estonia. By understanding the specific contexts and initiatives within each country, stakeholders can develop tailored strategies to promote growth, competitiveness, and environmental sustainability in the furniture sector.

1.3. 1. Status of the furniture sector in EU and Worldwide

The furniture sector holds significant importance in the European Union (EU) and worldwide, encompassing various segments and catering to diverse consumer needs. In the EU, renowned for its design expertise and craftsmanship, the furniture industry showcases a blend of manufacturing prowess, design excellence, and a growing emphasis on sustainability. The EU is one of the world's largest furniture markets. The sector encompasses a wide range of products, including residential, office, and contract furniture, with a focus on quality and innovation.

Globally, the furniture sector has experienced growth driven by urbanization, population expansion, and increasing disposable incomes, particularly in emerging economies. Countries such as China, the United States, Germany, Italy, and India are among the leading furniture markets worldwide. The industry provides diverse furniture options, from classic to contemporary, with materials ranging from traditional choices like wood and metal to sustainable alternatives.

The EU and global furniture sectors have both recognized the importance of sustainability and have embraced eco-friendly practices. In the EU, companies are adopting sustainable materials, reducing waste, and incorporating circular economy principles. This commitment aligns with the rising consumer demand for environmentally friendly products. Moreover, technological advancements have enabled sophisticated design processes, smart furniture solutions, and efficient manufacturing techniques, further shaping the industry's landscape.

However, it is important to acknowledge the impact of the COVID-19 pandemic on the furniture sector globally. The pandemic has resulted in supply chain disruptions, manufacturing and distribution restrictions, and changes in consumer behavior. The extent of the pandemic's impact and the recovery timeline may vary across regions.

Overall, the furniture sector in the EU and worldwide remains dynamic and diverse, combining creativity, functionality, and sustainability. This report aims to provide an in-depth analysis of the current status of the furniture sector, exploring market trends, design influences, manufacturing practices, and the impact of sustainability initiatives in both the EU and global contexts.

a. 1.1 Furniture sector

Furniture is an essential part of our daily lives, providing us with comfort, functionality, and aesthetic appeal in our homes, workplaces, and public spaces. The furniture world is a diverse and dynamic industry that encompasses the design, manufacturing, and distribution of various types of furniture, catering to a wide range of needs and preferences.From residential to commercial settings, furniture plays a crucial role in creating inviting and functional environments. Whether it is a cozy sofa in a living room, an ergonomic chair in an office, or stylish tables and chairs in a restaurant, furniture contributes to the overall ambiance and functionality of a space.

The furniture industry is a vibrant and dynamic sector that plays a crucial role in shaping our living and working spaces. Europe, in particular, holds a prominent position in the global furniture industry, with its strong manufacturing capabilities, large consumer market, and significant trade in furniture exports and imports.

Europe stands as the second-largest region for furniture production worldwide, benefiting from its integrated market of over 500 million consumers. The EU furniture sector employs approximately 1 million workers across 130 thousand companies, generating an impressive annual turnover of around EUR 96 billion. EU furniture manufacturers are known for their ability to set global trends, as evident from the registration of about 12% of designs in the European Union Intellectual Property Office relating to this sector. Moreover, the EU leads the way in the high-end furniture segment, with nearly two-thirds of high-end furniture products sold globally being produced within its border(Strategy for Forest-based Industries, n.d.).[2]

The furniture industry is characterized by its labor-intensive nature and the dominance of small and medium-sized enterprises (SMEs) and micro firms. EU furniture manufacturers have gained worldwide recognition for their creative capacity, responsiveness to new demands, and the integration of innovative technologies with cultural heritage and style. However, the sector faces various challenges. Intense competition arises from countries with low production costs, with China emerging as the largest furniture exporter to the EU. The reliance on innovation and design, coupled with global trade and digitalization, exposes the sector to weak protection of intellectual property rights. Additionally, an ageing workforce and difficulties in attracting young workers pose potential disruptions to maintaining skilled craftsmanship. Trade barriers and high operational costs, driven by environmental, sustainability, and technical standards in the EU, further impact the sector's competitiveness.

Despite the challenges, the EU furniture sector has opportunities for growth and advancement. Continued investment in skills, design, creativity, research, innovation, and new technologies can lead to the development of new products that cater to changing demographics, lifestyles, and trends. Research in advanced manufacturing technologies can create high-tech and knowledge-intensive jobs, appealing to younger generations and rejuvenating the sector's workforce. Furthermore, the sector's reputation for quality and design opens doors to new markets, particularly in high-end segments and emerging economies. Synergies with the construction and tourism sectors can also be explored, building on the furniture industry's strong track record in sustainability. By leveraging sustainable sourcing practices for raw materials and appealing to environmentally conscious end-users, the sector can drive sales and profitability.

To conclude, the furniture world is a dynamic and ever-evolving industry with Europe at its forefront. The EU's significant contribution to production, trend-setting capabilities, and dominance in the high-end furniture market highlights its pivotal role. However, the industry faces challenges such as competition, innovation, and trade barriers. By embracing opportunities for investment, research, market expansion, and synergies with related sectors, the EU furniture industry can navigate these challenges and continue to thrive, offering innovative, sustainable, and high-quality furniture solutions to consumers worldwide.

b. 1.2 Types of Furniture Products and Furniture Trends/Fashion

The furniture market encompasses a wide array of products that cater to various aspects of our lives and living spaces. It can be divided into distinct segments, each serving specific purposes and styles.One notable category is Living Room and Dining Room Furniture, which comprises furnishings found in living rooms, lounges, lobbies, and dining areas. Comfort is a significant driving factor in this segment, as consumers seek to create welcoming spaces for socializing and relaxation. Another important division is Bedroom Furniture, encompassing everyday bedroom items such as beds, mattresses, closets, nightstands, and dressers. Retailers in this market focus on providing comfort and convenience directly to consumers,

[2] Strategy for forest-based industries. (n.d.). Internal Market, Industry, Entrepreneurship and SMEs. https://single-market-economy.ec.europa.eu/sectors/raw-materials/related-industries/forest-based-industries/strategy-forest-based-industries_en

driving innovation. Kitchen Furniture is a growing sector propelled by advancements in materials and designs, offering consumers a wider selection of products. This category includes cabinets, countertops, and other storage solutions that adapt to evolving culinary needs and personal styles. Plastic and Other Furniture include pieces made from plastic and alternative materials, offering practical and versatile options for outdoor settings, children's furniture, and other environments. Office Furniture caters to work environments by providing desks, chairs, storage solutions, and ergonomic accessories that enhance productivity and functionality. Lamps and Lighting play a vital role in enhancing the ambiance and functionality of any space. This segment covers a variety of lighting fixtures, including lamps, pendants, and chandeliers, offering both decorative and practical options. Floor Covering is an essential aspect of furniture, contributing to the overall aesthetics and comfort of a room. It encompasses carpets, rugs, hardwood, laminate, tiles, and more. Furthermore, several emerging trends are influencing furniture fashion and design. Designers are incorporating curved elements into furniture, such as sofas and armchairs, to add a soft and inviting touch to living spaces. Natural materials like wood, wool, stone, and ceramics are gaining popularity, creating a grounding and calming effect while embracing the principles of biophilic design, which connects humans with nature. Sustainability is a significant focus, with consumers opting for vintage and pre-loved furniture and investing in durable designs made from recyclable materials. The nostalgic influence of the 70s is inspiring bold choices in furniture design, while statement stone, such as marble and onyx, adds a touch of luxury. The integration of vintage and contemporary design is becoming increasingly prominent, enabling a cohesive and personalized look. Metallic finishes are transitioning from brass and bronze to chrome and silver, providing a fresh and distinctive touch to furniture pieces. In summary, these trends and segments offer a diverse range of furniture options that cater to different styles, needs, and sustainability considerations. They empower individuals to create personalized and inviting spaces in their homes.

c. 1.3 Furniture Production and Consumption in the World

The furniture sector is of great importance to the EU economy, employing approximately 1 million workers in 130,000 companies and generating an annual turnover of around €96 billion. Europe has a long-standing history of furniture manufacturing, combining new technologies and innovation with cultural heritage and style. The industry provides jobs for skilled workers and is a global leader in the high-end segment of the furniture market.

The world furniture market is projected to grow at a compound annual growth rate (CAGR) of 5.5% from 2020 to 2028 (Insights, 2022)[3]. One of the key factors driving the growth of the European furniture market is the increasing demand for eco-friendly, modern, and luxury furniture, particularly from sectors such as hotels and restaurants. Additionally, the reduction

[3] Insights, F. B. (2022, July 27). Furniture Market to Reach USD 720.2 Billion by 2028 | At 5.5% CAGR. GlobeNewswire News Room. https://www.globenewswire.com/en/news-release/2022/07/27/2486623/0/en/Furniture-Market-to-Reach-USD-720-2-Billion-by-2028-At-5-5-CAGR.html

of high-cost transportation to manufacturers and the availability of raw materials from suppliers contribute to the market's expansion.

According to the CSIL report 'The furniture industry in Europe,' European furniture consumption reached nearly €120 billion in 2022, with Germany, the UK, France, and Italy being the largest markets. These countries also rank among the top 10 furniture markets worldwide. The European furniture industry remains fragmented, with a significant number of small and medium-sized enterprises (SMEs) that are leaders in the high-end furniture market. Europe is also home to numerous large players in terms of furniture turnover, with over 90 European companies included in CSIL's selection of the top 200 furniture manufacturers globally (Figure 1).

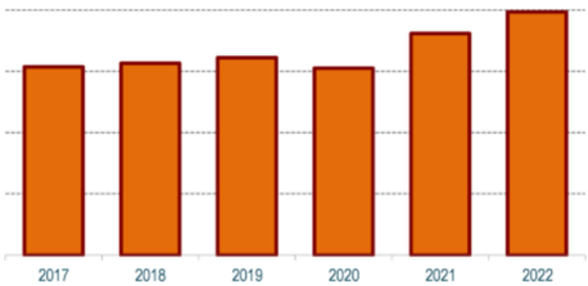

Figure 1. Total furniture consumption, 2017-2022 (Europe)

Source: CSIL (https://www.worldfurnitureonline.com/report/the-furniture-industry-in-europe/)

Furniture consumption worldwide has been steadily increasing in line with production growth. While developed countries are the primary consumers, developing and underdeveloped nations also contribute significantly to furniture consumption. Figure 2 provides a comprehensive representation of the leading furniture consumers in terms of global consumption.

		Apparent Consumption (€ Million)	Imports (€ Million)	Population (€ Million)	Apparent Consumption Per Capita (€ Million)	Total GNP (€ Million)	Per capita GNP (€ Million)
EU (27) UK, Norway Switzerland and Iceland		**117 031**	**73 791**	**480**	**221**	**17 396**	**32 918**
of which	France	14 232	8 883	61	211	2 422	35 945
	Germany	23 577	15 302	76	284	3 596	4 324
	Italy	11 411	18 943	54	192	1 751	29 448
	Poland	5 158	3 382	35	136	526	13 887
	UK	16 112	9 068	61	239	2 436	36 245
Central-East Europe outside the EU, Russia and Türkiye		**9 543**	**3 743**	**273**	**32**	**2 413**	**8 038**
of which	Russia	5 159	2 181	131	35	1 425	9 728
	Turkey	2 722	426	76	32	694	8 236
Middle East and Africa		**18 729**	**8 719**	**870**	**20**	**3 868**	**4 048**
of which	South Africa	1 214	445	54	20	325	5 469
Asia and Pacific		**180 554**	**22 797**	**3 710**	**45**	**28 309**	**6 943**
of which	China	115 744	1 964	1 284	82	13 541	9 601
	India	14 805	1 164	1 256	11	2 413	1 747
	Japan	13 790	5 469	115	109	4 863	38 520
	Malaysia	2 293	1 058	29	71	311	14 169
	Vietnam	1 984	1 182	88	20	235	2 412
North America		**106 002**	**48 646**	**453**	**213**	**21 850**	**43 834**
of which	United States	93 195	41 458	302	281	19 348	58 367
	Canada	11 287	5 806	35	297	1 507	39 621
	Mexico	1 521	1 382	117	12	995	7 717
Central and South America		**12 424**	**3 084**	**409**	**27**	**3 102**	**6 915**
of which	Brazil	7 021	639	194	33	1 519	7 144
WORLD TOTAL (100 COUNTRIES)		**444 284**	**160 779**	**6 196**	**66**	**76 939**	**11 300**

Figure 2. Leading furniture consumers

Source: CSIL 2022

In terms of global production and consumption, the world furniture production in 2022 was approximately €461.7 billion, while consumption stood at around €444 billion. China was the largest producer, with a production volume of €182 billion, and it consumed €115 billion domestically, resulting in a production surplus of over €66 billion. EU countries produced nearly €109 billion worth of furniture but consumed over €116 billion. Türkiye produced around €6 billion and consumed approximately €3 billion for furniture. Italy, Poland, Vietnam, Canada, Germany, Brazil, and Türkiye were other countries with production surpluses. The

USA was the second-largest producer with a volume of €62 billion, but it consistently imported more furniture than it produced. Countries such as the USA, England, Japan, and France consumed more furniture than they produced.

The production value of furniture manufacturing in Italy was the highest inside the European Union in 2019, with around 22.4 billion Euros (Figure 3). Germany and Poland ranked second and third with 21.5 and 11.3 billion Euros in production values (Global: Furniture Market Revenue by Country 2022 | Statista, n.d.)[4].

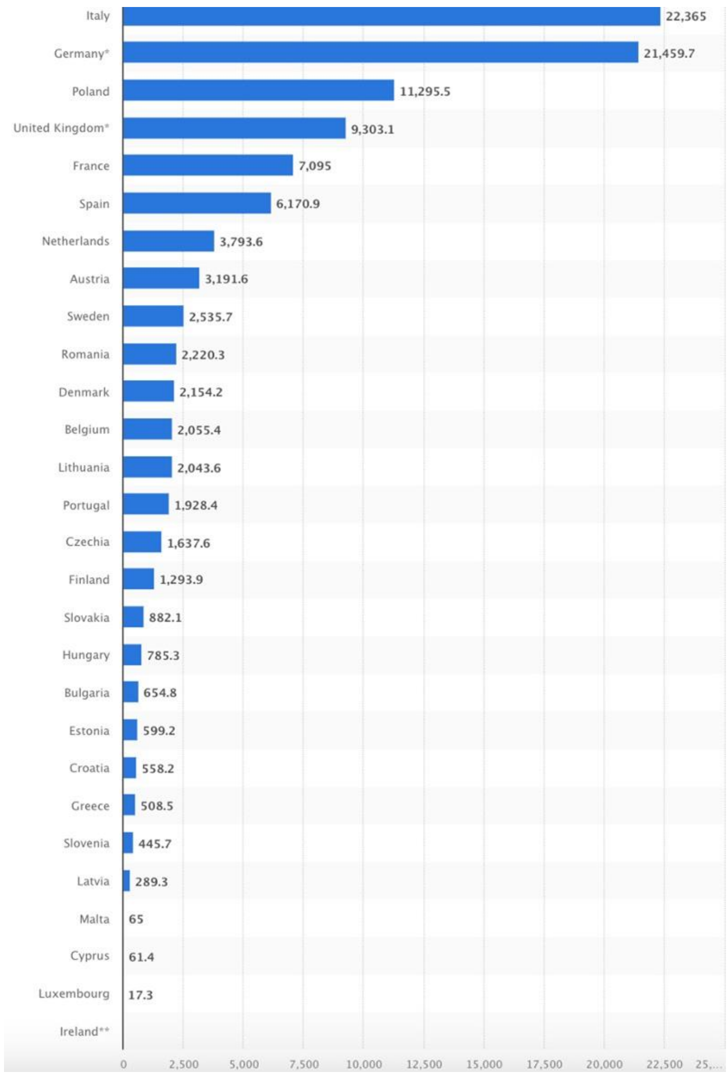

Figure 3. Production value of the furniture manufacturing industry in the European Union in 2019, by country(in million €)

Source: https://www.statista.com/statistics/456496/production-value-manufacturing-furniture-europea

[4] Global: furniture market revenue by country 2022 | Statista. (n.d.). Statista. https://www.statista.com/forecasts/758621/revenue-of-the-furniture-market-worldwide-by-country

In conclusion, the global furniture market is growing steadily, and Europe, with its rich furniture manufacturing heritage, plays a significant role. The EU furniture sector contributes significantly to the region's economy, employing millions of workers and generating substantial turnover. While China is the largest global furniture producer, Europe's production and consumption levels are also noteworthy, with Germany, the UK, France, and Italy being key markets. The furniture industry in Europe comprises a mix of SMEs and large companies, and there is a growing demand for eco-friendly and high-end furniture.

d. 1.4 EU and Worldwide Furniture Production and Consumption Balance

The furniture industry has a considerable economic importance and serves as a vital sector within the European Union (EU) and the global market. The aim is to examine the dynamics of furniture production and consumption in the EU and worldwide. It will give an insight into the importance of the EU as a major player in the furniture sector and provide an understanding of the broader landscape of global furniture production and consumption by examining key statistics and trends.

The EU is an important player in the furniture industry, both as a producer and consumer. Eurostat, the EU's statistical office, reported that furniture production in the EU was worth around €108 billion in 2020. This shows that the EU makes a significant contribution to the global furniture market.

Additionally, the EU is a big consumer of furniture, with households spending approximately €101 billion on furniture and furnishings in 2020. This highlights the strong demand for furniture within the EU and its role as a major market for the industry.

On a global scale, the furniture industry involves many countries in production and consumption. According to a report by CSIL, the global furniture production value was about €470 billion in 2020. China takes the lead as the largest producer, with a production volume of around €182 billion. China's domestic consumption of furniture amounted to about €115 billion, resulting in a significant production surplus of over €66 billion. This demonstrates China's dominance in furniture production.

In the EU, countries collectively produced nearly €109 billion worth of furniture in 2022. However, the consumption of furniture within the EU exceeded production, reaching over €116 billion. This means that the EU needs to import furniture to meet its domestic demand. Other countries such as Italy, Poland, Vietnam, Canada, Germany, Brazil, and Türkiye also contributed to the global furniture market with their production surpluses.

On the other hand, countries like the United States, England, Japan, and France had higher furniture consumption than their production levels. The United States, as the second-largest producer with a volume of around €62 billion, consistently imported more furniture than it produced. This indicates different patterns of furniture consumption worldwide.

To sum up, the EU plays a significant role in the furniture industry as both a producer and consumer. It contributes a substantial amount to global furniture production, while also having strong demand for furniture. China stands out as a major player in furniture production, with its large domestic market and significant production surplus. Understanding the dynamics of furniture production and consumption is crucial for policymakers and industry stakeholders. It emphasizes the need to address production-consumption imbalances and focus on innovation and sustainability for long-term growth and success in the furniture industry.

e. 1.5 Furniture Markets and Consumer Behaviour

The global furniture market exhibits significant variations in terms of markets and consumer behavior. Emerging economies present lucrative opportunities for the furniture sector to expand into new markets, particularly in the high-end segments. Consumer spending plays a crucial role in driving the furniture market, influenced by factors such as per-capita income, household debt levels, and consumer expectations. The continuous growth of the market is fueled by the steady increase in disposable income and rising living standards, which contribute to the consistent demand for furniture.

The proliferation of internet and smartphone usage has not only transformed consumer behavior but has also revolutionized sales channels and the retail landscape. The advent of online shopping has propelled the furniture market to become one of the fastest-growing segments in the e-commerce realm. In Europe, the preference for online shopping over physical stores is on the rise. Changing trends in home and living concepts have influenced customer buying patterns. The availability of online platforms has opened up new opportunities for customers to purchase furniture items such as chairs, storage files, tables, and desks.

The trend of online furniture shopping is expected to continue evolving due to several factors. These include the convenience and comfort of online purchasing, 24/7 customer support, online shipment tracking, cost-effectiveness, and a wide range of merchandise. As the demand for online distribution channels grows, the European furniture market is anticipated to experience a positive outlook during the forecast period. Customers appreciate the convenience of having furniture items delivered directly to their doorstep, further driving the preference for online buying.

Overall, the furniture market is influenced by changing consumer preferences, advancements in technology, and the availability of convenient online shopping experiences. As these trends continue to shape the industry, the online distribution channel is expected to play.

Below graphic (Figure 4) analyses trends in the structure of household final consumption expenditure by consumption purpose (COICOP) which can be expected to have a significant influence on citizens' wellbeing.a significant role in the growth and development of the European furniture market.

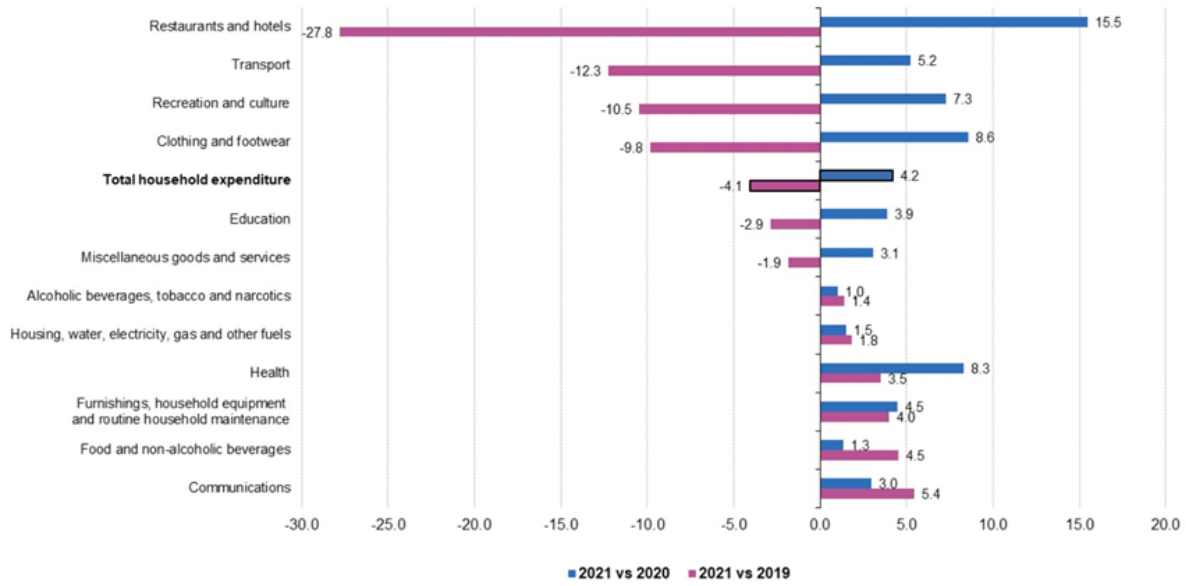

Figure 4. Household expenditure by consumption purpose, EU, % change

Source: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Household_consumption_by_purpose

f. **1.6 EU and Worldwide Furniture Trade**

The EU furniture sector faces tough competition from countries with lower production costs, particularly China, which is the largest furniture exporter to the EU. Trade in furniture between the EU and non-EU countries has been balanced, with similar values of imports and exports.

The EU furniture market was estimated to be valued at around €96 billion in 2020, representing about 20% of the global furniture industry market value. To enhance export-oriented growth, the EU furniture sector has focused on improving quality, design, and innovation. Investing in skills, design, research, and innovative technologies is seen as key to aligning with evolving consumer trends and business models. Advancements in manufacturing technologies offer opportunities to create high-tech, knowledge-intensive jobs, attracting younger generations and maintaining competitiveness. EU furniture manufacturers are renowned for their quality and design, providing prospects for expanding into high-end segments and emerging economies. Emphasizing sustainability, including the use of sustainable materials, can also appeal to environmentally conscious consumers and boost sales.

Overall, the EU furniture trade involves both imports and exports, with China dominating imports and the United States as a significant export destination. By focusing on quality, design, innovation, and sustainability, the EU furniture sector can seize opportunities for growth and expansion in the global market (Figure 5).

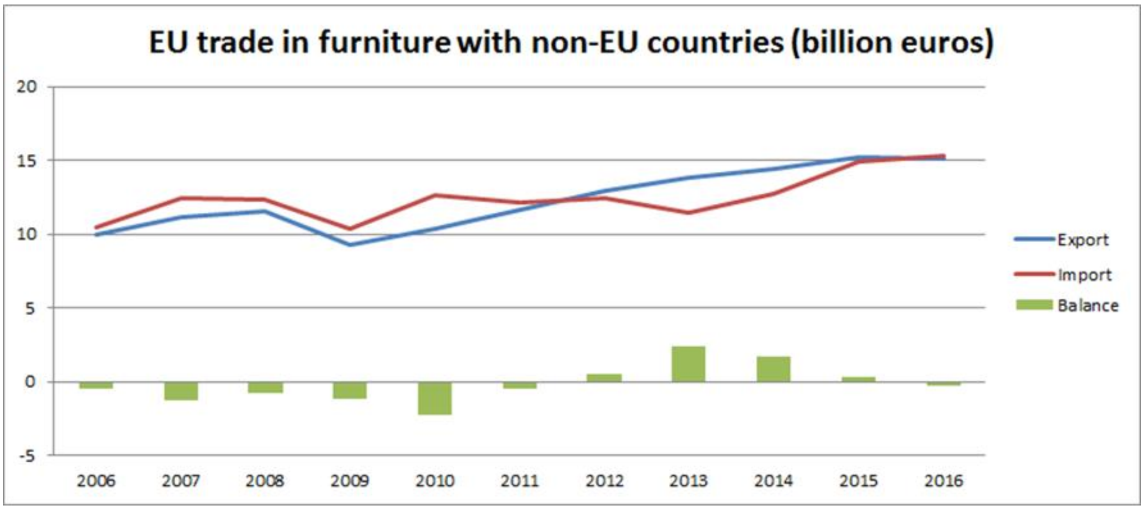

Figure 5. EU trade in furniture around the globe

Source:https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20180124-1

g. 1.7 EU and Worldwide Furniture Export

The furniture export market holds a vital position within the European Union (EU) and globally, with EU countries renowned for their excellence in producing high-quality furniture, innovative designs, and skilled craftsmanship. As a result, EU member states such as Italy and Germany have emerged as key players in the international furniture trade due to their ability to meet diverse consumer preferences and deliver superior furniture products. The EU's export performance is a testament to the region's reputation for high-quality furniture, innovative designs, and skilled craftsmanship. EU member states, including Italy and Germany, contribute significantly to the overall EU furniture export figures.

Italy, famous for its luxury and high-end furniture, occupies a prominent position in the EU furniture export market. Italian furniture manufacturers have gained worldwide recognition for their impeccable craftsmanship, meticulous attention to detail, and groundbreaking designs. The country's reputation for excellence has propelled it to the forefront of the global furniture export industry.

Germany, another significant exporter, emphasizes high-quality and functional furniture. German furniture manufacturers are acclaimed for their precision engineering, durable construction, and contemporary designs. Moreover, Germany's commitment to sustainability and eco-friendly production practices adds to its appeal in the export market.

EU furniture exports reach various countries worldwide, including the United States, Switzerland, Norway, China, and Russia. The United States serves as a significant market for EU furniture exports, driven by consumer demand for European craftsmanship and distinctive designs. Switzerland, known for its affinity for luxury and high-quality furniture, represents another prominent destination for EU furniture exports.

Norway, China, and Russia also demonstrate substantial demand for furniture imports from the EU. These countries offer attractive opportunities for EU furniture manufacturers to expand into emerging markets and cater to evolving consumer preferences. By capitalizing on these opportunities, EU exporters can tap into new customer bases and solidify their presence in the global furniture trade (The EU Furniture Market Situation and a Possible Furniture Products Initiative, 2015)[5].

In conclusion, the EU furniture export market benefits from the reputation of EU member states for producing top-tier furniture, innovative designs, and skilled craftsmanship. Italy and Germany, lead the way as major exporters, while the United States, Switzerland, Norway, China, and Russia serve as important destinations for EU furniture exports, presenting opportunities for market growth and expansion.

h. 1.8 EU and Worldwide Furniture Import

The European Union (EU) plays a crucial role as both a significant importer and exporter of furniture, reflecting the region's diverse consumer preferences and the need to cater to various market demands. While the EU is recognized for its high-quality furniture production, there remains a substantial demand for imported furniture to meet the diverse needs of consumers and supplement domestic production.

In 2020, the EU's furniture imports amounted to €25.5 billion, indicating the region's reliance on imported furniture to enhance its domestic market offerings. This import volume underscores the EU's commitment to providing consumers with a wide range of furniture options, including styles, designs, and materials that may not be extensively available within the EU's borders.

On a global scale, the world furniture import market has experienced notable growth and increased value. In 2021, the global imports of "Other furniture and parts thereof" surpassed $102 billion, surpassing the previous year's value of $82 billion. This growth reflects the expanding consumer markets and rising demand for furniture products across different countries.

The United States stands out as the largest importer of furniture globally, accounting for approximately 31% of the world's imports, totaling $31 billion in 2021. The US market's size, coupled with its strong consumer purchasing power, makes it an attractive destination for furniture exporters worldwide. The U.S. market's preferences span various styles and price ranges, creating opportunities for both high-end and affordable furniture imports.

Within the EU, Germany holds a prominent position as an importer of furniture, accounting for 7.98% of global imports in 2021, with a value of $8.16 billion. The German market's strength lies in its robust economy, high disposable income levels, and strong domestic demand for furniture products. Germany's consumers exhibit a penchant for high-quality and functional furniture, and imports play a crucial role in meeting their preferences and supplementing domestic production.

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[5] The EU Furniture Market Situation and a Possible Furniture Products Initiative. (2015, April 14). CEPS. https://www.ceps.eu/ceps-publications/eu-furniture-market-situation-and-possible-furniture-products-initiative/

Despite its departure from the EU, the United Kingdom continues to be a significant importer of furniture, accounting for 5.94% of global imports in 2021, totaling $6.07 billion. The UK's large population and high consumer spending on furniture contribute to its prominence in the global furniture import market. As an international hub for design and fashion, the UK market presents opportunities for both mass-market and luxury furniture imports.

France and the Netherlands are also notable importers within the EU. France accounts for 5.67% of global imports, valued at $5.8 billion in 2021, while the Netherlands represents 4% of global imports, amounting to $4.09 billion. These countries benefit from their strategic geographic locations, strong retail sectors, and vibrant interior design markets, driving demand for a diverse range of imported furniture.

Additionally, Canada is a noteworthy importer of furniture, representing 3.4% of global imports, with a value of $3.48 billion. Proximity to the United States and strong trade ties contribute to Canada's demand for furniture imports, with consumers seeking a mix of North American and international styles and designs (The European Market Potential for Occasional Furniture | CBI, 2023)[6].

The EU's furniture import market reflects the region's commitment to offering a diverse selection of furniture to its consumers. Imports supplement domestic production, allowing consumers access to a broader range of styles, designs, and materials from around the world. The import market caters to evolving consumer trends, preferences, and the need for specialized or niche products that may not be readily available domestically.

The Connectivity of the global furniture trade is evident through the EU's reliance on imports and the strong demand from countries such as the United States, Germany, the United Kingdom, France, the Netherlands, and Canada. The furniture import market fosters international trade collaborations, stimulates innovation, and supports economic growth in both exporting and importing countries.

Overall, the EU and global furniture import market highlight the dynamic nature of the furniture industry, where international trade plays a crucial role in meeting consumer demand for diverse furniture options. The EU's reliance on imports, coupled with the strong demand from major importing countries, underscores the interconnectedness and interdependence of the global furniture trade.

i. 1.9 Scope of Partner Countries in the EU and Worldwide Furniture Market

The furniture market operates as a dynamic and interconnected industry, with numerous countries contributing to its growth and diversity. Within both the European Union (EU) and

[6] The European market potential for occasional furniture | CBI. (2023, April 24). The European Market Potential for Occasional Furniture | CBI. https://www.cbi.eu/market-information/home-decoration-home-textiles/occasional-furniture/market-potential#which-european-countries-offer-most-opportunities-for-occasional-furniture

the global landscape, the presence of partner countries significantly shapes the furniture market. This focuses on six key partner countries: Greece, Estonia, Türkiye, Spain, the Netherlands, and Portugal. Each of these countries brings its distinctive styles, craftsmanship, and market dynamics, enriching the EU and worldwide furniture market with a wide array of options for consumers. By examining the unique contributions and market trends of these partner countries, we can gain valuable insights into their influence on the furniture industry and their significance as valuable participants in this global market.

Türkiye holds a significant scope in the EU and worldwide furniture market, showcasing a robust furniture industry with a rich history and diverse production capabilities. As a bridge between Europe and Asia, Türkiye benefits from its strategic location, enabling it to cater to a wide range of markets.Türkiye's furniture industry has experienced steady growth over the years, making it one of the leading furniture producers in the world. The industry's success can be attributed to several key factors. First and foremost is Türkiye's skilled craftsmanship, which has been cultivated through generations. Turkish furniture manufacturers are known for their attention to detail, quality workmanship, and innovative designs. This expertise allows them to produce a wide range of furniture items, including wooden furniture, upholstered furniture, and office furniture. Furthermore, Türkiye's competitive advantage lies in its ability to offer affordable yet high-quality furniture products. The country's efficient production processes and access to raw materials enable manufacturers to produce furniture at competitive prices, appealing to both domestic and international markets. Türkiye has also invested in modernizing its furniture industry, incorporating advanced technologies and manufacturing practices. This has led to increased efficiency, productivity, and the ability to meet the evolving demands of the market. Additionally, the industry has embraced sustainable practices, such as using eco-friendly materials and implementing energy-efficient production methods, to cater to the growing demand for environmentally conscious furniture. On a global scale, Türkiye's furniture exports have gained traction in various countries, including the Middle East and North Africa region, where Turkish furniture is highly regarded for its quality and durability. The country has also been successful in penetrating emerging markets in Central Asia, further expanding its export opportunities. Türkiye has established itself as a prominent player in the global furniture trade. The country's ability to cater to diverse markets and produce a wide range of furniture items positions it favorably for continued growth and success in the industry.

The table below (Figure 6) depicts the distribution of market share between partner countries and EU countries in the furniture industry. Among the partner countries, the Netherlands leads with the highest export capacity, while collectively they account for only 6.5% of the market share. In contrast, EU countries hold a significant portion of 36.09% in the global furniture industry. The Netherlands' export success can be attributed to its strong economy, emphasis on quality and design, efficient logistics, and strategic location.

CTSPC Code	Countries	Export for the groups of CTSPC (1.000 €)					Share
		2018	2019	2020	2021	2022	
9401-06	Netherlands	4 177 658	4 374 807	4 488 718	5 633 626	7 005 533	2.1
	Türkiye	2 650 857	3 455 899	3 414 370	4 047 660	5 026 029	1.6
	Spain	3 240 769	3 492 800	3 040 454	3 668 721	4 412 261	1 4
	Portugal	2 102 095	1 994 118	1 719 978	1 922 932	2 193 274	0.7
	Estonia	1 102 142	1 120 335	1 042 232	1 261 714	1 337 929	0.4
	Greece	162 090	169 982	162 238	213 375	297 807	0.09
Partner total		**14 439 099**	**14 881 711**	**14 403 903**	**18 029 651**	**19 309 748**	**6.5**
EU countries (27)		**84 506 992**	**85 530 760**	**86 437 458**	**106 418 213**		**36.09**
General total (world)		**234 741 647**	**237 585 448**	**240 104 053**	**295 606 149**	**0 00**	**100**

Figure 6. Export of EU countries (27), and partners in world furniture trade

Source: Trademap 2023

The import data reveals that the Netherlands and Spain are among the leading partner countries in terms of import in the global furniture market. However, when considering the product description, it is evident that the combined market share of all partner countries among the 227 countries is relatively modest, accounting for only 5.2% of the total import value of 18 billion. In contrast, the EU countries have a much larger stake, holding a substantial 28.05% share with a volume of 89 billion euros out of the total import value of 289 billion euros. This indicates the dominant position of EU countries in the global furniture import market. (Figure 7).

CTSPC Code	Countries	Import for the groups of CTSPC (1.000 €)					Share
		2018	2019	2020	2021	2022	
9401-06	Holland	6 126 756	6 724 572	6 952 571	8 641 919	10 227 381	3 5
	Spain	4 061 059	4 137 377	3 686 674	4 692 418	5 661 964	1.9
	Türkiye	714 063	677 233	631 499	673 466	865 612	0.3
	Portugal	1 240 931	1 233 016	1 108 107	1 311 12	1 512 559	0.5
	Greece	493 813	559 903	481 659	670 211	874 930	0.3
	Estonia	256 846	281 093	274 666	347 865	377 063	0.1
Partner total		**13 856 463**	**13 868 322**	**13 642 772**	**17 587 173**	**13 856 463**	**5.2**
EU countries (27)		**63 382 989**	**62 020 936**	**59 060 486**	**73 704 388**	-	**28.05**
General total (world)		**226 367 823**	**221 503 346**	**210 930 309**	**263 229 958**	-	**100**

Figure 7. Import of EU countries (27) and partners in world furniture trade

Source: Trademap 2023

Greece, although a relatively small player in the global furniture market, has a rich tradition of furniture production and a growing reputation for producing high-quality, handmade furniture. The Greek furniture industry primarily caters to domestic consumption, with a focus on meeting the demands of the local market. However, in recent years, Greece has also witnessed an increase in its furniture exports, indicating its potential to expand its presence in international markets.Within the European Union (EU) furniture market, Greece holds a modest market share, accounting for less than 1% of the total industry revenue, which was approximately 279.1 million euros. The major furniture markets within the EU include Germany, France, Italy, and the United Kingdom. Despite its small market share, Greece has been making efforts to boost its furniture exports to other EU member states, particularly Germany, Cyprus, and Bulgaria. These export activities demonstrate Greece's ambition to expand its reach beyond domestic borders and tap into larger consumer markets.On a global scale, Greece's presence in the furniture market is also relatively small. However, Greek furniture products have gained recognition for their quality craftsmanship and unique design, which has contributed to an increased visibility in international markets. The appreciation for Greek furniture's authenticity and aesthetics has opened doors for export opportunities and fostered interest from discerning customers seeking distinctive pieces. Despite its modest market share, the Greek furniture industry holds significant growth potential, particularly in the realm of exports. The industry's reputation for producing high-quality, handmade furniture aligns well with the rising demand for sustainable and eco-friendly products in the global market. By capitalizing on its strengths and leveraging targeted support and investment, the Greek furniture industry can further develop its export capabilities, expand its market reach, and compete more effectively on a global scale.

The Netherlands is an important player in the EUand worldwide furniture market, known for its innovative designs, high-quality craftsmanship, and a strong focus on sustainability. As a country with a long-standing tradition of design and craftsmanship, the Netherlands has established itself as a hub for creative and contemporary furniture production.Within the European Union (EU) furniture market, the Netherlands holds a notable market share. It is renowned for its thriving furniture industry, which contributes to the overall industry revenue. The country's strategic geographic location and well-developed infrastructure have positioned it as a key distribution center, allowing Dutch furniture manufacturers to efficiently reach customers throughout the EU and beyond. In addition to its domestic market, the Netherlands has successfully expanded its furniture exports to various EU member states and beyond. The Dutch furniture industry's export-oriented approach has facilitated its strong presence in international markets, including Germany, Belgium, the United Kingdom, and France. These export activities contribute to the Netherlands' reputation as a global player in the furniture market. Overall, the Netherlands' scope in the EU and worldwide furniture market is characterized by its innovative designs, commitment to sustainability, and strong export orientation. The country's thriving furniture industry, coupled with its renowned craftsmanship and design expertise, positions the Netherlands as a key player in the global furniture market.

Spain holds a significant position in the EU and worldwide furniture market. The country's rich history, cultural heritage, and skilled craftsmanship contribute to its strong presence in the industry. Spanish furniture manufacturers are known for their high-quality craftsmanship, innovative designs, and attention to detail, making them competitive players in both the domestic and international markets. In the EU furniture market, Spain has established itself as a prominent exporter and a major contributor to the region's overall furniture exports. The country's furniture exports to other EU countries are driven by its ability to produce a diverse range of furniture styles, from traditional and rustic designs to modern and contemporary pieces. Spain's strong design culture and expertise in woodwork and upholstery make its furniture products highly sought after by consumers across Europe. On a global scale, Spain's furniture exports have been steadily growing, demonstrating its reach and competitiveness in international markets. Spanish furniture manufacturers have successfully expanded their presence beyond the EU, exporting to countries worldwide. The combination of quality craftsmanship, design innovation, and competitive pricing has allowed Spain to capture market share in various regions, including North America, Latin America, and the Middle East.Spain's focus on sustainability and the use of raw materials from sustainable sources further enhances its position in the furniture market. With increasing consumer awareness and demand for environmentally friendly products, Spanish furniture manufacturers are embracing eco-friendly practices and incorporating sustainable materials into their production processes. This commitment to sustainability not only aligns with global trends but also opens up opportunities for Spanish furniture companies to cater to the growing market of environmentally conscious consumers.

Portugal has emerged as a significant player in the global furniture market, with a strong focus on exports. The country's furniture industry has experienced remarkable growth, driven by its transformation from traditional craftsmanship to innovative design and technology. Portugal's furniture exports have seen a substantial increase, reaching a value of 2.45 billion euros in 2018, representing approximately 4% of the country's total exports.The growth of Portugal's furniture industry has had a positive impact on the country's economy, particularly in terms of job creation. It is estimated that over 35,000 people are directly employed in the furniture industry, while an additional 100,000 are employed indirectly in sectors such as logistics and distribution. This growth in employment underscores the significant contribution of the furniture sector to Portugal's economic development.Portugal's success in the furniture industry can be attributed to various factors. One key factor is the investment in research and development, which has fueled innovation and the adoption of advanced manufacturing techniques. This focus on innovation has allowed Portuguese furniture manufacturers to offer high-quality, contemporary designs that resonate with international consumers.Additionally, Portugal has emphasized internationalization, increasing its competitiveness in the global market. The country's furniture industry has actively sought opportunities to expand its presence beyond national borders, targeting key export markets. The efforts to internationalize have paid off, as Portuguese furniture products have gained recognition for their quality, design, and competitiveness, contributing to the industry's growth.Another significant aspect of Portugal's furniture industry is its commitment to sustainability. Portuguese furniture manufacturers have embraced sustainable practices, including the use of eco-friendly materials and production processes. This sustainability focus aligns with growing global consumer demand for environmentally responsible products, providing Portuguese furniture companies with a competitive advantage in the market.The production made in the Portuguese furniture sector is diverse, encompassing a wide range of furniture types, including panel furniture, solid furniture, sofas, seating groups, modular furniture, garden furniture, and more. This diversity showcases the industry's ability to cater to various customer needs and preferences, further enhancing Portugal's standing in the global furniture market.Overall, Portugal's furniture industry has undergone a significant transformation, transitioning from traditional craftsmanship to innovative design and technology. With a strong focus on exports, investment in research and development, internationalization, and sustainability, Portugal has positioned itself as a notable player in the EU and worldwide furniture market, offering high-quality, contemporary designs that appeal to international consumers.

Estonia's presence in the EU and worldwide furniture market holds significant potential due to its unique scope and commitment to sustainability. The country's reliance on raw materials from sustainable sources aligns with the growing demand for environmentally-friendly products, making it an attractive choice for environmentally conscious end-users.Estonia's abundant forests and responsible forestry practices provide a rich source of raw materials for furniture production. The country's emphasis on sustainable sourcing ensures that the wood used in furniture manufacturing is obtained through responsible harvesting and replanting, minimizing the impact on the environment. This commitment to sustainable materials resonates with consumers who prioritize eco-friendly products, giving Estonian furniture manufacturers a competitive advantage in the market.Furthermore, Estonia's focus on sustainable production extends beyond raw materials. The country's furniture industry emphasizes energy-efficient manufacturing processes, waste reduction, and the use of eco-friendly technologies. By adopting sustainable practices throughout the production cycle, Estonian furniture manufacturers can offer products that align with the values of environmentally conscious consumers.In the EU market, Estonia's scope lies in its ability to provide high-quality furniture that meets stringent sustainability standards. As EU regulations continue to prioritize sustainability and environmental responsibility, Estonian furniture manufacturers are well-positioned to comply with these requirements and cater to the growing demand for eco-friendly furniture. On a global scale, Estonia's commitment to sustainability enhances its reputation as a responsible and forward-thinking player in the furniture market. The increasing awareness and concern for the environment worldwide create opportunities for Estonian furniture exports to reach environmentally conscious consumers in different regions.

The furniture sector holds significant scope and potential both within the European Union (EU) and worldwide. As a crucial part of the global economy, the furniture industry encompasses various segments, including residential, commercial, and outdoor furniture, as well as related areas such as interior design and manufacturing. The demand for furniture is driven by factors such as population growth, urbanization, economic development, changing consumer preferences, and the rise of e-commerce. The EU, with its diverse member states, contributes significantly to the furniture market, producing high-quality and innovative designs. However, the furniture sector is not limited to the EU alone, as it extends its reach to other regions across the globe. In the subsequent sections, we will delve into the specific characteristics, of furniture industry in Spain, Estonia, Greece, the Netherlands, and Türkiye.

1.4. 2. The Scope of the Furniture Sector in Partner Countries – Economy

The furniture sector is a crucial component for the economies of some countries in the Europe, making substantial contributions to various aspects such as employment, regional development, and international trade. Understanding the scope and dynamics of this sector within each partner country's economy is of utmost importance in comprehending its significance and potential for growth. This section aims to provide a comprehensive overview of the furniture sector's scope within the partner countries' economies. It delves into multiple facets, including the number and types of enterprises operating in the sector, employment figures, regional distribution patterns, production and consumption trends, furniture markets, and consumer behavior. Additionally, it explores capacity utilization, technology activities, research and development initiatives, export and import statistics, foreign trade balance, and sector production costs. nalyzing the number and types of enterprises gives insights into the structure and diversity of the furniture sector within each partner country. This information sheds light on the presence of small-scale businesses and large-scale manufacturers, providing a comprehensive picture of the industry's landscape.Employment figures offer a glimpse into the sector's role in job creation and its contribution to the labor market within each partner country. Understanding employment trends directly and indirectly linked to the furniture sector aids in assessing its socio-economic impact.Examining the regional distribution of furniture businesses provides valuable insights into the geographical dispersion of economic activity and regional development patterns. It helps identify regions that are thriving in the furniture sector and those that may require targeted support. Production and consumption trends offer a deeper understanding of the sector's performance, market demand, and changing consumer preferences. By analyzing factors such as production volumes, product offerings, and consumption patterns, it becomes possible to identify potential growth areas and evolving market trends. Capacity utilization is a critical indicator of efficiency and productivity within the furniture sector. Assessing capacity utilization rates enables the identification of potential areas for improvement in production processes, ensuring optimal resource allocation to meet market demand effectively. Exploring technology activities and research and development initiatives provides insights into the sector's innovation capacity, competitiveness, and adoption of advanced technologies. It helps assess each partner country's ability to remain at the forefront of technological advancements within the global furniture market. Examining export and import statistics, foreign trade balances, and market shares provides a comprehensive understanding of each partner country's international trade performance in the furniture sector. It highlights key export and import destinations, trade dynamics, and potential market opportunities. Finally, analyzing sector production costs, including raw material expenses, labor costs, and energy prices, helps identify cost drivers and strategies for cost optimization within the furniture sector. By considering these various aspects, this report offers a holistic view of the furniture sector's scope within the partner countries' economies. It aims to support policymakers, industry stakeholders, and investors in making informed decisions and fostering sustainable growth within the furniture sector of each partner country.

j. **2.1 Number and Types of Enterprises, and Employment**

Understanding the number and types of enterprises operating within the furniture sector, as well as their impact on employment, is essential for assessing the sector's scope and significance in each country's economy. This section of the report delves into the comprehensive analysis of the number and types of enterprises in the furniture sector, providing insights into the sector's size, diversity, and overall structure. Additionally, examining employment figures allows us to evaluate the sector's contribution to job creation and its role in supporting the labor market.

Türkiye

In Türkiye, the classification of Micro, Small, and Medium Enterprises (SMEs) and large-scale enterprises is based on both quantitative and qualitative criteria. These criteria encompass various aspects such as the number of personnel employed, operation time, wage total or labor cost, fixed assets, machinery park, area and volume used, material use, equity, and operating capacity. While quantitative criteria, such as the number of workers employed and the machinery park, are easily detectable, it is important to consider qualitative criteria as well in order to accurately classify enterprises. It is worth noting that there is no internationally standardized definition for SMEs, and each country defines its own criteria based on its economic context. The definitions of small and medium-sized enterprises often vary depending on the economic size and the specific criteria set by each country or organization. This highlights the need to approach the definition of enterprises from a utilitarian perspective, considering the purpose and conditions for classification. The concept of SMEs covers a wide range of businesses, making it challenging to establish a universally accepted definition. It encompasses both small workshops and technologically advanced factories. Defining SMEs requires careful consideration of multiple factors. In the graph, the definitions of SMEs provided by the OECD, the European Union (EU), and Turkish Statistic Institute (TÜİK) are presented, reflecting the diverse perspectives and criteria used to classify enterprises in Türkiye. (Figure 88).

Enterprises type	Number of employees		
	OECD	EU	TÜİK
Micro	1-19	1-9	1-9
Small	20-99	10-49	10-49
Medium	100-499	50-249	50-249
Large	over 500	over 250	0ver 250

Figure 8. Definitions of firms in scale

In Türkiye, an institute was established (KOSGEB) to support and develop small and medium-sized enterprises, in its founding law; Enterprises employing 1–50 workers are defined as small-scale enterprises, while enterprises employing 51-150 workers are defined as medium-sized enterprises. The number of enterprise and employment levels in the furniture industry by years follows a bumpy course. The number of employments within the furniture sector is given in the following figures (**Error! Reference source not found.**, Figure 10. Number of Enterprises in Türkiye, and **Error! Reference source not found.**). The number of employments within the furniture sector is given in **Error! Reference source not found.**.

Economic activity (NACE REV.2) Furniture	2015	2016	2017	2018	2019	2020	2021
Micro	32 121	33 174	34 082	35 666	35 914	35 932	39 380
Small	3 273	3 422	3 725	2 819	2 636	2 834	3 378
Medium	564	559	593	465	449	519	603
SMEs	**35 958**	**37 155**	**38 400**	**38 950**	**38 999**	**39 285**	**43 361**
Large	71	67	77	44	43	51	67
Total	**36 029**	**37 222**	**38 477**	**38 994**	**39 042**	**39 336**	**43 428**
Source: TUIK 2023							

Figure 9. Number of Enterprises in Furniture Industry

Economic activity (NACE REV.2)	2015	2016	2017	2018	2019	2020	2021
Micro	2 628 851	2 654 664	2 737 053	2 904 649	2 979 417	3 035 095	3 250 625
Small	256 155	266 489	94 126	213 426	207 634	223 626	269 818
Medium	46 034	49 042	55 973	35 224	34 182	37 274	47 323
SMEs	**2 931 040**	**2 970 195**	**3 087 152**	**3 153 299**	**3 221 233**	**3 295 995**	**3 567 766**
Large	10 193	11 186	13 260	7 072	7 188	8 071	11 165
Total	**2 941 233**	**2 981 381**	**3 100 412**	**3 160 371**	**3 228 421**	**3 304 066**	**3 578 931**
Source: TUIK 2023							

Figure 10. Number of Enterprises in Türkiye

Economic activity (NACE REV.2)	2015	2016	2017	2018	2019	2020	2021
Micro	4 867 920	4 879 274	4 977 115	5 576 127	5 620 395	5 707 843	6 103 676
Small	3 339 149	3 300 836	3 358 705	3 421 721	3 110 953	3 177 457	3 500 565
Medium	2 765 369	2 778 774	2 875 784	2 841 215	2 597 928	2 603 323	2 816 753
SMEs	**10 972 438**	**10 958 884**	**11 211 604**	**11 839 063**	**11 329 276**	**11 488 623**	**12 420 99**
Large	4 250 149	4 442 758	4 802 031	4 317 315	4 327 295	4 464 172	5 072 680
Total	**15 222 587**	**15 401 642**	**16 013 635**	**16 156 378**	**15 656 571**	**15 952 795**	**17 493 674**
Source: TUIK2023							

Figure 11. Number of Employment in Türkiye

Economic activity (NACE REV.2) Furniture	2015	2016	2017	2018	2019	2020	2021
Micro	71 791	72 397	72 961	79 331	77 423	78 028	87 782
Small	56 310	56 695	56 021	53 881	49 771	52 639	58 385
Medium	47 628	45 839	45 514	45 480	42 948	48 044	52 252
SMEs	**175 729**	**174 931**	**174 496**	**178 692**	**170 142**	**178 711**	**198 419**
Large	35 942	34 200	35 572	29 609	27 591	30 484	35 803
Total	**211 671**	**209 131**	**210 068**	**208 301**	**197 733**	**209 195**	**234 222**
Source: TUIK 2023							

Figure 12. Number of Employment in the Turkish Furniture Industry

The Turkish furniture industry holds a significant position within the broader Turkish industry in terms of employment and the number of enterprises. The sector contributes to the overall economy, with employment in the furniture industry accounting for approximately 5.09% of total employment. Furthermore, the furniture industry comprises 11.59% of the total number of enterprises in the country.Over the years, there has been a notable increase in the number of enterprises operating in the furniture sector, indicating its growth and importance. The industry has witnessed a rise in employment, with the number of people employed in the sector increasing from 36,000 to 43,000. The last figure (Figure 12) highlight the substantial role that the furniture industry plays in generating employment opportunities and stimulating economic activity in Türkiye. The sector's growth and increased presence within the Turkish industry further emphasize its significance in contributing to the country's overall economic landscape.

Greece

According to data from the Hellenic Statistical Authority (ELSTAT), the furniture sector in Greece comprises a significant number of enterprises, with approximately 4,700 active companies in 2020. The majority of these enterprises (around 83%) are classified as micro-enterprises, employing fewer than 10 people, while the remaining portion consists of small and medium-sized enterprises (SMEs). The sector encompasses various types of businesses involved in furniture production, including manufacturers, retailers, wholesalers, and importers/exporters. Additionally, specialized firms engaged in the production of furniture components and materials, such as textiles, wood, and metalworking, contribute to the sector's overall landscape.

In terms of employment, the furniture sector plays a vital role in Greece, providing jobs for approximately 29,000 individuals in 2020. The majority of these employees (around 80%) work in micro-enterprises, with the remaining workforce distributed across SMEs and larger firms. The sector's employment figures reflect its significance as a source of livelihood for many individuals in Greece.

The furniture sector in Greece has experienced growth in recent years, driven by factors such as an improving economy, increased disposable incomes, and a growing interest in home renovation and design. However, the sector also faces challenges, including competition from other European countries and the need to adapt to changing consumer preferences and technological advancements.Like many industries worldwide, the furniture sector in Greece has been impacted by the COVID-19 pandemic. The pandemic resulted in a decrease in furniture demand, particularly in the hospitality sector, which was heavily affected by travel and tourism restrictions. Nevertheless, with the ongoing vaccination efforts and the gradual reopening of economies, there are positive signs of recovery within the Greek furniture sector.It is important to note that the representation provided below illustrates the total number of micro, small, and medium-sized enterprises (SMEs) in the EU-27 NFBS (National Framework for Business Statistics) by Member State in 2021, where Greece is represented as "EL" (Figure 13).

	Micro SMEs	Small SMEs	Medium-sized SMEs
AT	87.5%	10.9%	1.6%
BE	95.4%	3.9%	0.7%
BG	92.0%	6.8%	1.2%
CY	92.5%	6.6%	1.0%
CZ	96.3%	3.1%	0.7%
DE	83.6%	14.2%	2.2%
DK	89.2%	9.1%	1.7%
EE	91.6%	7.1%	1.3%
EL	93.1%	6.3%	0.7%
ES	94.3%	5.1%	0.6%
FI	91.0%	7.6%	1.4%
FR	94.8%	4.5%	0.7%
HR	92.3%	6.7%	1.0%
HU	95.2%	4.2%	0.7%
IE	91.9%	6.9%	1.3%
IT	94.5%	4.9%	0.6%
LT	93.9%	5.1%	1.0%
LU	87.7%	10.2%	2.1%
LV	91.5%	7.2%	1.3%
MT	92.1%	6.7%	1.3%
NL	95.9%	3.3%	0.7%
PL	95.0%	4.3%	0.7%
PT	95.1%	4.3%	0.7%
RO	89.9%	8.6%	1.5%
SE	94.1%	5.0%	0.9%
SI	94.6%	4.6%	0.9%
SK	97.4%	2.2%	0.5%

Source: Calculations by the JRC based on Eurostat's Structural Business Statistics, Short-Term Business Statistics and National Accounts Database

Figure 13. The total number of micro, small, and medium-sized enterprises (SMEs) in the EU-27 NFBS (National Framework for Business Statistics) by Member State in 2021

Following (Figure 14) it is presented the share in total SME employment in the EU-27 NFBS of micro, small and medium-sized SMEs by Member State – 2021.

	Micro SMEs	Small SMEs	Medium-sized SMEs
AT	36.4%	35.5%	28.1%
BE	50.3%	26.9%	22.8%
BG	40.0%	31.0%	28.9%
CY	45.6%	30.5%	23.9%
CZ	45.9%	26.2%	27.9%
DE	32.2%	38.2%	29.5%
DK	30.6%	36.5%	32.9%
EE	40.1%	31.2%	28.7%
EL	47.8%	33.9%	18.3%
ES	52.0%	29.1%	18.8%
FI	34.3%	35.4%	30.4%
FR	43.7%	31.2%	25.0%
HR	45.2%	30.2%	24.7%
HU	51.6%	26.3%	22.1%
IE	37.3%	32.7%	30.0%
IT	54.7%	27.5%	17.8%
LT	40.5%	29.9%	29.6%
LU	25.8%	36.7%	37.5%
LV	39.4%	31.9%	28.7%
MT	38.0%	31.9%	30.1%
NL	43.3%	28.2%	28.5%
PL	51.5%	25.5%	22.9%
PT	50.6%	27.5%	21.9%
RO	36.9%	33.6%	29.4%
SE	35.4%	33.4%	31.2%
SI	46.5%	26.9%	26.7%
SK	60.3%	18.6%	21.1%

Source: Calculations by the JRC based on Eurostat's Structural Business Statistics, Short-Term Business Statistics and National Accounts Database

Figure 14. Total SME employment in the EU-27 NFBS of micro, small and medium-sized SMEs by Member State – 2021

The Netherlands

The furniture sector in the Netherlands demonstrates its significant presence and contribution to the country's economy (**Error! Reference source not found.**). As per data from the Dutch C hamber of Commerce, the number of active companies in the Netherlands surpassed 2.3 million in January 2023, showcasing a growth rate of approximately 6% compared to the previous year. These companies play a crucial role, accounting for over 60% of the added value and an impressive 70% of total employment in the country. To understand the sector's composition, it is essential to examine the distribution of companies across various employment sizes. The data reveals a diverse landscape, with companies employing different numbers of individuals, including those with one employed person, 2 to 10 employed persons, 10 to 50 employed persons, and 50 to 250 employed persons. Notably, the largest group consists of companies with two employed people, indicating the prevalence of small-scale enterprises in the furniture sector. This information sets the stage for a comprehensive analysis of the furniture sector's scope in the Netherlands, shedding light on the sector's structure and employment dynamics (Figure 15).

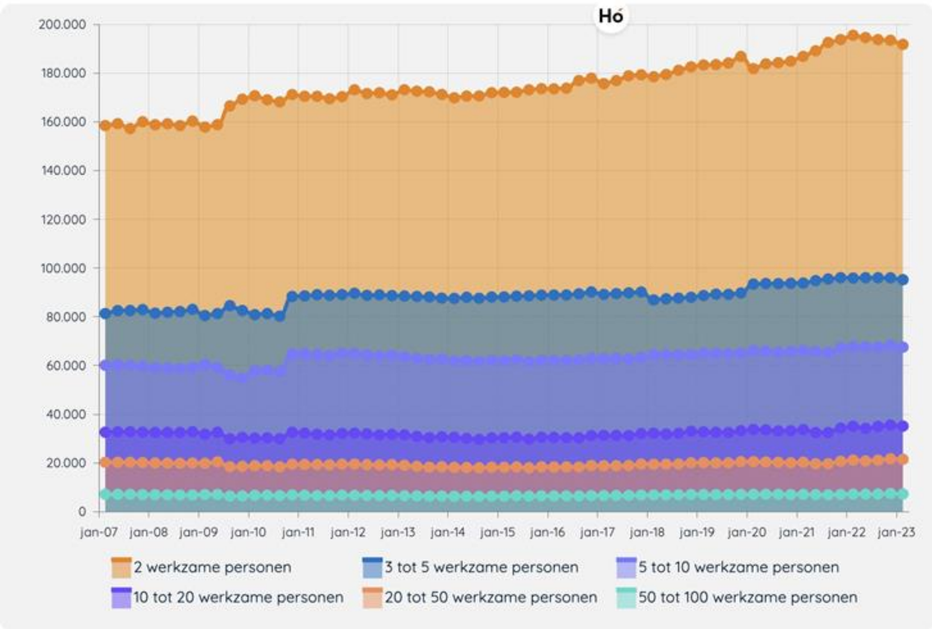


Figure 15. Number of employed people

Source: MKB ServiceDesk (https://www.mkbservicedesk.nl/sales-marketing/marktonderzoek/informatie-over-het-mkb-)

The furniture sector in the Netherlands encompasses a diverse range of enterprises, including furniture manufacturers, wholesalers, retailers, and design companies. (**Error! Reference s ource not found.**). According to recent data, there are 10,400 companies in the furniture industry, which is 310 more than a year earlier. These enterprises vary in size and specialization, ranging from small family-owned businesses to large-scale production facilities.

Industry	Total
31 - Manufacture of furniture	3
31011 - Interior construction	4520
31012 - Manufacture of commercial furniture	390
3102 - Manufacture of kitchen furniture	359
3103 - Manufacture of mattresses	67
3109 - Manufacture of other furniture	4801
310901 - Manufacture of the living room and bedroom chairs and garden chairs	1
310902 - Manufacture of the living room and bedroom furniture, garden furniture and other furniture (excluding chairs)	1
46471 - Wholesale of home furniture	1612
47591 - Furniture stores	2760
Total number of companies	14514

Figure 16. Number of enterprises per Activity

Below table contains data on the number of companies and institutions by main economic activity, based on the Standard Industrial Classification 2008 (SBI 2008). The SBI is broken down in this table up to and including the lowest level. The companies are further classified by company size based on the number of employees and by legal form. This is the business population of the Netherlands. (**Error! Reference source not found.**).

Total companies	8 845
Company size	
1 employed person	6 845
2 employed persons	880
3 to 5 employed persons	410
5 to 10 employed persons	340
10 to 20 employed persons	215
20 to 50 employed persons	105
50 to 100 employed persons	35
100 employed persons or more	20
0 to 50 employed persons	8 795
0 to 250 employed persons	8 840
Legal form	
Natural persons	7 750
Legal entitie	1 095

Figure 17. Furniture Business, Industry

Source: CB S (https://opendata.cbs.nl/statline/#/CBS/nl/dataset/81589NED/table?dl=1D4D5&ts=1684695)

A sole proprietorship is the most usual form of business in the interior construction industry. Only 3 per cent of companies are registered in a woman's name. In the second quarter of 2023, 69 per cent of all companies in the Netherlands were sole proprietorships; in the first quarter of 2007, this was still 53 per cent. In the second quarter of 2023, there are 8,170 sole proprietorships and 1,275 BVs in the furniture industry. (**Error! Reference source not found.**). A sole proprietorship can also employ staff. The interior construction industry is a man's world. Of the registered interior builders for whom the gender of the owner is known, 97 per cent are registered in the name of a man.

Legal form	Businesses
Proprietorship	8,170
Private company (BV)	1,275
Partnership	895
Limited partnership	15
Other legal entities	10
Partnership, cooperation	5
Other or unknown	35

Figure 18. Companies by legal form, Q2*2023

Source: CBS (https://www.cbs.nl/nl-nl/visualisaties/dashboard-economie/bedrijven#C+31)

The Netherlands home furniture market is highly fragmented and consists mainly of small or medium-sized family-owned and operated firms. The Netherlands furniture industry often finds it difficult to compete with other countries. Due to high transportation and labour costs compared with other competing countries. However, to meet the global competition, the players are building larger production capacities and focusing on achieving economies of scale.Employment within the furniture sector is substantial, providing jobs to around 60,000 people. The workforce comprises skilled craftsmen, designers, sales professionals, and other supporting roles. The furniture industry contributes significantly to employment opportunities, particularly in regions with high furniture manufacturing and retailing concentrations.The number of entrepreneurs with a place of birth outside the Netherlands will have risen to about 18%. The countries that are best represented: Poland, Türkiye and Suriname. In the first quarter of 2023, there were 35,000 vacancies in the Netherlands, which is 1,000 fewer than in the same period a year earlier.(**Error! Reference source not found.**).

Year	Quarter	Groningen	Friesland	Drenthe	Overijssel	Flevoland	Gelderland	Utrecht	North Holland	South-Holland	Zealand	North Brabant	Limburg
	First quarter	0.5	0.8	0.5	1.7	0.3	2.4	1	2.3	2.6	0.5	4.8	1.2
	Second quarter	0.4	0.7	0.4	1.5	0.3	2.1	1	2	2.2	0.4	3.8	1.1
	Third quarter	0.5	0.8	0.5	1.5	0.3	2.1	1	2.1	2.3	0.5	4.2	1.1
2020	Fourth quarter	0.5	0.8	0.4	1.6	0.3	2.3	1	2	2.4	0.4	5	1.2
	First quarter*	0.6	0.9	0.5	1.9	0.4	2.8	1.2	2.5	2.8	0.5	5.1	1.5
	Second quarter*	0.7	1.2	0.7	2.5	0.6	3.7	1.5	3.2	3.8	0.8	7.4	1.9
	Third quarter*	0.8	1.4	0.9	2.9	0.7	4.5	1.7	3.7	4.6	0.9	9.1	2.2
	Fourth quarter*	0.9	1.4	0.8	2.9	0.7	4.2	1.7	3.6	4.5	0.9	8.9	2.2
	First quarter*	1	1.5	0.8	3.3	0.8	4.8	1.9	3.9	4.8	1	9.4	2.5
	Second quarter*	1	1.6	0.9	3.6	0.8	5.3	2	4.3	5.1	1.2	9.8	2.6
	Third quarter*	0.9	1.4	0.9	3.2	0.8	4.8	1.8	4	4.8	1.1	9.1	2.4
2022	Fourth quarter*	0.9	1.4	0.9	3.1	0.7	4.5	1.7	4	4.5	1	9	2.3
2023	First quarter*	1	1.5	0.9	3.2	0.7	4.6	1.9	4	4.5	1	9.1	2.5

Figure 19. Vacancies in the Netherlands in furniture sector

Spain

According to Spain Given the context, the number of enterprises and the employment has been analysed according to the company size in the Spanish furniture sector, as well as the industrial Spanish sector. It is important to note that the classification of company size, micro, medium and large companies, does not form part of the classifications or variables used by the Spanish National Institute of Statistics, in the statistical operations that it compiles on companies. The following classifications are used: 0 to 9; 10 to 19; 20 to 49; 50 to 249; Over 250. The data gathering has been done according to the classification of the Ministry of Industry. The Numbers are explained in the below graphs (Figure 20, Figure 21, Figure 22, Figure 23, and Figure 24).

Enterprises type	Number of employees		
	OECD	EU	Ministry of Industry ipyme.org
Micro	1-19	1-9	1-9
Small	20-99	10-49	10-49
Medium	100-499	50-249	50-249
Large	over 500	over 250	over 250

Figure 20. Definitions of firms in scale

Economic activity (NACE REV.2) Furniture	2018	2019	2020
Micro	22.149	20.167	20.690
Small	20.703	20.715	21.049
Medium	12.875	13.499	13.287
SMEs	**55.727**	**54.381**	**55.026**
Large	5.865	6.156	6.029
Total	**61.592**	**60.537**	**61.055**
Source: INE 2023			

Figure 21. Number of Employment in the Spanish Furniture Industry

Economic activity (NACE REV.2) Furniture	2018	2019	2020
Micro	10.346	9.837	9.620
Small	1.052	1.057	1.037
Medium	141	143	141
SMEs	**11.539**	**11.037**	**10.798**
Large	14	15	15
Total	**11.554**	**11.051**	**10.814**
Source: INE 2023			

Figure 22. Number of Enterprises in the Spanish Furniture Industry

Economic activity (NACE REV.2) Industry sector	2018	2019	2020
Micro	164.280	162.740	161.251
Small	25.128	25.499	24.580
Medium	4.907	5.081	5.012
SMEs	**194.315**	**193.320**	**190.843**
Large	1.024	1.087	1.079
Total	**195.340**	**194.406**	**191.922**
Source: INE 2023			

Figure 23. Number of Enterprises in Spain

Economic activity (NACE REV.2) Industry sector	2018	2019	2020
Micro	358.489	351.265	358.098
Small	517.320	531.114	510.907
Medium	494.602	507.625	505.029
SMEs	**1.370.411**	**1.390.004**	**1.374.034**
Large	883.064	921.807	918.535
Total	**2.253.476**	**2.311.811**	**2.292.568**
Source: INE 2023			

Figure 24. Number of Employment in Spain

The graphs clearly illustrate the significant presence of Small and Medium-Sized Enterprises (SMEs) in the furniture sector, as well as the broader industry in Spain. In particular, the furniture industry is characterized by a substantial number of micro-SMEs, which account for

89% of the total workforce employed in the sector. This highlights the importance of these small enterprises in driving employment and economic activity within the furniture sector.However, it is worth noting that the COVID-19 crisis had a noticeable impact on the industry, resulting in a drop in activity from 2018 to 2020. This can be attributed to the various challenges and disruptions caused by the pandemic, including restrictions on mobility, supply chain disruptions, and decreased consumer spending. Despite these challenges, SMEs in the furniture industry remained resilient and played a vital role in the overall Spanish industry.In terms of employment rates, the furniture sector accounted for around 4% of the general employment in the Spanish industry between 2018 and 2020. This highlights the sector's contribution to job creation and its significance within the broader economy. Additionally, when considering the number of enterprises, the furniture sector represented approximately 6% of all enterprises in Spain during the same period, underscoring its presence and importance within the business landscape. Overall, the data presented in the graphs emphasizes the substantial role of SMEs, particularly micro-SMEs, in the Spanish furniture sector. It also sheds light on the industry's resilience during challenging times and its contribution to employment and economic growth in Spain.

Portugal

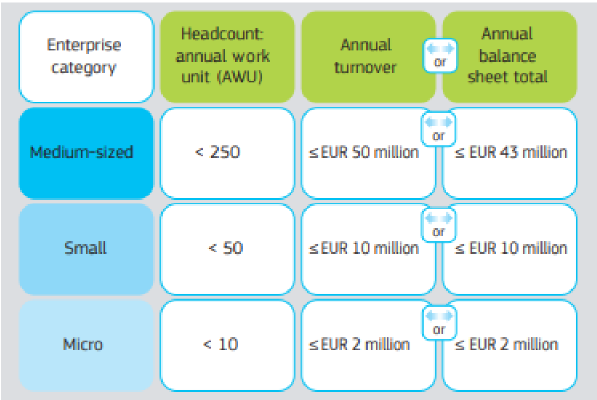
With regard to the theoretical concept of enterprises' size, the literature review presents us with different categorisations, which vary according to the sources consulted. The Portuguese Labour Code (defines four categories of enterprises in terms of size: microenterprises (enterprises with less than 10 workers), small enterprises (those with between 10 and less than 50 workers), medium enterprises (between 50 and less than 250 workers) and large enterprises (250 or more workers). According to the same source, the reference for determining the size of an enterprise should be the number of employees in the previous calendar year.

The European Commission provides a classification of micro, small and medium-sized enterprises that includes not only the criteria of the number of employees (staff headcount), but also annual turnover or balance sheet total (European Union, 2020) (Figure 25 and Figure 26). In Portugal, the National Statistics Institute (INE), one of the official entities responsible for the reporting of national indicators, follows the European Union (EU) regulation Nº 651/2014.

Enterprises category	Number of employees		
	OECD	EU	PORTUGAL
Micro	1-19	1-9	1-9
Small	20-99	10-49	10-49
Medium	100-499	50-249	50-249
Large	over 500	over 250	0ver 250

Figure 25. Number of employess per enterprise category

Source: INE Statistics Portugal (2023)



Enterprise category	Headcount: annual work unit (AWU)	Annual turnover	or	Annual balance sheet total
Medium-sized	< 250	≤ EUR 50 million	or	≤ EUR 43 million
Small	< 50	≤ EUR 10 million	or	≤ EUR 10 million
Micro	< 10	≤ EUR 2 million	or	≤ EUR 2 million

Figure 26. Enterprise Indicator by category

Source: European Union (2020, p. 11)

The number of enterprise and employment levels in the furniture industry by year follows a steady state. (Figure 26). The number of jobs within the furniture sector is given to the below graph. It is a labor-intensive industry and is controlled by SMEs. It will have about 34.962 workers by 2021. This accounts for 0.72% of Portugal's total employment and 4.8% of jobs in manufacturing.(Figure 27).

Economic activity (NACE REV.2) Furniture	2015	2016	2017	2018	2019	2020	2021
Micro	8631	8552	8669	8707	8814	8510	8627
Small	9944	10574	11154	11981	11914	12275	12864

Medium	7510	7251	7423	7867	7563	7980	8400
SMEs	**26085**	**26377**	**27246**	**28555**	**28291**	**28765**	**29891**
Large	3782	4777	5294	5215	5931	5164	5071
Total	**29867**	**31154**	**32540**	**33770**	**34222**	**33929**	**34962**

Figure 27. Number of Employment in the Portugal Furniture Industry

Source: INE Statistics Portugal (2023)

The sector contributed 0.4% to the Portuguese economy's Gross Value Added (GVA) and 3% to the GVA of the manufacturing sector in 2019. The number of businesses in the furniture and bedding industry in 2021 will be 4.417. This amounts to roughly 0.33 percent of all national businesses and 6.6% of all manufacturing companies (Figure 28).

Economic activity (NACE REV.2) Furniture	2015	2016	2017	2018	2019	2020	2021
Micro	3837	3774	3757	3749	3775	3653	3672
Small	521	549	567	594	602	614	642
Medium	84	84	89	88	92	92	96
SMEs	**4442**	**4407**	**4413**	**4431**	**4469**	**4359**	**4410**
Large	4	7	8	7	10	7	7
Total	**4446**	**4414**	**4421**	**4438**	**4479**	**4366**	**4417**

Figure 28. Number of Enterprises in Furniture Industry

Source: INE Statistics Portugal (2023)

In Portugal SMEs are characterized by their small size, with fewer than 10 employees and are typically family owned. Many of these businesses operate in the service sector, providing a range of services such as retail, hospitality, and personal care (Figure 29).

Economic activity (NACE REV.2)	2015	2016	2017	2018	2019	2020	2021
Micro	1666767	1708951	1770639	1818134	1873754	1848591	1878269
Small	687084	715434	747180	785100	816666	802398	819683
Medium	524882	551673	581050	612692	640935	627634	653902
SMEs	**2878733**	**2976058**	**3098869**	**3215926**	**3331355**	**3278623**	**3351874**
Large	700180	728682	793349	844525	894183	861513	884348
Total	**3578913**	**3704740**	**3892218**	**4060451**	**4225538**	**4140136**	**4236222**

Figure 29. Number of Employment in Portugal

Source: INE Statistics Portugal (2023)

Estonia

The Estonian furniture sector has been growing steadily in recent years, with revenues increasing annually and profitability higher than many other economic sectors in Estonia. The sector is characterized by two important development directions - project furniture manufacturers and series/mass furniture manufacturers. The flexibility of the sector is paramount to its success, and inter-company cooperation, education, popularization of the field, increasing export capacity, improving productivity, and technological level are crucial to maintaining the sector's momentum. For this analysis we examined the data provided by the Estonian Statistical Office to examine the financial performance of enterprises in the Estonian furniture sector over the years 2014 to 2021. The analysis will focus on the revenues, profitability, and costs of small, medium-sized, and large furniture enterprises in Estonia. The furniture sector is an important part of the Estonian economy, and the data indicates that it has been performing relatively well over the years 2014 to 2021. In 2019, there were a total of 870 enterprises in the furniture sector in Estonia, with a total revenue of €545 million. Of these, 728 were small enterprises, 123 were medium-sized enterprises, and only 19 were large enterprises (Figure 30 and Figure 31).

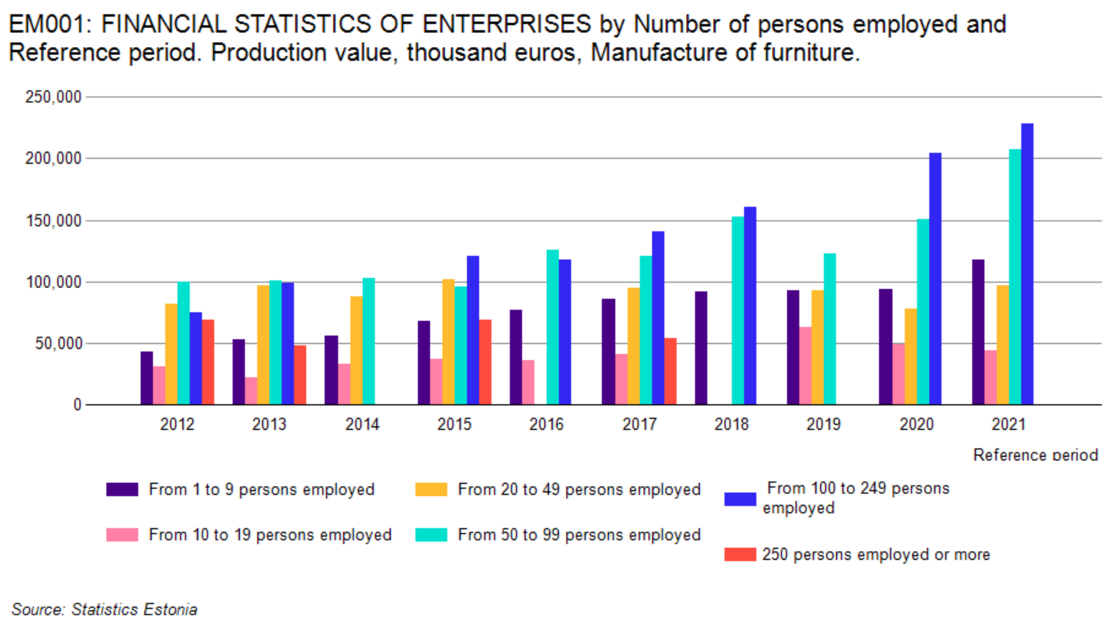


Figure 30. Financial Statistics of Enterprises

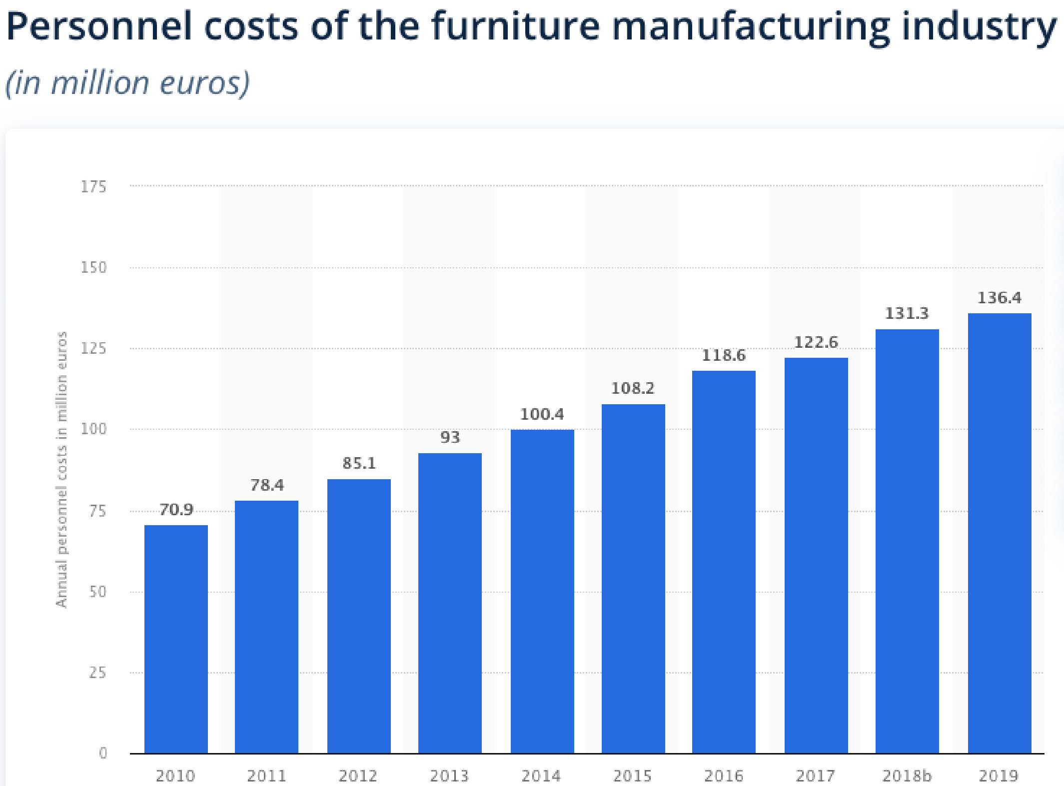


Figure 31. Personnel costs of the furniture manufacturing industry

k. 2.2 Regional Distribution of the Sector

The regional distribution of the furniture sector varies across the six countries analyzed, namely Greece, Estonia, Portugal, Spain, Türkiye, and the Netherlands. Each country has its own unique regional concentration of furniture manufacturing hubs and distribution centers, contributing to the overall economic landscape. Understanding the regional distribution in these countries provides valuable insights into the geographic factors influencing the sector's growth, employment patterns, and regional development opportunities.

Türkiye

The evaluation process has changed in the last 20 years of production and consumption habits. In the process, consumers tended to make purchases intended to satisfy their individual tastes and liking. The natural result of this increases the purchases of products of individual form. Group sales decreased furniture, buying has accelerated in the direction of the user's needs and marketing prone process. Specifically, the furniture in the past, shoppers have submissive approach to Ankara, Istanbul Inegöl, Kayseri and buy furniture seized while making-of-purchase in the initiative today. Products sold are produced. The rest of his productions to the density of small-sized companies are also defined. Inegöl Furniture Market; today found a former warehouse of the store shopper and the product was abandoned storage logic. Again, with a possible trade habits and shopper employee asset in ancient times, the only manufacturer today has abandoned these trends. Markets in the history of the old store owners can trade professionals tend to do. This process has gained speed particularly with the participation of large firms. Their successful adherence rate is about 20% of new hires thrown outlets; those who fail are withdrawn from the market at the end of 2 years . Large-scale enterprises have undergone store owners to display the appearance tends to make sales after the start of the catalog with the catalog across the country, especially when the sales of the products they designed. This trend has spread across the country manufacturers have entered the ground grabbing fight among themselves. No effort has been accelerated through the catalog sales furniture industry in the country. A new method of application is not yet as marketing practices. In either started to sell branded products, furniture sellers in the market, as in the final consumer tendency it is high. This is the easy way to keep the market vendors hired him to be the beginning of a new way. New vendors entering the market by increasing the quality and prestige of the products to sell in their own conditions recently required purpose. Growth is seen accelerating their efforts of manufacturers grows to reach customers with a larger sales talent.

Number	Highest				Number	Lowest			
	Cities	Enterprise Number	Employee With insurance	Rate		Cities	Enterprise Number	Employee With insurance	Rate
1	İstanbul	4.353	24.812	5.69	1	Ardahan	0	0	0
2	Bursa	1.549	17.031	10.9	2	Bayburt	3	4	1.3
3	Kayseri	760	13.432	17.6	3	Tunceli	3	4	1.3
4	Ankara	2.156	11.741	5.5	4	Gümüşhane	4	5	1.2
5	İzmir	1.642	9.916	6.03	5	Ağrı	4	8	2.0
6	Kocaeli	315	3.442	10.9	6	Hakkâri	4	14	3.5
7	Antalya	636	2.990	4.7	7	Edirne	9	15	1.6
8	Düzce	92	1989	21.6	8	Iğdır	4	17	4.2
9	Sakarya	221	1.795	8.1	9	Kilis	3	28	9.3
10	Mersin	344	1.529	4.4	10	Van	9	42	4.6
List total		**12.068**	**88.667**	**7.3**	**List total**		**43**	**137**	**3.1**
Total Furniture production				**%**	**Total Country Production**				**%**
Number of Enterprises			**43 428**	**18.53**	**3 578 931**				**20.45**
Number of employees			**234 222**		**17 493 674**				

Figure 31.Number of Enterprises and Employment and Distribution to Regions

Greece

The furniture sector in Greece is fairly well-distributed across the country, with a significant presence in both urban and rural areas. However, there are some regions that are particularly important for the industry. According to data from the Hellenic Statistical Authority, most furniture companies are located in the Attica region, which includes the capital city of Athens. Attica is home to around 30% of all furniture companies in Greece. Other regions with significant numbers of furniture companies include Central Macedonia, which includes the city of Thessaloniki and accounts for around 18% of all companies, and Crete, which accounts for around 11% of all companies. The Peloponnese region, which includes the cities of Patras and Kalamata, also has a significant presence in the furniture sector, accounting for around 8% of all companies. Another significant region for the furniture sector in Greece is Thessaly. The region is home to a large number of furniture manufacturers and is known for its high-quality wooden furniture products. In addition to these regions, there are also smaller clusters of furniture manufacturers in other parts of the country, particularly in rural areas. These manufacturers tend to specialize in specific types of furniture products, such as handmade wooden furniture or upholstered furniture.

Overall, the regional distribution of the furniture sector in Greece is relatively diverse, with a range of different types of enterprises and products spread across the country. This diversity is partly a result of the country's long history of furniture making, which has led to the development of specialized skills and knowledge in different regions. However, it also reflects the changing needs and demands of consumers in Greece and abroad, as well as the challenges and opportunities presented by the global economy.

The Netherlands

The regional distribution of SME entrepreneurs in the Netherlands showcases varying concentrations across different provinces. North Holland stands out with a relatively large number of entrepreneurs, with 142 entrepreneurs per 1000 inhabitants, while Utrecht also demonstrates a significant presence, with approximately 125 entrepreneurs per 1000 inhabitants. The distribution of entrepreneurs provides insights into the regional dynamics and entrepreneurial activity within the country (Figure 32).

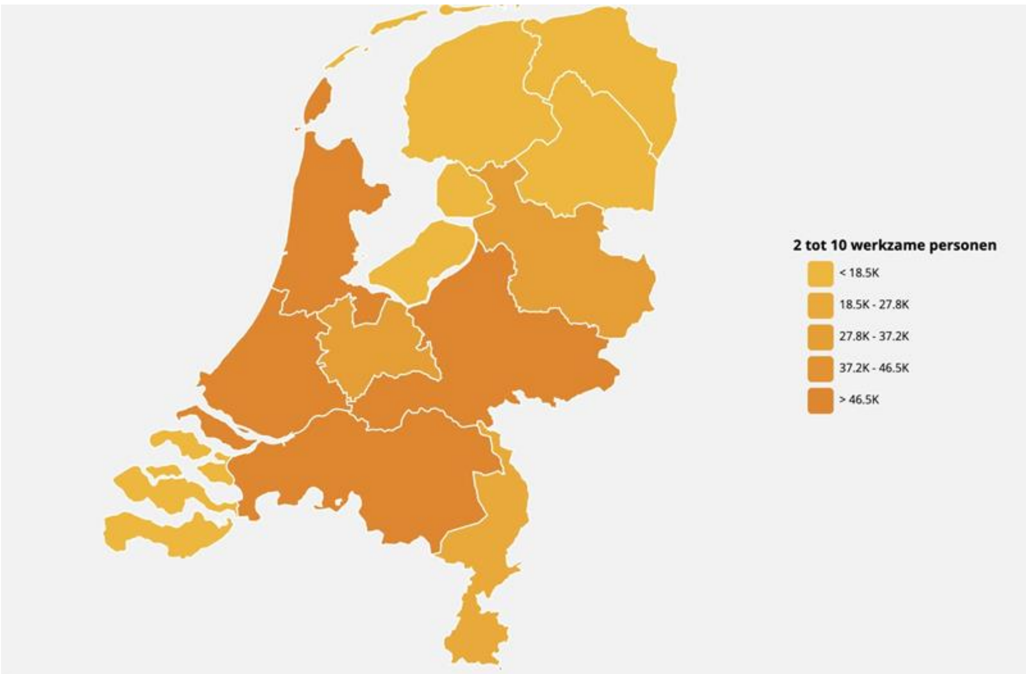


Figure 32. Profile SME entrepreneur

Source: MKB Servicedesk

Most SMEs are located in the province of South Holland. Most of these consist of organisations with two to ten employees: A good second place is for the province of North Holland. The top 3 provinces with the most small and medium-sized enterprises are closed by North Brabant. The fewest SMEs have located in the Zeeland. See the map above for more details, including other provinces. Almost one in 5 Dutch furniture companies is located in North Holland (19%). North Brabant is in second place (18%). There are also many in South Holland (2,433). Together, more than half (54%) of all furniture companies in the Netherlands are located in these three provinces. The number of furniture companies in the Netherlands per sector is given below. The region with the most establishments of companies in the furniture industry is Greater Amsterdam (990). Ten years earlier there were 735. The largest increase in the number of furniture industry establishments was in the Utrecht region, the smallest increase was in the Delfzijl region and the surrounding area (Figure 33).

COROP area	Businesses		COROP area	Businesses
Greater Amsterdam	990		North Frisia	200
Utrecht	845		Southeast South Holland	195
Greater Rijnmond	670		Alkmaar and surroundings	180
Southeast North Brabant	620		North Limburg	180
Northeast North Brabant	530		Zaan region	160
Veluwe	470		The Gooi and Vecht region	155
Central North Brabant	435		Southwest Friesland	145
Western North Brabant	400		Central Limburg	140
Arnhem/Nijmegen	375		Southeast Friesland	135
Twente	325		Other Zeeland	135
Cup of North Holland	310		Haarlem agglomeration	130
Achterhoek	265		IJmond	125
Agglomeration of The Hague	265		Delft and Westland	125
Southwest Gelderland	250		North Drenthe	100
North Overijssel	245		Southwest Drenthe	75
Agglomeration of Leiden and Bollenstreek	220		Southwest Overijssel	70
Flevoland	220		Southeast Drenthe	65
Other Groningen	215		East Groningen	50
East South Holland	215		Zeeuws-Vlaanderen	35
South Limburg	215		Delfzijl and surroundings	10

Figure 33. Company locations by region[7]

Source: CBS, 2023 (https://www.cbs.nl/nl-nl/visualisaties/dashboard-economie/bedrijven#C+31)

[7] Every company consists of at least one branch. Multiple locations of a company within one postcode area considered one establishment.

In the first quarter of 2023, the furniture industry in the Netherlands experienced a slight decrease in the number of newly founded companies compared to the previous year, with 170 new companies being established, representing a 3% decline. Conversely, the number of company closures decreased significantly by 22%, with 125 companies shutting down. The overall trend in bankruptcies across industries showed a significant increase in 2022, with 1,854 companies and institutions declaring bankruptcy, marking a 21% rise compared to the previous year. However, it is worth noting that the furniture industry witnessed only one bankruptcy in April 2023, compared to none in the same month the previous year.

Spain

The Valencian Community in Spain holds a prominent position in the furniture manufacturing industry, both in terms of economic impact and employment. Cities like Valencia, Alicante, and Castellón are home to a significant number of furniture production companies, known for their quality and design. As the third autonomous community with the highest number of furniture producers in Spain, after Catalonia and Andalucía, the Valencian Community contributes significantly to the country's furniture exports. Together with Catalonia, it accounts for 25.9% and 23% of Spain's total furniture exports, respectively, according to a report from Aidimme, the technological institute. Overall, the Valencian Community, Catalonia, Andalucía, and the Madrilian Community contribute to 54.3% of Spain's furniture sector production.

Portugal

The geographical distribution of the companies varies greatly across all Portuguese territory. Looking through the sector data, the three major clusters are the North, Centre, and Metropolitan Area of Lisbon. The main entities involved in the promotion of the cluster across the years are:

- AIMMP - Associação das Indústrias de Madeira e Mobiliário de Portugal [Portuguese Wood and Furniture Industries Association];
- APIMA - Associação Portuguesa das Indústrias de Mobiliário e Afins [Portuguese Association of Furniture and Related Industries];
- AEP - Associação Empresarial de Portugal (although not a furniture association) [Portuguese Business Association].

As illustrated in figure31, these clusters have very distinct percentages. In 2021, the North region of Portugal has 64.3% of the companies, followed by the Centre region, which has 20.1% (INE Statistics Portugal, 2023). These two regions account for 84.2% of all companies in the Portuguese furniture industry and for 89.4% of the employees of the furniture industry. It is worth mentioning Paços de Ferreira, in the region of Tâmega and Sousa, known as the Furniture Capital, has been one of the main references in the furniture sector since the 1990s.

The city of Paredes has a strong connection to this sector, incorporating the Furniture Route and serving as one of the main references for Portuguese furniture exports (Figure 34 and Figure 35).

CAE / NACE 31 - 2021

	Empresas *Enterprises*		Pessoal ao Serviço *Persons employed*		VVN / Turnover		VABpm / *GVA*		Empresas/ *Enterprises* por / *by NUTS II*	Estabelecimentos (3) (2020) *Establishments (3) (2020)*	
	Nº / ner	Estrutura Regional *Regional Structure* (%)	Nº / ner	Estrutura Regional *Regional Structure* (%)	M€	Estrutura Regional *Regional Structure* (%)	M€	Estrutura Regional *Regional Structure* (%)	Peso da CAE 31 na Secção C *Share of NACE 31 in Section C*	Nº / ner	Estrutura Regional *Regional Structure* (%)
Portugal	4 417	100,0%	34 962	100,0%	2 129	100,0%	710	100,0%	6,6%	4 516	100,0%
Continente	4 364	98,8%	...	...	...	...	...	...	6,7%	4 465	98,9%
Norte	2 839	64,3%	23 016	65,8%	1 374	64,5%	452	63,6%	8,6%	2 878	63,7%
Centro	887	20,1%	8 242	23,6%	557	26,2%	188	26,6%	5,4%	924	20,5%
Lisboa	487	11,0%	2 167	6,2%	122	5,7%	42	5,9%	4,8%	499	11,0%
Alentejo	105	2,4%	1 251	3,6%	66	3,1%	24	3,3%	2,6%	112	2,5%
Algarve	46	1,0%	...	...	...	...	...	...	2,4%	52	1,2%
R. A. Açores	27	0,6%	...	...	...	...	...	...	2,5%	25	0,6%
R. A. Madeira	26	0,6%	...	...	...	...	...	...	3,6%	26	0,6%

Figure 34. Regional distribution enterprises and employment

Source: INE Statistics Portugal (2023) and Gabinete de Estratégia e Estudos (2023)

	Geographic location (NUTS - 2013)	Number of employees (No.) in enterprises by Geographic localization (NUTS - 2013) and Economic activity (Subclass - CAE Rev. 3); Annual	Number of enterprises	Rate (a)
Year 2019	Portugal	34222	4479	7,6
1º	Área Metropolitana do Porto	11315	1445	7,8
2º	Tâmega e Sousa	8070	961	8,4
3º	Região de Coimbra	2747	126	21,8
4º	Região de Aveiro	2419	188	12,9
5º	Área Metropolitana de Lisboa	2286	479	4,8
6º	Lezíria do Tejo	1232	50	24,6
7º	Cávado	1098	211	5,2
8º	Ave	1095	130	8,4
9º	Região de Leiria	953	177	5,4
10º	Viseu Dão Lafões	775	85	9,1

Figure 35. The top 10 regions - number of enterprises and employment in Portugal (2019)

Notes: (a) Rate = Amount of employees / Number of enterprises

Source: INE Statistics Portugal (2023)

The following figure (Figure 36) provides an overview of the 10 regions that exhibit comparatively lower numbers of enterprises and employment.

Year 2019	Geographic location (NUTS - 2013)	Number of Employees (No.) in enterprises by Geographic localization (NUTS - 2013) and Economic activity (Subclass - CAE Rev. 3); Annual	Number of enterprises	Rate
1º	Baixo Alentejo	19	14	1,4
2º	Alto Alentejo	20	14	1,4
3º	Alentejo Litoral	22	14	1,6
4º	Alto Tâmega	42	17	2,5
5º	Alentejo Central	57	23	2,5
6º	Douro	83	24	3,5
7º	Terras de Trás-os-Montes	105	30	3,5
8º	Beira Baixa	135	21	6,4
9º	Beiras e Serra da Estrela	195	63	3,1
10º	Alto Minho	217	63	3,4

Figure 36. The lowest 10 respect to the number of enterprises and employments

Note: (a) Rate = Amount of employees / Number of enterprises

Source: INE Statistics Portugal (2023)

Estonia

The furniture sector in Estonia demonstrates a relatively balanced distribution of enterprises across the country, with a notable concentration in Harju county, home to the capital city of Tallinn. In 2019, Harju county housed 277 furniture enterprises, contributing to a substantial revenue of €280 million and a total profit of €22 million. Other regions such as Tartu, Pärnu, and Viljandi counties also play a significant role in the furniture sector, highlighting the sector's presence and economic impact beyond the capital region.

I. 2.3 Furniture Production and Consumption, Furniture Trends

This section provides a detailed overview of the furniture production and consumption sectors in the partner countries, namely the Netherlands, Estonia, Greece, Spain, Portugal, and Türkiye. It highlights the key findings and trends observed within each country's furniture industry, including production levels, consumption patterns, and emerging market trends.

Türkiye

The furniture industry in Türkiye has experienced significant growth and development over the years. The sector offers a wide range of furniture products, including panel furniture, solid furniture, sofas, seating groups, modular furniture, and more, catering to both domestic and international markets. The industry has shown a focus on quality, functionality, and modern designs, driven by increasing demand for furniture due to factors such as population growth, rising income levels, urbanization, changing housing policies, and lifestyle preferences.

In terms of production, the Turkish furniture sector is distributed countrywide, with a significant number of small-scale enterprises using both traditional and modern production methods. The industry has embraced technological advancements, with the adoption of CNC machines for series production. The sector's employment capacity is noteworthy, contributing to job creation and economic development in various provinces and districts across Türkiye. The furniture sector in Türkiye faces challenges related to factors such as exchange rate fluctuations, increasing production costs, and volatility in foreign currency values. However, despite these challenges, the industry has witnessed growth in exports, reaching billions of euros and establishing its position in the global market. The sector aims to further enhance its production capabilities and exports, with a vision to become one of the top furniture producers globally.

Domestic consumption in Türkiye constitutes a significant portion of the furniture sector's demand, driven by factors such as population growth, increasing per capita income, changing lifestyles, and housing trends. However, the sector also relies heavily on foreign markets, with exports accounting for a substantial portion of production. The furniture industry in Türkiye has multiple connections with various industries such as design, engineering, advertising, logistics, and more, creating a comprehensive network of stakeholders.

Overall, the furniture production and consumption trends in Türkiye reflect the country's economic and social development, as well as its aspirations for growth and competitiveness in the global market.

Greece

According to data from the Hellenic Statistical Authority (ELSTAT), the production value of the furniture industry in Greece was €1.4 billion in 2020, with most of the furniture production focused on wooden furniture. The production of metal furniture, upholstered furniture, and furniture made from other materials such as plastic and glass also contributed to the overall output. This represents a decrease from previous years, due in part to the impact of the COVID-19 pandemic on the industry. However, furniture production in Greece has been relatively stable in recent years, with manufacturers producing a wide range of products for both domestic and international markets.

In terms of furniture consumption, the Greek market is relatively small compared to other European countries. According to Eurostat, the household expenditure on furniture in Greece was €2.8 billion in 2019. This represents a slight increase from previous years, but is still lower than the EU average (Figure 37).

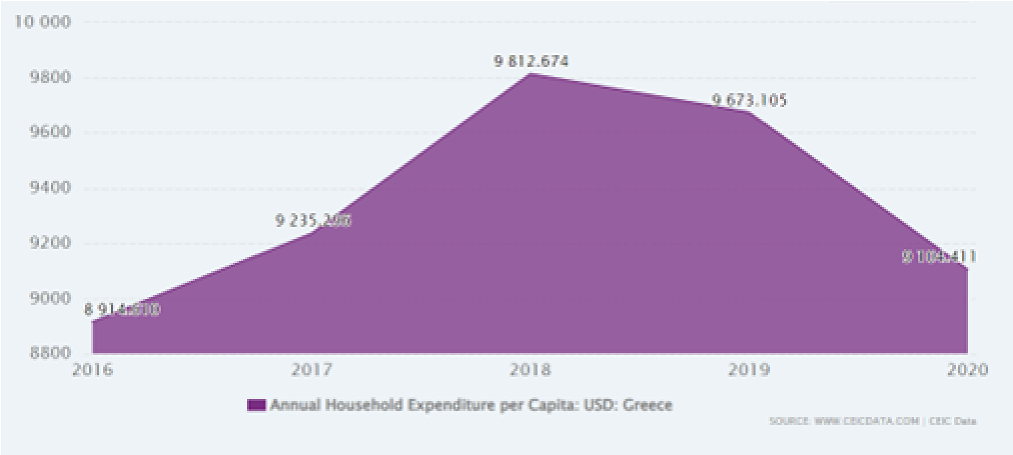


Figure 37. Anual household expediture per capita (USD). Greece

However, there are signs that the furniture market in Greece is growing, particularly in the e-commerce sector, where online sales of furniture products have increased in recent years. The furniture sector in Greece is driven by both domestic demand and demand from commercial sectors such as tourism and hospitality. The domestic market for furniture is mainly driven by private households, with rising disposable incomes and a growing trend towards home renovation and design supporting demand for high-quality and innovative furniture. The Greek furniture sector is also influenced by broader trends in the global furniture industry. There are a number of styles and designs that are popular in Greece. One trend that has been growing in recent years is the use of natural materials, such as wood and stone, in furniture design. Greek furniture manufacturers are known for their use of high-quality, locally-sourced materials, and there is a growing demand for furniture products that are sustainable and environmentally-friendly. Another trend in the Greek furniture market is the use of modern and minimalist designs. Many consumers in Greece are looking for furniture products that are functional and practical, as well as aesthetically pleasing. This has led to a focus on simple, clean lines and a preference for neutral colors and materials. Another trend is the use of technology and digital tools in the design and manufacturing process. This includes the use of computer-aided design (CAD) software to create and test furniture prototypes, as well as the use of advanced manufacturing technologies such as 3D printing to produce customized furniture pieces. Overall, the furniture sector in Greece is characterized by a mix of traditional and innovative approaches to design and production, with a focus on quality and sustainability. The sector is driven by both domestic and commercial demand and is influenced by broader trends in the global furniture industry.

The Netherlands

Furniture production in the Netherlands is characterised by high-quality craftsmanship and innovative design. Dutch furniture manufacturers use sustainable materials and functional yet aesthetic designs. The production output includes various furniture items, such as residential, office, kitchen, and outdoor furniture.

The Netherlands Home Furniture Market is segmented by Material (Wood, Metal, Plastic and Other furniture), by Type (Kitchen Furniture, Living-room, and Dining-room Furniture, Bedroom Furniture, and Other Furniture), and by Distribution Channel (Home Centers, Flagship Stores, Specialty Stores, Online Stores, and Other Distribution Channels)

Below, Netherland home furniture market leaders sorted in no particular order.

- Ikea (https://www.ikea.com/nl/en/)
- Leen Bakker (https://www.leenbakker.nl/)
- Home24 (https://www.home24.nl/)
- Beliani (https://www.beliani.nl/)
- Meubella (https://www.meubella.nl/)

Chinese online retail giant JD.com has opened its first physical stores in Europe on January 2022. Operating under the brand name Ochama, the stores are located in Leiden and Rotterdam in the Netherlands, with two more planned for Amsterdam and Utrecht. Ochama is essentially a robotic-operated retailer as part of a new shopping format merging online ordering and pick-up options in which robots prepare the parcels and home delivery service (Figure 38).

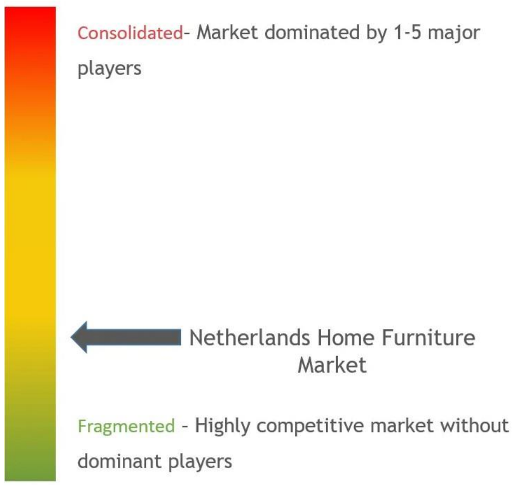


Figure 38. Market Concentration

Source: Mordor Intelligence

Products can be made in the Netherlands or abroad. On average, an interior builder realises 94 per cent of the production value in the Netherlands. The weighted market figures look different because large companies relatively often produce abroad. Not all interior builders have production abroad. All surveyed interior builders produce (partly) in the Netherlands. In addition to production in the Netherlands, 20 per cent of the companies also have production abroad.

In the production of furniture/interiors, not everything is always produced in-house, but parts of the production are also outsourced. On average, 22 per cent of the purchase value of production is outsourced. When weighing the share of outsourced work in the purchase value based on the number of employees converted to full-time, the outsourced purchase value share of production amounts to 19 per cent. On average, small companies outsource a slightly larger share of production than large companies. 14 per cent of the interior builders who participated in the survey produce everything themselves and do not outsource anything. On the other hand, 4 per cent of the respondents outsource the entire production. In the other 82 per cent of the companies, part of the production is outsourced.

For a long time, the wood industry was mainly a producer of an end product, but it is increasingly becoming a partner for co-design, delivery, assembly and guarantee of a total product. Extra service and services will be part of the standard package; for example, it is increasingly common for a manufacturer to supply the entire installed product instead of a kit. This also means that design and construction risks are gradually transferred to the supplier.

Furniture Consumption

Regarding consumption, the Dutch strongly favour well-designed and durable furniture. The demand for sustainable and eco-friendly furniture has been growing, driven by increasing consumer environmental awareness. Minimalist and Scandinavian-inspired designs are particularly popular, emphasising simplicity, functionality, and natural materials.Dutch furniture consumption is broken down by segment, together with an analysis of home furniture sales by distribution channels (buying groups and franchising, independent furniture chains, small-scale independent retailers, non-specialised distribution, and others).

Furniture Trends

The rising disposable income of the population is expected to positively impact the growth of the home furniture market over the forecast period. Furthermore, changing the lifestyle of the people, such as increasing their preference for smart furniture, is anticipated to intensify the growth of the home furniture market. Moreover, the increasing disposable income of individuals has led to thinking regarding social status, driving the increased spending on products, including furniture. Moreover, increasing disposable income among the urban population drives the home furniture industry, wherein consumers are now willing to pay for premium products at a high cost.

Increasing expenditure on furniture goods among millennials, coupled with their growing brand consciousness, is supporting the market to record growing revenues during the study period. The significant increase in e-commerce platforms offering various designs and models of furniture products is accelerating the market's growth. The omnichannel distribution practices are also helping the key players record more revenues in the market.

The impact of the Covid-19 crisis on consumer behaviour and manufacturing trends has heightened the importance of digitalisation and automation for the furniture industry. Online-savvy consumers seeking personalised shopping experiences and competitive prices are pushing furniture manufacturers to innovate on their existing workflows. Whereas advances in digital technology and communication tools empower furniture executives to respond faster to the changes in consumer demand, gain cost-saving benefits, and boost operational efficiency.

Due to significant demand from the younger generation, key players have come up with various offers on their products. The growing demand for do-it-yourself (DIY) furniture products and ready-to-assemble (RTA) is also helping the market grow further, especially in the home and office furniture segments, thus helping the market record more sales across the Netherlands. The growing residential and commercial construction across the Netherlands and the increasing number of strategic alliances and partnerships are expected to drive the market's growth.

Spain

The Spanish furniture market has shown resilience despite the challenges posed by the Covid-19 pandemic. While there was initially a decrease in average spending on furniture during the pandemic, there was a subsequent boost in sales as lockdown restrictions were lifted and people sought to renew their homes with newer and more comfortable furniture. The market is driven by the bedroom segment, followed by bath and kitchen segments, and there is an increasing trend towards customizable furniture.

Spain is the fifth largest European market for furniture, with households spending over €8 billion on furniture products. The market is in good shape and experiencing solid growth, with revenue reaching €10.76 billion in 2023 and expected to grow annually. The availability of premium goods and rising living standards are influencing the bedroom furniture segment, and there has been significant expansion in the online bedroom furniture market due to the fragmented consumer options and improved shipping services. Furniture manufacturing companies in Spain have shown positive sales dynamics, despite various challenges such as the end of the health crisis, tensions in the raw materials market, and price increases in energy and end products. Spanish furniture manufacturers have also strengthened their business connections with countries outside of Europe. The furniture market plays an essential role in the Spanish economy, with a potential market value of over €7 billion in 2020.

Overall, the furniture production, consumption, and trends in Spain highlight the resilience of the market, the shift towards online retail, the importance of customizable furniture, and the significant role of the bedroom segment in driving growth.

Portugal

Portugal has undergone a remarkable transformation in its furniture industry, shifting from traditional craftsmanship to innovative design and technology. This transformation has been driven by factors such as investment in research and development, increased competitiveness through internationalization, and a focus on sustainable practices. As a result, Portugal's furniture industry has experienced significant growth and gained recognition for its high-quality, contemporary designs, becoming a prominent player in the international furniture market. The production in the Portuguese furniture sector encompasses a wide range of products, including panel furniture, solid furniture, sofas, modular furniture, and more. Despite a slight dip in production in 2020, possibly due to the impact of COVID-19, the industry has shown positive annual changes. The structure of import and export markets for the Portuguese furniture sector is mainly focused on European countries, with Spain being the primary import destination and China as the second-largest import market.Through investments in research and development, the Portuguese furniture sector has been able to design innovative and functional products that align with consumer preferences, such as eco-friendly materials and space-saving designs. Collaborations between the industry and research institutions have facilitated the development of new materials and production techniques. The Portuguese government has also recognized the importance of technology and R&D in the furniture industry and has provided funding for initiatives aimed at improving sustainability and reducing carbon emissions.

Furthermore, R&D investment in the furniture sector in Portugal has seen significant annual increases, indicating the sector's commitment to innovation and development. This investment has contributed to the industry's growth and improved its environmental impact, reinforcing Portugal's reputation as an innovative producer in the global furniture market.

Estonia

The furniture industry is undergoing significant changes, with a growing emphasis on internationalization and a shift towards project-based and order-based manufacturing. Two key directions in this evolving landscape are project furniture manufacturers and series/mass furniture manufacturers. As customer demands continue to evolve, flexibility and strategic planning become crucial for the furniture sector. In Estonia, as the furniture sector grows and develops, it faces increasing demands to comply with EU regulations, while also witnessing advancements in material and woodworking industries. Exploring new markets beyond Estonia becomes essential, but the challenges of navigating these changes often require collaborative efforts due to the diverse and complex nature of the industry.

m. **2.4 Furniture Markets and Consumer Behaviour**

The furniture market in the analyzed countries is driven by consumer behavior and preferences. Consumers in these countries are increasingly looking for furniture that combines style, functionality, and sustainability. There is a growing demand for high-quality, contemporary designs that cater to individual tastes and home decor trends. Additionally, consumers are seeking furniture that offers customization options, allowing them to personalize their living spaces. With the rise of e-commerce, online shopping for furniture has gained popularity, providing consumers with convenience and a wide range of options. Moreover, consumers are becoming more conscious of the environmental impact of their purchases, leading to a greater demand for eco-friendly materials and sustainable production practices. Overall, the furniture markets are influenced by evolving consumer behaviors and preferences, emphasizing the importance of offering innovative and socially responsible products.

Türkiye

One significant factor shaping consumer behavior in Türkiye is the country's population growth and its evolving needs. As the population expands, there is an increased demand for furniture to furnish new households and accommodate changing lifestyles. Additionally, rising income levels have led to a higher purchasing power and a greater emphasis on quality, functional, and modern furniture. Changing housing policies, urbanization, and shifting consumer preferences also influence furniture consumption patterns in Türkiye. Factors such as new marriages, the need to replace outdated furniture, changes in housing styles, and the growth of office and service sectors impact consumer buying decisions. Consumers seek furniture that aligns with current housing trends, adapts to style changes, and enhances their living spaces.In recent years, there have been notable marketing trends in the Turkish furniture market. One significant trend is the increasing importance of online channels and e-commerce. With the rise of digitalization, consumers are increasingly using online platforms to research, compare, and purchase furniture products. Therefore, furniture businesses need to have a strong online presence, user-friendly websites, and effective digital marketing strategies to reach and engage their target audience.Another emerging trend is the focus on sustainability and eco-friendly products. Turkish consumers are becoming more conscious of the environmental impact of their purchases. They prefer furniture made from sustainable materials and produced through environmentally friendly practices. Companies that prioritize sustainability and promote eco-conscious products have a competitive advantage in capturing the attention and loyalty of environmentally conscious consumers.Personalization and customization have also gained popularity in the Turkish furniture market. Consumers are seeking unique and personalized furniture solutions that reflect their individual style and preferences. Furniture businesses that offer customization options, such as fabric choices, colors, and design variations, can attract and satisfy the growing demand for personalized products. Furthermore, social media platforms play a significant role in influencing consumer behavior in Türkiye. Consumers often turn to social media for inspiration, recommendations, and reviews when making furniture purchasing decisions. Furniture companies that leverage social media marketing and influencer collaborations can effectively engage with their target audience, increase brand visibility, and build trust among potential customers.

Greece

The furniture market in Greece is diverse and competitive, with a mix of domestic and international brands operating in the sector. There are a number of well-known furniture retailers in Greece, such as IKEA, JYSK, and Praktiker, which offer a wide range of products at competitive prices. However, there are also a number of smaller, specialized retailers and manufacturers that cater to specific segments of the market, such as high-end or handmade furniture. The domestic market for furniture is mainly driven by private households, with rising disposable incomes and a growing trend towards home renovation and design supporting demand for high-quality and innovative furniture. The consumer behavior in the Greek furniture market is influenced by a range of factors, including economic conditions, social trends, and individual preferences. One of the key factors that influences consumer behavior in Greece is price sensitivity. Many consumers in Greece are price-conscious and look for furniture products that offer good value for money. This has led to a focus on affordability and accessibility in the furniture market, with retailers and manufacturers offering a range of products at different price points.

However, consumer behaviour in Greece is also influenced by the ongoing COVID-19 pandemic, with many people spending more time at home and investing in home renovation and improvement projects. This has led to increased demand for furniture that is comfortable, functional, and versatile, such as modular furniture that can be easily rearranged to suit changing needs. Another factor that influences consumer behaviour in Greece is design and aesthetics. Greek consumers tend to have a strong preference for furniture products that are stylish and visually appealing, with a focus on modern and minimalist designs. However, there is also a growing interest in handmade and bespoke furniture products, which reflect a broader trend towards local and artisanal products

Overall, the furniture market in Greece is characterized by a mix of traditional and innovative approaches to design and production, with a focus on quality and sustainability. Consumer behaviour is driven by a combination of changing trends in the global furniture industry and the ongoing impacts of the COVID-19 pandemic.

The Netherlands

The total amount of furniture present in Dutch society has been fairly stable for years. Since 2008, there are around 12 billion kilograms of various furniture in stock. Of this,2.4 billion kilograms are living, and bedroom furniture and 440 million kilograms are mattresses. This is evident from the CBS study Stocks in Society: the raw materials basis for a circular economy.

Due to the long lifespan of most furniture, the changes in stock are fairly small. In 2020, 147 million kilograms of living and bedroom furniture and 58 million kilograms of mattresses were put on the market. These are both the furniture in-store stock and the furniture that has been sold. In the same year, 200 million kilograms of living room and bedroom furniture and 47 million kilograms of mattresses disappeared from stock. As a result, the stock of living and bedroom furniture has decreased by 53 million kilograms in 2020 and the stock of mattresses has increased by 6 million kilograms compared to a year earlier. Mattresses don't last as long as beds, so they are replaced more often.

The furniture market in the Netherlands is highly competitive and dynamic and growing at a CAGR of >4.5% over the next 5 years. Its distribution channels include specialised furniture stores, department stores, online retailers, and interior design studios. Dutch consumers prefer quality and durability when purchasing furniture, often considering price, design, comfort, and sustainability. Online shopping for furniture has gained momentum in recent years, with consumers seeking convenience and a wide range of options (Figure 39).

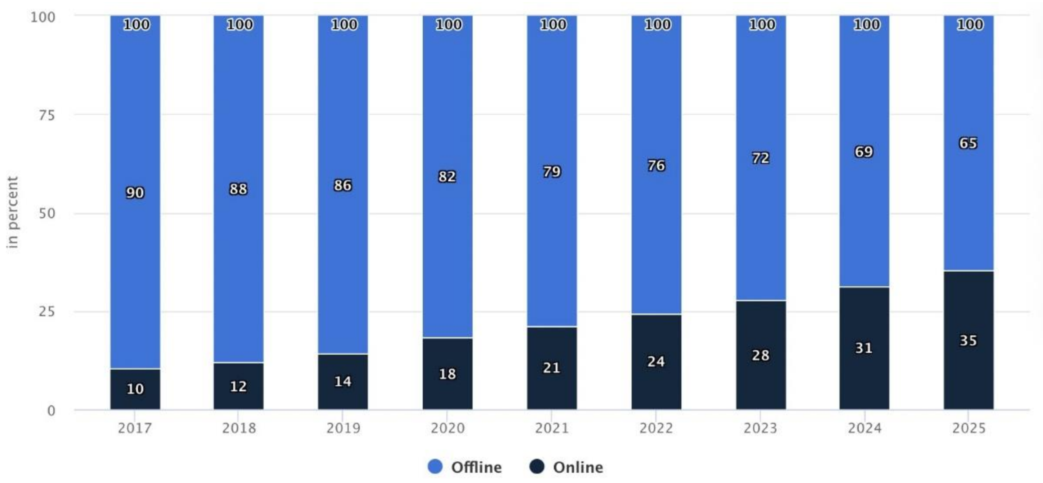


Figure 39. Sales Channels

Source: Statista Market Insights, October 2020 (https://www.statista.com/outlook/cmo/furniture/netherlands#revenue)

Consumer Behaviour

The average Dutch person owns 7 living and bedroom furniture. Assuming an average weight of 20 kilograms per living room and bedroom furniture and 15 kilograms per mattress, the Dutch-owned an average of almost 7 living and bedroom furniture and almost 2 mattresses in 2020. This is not only about the number in people's homes, but also, for example, about what is available in hospitals and companies such as hotels (Figure 40).

Furniture	Stock per inhabitant
Partitions and other furniture made of wood or metal	8
Living and bedroom furniture	7
Kitchen furniture	3
Mattresses	2
Chairs and benches	2
Company furniture	1

Figure 40.Furniture in use per person, 2020

Source: CBS (https://www.cbs.nl/nl-nl/nieuws/2022/09/nederland-bezit-12-miljard-kilogram-meubels#:~:t)

In 2021, the Furniture market continued to experience significant growth, which can, in large part, be attributed to COVID-19 restrictions that required many people to stay home. This was reflected in their buying behaviour: Furniture sales increased as people began to make their living and home office more comfortable.

In 2022, it was expected the easing of COVID-19 restrictions, rising inflation, and increasing energy prices to put downward pressure on the growth of the Furniture market. One area that we foresee contributing to its long-term growth is the millions of millennials who are the easing of COVID-19 restrictions, rising inflation, and increasing energy prices was expected key driver, retailers should pay close attention to the buying behaviours of millennial consumers and make the necessary adjustments to capture market share.

Spain

Consumer behavior and marketing trends in Spain's furniture market have been shaped by various factors, including the impact of the Covid-19 pandemic, the rise of e-commerce, and the growing demand for customizable furniture.The Covid-19 pandemic initially led to reduced average spending on furniture by Spanish families. However, following the lifting of lockdown restrictions, there was a surge in buying behavior as people sought to renovate their homes with newer and more comfortable furniture. This unexpected boost in sales highlighted the resilience of the market and the willingness of consumers to invest in their living spaces.Traditionally, the Spanish furniture market has been dominated by physical retail stores. However, the rise of e-commerce has presented new challenges for traditional retailers, requiring them to adapt to the changing market landscape. To drive further growth in the furniture market, Spain needs to develop manufacturing technology and meet the increasing demand for customizable furniture, catering to consumers' desire for personalized and unique products.Spain holds a prominent position as the fifth largest European market for furniture, with significant household spending of over €8 billion. The market's positive trajectory is primarily driven by the bedroom segment, accounting for a volume market of €2.80 billion, followed by the bath and kitchen segments. The furniture market's revenue is projected to reach €10.76 billion in 2023, with an annual growth rate of 2.42%.Rising living standards have played a significant role in shaping consumer behavior, particularly in the bedroom furniture segment. As living standards improve, consumers have shown an increased preference for premium goods, influencing the market's availability of high-quality products. The expansion of shipping services and the fragmentation of consumer options have further propelled the online bedroom furniture market, offering consumers more choices and convenience in their shopping experiences.

Portugal

One notable trend is the increasing competition in the market due to the availability of low-cost furniture imported from other countries. Consumers in Portugal have also become more environmentally conscious, seeking sustainable and eco-friendly furniture options. This shift in consumer preferences reflects a growing awareness of the importance of responsible consumption.Another significant trend is the growing interest in online furniture shopping. Consumers are embracing the convenience and accessibility of e-commerce platforms, a trend that has been accelerated by the COVID-19 pandemic. The pandemic has caused a surge in online sales and has prompted both retailers and consumers to adapt to digital channels. This shift toward online shopping is expected to reshape the way customers interact with furniture retailers and drive further digitization within the industry.In terms of marketing strategies, furniture companies in Portugal need to prioritize sustainability and eco-friendly practices to align with consumer expectations. Embracing digital marketing and enhancing online presence will be crucial for reaching and engaging with customers in the increasingly digital landscape. Building user-friendly websites, offering virtual showrooms, and providing detailed product information online will enhance the overall customer experience.Furthermore, personalized and customized offerings have gained popularity among Portuguese consumers. Providing options for customization and tailoring furniture to individual preferences can create a competitive edge and strengthen customer loyalty. Additionally, creating engaging and visually appealing marketing content, such as social media campaigns and influencer collaborations, can help furniture brands connect with their target audience and build brand awareness.

Estonia

Estonia's furniture sector has been growing steadily in recent years, with production reaching €475 million in 2021, ranking the country at 57th among 100 countries. The sector has experienced significant growth since 2012, with production increasing by €124 million during this period. In terms of exports, Estonia has been successful in expanding its reach in the international furniture market, with exports growing from €270 million in 2012 to €377 million in 2021. However, the country's import figures have also increased, with imports reaching €152 million in 2021, resulting in an apparent consumption of €250 million, indicating a strong domestic market. Despite the strong growth in the sector, Estonia's furniture market remains relatively small in comparison to other countries, with a total GNP of €31 billion and household consumption expenditure of €15 billion in 2021, ranking the country at 90th and 90th, respectively, among 100 countries. However, Estonia's per capita GNP at PPP is €37,570, ranking the country at 35th, indicating a high standard of living. The CSIL forecasts a 2% real growth of furniture consumption for Estonia in both 2022 and 2023 (Figure 41).

The furniture sector. Millions of €											
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**Ranking**[8]
Production	452	477	480	435	443	465	505	483	461	560	57
Exports	349	365	369	333	325	359	394	379	357	445	41
Imports	92	113	120	114	105	122	129	139	137	184	68
Consumption[9]	196	224	231	216	223	228	239	242	241	299	74

Figure 41. World Furniture Indicators (Estonia)

Sources: CSIL, Eurostat, UN Comtrade database, DESA/UNSD, Statistics Estonia

n. **2.5 Capacity Utilization**

Capacity utilization plays a crucial role in the furniture sector, as it directly impacts productivity, efficiency, and profitability. By effectively utilizing the available production capacity, furniture companies can maximize their output and optimize their resources. Operating at optimal capacity ensures that production processes run smoothly, reducing wastage and costs. Additionally, it allows companies to meet customer demands promptly and maintain a competitive edge in the market. Proper capacity utilization enables furniture manufacturers to balance supply and demand, minimize bottlenecks, and enhance overall operational performance.

Türkiye

The furniture industry in Türkiye is characterized by the presence of micro and small-sized enterprises, which often face challenges in maximizing their capacity utilization. While these enterprises have the flexibility to adapt quickly to changes in demand and implement innovations, they may struggle with limited access to resources and technology. However, technological developments in the information age have provided opportunities for flexible production systems, which are well-suited for small and medium-sized businesses. Despite the positive developments in the industry, there are still structural, organizational, and technological deficiencies that impact capacity utilization in the Turkish furniture sector. For instance, there are challenges related to technology, quality, standards, cost, and raw material supply. These issues can hinder the ability of furniture companies to fully utilize their capacity and meet market demand effectively. Additionally, the changing consumer behavior and market trends have further influenced capacity utilization in the furniture industry. Consumers in Türkiye have become more individualistic in their purchasing decisions, seeking products that satisfy their personal tastes and preferences. This shift has led to increased purchases of customized and individualized furniture, which can require different production processes and may impact capacity utilization. The rise of e-commerce and the adoption of digital channels

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[8] Ranking among 100 countries, last available year

[9] Apparent consumption =Production – Exports + Imports

have also affected capacity utilization in the industry. Furniture companies have had to adapt to the growing trend of online shopping, which has increased the demand for efficient order processing, inventory management, and logistics. The ability to effectively utilize digital platforms and technology plays a crucial role in optimizing capacity utilization and meeting customer expectations in the digital marketplace.

Furthermore, the presence of large-scale enterprises and their marketing practices have influenced capacity utilization in the Turkish furniture industry. Large firms have employed strategies such as catalog sales and nationwide distribution to reach a wider customer base. This has intensified competition and prompted smaller businesses to enhance their sales capabilities and strive for growth to compete effectively.

Greece

In the context of the furniture sector in Greece, the capacity utilization rate serves as an important indicator of production efficiency and resource utilization. Based on available data from the Hellenic Statistical Authority (ELSTAT), the capacity utilization rate for the furniture manufacturing industry in Greece stood at 70.8% in 2019. Although this represents a slight increase compared to previous years, it remains below the average for the European Union. The capacity utilization rate reflects the degree to which manufacturing capacity is utilized for production, with higher rates indicating more efficient use of resources and increased output. It is worth noting that capacity utilization rates can vary significantly across industries, influenced by factors such as economic conditions, demand fluctuations, competition, and technological advancements (Figure 42).

Figure 42. Capacity utilization in Greece

According to the graph, the capacity utilization rate in Greece's furniture sector decreased from 75.40 percent in March 2023 to 73.40 percent in April 2023. This decline suggests a decrease in the level of production activity compared to the previous month.

The Netherlands

This statistic displays the capacity utilization of the furniture manufacturing industry in the Netherlands from January 2010 to October 2022. It shows that in October 2022, the Dutch furniture manufacturing industry used approximately 83.7 per cent of its total capacity (Figure 43).

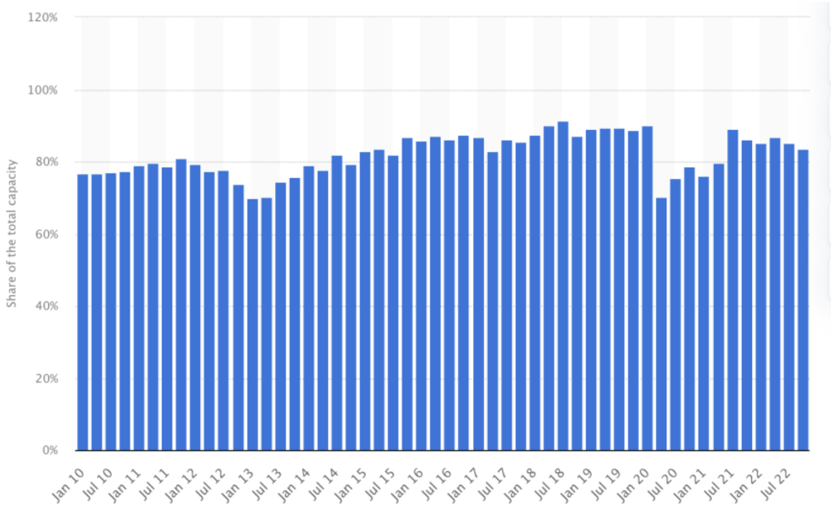


Figure 43. Capacity utilisation of the furniture manufacturing industry

Source: Statista

Spain

Spain, the capacity utilization in the furniture industry is influenced by numerous factors and the role of micro-SMEs is crucial in this context. Despite facing challenges, these small and medium-sized enterprises play a significant role in maximizing capacity utilization. Here are some key points regarding capacity utilization in the Spanish furniture industry:

- Flexibility and Adaptability: Micro-SMEs in the furniture industry are known for their agility and flexibility in responding to changing market conditions. This allows them to optimize their production processes and adjust their capacity based on demand fluctuations. Their ability to quickly adapt to market trends and customer preferences contributes to efficient capacity utilization.
- Innovation and Customization: Micro-SMEs often focus on niche markets and specialize in producing unique and customized furniture products. Their emphasis on innovation and design enables them to differentiate themselves from larger competitors. By offering tailored solutions and personalized designs, they can attract customers seeking distinctive and individualized furniture, leading to improved capacity utilization.
- Local Sourcing and Supply Chains: Micro-SMEs in the furniture industry tend to source their materials and labor locally, supporting other local businesses and contributing to the development of regional supply chains. This localized approach enhances capacity

utilization by fostering collaboration and synergy within the industry and ensuring efficient resource allocation.

- Job Creation and Employment: Micro-SMEs in the furniture sector are major contributors to employment generation in Spain. As they expand their operations and increase their capacity, they create new job opportunities, thereby utilizing available labor resources effectively. Their role in providing employment has a positive impact on the overall capacity utilization in the industry.
- International Trade and Competitiveness: Micro-SMEs in the furniture industry contribute to Spain's international trade by offering specialized products that cater to niche markets abroad. Their ability to adapt to consumer needs and preferences, coupled with their focus on quality and innovation, enhances the competitiveness of the Spanish furniture industry on the global stage. This, in turn, supports capacity utilization by expanding market reach and diversifying the customer base.
-

Portugal

The furniture industry in Portugal has undergone a significant transformation, shifting from traditional craftsmanship to innovative design and technology. This transformation, coupled with changing consumer preferences and increased competition, has led to effective capacity utilization. Portuguese furniture companies have responded to consumer demands for modern, functional, and eco-friendly furniture options, driving growth in the industry. The role of micro and small enterprises is crucial, as they contribute to turnover and value-added, showcasing their agility and flexibility in utilizing production capacity efficiently. Government support and investment in research and development further bolster capacity utilization. Overall, Portugal's furniture industry has successfully adapted to market trends and consumer preferences, positioning itself as a player in the international market while driving economic growth.

Estonia

In Estonia, the furniture sector has seen remarkable growth in recent years, accompanied by increased investments and technological advancements. However, the current capacity utilization in the industry indicates that there is still untapped potential. Many companies are operating below full capacity, signaling opportunities for further expansion and development. To enhance capacity utilization, furniture companies can consider investing in advanced technologies, expanding their marketing efforts, and exploring new markets. Additionally, government support in the form of incentives and funding for research and development can play a crucial role in maximizing the industry's capacity utilization and fostering its growth.

In conclusion, optimizing capacity utilization is a key factor for the growth and competitiveness of the furniture sector. It not only allows companies to maximize their production efficiency and output but also enables them to meet the increasing demands of customers and the market. By investing in technology, exploring new markets, and receiving support from policymakers, the furniture sector can unlock its full potential and contribute even more to the economy.

o. **2.6 Technology Activities and R&D in the Sector**

Technology activities and research and development (R&D) play a crucial role in the furniture sector, driving innovation, improving production processes, and enhancing product quality. In an increasingly competitive global market, furniture companies are investing in technology and R&D to gain a competitive edge, meet evolving consumer demands, and address sustainability challenges. This chapter examines the importance of technology activities and R&D in the sector, exploring the latest trends, advancements, and initiatives undertaken by furniture companies in the countries. By delving into the realm of technology and R&D, it is important to give insights into how these countries are leveraging innovation to shape the future of the furniture industry.

Türkiye

The furniture sector in Türkiye has recognized the importance of technology activities and research and development (R&D) as key drivers of growth and competitiveness. Over the past decade, the industry has undergone significant transformation, embracing innovation and technological advancements. Turkish furniture companies have invested in R&D to develop modern and functional products that cater to changing consumer preferences and global market trends. This focus on technology and innovation has allowed the sector to diversify its offerings, enhance product quality, and increase its competitiveness on the international stage.The Turkish government has also acknowledged the significance of technology and R&D in the furniture industry, providing support and incentives to promote innovation and modernization. Efforts have been made to foster collaborations between the industry and research institutions, facilitating knowledge transfer and the development of new materials, production techniques, and design processes.

Greece

The furniture sector in Greece has traditionally been characterized by a focus on traditional manufacturing techniques and craftsmanship. However, in recent years, there has been increasing interest in the use of technology and innovation in the sector, including in research and development (R&D) activities. Some examples of technology activities and R&D in the Greek furniture sector include: The use of computer-aided design (CAD) software to create and test furniture prototypes before they are manufactured, enabling companies to refine their designs and improve product quality. The adoption of new manufacturing technologies such as 3D printing, which allows for the production of complex and customizable furniture pieces with minimal waste. The development of eco-friendly and sustainable materials for use in furniture production, such as recycled wood and non-toxic finishes. The use of digital tools such as augmented reality (AR) and virtual reality (VR) to help customers visualize furniture in their homes and make more informed purchasing decisions. Collaboration between furniture companies and research institutions to explore new materials, manufacturing processes, and design concepts. According to Eurostat data, R&D expenditure in the furniture and manufacturing industry in Greece accounted for only 0.14% of GDP in 2019, compared to the EU average of 0.54%.

In conclusion, technology activities and research and development (R&D) are essential drivers of innovation and growth in the furniture sector. Companies in Greece, Estonia, and the Netherlands are actively investing in technology and R&D to improve their production processes, enhance product quality, and meet changing consumer demands. The adoption of advanced technologies and the pursuit of innovative solutions enable furniture companies to stay competitive in the global market and drive industry advancements. Moreover, R&D efforts contribute to the development of sustainable practices and the exploration of new materials, leading to more environmentally friendly and socially responsible furniture production. As the furniture industry continues to evolve, the importance of technology activities and R&D will only grow, shaping the future of the sector and propelling it towards further success.

The Netherlands

The furniture sector in the Netherlands embraces technological advancements to enhance manufacturing processes, improve product quality, and drive innovation. Companies invest in modern machinery, automation, and digitalisation to increase efficiency and reduce production costs. Additionally, research and development activities focus on sustainable materials, smart furniture solutions, and ergonomic designs to cater to evolving consumer needs.

Digitization of the production process, retail process and circular production are the most important trends and innovations in these industries. Machine woodworking is going digital. The manufacturers of machine tools are now going to automate more.For example, the digital solution Proliner helps to optimize efficiency and production. With the Proliner, measuring and creating a digital template of an opening only takes a few seconds. The Proliner is an efficient and accurate digital measuring device, with which door and window manufacturers can improve their productivity enormously. The Proliner helps to make end products with an even reveal and seamless connection. With the Proliner, creating and exporting a digital template is so easy that you can already think about automatic processing and production with CNC machines. Prodim has helped door manufacturers from all over the world automate their factories by linking digital measurement files directly to production. Prodim indicates that they have extensive knowledge of CAD/CAM automation for door factories.

In 2020, there were 105,000 companies with expenditure on their own research and development (R&D). These are private R&D expenditures, i.e. excluding expenditure by institutions and higher education (Figure 44).

Year	0 to 50 employed persons	50 to 250 employed persons	250 or more employed persons
2013	160	15	
2014	115	30	
2015	60	25	
2016	65	30	
2017	70	30	
2018	65	25	
2019	75	25	5
2020	80	25	

Figure 44. Companies with R&D expenses

Source: CBS

In 2020, companies' expenditure on their own research and development (R&D) amounted to 7 million euros (Figure 45).

Year	0 to 50 employed persons	50 to 250 employed persons	250 or more employed persons
2013	5		
2014		8	
2015		7	
2016		9	
2017		7	
2018		6	
2019	7	5	4
2020		7	

Figure 45. Employed persons

Spain

The furniture sector in the country recognizes the importance of technology activities and research and development (R&D) in driving its growth and competitiveness. In recent years, Spain has undergone a significant transformation in its furniture industry, shifting from traditional craftsmanship to embracing innovative design and technology.Spanish furniture companies have made substantial investments in R&D to develop contemporary and technologically advanced products that cater to evolving consumer preferences and global market trends. The industry's focus on technology activities and R&D has enabled it to enhance product quality, offer unique and customizable furniture options, and gain recognition in the international market.Moreover, the Spanish government has shown support for technology activities and R&D in the furniture sector by providing funding and incentives for research collaborations between manufacturers and research institutions. This support has facilitated knowledge transfer, the development of sustainable practices, and the adoption of digital technologies within the industry.

Portugal

The furniture industry in Portugal has demonstrated a strong commitment to technology activities and research and development (R&D). This focus on innovation has propelled the sector's transformation and contributed to its success in the global market. Portuguese furniture companies have invested in R&D to design innovative and functional products that align with consumer preferences, such as eco-friendly materials and space-saving designs. Partnerships between the industry and research institutions have played a vital role in driving technological advancements, leading to the development of new materials and production techniques that enhance competitiveness.

The Portuguese government has recognized the importance of technology and R&D in the furniture sector and has provided support to encourage innovation and modernization. Funding for research projects has been allocated to improve sustainability, including initiatives focused on waste recycling and reducing carbon emissions. This investment not only enhances the environmental impact of the industry but also strengthens Portugal's reputation as an innovative and forward-thinking furniture producer. The commitment to technology activities and R&D has resulted in significant annual increases in R&D expenditure and intensity in the furniture sector, further driving the industry's growth and ensuring its continued success in the global market.

Estonia

Estonia has made significant strides in supporting research and development (R&D) initiatives in the micro, small and medium-sized enterprise (MSME) sector. A range of supporting mechanisms have been put in place to promote innovation, including funding, tax incentives, and co-financing opportunities. Internationalization of businesses is also supported through various programs that offer networking opportunities and assistance in entering foreign markets.

However, the furniture sector in Estonia is heavily reliant on large companies, and micro and small-sized enterprises (microSMEs) often lack the resources and space to innovate. As a result, policies aimed at fostering innovation among microSMEs in the furniture sector are necessary to promote growth and competitiveness in the industry.

Over the years, the Estonian government has implemented measures aimed at simplifying the investment process for MSMEs. These incentives include a reduced corporate income tax rate for qualifying companies, tax credits for R&D activities, and streamlined administrative procedures for investment projects. Despite these measures, more policies are needed to support R&D initiatives among microSMEs in the furniture sector. Increased funding opportunities and tax incentives for smaller firms could help to spur innovation and growth in the industry. Additionally, greater collaboration between businesses and research institutions could help to bridge the gap between microSMEs and large firms, leading to increased innovation and competitiveness across the sector.

p. **2.7 Export and Import**

The import and export of goods play a vital role in the global economy, facilitating international trade and promoting economic growth. In the context of the furniture sector, import and export activities are of significant importance as they contribute to the development and expansion of markets, foster competition, and enable the exchange of diverse furniture products across borders. By engaging in import and export, countries can access a wider range of furniture options, meet consumer demands, and take advantage of cost-effective production and sourcing opportunities. Furthermore, import and export activities in the furniture sector create employment opportunities, generate revenue, and contribute to the overall economic prosperity of nations. In this regard, understanding the dynamics and trends of import and export in the furniture sector is crucial for businesses, policymakers, and industry stakeholders to make informed decisions and seize opportunities in the global market.

Türkiye

In Türkiye, the furniture industry has a significant presence in both domestic and international markets. Turkish furniture manufacturers have been actively engaged in export activities, with the sector witnessing notable growth in terms of exports. The industry has demonstrated its competitiveness by increasing its export value, reaching billions of euros. This growth has been facilitated by the adoption of modern manufacturing technologies, customization capabilities, and compliance with international quality standards. SMEs play a crucial role in Türkiye's furniture industry, contributing to the majority of the sector's employment and production. These SMEs are actively involved in both import and export activities, establishing business connections and partnerships with countries around the world.

Greece

According to data from the World Furniture Outlook, in 2021, Greece exported approximately $122 million worth of furniture products, and imported approximately $470 million worth of furniture products. Greece's furniture exports are primarily focused on other EU countries, with Cyprus, Germany, France, Netherlands, and Bulgaria being the top destinations. The most common furniture products exported by Greece are seats with wooden frames, followed by wooden furniture and metal furniture. Other types of furniture products, such as plastic and glass furniture, also make up a smaller portion of Greek furniture exports. In terms of furniture imports, Greece sources products from a variety of countries, including Italy, China, and Türkiye (Figure 46).

World Furniture Indicators — **Greece**

Table 37

The furniture sector. Million of US$

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking**
Production	605	515	457	386	407	410	483	459	424	520	59
Exports	43	49	51	56	60	70	97	95	92	122	56
Imports	275	259	299	251	276	293	351	359	325	470	50
Consumption*	837	725	705	581	622	632	738	722	656	868	49

* Apparent consumption = Production – Exports + Imports

** Ranking among 100 countries, last available year

Sources: CSIL, Eurostat

Economic indicators

		Value	Ranking**
Population	Million	11	55
Area	Thousand Square Km	132	56
Tot GNP	US$ Billion	192	52
Per capita GNP	US$	17,950	39
Household Consumption Expenditure	US$ Billion	132	46
Dara at Purchasing Power Parity (PPP)			
Tot GNP at PPP	US$ Billion	298	55
Per capita GNP at PPP	US$	27,830	46

Source: World Bank, last available year

** Ranking among 100 countries, last available year

Figure 46. Word Furniture Indicators, Greece

The Netherlands

The import and export activities in the Dutch furniture sector have played a pivotal role in its growth and development. The Netherlands has emerged as a prominent player in the international furniture trade, capitalizing on its strategic location and efficient logistics infrastructure. Dutch furniture manufacturers have successfully exported a significant share of their production to various global markets, expanding their reach and contributing to the country's export revenue. At the same time, imports of furniture have allowed the Dutch market to offer a diverse range of products to meet domestic demand and cater to specific consumer preferences. The steady increase in the value of furniture exports from the Netherlands over the years underscores the sector's success in international trade. These import and export activities not only foster economic growth but also promote exchange, innovation, and cultural diversity in the furniture industry (Figure 47).

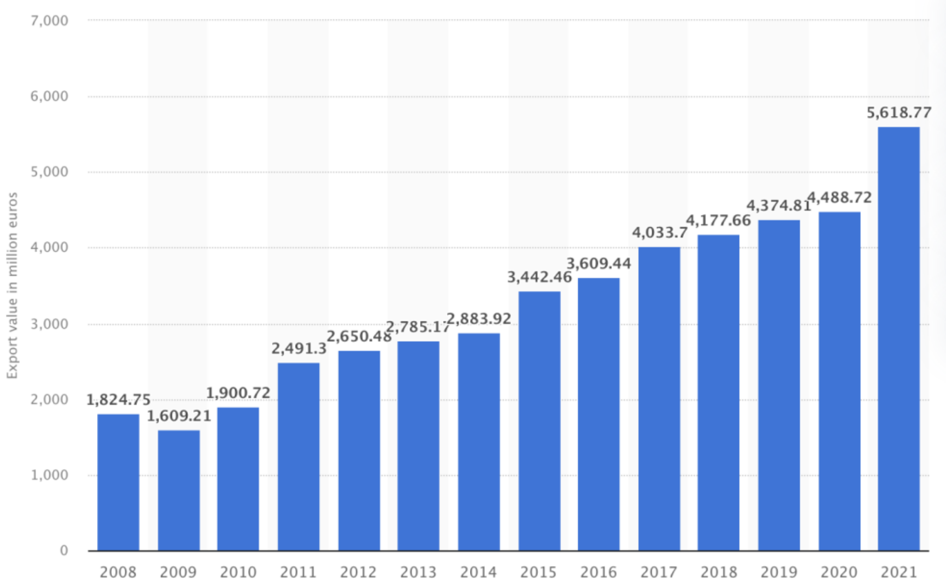


Figure 47. Value of furniture exported from the Netherlands 2008-2021

Source: Statista

The import of furniture, bedding, mattresses, cushions, and other furnishings into the Netherlands has witnessed substantial growth over the past decade. The increasing value of imports highlights the country's strong demand for a diverse range of furniture products from international markets. From 2008 to 2021, the value of furniture imports into the Netherlands more than doubled, reaching an impressive figure of around 8.63 billion euros. This upward trend in imports indicates the country's commitment to meeting domestic demand, expanding consumer choices, and accessing unique and specialized furniture items from various global sources. The Netherlands' position as a thriving import market contributes to the vitality and diversity of its furniture sector while satisfying the preferences and needs of its consumers.

Spain

The furniture sector in Spain has experienced positive trends in both import and export activities. Spain is recognized as the fifth-largest European market for furniture, with a considerable amount spent on furniture by households. The industry has demonstrated resilience and diversification, emphasizing innovation, sustainability, and digital technologies. Spanish furniture manufacturers have expanded their export activities, with a strong focus on European markets. France and Spain are notable destinations for Spanish furniture exports, accounting for a significant share. SMEs play a crucial role in the Spanish furniture industry, generating employment and contributing to the sector's overall export performance. These SMEs often specialize in niche markets, offering unique and customized products to meet consumer demands.

Portugal

The furniture industry in Portugal has undergone a considerable transformation and has experienced growth in both import and export activities. Portugal's furniture sector has gained recognition for its high-quality designs and has become an active player in the international market. The industry has witnessed an expansion of its export activities, with a strong emphasis on European markets. France and Spain stand out as major destinations for Portuguese furniture exports, accounting for a significant share. Moreover, Portugal's furniture industry has demonstrated a commitment to sustainability and eco-friendly practices, responding to the increasing demand for environmentally conscious products. SMEs in Portugal's furniture sector contribute significantly to export activities, with their agility, flexibility, and ability to cater to niche markets driving the industry's growth.

Estonia

Estonia Imports of Furniture, lighting signs, prefabricated buildings was EUR 363 million during 2022, according to the United Nations COMTRADE database on international trade (Figure 48).

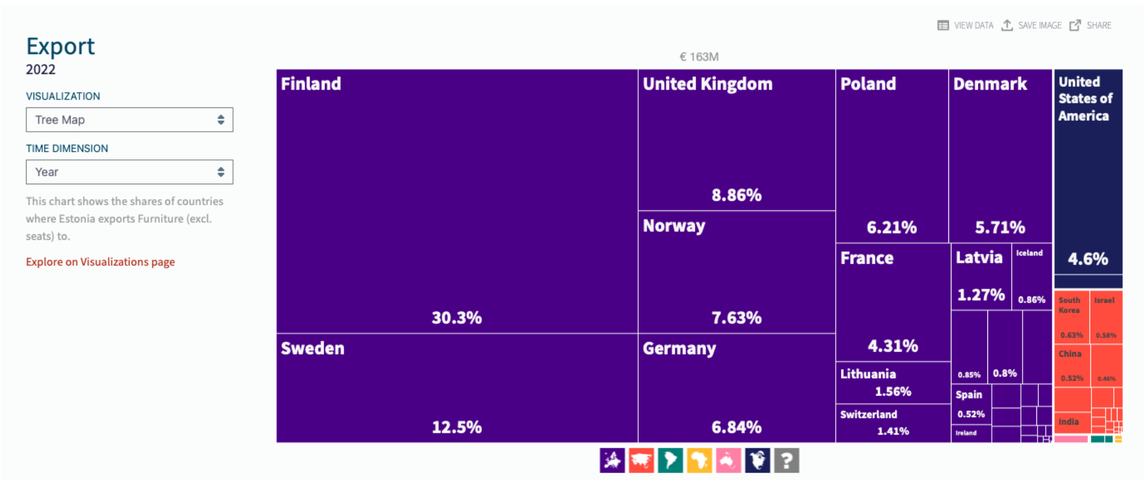


Figure 48. The shares of countries where Estonia exports furniture

Source: Statista, retrieved March 2023

The table reveals that the top three countries for Estonian exports are Finland, Sweden, and Latvia, accounting for over 50% of all exports. The United States, Germany, and Russia also feature in the top 10 countries. The table shows the value of Estonian exports to the European Union (EU) and non-EU countries from 2015 to 2020. The table reveals that the EU is Estonia's primary trading partner, with exports to the EU accounting for over 70% of total exports in each year. While exports to non-EU countries have increased over the period, they still only account for a small share of Estonia's total exports. The top countries with the highest percentage increase in exports from Estonia are Austria, United Arab Emirates, and Egypt, with increases of 78%, 60%, and 54% respectively. However, it should be noted that these countries represent a relatively small share of Estonia's total exports (Figure 49 and Figure 50).

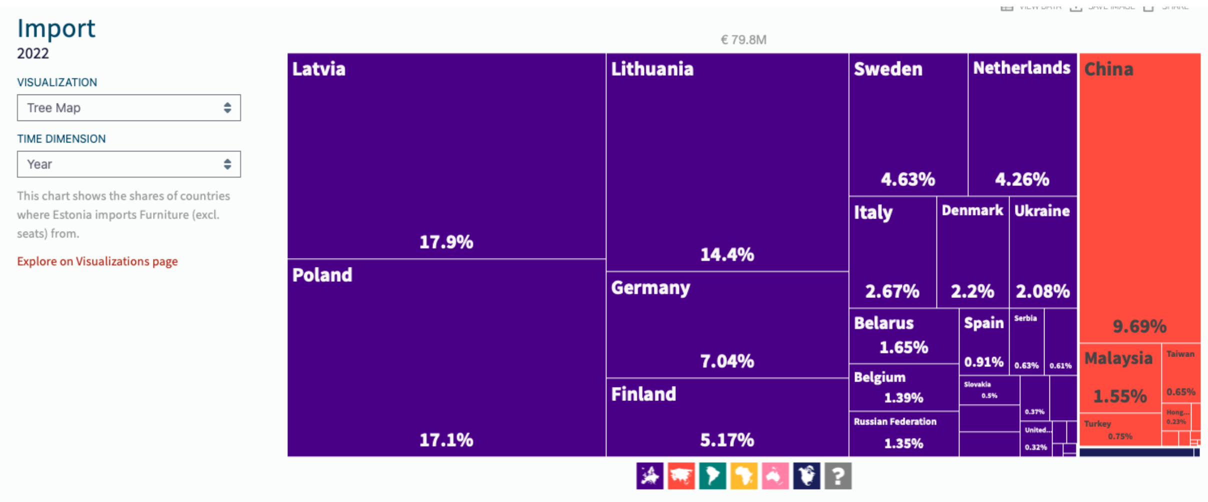


Figure 49.The shares of countries where Estonia imports Furniture

Source Statistics Estonia March 2023

Main furniture trading partners

Origin of furniture imports		Destination of furniture exports	
Latvia	17.7%	Finland	33.3%
China	14.5%	Sweden	16.9%
Lithuania	11.8%	Norway	8.8%
Poland	10.2%	Denmark	7.2%
Finland	8.0%	Germany	5.9%
Germany	6.8%	United States	5.4%
Sweden	4.2%	United Kingdom	4.4%
Italy	3.9%	Lithuania	2.8%
Ukraine	3.3%	Netherlands	2.2%
Russia	3.1%	Latvia	2.1%

Source: CSIL. Data are for the last available year

Figure 50. Main furniture trading partners

q. **2.8 Foreign Trade Balance**

Foreign trade balance refers to the difference between a country's total exports and imports of goods and services. It is a crucial indicator of a nation's economic performance and its integration into the global market. A positive trade balance, known as a trade surplus, occurs when the value of exports exceeds the value of imports. Conversely, a negative trade balance, or trade deficit, arises when imports surpass exports. The foreign trade balance reflects a country's competitiveness, trade relationships, and the overall health of its economy. Analyzing the foreign trade balance provides valuable insights into a nation's trade patterns, competitiveness, and its ability to generate income through exports or manage import dependencies.

Türkiye

Türkiye's foreign trade balance for furniture has followed a positive course since 2001. Continuously being short in the years 1997-2000, the sector now has a trade surplus increasing since 2001. The Turkish furniture sector has become one of the rare sectors in the trade of country without having foreign trade deficit in the direction of its last 20 years performance. Excluding 2009, the regular increase in the annual export and import ratios attracts attention and the export increase is greater than the import increase. The highest result was obtained in 2022 for trade balance with the export values 5 times more than import values. However, especially that garden/exterior furniture which was brought from China and other Far East countries, and which previously was not used much may cause an increase in import.

Greece

According to data from the Hellenic Statistical Authority, the foreign trade balance of the furniture sector in Greece has been negative in recent years, meaning that the country imports more furniture than it exports. In 2020, the trade deficit for furniture products in Greece was €1.3 billion, up from €1.2 billion in 2019. This resulted in a negative trade balance of approximately €930 million for the furniture sector.

However, while this negative trade balance is a challenge for the industry, there is still potential for growth and expansion through increased export activity and the adoption of innovative technologies and practices. The Greek furniture industry has a reputation for quality and craftsmanship, and there are opportunities for companies to differentiate themselves in international markets using sustainable materials, customizable products, and unique design features (Figure 51).

Economic indicators			
		Value	Ranking**
Population	Million	11	55
Area	Thousand Square Km	132	56
Tot GNP	US$ Billion	192	52
Per capita GNP	US$	17,950	39
Household Consumption Expenditure	US$ Billion	132	46
Dara at Purchasing Power Parity (PPP)			
Tot GNP at PPP	US$ Billion	298	55
Per capita GNP at PPP	US$	27,830	46

Source: World Bank, last available year ** Ranking among 100 countries, last available year

Figure 51. Economic indicators

The Netherlands

The furniture sector in the Netherlands generally maintains a positive trade balance, indicating that the value of furniture exports exceeds the value of imports. This trade surplus is a testament to the sector's competitiveness and the quality of Dutch furniture products. However, fluctuations in exchange rates, global economic conditions, and trade policies can influence the foreign trade balance of the furniture sector.

According to the United Nations COMTRADE database on international trade, United States Imports from the Netherlands of Furniture, lighting signs, and prefabricated buildings were US$115.25 Million in 2022 (Figure 52 and Figure 53).

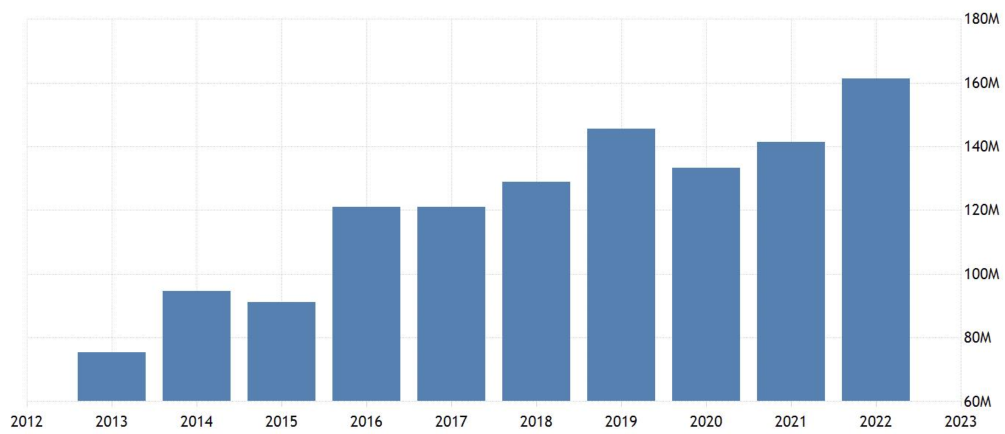


Figure 52. USA Exports of furniture, lighting signs, prefabricated buildings to the Netherlands

Source: tradingeconomics.com

	Value	Year
Medical, Surgical, Dental or Veterinary Furniture	$62.20M	2021
Other Furniture not specified elsewhere	$39.46M	2021
Lamps and Lighting Fitting; Illuminated Signs, Illuminated Name-plates	$29.26M	2021
Seats (Other than Dentists or Barbers Chairs)	$7.82M	2021
Mattress Supports; Articles of Bedding and Similar Furnishing	$1.48M	2021
Prefabricated Buildings	$1.22M	2021

Figure 53. United States exports of furniture, lighting signs, prefabricated buildings to Netherlands

In conclusion, the foreign trade balance in the furniture sector is an important factor for the countries. The concentration of exports in a few key markets and commodity groups highlights the need for diversification to mitigate risks and explore new opportunities. The strong presence of the European Union as a trading partner underscores the significance of maintaining and strengthening relationships within the EU market. At the same time, emerging opportunities in non-EU countries present avenues for expansion and market diversification. Monitoring and analyzing the foreign trade balance in the furniture sector can inform strategic decisions, support economic growth, and enhance the competitiveness of the industry.

Spain

The furniture sector in Spain has experienced a positive foreign trade balance, with the country being recognized as the fifth-largest European market for furniture. Spanish furniture manufacturers have expanded their export activities, catering to both domestic and international demand. While import trends in the furniture sector are not explicitly mentioned, Spain's solid growth in furniture exports indicates a favorable foreign trade balance, suggesting that the value of furniture exports surpasses that of imports.

Portugal

Portugal's furniture industry has witnessed notable growth in terms of exports, contributing to a positive foreign trade balance. Portuguese furniture manufacturers have focused on expanding their presence in international markets, particularly in Europe. The industry has gained recognition for its high-quality designs and has successfully captured a significant share of the furniture market in countries like France and Spain. While import trends in the furniture sector are not explicitly discussed, Portugal's strong export performance implies a favorable foreign trade balance, indicating that furniture exports outweigh imports.

Estonia

The foreign trade balance for Estonia in the furniture sector is an essential aspect of the country's economic landscape. The data provided by Statistics Estonia reveals that Estonia's furniture exports are concentrated in a few key markets and commodity groups. The European Union plays a significant role as a trading partner, highlighting the importance of the EU market for Estonia's furniture sector. However, there are indications of emerging opportunities in non-EU countries, such as the United Arab Emirates and Egypt, which suggest the potential for diversification in export markets. Understanding the dynamics of the foreign trade balance in the furniture sector can provide valuable insights into Estonia's trade relationships and opportunities for future growth and expansion (Figure 54).

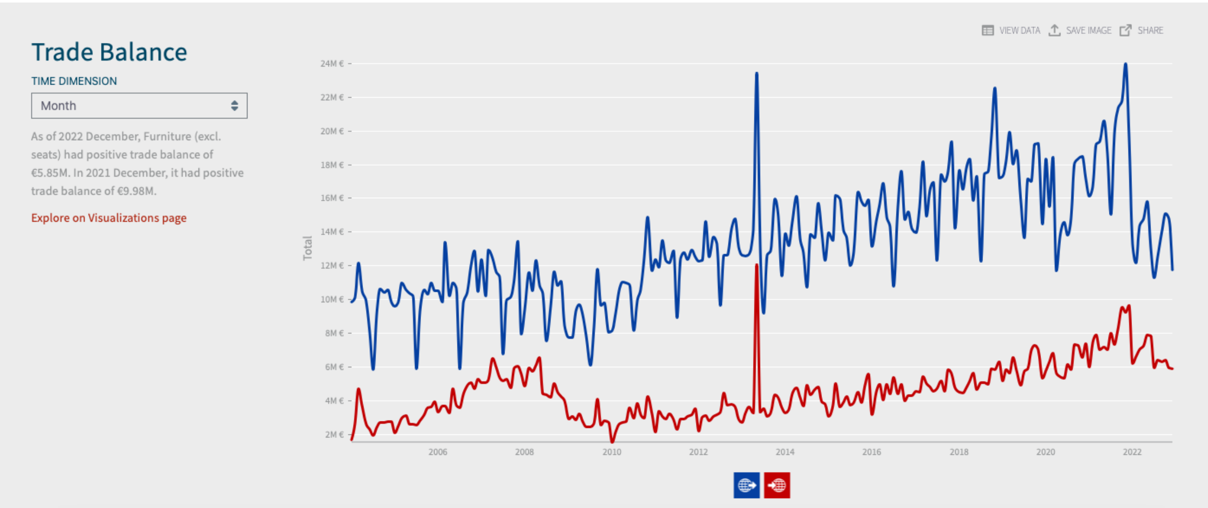


Figure 54. Trade balance

Note: Blue=exports, Red=imports

r. **2.9 Sector Production Costs**

The production costs of the furniture sector play a crucial role in determining its competitiveness and profitability. These costs encompass various factors, including raw materials, labor, energy, technology, and overhead expenses. Understanding and effectively managing production costs is essential for furniture manufacturers to optimize their operations, maintain price competitiveness, and achieve sustainable growth. Factors such as fluctuations in raw material prices, labor market conditions, energy costs, and technological advancements can significantly impact the sector's production costs. Additionally, market dynamics, consumer demands, and regulatory requirements influence the cost structure of the furniture industry.

Türkiye

In the furniture sector, Türkiye has been able to maintain competitive production costs, which have contributed to its position as a significant player in the global market. The country benefits from lower labor costs compared to many other countries, allowing Turkish furniture manufacturers to offer competitive prices while maintaining quality standards. Additionally, the presence of a well-established supply chain and access to raw materials at relatively lower costs further supports cost-effective production in Türkiye.

Greece

The production costs of furniture in Greece are influenced by a range of factors, including the cost of raw materials, labour costs, energy costs, and other production inputs such as machinery and equipment. Here are some key points related to furniture production costs in Greece:

Labour Costs: Labour costs in Greece are a significant component of furniture production costs. According to Eurostat data, the average hourly labour cost in the furniture manufacturing industry in Greece was €11.70 in 2020, which is lower than the EU average of €24.60. This means that labour costs are relatively competitive in Greece compared to other EU countries.

Raw Materials: The cost of raw materials is another important factor influencing furniture production costs in Greece. While some materials, such as wood, are readily available in the country, others need to be imported, which can add to the production costs. The availability and cost of raw materials can also be affected by global market conditions and fluctuations in exchange rates.

Energy Costs: Energy costs, including electricity and gas, are a significant component of furniture production costs in Greece. While energy costs have decreased in recent years due to the growth of renewable energy sources, they are still higher than in some other EU countries.

Other Production Inputs: The cost of machinery, equipment, and other production inputs can also influence furniture production costs in Greece. These costs can be affected by factors such as technological innovation, the availability of financing, and government regulations. Other expenses associated with the furniture sector in Greece include marketing and advertising costs, rent and utility costs for production facilities, and administrative expenses such as insurance and legal fees.

Netherlands

Various factors, including raw material prices, labour costs, energy expenses, and regulatory requirements, influence production costs in the Dutch furniture sector. While labour costs tend to be relatively higher in the Netherlands than in other countries, the sector's focus on innovation, efficiency, and sustainable practices helps offset these expenses. Manufacturers often seek cost-saving measures through process optimisation, supply chain management, and the adoption of advanced technologies.

In third quarter of 2022, manufacturing turnover was 23,1% higher than in the same quarter a year earlier (Figure 55).

Year	Quarter	C Industry
2018	First quarter	6.3
	Second quarter	6.8
	Third quarter	7.9
	Fourth quarter	1.4
2019	First quarter*	-4.4
	Second quarter*	-4.8
	Third quarter*	-6.3
	Fourth quarter*	-1.5
2020	First quarter*	-1.7
	Second quarter*	-16.1
	Third quarter*	-7.8
	Fourth quarter*	-7.2
2021	First quarter*	-1
	Second quarter*	20.8
	Third quarter*	15.7
	Fourth quarter*	24.1
2022	First quarter*	24.4
	Second quarter*	30.3
	Third quarter*	23.1
	Fourth quarter*	

Figure 55. Turnover development (Year-earlier development)

Source: CBS

In 2020, the result before tax of the furniture industry was 0.546 billion euros. That is 19 per cent more than a year earlier (Figure 56).

Year	Revenues	Cost	Taxresult)
2018	4,285	3,846	0.44
2019	4,160	3,708	0.46
2020	4,219	3,690	0.546

Figure 56. Costs and revenues

Source: CBS

The purchase value of the turnover in the furniture industry in 2020 formed 54.1% of the costs, the personnel costs 26.9% (Figure 57).

	Operating costs
Purchase value turnover	69,860
Personnel costs	34,650
Further operating expenses	20,769
Depreciation on fixed assets	3,741

Figure 57. Cost per FTE, 2020 (Euro)

Source: CBS

In the furniture industry, personnel costs were the largest cost item at €34,650 (58.6%) in 2020 (Figure 58).

Operating costs	Operating costs
Personnel costs	34,650
Housing costs	4,650
Operating costs not previously mentioned	4,301
Depreciation on fixed assets	3,741
Costs of other services	3.112
Cost of sales	2,937
Costs of means of transport	2,378
Equipment and inventory costs	1,818
Energy consumption costs	1,154
Communication costs	420

Figure 58. Costs (excluding turnover costs) per FTE, 2020 (Euro)

Source: CBS

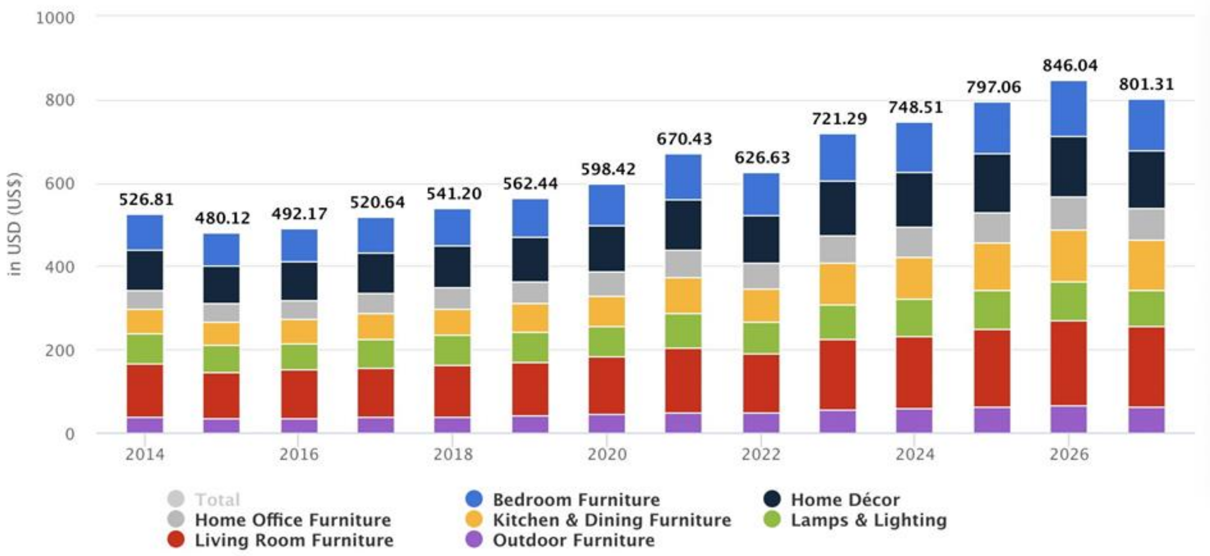


Figure 59. Average Revenue per Capita

Source: Statista Market Insights, Apr 2023

Trading Economics provides the current actual value, an historical data chart and related indicators for the Netherlands (Figure 59). Manufacture of furniture was 151.30 Points in March of 2023, according to the EUROSTAT. Manufacture of furniture - last updated from the EUROSTAT on May of 2023. Manufacture of furniture reached a record high of 151.30 Points in March of 2023 and a record low of 73.30 Points in January of 2000 (Figure 60).

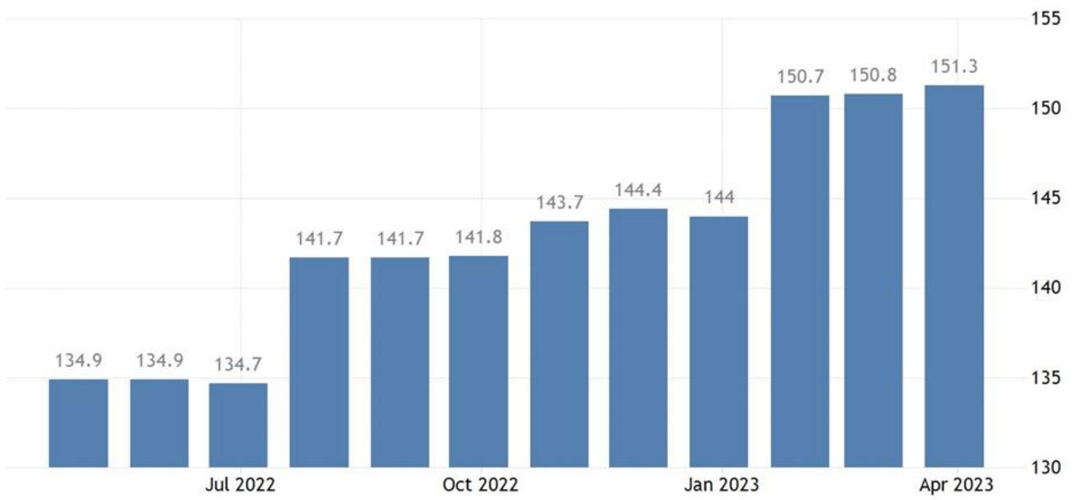


Figure 60. TheNetherlands - Producer prices in industry: Manufacture of furniture

Source: tradingeconomics.com

In conclusion, the furniture sector in the Netherlands plays a significant role in the country's economy, contributing to employment, regional development, and international trade. The sector comprises a diverse range of enterprises, and its workforce includes skilled professionals from various fields. The Netherlands produces high-quality furniture focusing on sustainability and design innovation.

The furniture market in the Netherlands is competitive and dynamic, with consumers showing a preference for durable, well-designed, and eco-friendly furniture. The sector embraces technology and invests in research and development activities to improve production processes, enhance product quality, and meet evolving consumer needs. The Netherlands has a strong presence in the international furniture trade, exporting a significant portion of its production and importing complementary and specialised furniture items.

Efficient capacity utilisation, favourable foreign trade balance, and cost optimisation strategies contribute to the sector's growth and sustainability. Overall, the furniture sector in the Netherlands demonstrates promising prospects and continues to evolve to meet the changing demands of consumers and the global market.

Spain

Spain's furniture sector has faced various challenges related to production costs, including tensions in the raw materials market and increased energy and end-product prices. These factors have put pressure on production costs and affected profitability for furniture manufacturers. However, despite these challenges, the industry has demonstrated resilience and continued positive sales dynamics. To remain competitive, Spanish furniture manufacturers have been adapting to market realities by exploring opportunities to develop manufacturing technology and increase the demand for customizable furniture, which can help optimize production costs and enhance profitability.

Portugal

In Portugal, the furniture sector has undergone a significant transformation in recent years, driven by factors such as investment in research and development, increased competitiveness through internationalization, and a focus on sustainable practices. While specific details on production costs are not provided, Portugal's emphasis on innovation, entrepreneurship, and digital technologies suggests a proactive approach to optimizing production costs. Furthermore, the industry's commitment to sustainable practices aligns with the growing demand for eco-friendly furniture, which can contribute to cost optimization by utilizing efficient and environmentally friendly production processes.

Estonia

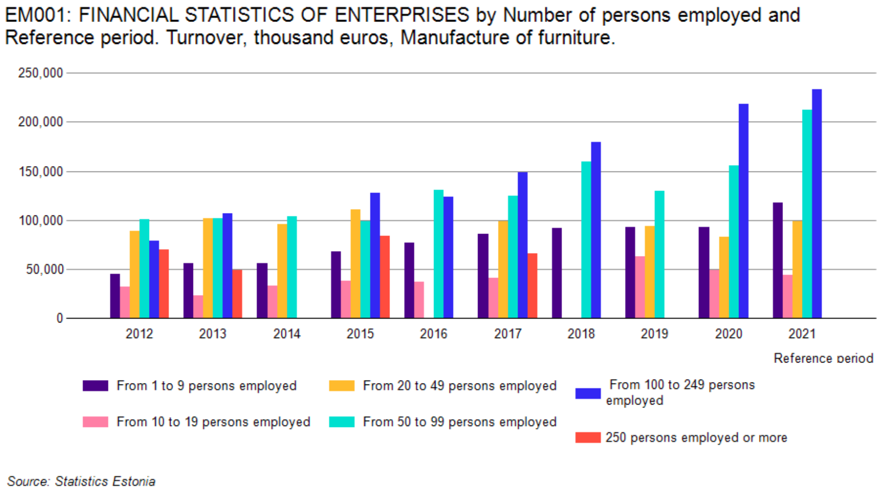


Figure 61. Financial statistics of enterprises

Revenue performance

The total revenue of the furniture sector in Estonia has been increasing annually from €436 million in 2014 to €545 million in 2019 (Figure 61). This represents an average annual growth rate of around 4%, which is a healthy rate of growth. The performance of small, medium-sized, and large furniture enterprises in Estonia is also noteworthy. Small enterprises generated a total revenue of €41 million in 2019, while medium-sized enterprises generated €200 million and large enterprises generated €304 million. The data indicates that while there are relatively few large enterprises in the sector, they play a significant role in generating revenue for the sector as a whole.

Profitability performance

The furniture sector in Estonia has been performing well in terms of profitability, with a total profit of €41 million in 2019, which represents a profit margin of around 7.5%. This is higher than the profit margins of many other economic sectors in Estonia, indicating that the furniture sector is a profitable one. Large furniture enterprises have a profit margin of around 12%, compared to a profit margin of around 7% for medium-sized enterprises and a profit margin of around 6% for small enterprises. This indicates that larger enterprises are able to generate higher profits than smaller enterprises, likely due to economies of scale.

Cost performance

The costs of the furniture sector in Estonia have been increasing annually, with total costs of €406 million in 2014 and €504 million in 2019. This represents an average annual increase of around 4%, which is roughly in line with the growth rate of revenues. Large furniture enterprises have higher costs compared to small and medium-sized enterprises. In 2019, the total costs of large enterprises were €262 million, compared to €177 million for medium-sized enterprises and €65 million for small enterprises. This is likely due to the fact that larger enterprises have higher fixed costs, such as rent, salaries, and equipment costs.

1.5. 3. The Scope of micro-SMEs in the furniture sector in Partner Countries

Micro-small and medium-sized enterprises (micro-SMEs) play a vital role in the furniture sector, contributing to its dynamism, innovation, and economic growth. These small-scale enterprises constitute a significant portion of the industry, both in terms of the number of businesses and employment. This section of the report focuses on examining the scope of micro-SMEs in the furniture sector in Netherlands, Estonia, Greece, Spain, Portugal, and Türkiye. We will delve into the characteristics, trends, challenges, and opportunities specific to micro-SMEs in each country, highlighting their contributions to the sector's overall development and exploring potential strategies to support their growth and competitiveness (Figure 62).

Company category	Staff headcount	Turnover	or Balance sheet total
Medium-sized	< 250	≤ € 50 m	≤ € 43 m
Small	< 50	≤ € 10 m	≤ € 10 m
Micro	< 10	≤ € 2 m	≤ € 2 m

Figure 62. Characteristics of Micro-small and medium-sized enterprises

s. 3.1 Description of micro-SMEs in Partner Countries

Micro-SMEs, which include enterprises with fewer than 10 employees, are an integral part of the economies in Portugal, Türkiye, the Netherlands, Spain, and Estonia. In Portugal, these small-scale enterprises are typically family-owned and operate in the service sector. Türkiye has established the KOSGEB institute to support and develop small and medium-sized enterprises, with micro enterprises defined as those employing 1-50 workers. The Netherlands recognizes micro-SMEs as part of the broader category of small and medium-sized enterprises, with almost 1.2 million micro enterprises compared to a smaller number of small and medium-sized enterprises. In Spain, micro-SMEs are a crucial part of the economy, with approximately 3.4 million operating in various sectors and employing over 6 million people. They face challenges such as limited financing but benefit from their agility and flexibility. Estonia includes micro-SMEs in its wider entrepreneurship policies, focusing on enhancing competitiveness and employment across all enterprises. Overall, these countries recognize the importance of micro-SMEs and their contributions to the economy, while acknowledging the unique challenges and advantages they bring to the business landscape.

t. **3.2 The Roles and Importance of micro-SMEs for Furniture Industry**

In **Türkiye**, there is a specific institution, KOSGEB, established to support and develop small and medium-sized enterprises. Micro-SMEs are included in the definition of SMEs, and they play a crucial role in the country's economy. Challenges for SMEs in Türkiye include access to capital, technology, and skilled labor. The government and support organizations provide assistance through initiatives like financial incentives, training programs, and advisory services. In the study titled "Small and medium-sized enterprises and examination of the furniture sector in the customs union process," Tunacelik, Adyton, and Mober firms were analyzed as models within the furniture industry, which holds a significant position in the forest products industry. The study considered factors such as company size, machinery and equipment, production techniques, semi-finished products, and work volumes to determine waste rates using computer-aided special cutting programs. These findings shed light on the operations and efficiency of small and medium-sized enterprises in the furniture sector, highlighting their role in technological development and their ability to adapt and innovate. Small and medium-sized enterprises are crucial for creating a competitive environment and contribute to the vitality and growth of the economy in both developed and developing countries like Türkiye.

In **Greece**, micro-SMEs in the furniture sector contribute to the country's economy, generating added value and employment opportunities. These businesses often face challenges such as limited access to financing and regulatory burdens. Efforts are made to support and promote the growth of SMEs through various initiatives and policies.

In the **Netherlands**, micro-SMEs in the furniture sector play a crucial role in the Dutch economy, contributing to employment, innovation, and economic growth. They face challenges in accessing capital, technology, and skilled labor but receive support from the government and various organizations.

In **Spain**, micro-SMEs are a significant part of the economy, employing a substantial portion of the workforce. They are concentrated in sectors like retail, hospitality, and professional services, including the furniture industry. These businesses often face challenges such as limited financing options and regulatory burdens but benefit from their agility and adaptability.

In **Portugal**, SMEs, including micro-SMEs, are key drivers of economic growth, job creation, and innovation in the furniture sector. They contribute a significant share of the added value in the industry but may face challenges related to financing and regulatory compliance. Support measures and initiatives are available to enhance their competitiveness (Figure 63).

EMPLOYMENT SIZE CLASSES (number of persons employed)

	1 - 9 (I)		10 - 19 (II)		20 - 49 (III)		50 - 249 (IV)		>= 250 (V)	
	CAE *NACE* 31	% no total *Share in total*	CAE *NACE* 31	% no total *Share in total*	CAE *NACE* 31	% no total *Share in total*	CAE *NACE* 31	% no total *Share in total*	CAE *NACE* 31	% no total *Share in total*
Empresas / *Enterprises* (Nº / *ner*)										
2010	4 676	84,8%	472	8,6%	279	5,1%	81	1,5%	4	0,1%
2019	3 775	84,3%	366	8,2%	236	5,3%	92	2,1%	10	0,2%
2020	3 653	83,7%	380	8,7%	234	5,4%	92	2,1%	7	0,2%
2021	3 672	83,1%	398	9,0%	244	5,5%	96	2,2%	7	0,2%
Pessoal ao Serviço / *Persons Employed* (Nº / *ner*)										
2010	...	...	...	...	8 510	24,0%	...	...	...	...
2019	8 814	25,8%	4 891	14,3%	7 023	20,5%	7 563	22,1%	5 931	17,3%
2020	8 510	25,1%	5 127	15,1%	7 148	21,1%	7 980	23,5%	5 164	15,2%
2021	8 627	24,7%	5 362	15,3%	7 502	21,5%	8 400	24,0%	5 071	14,5%
VVN / *Turnover* (M€)										
2010	...	...	...	...	395	26,1%	...	...	...	...
2019	336	16,8%	228	11,4%	414	20,7%	514	25,7%	509	25,4%
2020	304	16,7%	226	12,4%	385	21,2%	534	29,5%	365	20,1%
2021	345	16,2%	271	12,7%	472	22,2%	616	28,9%	425	20,0%
VAB / *GVA* (M€)										
2010	...	...	...	...	138	27,6%	...	...	...	...
2019	118	17,4%	86	12,6%	153	22,5%	180	26,4%	143	21,0%
2020	107	17,1%	87	13,9%	144	23,0%	176	28,1%	113	18,0%
2021	118	16,7%	102	14,4%	170	24,0%	192	27,1%	126	17,8%

Figure 63. Number of persons employed in Portugal

Note: GVA - Gross Value Added

Source: INE Statistics Portugal (2023) and Gabinete de Estratégia e Estudos (2023)

In **Estonia**, micro- and SMEs are essential contributors to the economy, including the furniture sector. They play a significant role in employment and value added. The country's policies focus on enhancing competitiveness, reducing bureaucracy, and creating a favorable business environment to support SMEs.

Overall, micro-SMEs are significant players in the furniture industries of these countries. They contribute to employment, value added, and innovation, while facing common challenges such as financing and regulatory compliance. Governments and support organizations are actively involved in providing assistance and fostering a favorable business environment for their growth and sustainability.

u. 3.3 Furniture Industry, micro-SMEs, and Internationalisation

The furniture industry, characterized by its diverse production and trade dynamics, is a significant sector in the countries of Türkiye, the Netherlands, Estonia, Portugal, and Greece. Within this industry, micro-SMEs (micro and small-sized enterprises) play a pivotal role in driving economic growth, fostering innovation, and generating employment opportunities. However, these micro-SMEs also encounter various challenges, such as intense competition, marketing complexities, and export limitations. Understanding the distinct characteristics and dynamics of micro-SMEs in each country is essential for comprehending the opportunities and obstacles surrounding internationalization within the furniture industry. By delving into the experiences of these countries, we can gain valuable insights into the role of micro-SMEs and their journey towards international expansion.

In the globalized world, the removal of borders between countries and regions has intensified competition, making it increasingly challenging for micro and small-scale firms in the local and international furniture trade. The ability to adapt quickly to market changes and implement innovations is a key strength of these dynamic enterprises. Therefore, the internationalization of micro-SMEs becomes vital for their survival, growth, and overall competitiveness.

In the **Netherlands**, the internationalization of furniture micro-SMEs brings various benefits, including access to new markets, increased revenue streams, risk diversification, and opportunities for innovation and learning. The country's central location in Europe provides proximity to major international markets, facilitating easier access to potential customers and logistical advantages such as reduced transportation costs and shorter supply chains. Moreover, advancements in technology, such as e-commerce platforms and digital marketing tools, enable Dutch micro-SMEs to connect with customers worldwide, promote their products, and facilitate cross-border transactions.

Similarly, in **Estonia**, micro-SMEs in the furniture sector play a vital role. While facing challenges, these enterprises contribute to employment and value added. Their sourcing of materials and labor locally supports other local businesses and helps strengthen the overall industry through the development of local supply chains.

Portugal's furniture sector has embraced research and development (R&D) to design innovative and functional products aligned with consumer preferences, such as eco-friendly materials and space-saving designs. This strategic focus on R&D has enabled Portuguese furniture companies to differentiate themselves from competitors and gain a competitive edge in the global market. Collaborations between the industry and research institutions have also facilitated the development of new materials and production techniques, further enhancing the sector's innovation capabilities.

Overall, micro-SMEs in the furniture industry across Portugal, Türkiye, the Netherlands, Estonia, and Greece face both challenges and opportunities in their pursuit of internationalization. By understanding the specific dynamics and characteristics of these micro-SMEs within each country, we can gain insights into their contributions, challenges, and potential for growth in the global furniture market.

v. 3.4 The micro-SMEs in Export and Import

Micro, small, and medium-sized enterprises (micro-SMEs) play a crucial role in the import and export activities of various countries. In Türkiye, while specific data on the share of micro-SMEs in furniture trade is not available, these businesses actively participate in global furniture trade, contributing to the industry's overall growth and development.

In the Netherlands, micro-SMEs have a significant impact on import and export activities. They accounted for approximately 30% of total Dutch exports in 2020, with a value of €109 billion.

Key sectors such as manufacturing, agriculture, food, and services heavily rely on micro-SMEs for export activities. Additionally, micro-SMEs contributed around 25% to total Dutch imports, with a value of €98 billion. Industries like wholesale trade, manufacturing, and retail prominently engage in import activities conducted by micro-SMEs. Similarly, in Spain, micro-SMEs play a vital role in the country's import and export landscape. According to the Annual Report on the State of Small and Medium Enterprises 2020, there were approximately 3.4 million micro-SMEs operating in Spain. These businesses employ a significant portion of the Spanish workforce, with over 6 million people working for them. Micro-SMEs are concentrated in sectors such as retail, hospitality, professional services, manufacturing, and construction, contributing to both import and export activities. Despite facing challenges such as limited access to financing and regulatory burdens, these micro-SMEs contribute to Spain's international trade and help diversify the country's economy. Greece, although a relatively small player in the global furniture market, has a strong tradition of furniture production and a growing reputation for high-quality, handmade furniture. The industry primarily focuses on domestic consumption but is also expanding its presence in the export market. Greek micro-SMEs contribute to the import and export activities in the furniture sector, showcasing their role in promoting Greek furniture products internationally.

Estonia, with its focus on entrepreneurship and support for small and medium-sized enterprises (SMEs), has a vibrant micro-SME sector. The country recognizes the importance of SMEs in driving economic growth and competitiveness. Micro-SMEs actively participate in import and export activities, contributing to the overall value added and employment in the economy.Portugal's furniture sector has embraced research and development (R&D) to design innovative and functional products aligned with consumer preferences, such as eco-friendly materials and space-saving designs. This has allowed Portuguese furniture companies, including micro-SMEs, to differentiate themselves in the global market and gain a competitive edge. In conclusion, micro-SMEs across these countries are instrumental in import and export activities in the furniture industry.

w. 3.5 Regulations, Laws, Policies, Incentives about Internationalisation - EU and Partner Countries

The furniture industry in Türkiye faces various challenges and opportunities. While specific data on the share of micro-SMEs in furniture trade is not available, these businesses actively participate in global furniture trade. However, monitoring their success in numbers can be challenging. Micro-SMEs in the Netherlands have a significant impact on import and export activities, accounting for a substantial portion of total Dutch exports and imports. They contribute to various sectors such as manufacturing, agriculture, food, and services.

Technological advancements and the rise of e-commerce platforms have facilitated the internationalization of micro-SMEs in the furniture industry. Digital tools allow these businesses to access international markets, expand their product offerings, and engage with customers worldwide. Moreover, the global value chains in which micro-SMEs operate play a crucial role in their success, although disruptions and competition can pose challenges.

In Greece, the government has implemented regulations, incentives, and support programs to promote the internationalization of the furniture sector. Financial and technical assistance, tax incentives for research and development, and quality standards are among the initiatives aimed at enhancing the competitiveness of Greek furniture companies in international markets.

Estonia recognizes the importance of SMEs in driving economic growth and competitiveness. Micro-SMEs contribute significantly to import and export activities in the furniture sector, adding value and employment to the economy. The country's favorable framework conditions and support programs encourage the creation and scaling up of firms, promoting the adoption of digital technologies in production.

Portugal's furniture sector has embraced research and development (R&D) to design innovative and sustainable products. Government funding for R&D projects has improved the environmental impact of the industry and reinforced Portugal's reputation as an innovative producer in the global furniture market.

In summary, micro-SMEs play a vital role of the furniture industry in these countries. Technological advancements, support from governments, and the ability to adapt to changing market conditions are key factors in their success. These businesses leverage digital platforms, collaborate with local partners, and engage in market research to navigate the complexities of international trade and seize growth opportunities.

x. 3.6 The Current **Problems** Encountered at Internationalisation for micro-SMEs.

The internationalization of micro-SMEs is a critical factor in driving economic growth and competitiveness in various countries, including Estonia, Portugal, Greece, the Netherlands, and Türkiye. However, despite the numerous opportunities and benefits offered by international markets, micro-SMEs face unique challenges and obstacles in their pursuit of global expansion.

Türkiye

The Turkish furniture industry is important for people's daily lives and has a wide range of products for both local and international markets. However, micro-SMEs in the industry face challenges when trying to expand internationally. The exchange rate can be unstable, making it hard to plan and predict costs. Although domestic sales have increased, overall industry growth has been slow. Rising production costs due to higher import prices make it difficult for micro-SMEs to stay competitive. Exporting furniture products also poses challenges, including trade barriers and meeting international standards. Access to finance can be tough, and micro-SMEs may lack knowledge about international business practices. Limited resources and technology hinder innovation and differentiation. Addressing these challenges requires government support, affordable finance options, capacity-building programs, and a favorable business environment. By overcoming these obstacles, micro-SMEs can enhance their international competitiveness and contribute to the industry's growth.

Greece

The micro-SMEs of the furniture sector in Greece face several challenges, which highlight the need for targeted support and resources to help them successfully navigate the complexities of international business activities. Some of these challenges are as follows:

- Lack of Resources: Micro-SMEs often lack the resources, both financial and human, needed to successfully enter foreign markets. For example, they may not have the resources to invest in market research, develop a comprehensive marketing strategy, or establish a distribution network in foreign markets.
- Local economic obstacles: The furniture sector in Greece has faced challenges in recent years due to the country's economic situation. High levels of unemployment and a weak domestic market can make it difficult for furniture companies to grow and expand their businesses, which in turn can make it difficult for them to successfully internationalize.
- Regulatory and Legal Challenges: International trade is subject to a range of regulations and legal requirements, including customs procedures, trade agreements, and intellectual property protection. Micro-SMEs may lack the knowledge or expertise needed to navigate these complex regulations and may face difficulties in complying with them.
- Topic-specific education: Furniture companies may lack the topic-specific education and training necessary to successfully navigate the complexities of international business operations, including issues related to logistics, marketing, and legal compliance.
- Social disadvantaged backgrounds: Some furniture companies in Greece may come from socially disadvantaged backgrounds, which can create additional barriers to internationalization.
- Competition: The furniture industry is highly competitive, both domestically and internationally. Micro-SMEs may struggle to compete with larger, more established firms in foreign markets, which may have greater resources, brand recognition, and market presence.

Netherlands

Micro-SMEs in the Netherlands face several challenges when it comes to internationalization. Firstly, limited financial resources can impede their ability to invest in international expansion, establish distribution channels, or adapt to foreign regulations and standards. These financial constraints can restrict their growth potential in global markets.

Secondly, micro-SMEs often lack the necessary knowledge and expertise in international business practices, export procedures, and cultural nuances. This lack of expertise makes it challenging for them to navigate foreign markets effectively. Without a deep understanding of international trade dynamics, they may struggle to establish successful ventures abroad.

Furthermore, entering new markets exposes micro-SMEs to increased competition from local and global players, especially in the furniture sector. This competitive environment requires micro-SMEs to differentiate their offerings and develop effective marketing strategies to stand out and capture market share

Overall, limited resources, lack of expertise, and a competitive environment pose significant challenges for micro-SMEs in the Netherlands as they strive to internationalize their businesses. However, with proper support, strategic planning, and a focus on building capabilities, these challenges can be overcome, enabling micro-SMEs to seize international opportunities and achieve sustainable growth.

Spain

Micro-SMEs in Spain face several challenges when it comes to internationalization. Firstly, the COVID-19 crisis had a significant impact on the furniture industry, causing a drop in activity from 2018 to 2020. While the lifting of lockdown restrictions led to increased sales as people sought to renew their homes, traditional retailers are now confronted with the rise of e-commerce, requiring them to adapt to new market realities.Access to finance is a common hurdle for micro-SMEs in Spain. Limited resources and difficulties in meeting the requirements of financial institutions can make it challenging to secure affordable financing options for international expansion. This lack of financial support can hinder their ability to invest in marketing, research, and development, as well as establishing distribution networks in foreign markets.Regulatory burdens also pose challenges for micro-SMEs. Compliance with international standards and regulations can be complex and costly, particularly for smaller businesses with limited resources. Navigating trade barriers, customs procedures, and intellectual property rights can further complicate the internationalization process. Competition from larger companies is another obstacle. Micro-SMEs may struggle to compete with larger players in terms of resources, market reach, and brand recognition. Building a strong market presence and establishing partnerships abroad can be difficult for micro-SMEs, requiring innovative strategies and targeted marketing efforts to differentiate themselves.Limited international business expertise and knowledge of foreign markets can also impede the internationalization efforts of micro-SMEs. Understanding export documentation, conducting market research, and navigating cultural differences are essential for successful international expansion. Capacity-building programs and support in international business practices can empower micro-SMEs to overcome these challenges and enhance their competitiveness in foreign markets.

Portugal

Micro-SMEs in Portugal often encounter difficulties in accessing funding and resources, which can hinder their growth and competitiveness, particularly when competing against larger firms. However, the Portuguese government has recognized the significance of micro-SMEs and has implemented various support mechanisms to assist these businesses.One of the key challenges for micro-SMEs in Portugal is accessing finance. Limited financial resources can restrict their ability to invest in expanding their operations, implementing new technologies, or entering foreign markets. To address this issue, the Portuguese government has established programs that provide micro-SMEs with access to loans and grants, enabling them to secure the necessary funding for their business activities. These financial support mechanisms play a vital role in empowering micro-SMEs to pursue internationalization opportunities.In addition to financial support, the Portuguese government offers tax credits and incentives to micro-SMEs. These incentives are designed to encourage the hiring of new employees, promoting job creation and economic growth. By reducing the financial burden associated with expanding the workforce, micro-SMEs can focus on enhancing their competitiveness in both domestic and international markets.To foster innovation and improve the competitiveness of micro-SMEs, the Portuguese government also provides support for research and development activities. Funding programs are available to assist micro-SMEs in developing new products, improving production processes, and adopting sustainable practices. This support helps micro-SMEs stay at the forefront of innovation, enabling them to meet evolving consumer demands and compete effectively on the global stage.Recognizing the importance of business management skills, the Portuguese government offers training programs specifically tailored to the needs of micro-SMEs. These programs aim to enhance the managerial capabilities of entrepreneurs and equip them with the necessary skills to navigate the complexities of international markets. By improving business management skills, micro-SMEs can make informed decisions, optimize their operations, and seize internationalization opportunities more effectively.

Overall, the Portuguese government's support mechanisms for micro-SMEs in the furniture industry are aimed at addressing the challenges they face. By providing access to finance, tax credits, research and development support, and training programs, the government empowers micro-SMEs to overcome obstacles and thrive in the competitive business environment. These initiatives contribute to the growth and success of micro-SMEs, reinforcing Portugal's reputation as an innovative and forward-thinking player in the global furniture market.

Estonia

Access to finance is a major obstacle to long-term investment for micro firms and SMEs in Estonia, and the rejection rate of loan applications by SMEs is more than double the EU average. Alternative financing methods such as factoring should be promoted to fill the funding gap for SMEs, while keeping safe standards regarding consumer protection and predatory lending. Successful industrial transition in regions undergoing transformation will depend on fostering innovation-led growth and ensuring that the benefits from growth are widely shared, calling for a coordinated effort including different levels of government, social partners, and the private sector (OECD, 2019). Policies within areas such as skills provision, entrepreneurship, research, development, and investment support should be improved, intensified, and place-based implemented. Educational attainment and skills are high in Estonia, with adult skills are well above the PIAAC average in both literacy and numeracy.

However, the digital transformation implies vast shifts in skills requirements, and challenges such as an aging population, rural-urban divides, and the gender gap in STEM fields need to be addressed to ensure that the workforce is equipped with the necessary skills for the future.

The scope of the furniture industry is vast and varied, encompassing a range of countries and regions worldwide. Through the analysis of the furniture sectors in Spain, Estonia, Greece, the Netherlands, and Türkiye, it is possible to say that each country shows diverse ways of different approach behaviors with their unique characteristics, trends, and initiatives in the related countries. These insights have shed light on the importance of vocational programs in preparing individuals for the specific demands of the furniture industry.

In the subsequent section, this part explores the vocational education programs offered in these countries, focusing on their structure, curriculum, and the skills and knowledge imparted to students. By examining the vocational programs within the furniture industry, it is a crucial point for a deeper understanding of how these countries are equipping individuals with the necessary expertise to excel in this sector.

1.6. 4. VET and Industry / Partner Countries

Vocational and technical education (VET) plays a crucial role in preparing individuals for successful careers in various industries. It is a comprehensive process that aims to develop individuals holistically, equipping them with the necessary knowledge, skills, attitudes, and professional habits required for their chosen professions. VET programs provide practical and hands-on training, bridging the gap between theoretical knowledge and practical application.

In today's rapidly evolving industries, VET is increasingly important in meeting the demands of the workforce. It ensures that individuals possess the relevant skills and competencies needed to excel in their chosen fields. By combining practical training with theoretical knowledge, VET programs enable individuals to acquire industry-specific skills and develop a deep understanding of the requirements and challenges within their chosen professions.

Moreover, VET programs foster the integration of individuals into the workforce by providing them with industry-relevant experiences and opportunities. They promote collaboration between educational institutions and industry partners, allowing learners to gain firsthand experience through internships, apprenticeships, and work-based learning. This close alignment with industry needs ensures that graduates of VET programs are well-prepared to enter the workforce and contribute to the growth and development of various industries.

Overall, VET serves as a critical bridge between education and industry, equipping individuals with the knowledge, skills, and practical experience necessary for successful careers. It plays a pivotal role in driving economic growth, meeting industry demands, and ensuring a skilled and adaptable workforce in an ever-changing job market.

y. 4.1 VET for the Furniture Industry

Türkiye

Vocational and Technical Education in Türkiye faces several challenges, including a lack of industry integration, limited program diversity, inadequate resources, and neglect of continuous education. The country requires significant improvements and reforms to meet the needs of the labor market and technological advancements. Creating a strong vocational education culture and providing opportunities for professional development and skills enhancement are crucial for Türkiye's economic competitiveness and addressing the paradox of high unemployment rates despite the need for qualified personnel. Formal vocational education is offered in vocational and technical high schools, while non-formal education programs include vocational open education high schools and apprenticeship training centers. Enhancing vocational education and bridging the gap between education and industry are essential for Türkiye's future success.

Greece

Vocational Education and Training (VET) for the furniture industry in Greece is provided through a range of public and private institutions. Some examples of VET providers in Greece that offer training programs for the furniture industry include: Public Employment Office (DYPA): This is a public office that aims to provide quality training for unemployed and employed people, to enhance the skills match between the workforce and the labour market and to fill available jobs. One of the certified trainings provided through this office is that of furniture design, production, and restoration. (https://www.dypa.gov.gr/ksylurgon-epiplopion) Centres for Vocational Training and Lifelong Learning: They are about private institutions in Greece that offers a range of training programs for various industries, including the furniture industry. They also offer courses on furniture design, production, and restoration, as well as training in marketing and business management for furniture companies. Technical Vocational School: It is a public institution that offers training programs in a range of technical fields, including furniture design and production. It offers theoretical and practical training in various aspects of furniture production, including design, materials, and manufacturing techniques. (http://www.pedia.gr/edu/2g/tesg.html).

The Netherlands

Vocational education equips individuals with the skills and knowledge required for specific industries. In the Netherlands, the furniture production sector is renowned for its quality craftsmanship and innovative designs.

The vocational education system in the Netherlands focuses on providing students with practical skills and knowledge to prepare them for the job market. It comprises a dual system that combines classroom instruction with on-the-job training through apprenticeships. Students can pursue vocational education at different levels, including intermediate vocational education (MBO) and higher vocational education (HBO).

In the Netherlands, vocational education programs related to furniture production are offered primarily at the MBO level. These programs aim to develop skills in areas such as furniture design, woodworking, upholstery, and furniture restoration. Some of the renowned institutions offering vocational education in furniture production include

- Hout- en Meubileringscollege (HMC) - HMC is a specialised vocational school with campuses in Amsterdam, Rotterdam, and Amsterdam West. It offers various furniture production programs, including Furniture Making, Interior Design, and Upholstery.
- Hout- en Bouwcollege Rotterdam - This vocational school in Rotterdam focuses on wood-related trades and offers Furniture Making and Interior Design programs.

To understand the scale and impact of vocational education in furniture production, let's examine enrollment and graduation statistics for relevant programs. However, it's important to note that exact figures may vary depending on the most recent available data.

According to the Ministry of Education, Culture and Science, in the academic year 2020/2021, there were approximately 3,500 students enrolled in furniture production-related MBO programs in the Netherlands. These students were distributed across various vocational schools offering furniture production education.

Regarding graduation rates, the same report states that around 2,900 students successfully completed their vocational education programs in furniture production during the same academic year. This indicates a high completion rate, reflecting the effectiveness of the vocational education system in preparing individuals for the furniture production industry.

The furniture production industry in the Netherlands is thriving, contributing significantly to the country's economy. As per recent data from Statistics Netherlands (CBS), the furniture industry experienced an increase in turnover by 4.8% in 2021 compared to the previous year (Figure 64).

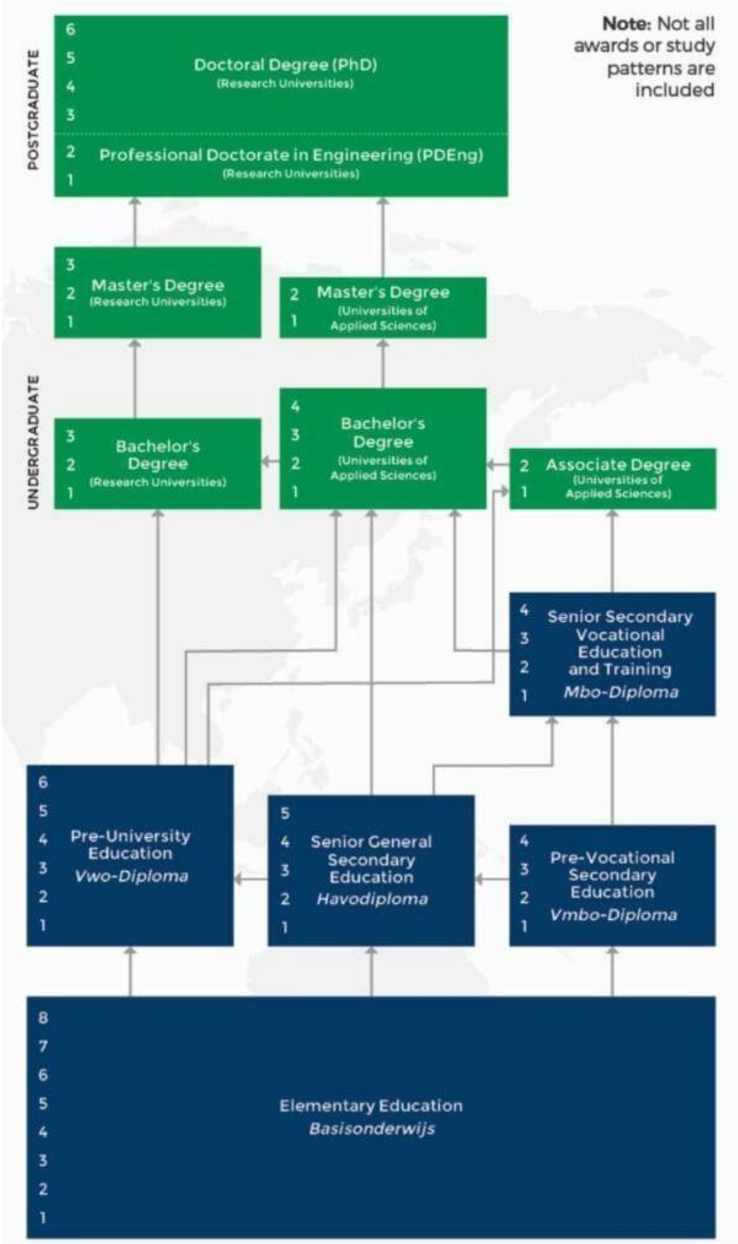


Figure 64. Main Flows in the Dutch Educational System

Source: WES

Adult Education

Netherlands has established itself as a country with a highly educated workforce, evident through its emphasis on higher education and the quality of skills demonstrated by its population. With around 22% of workers engaged in knowledge-intensive activities such as R&D, design, and software development, the country benefits from a substantial share of knowledge-intensive employment. The expansion of professional education in universities of applied sciences further contributes to fostering innovation within the workforce. Lifelong learning has been a key priority, promoting access to adult education and vocational training to enhance employability and personal achievement. While there is a strong focus on meeting the needs of disadvantaged students and providing autonomy to educational institutions, structural state funding for lifelong learning is still limited, with a significant portion of adult education being offered by private institutions.

The Netherlands has made progress in lifelong learning participation, exceeding the European standard and showing a higher percentage of adults engaged in education or training compared to the EU average. In 2019, over 1.7 million individuals between the ages of 25 and 65 participated in formal education programs, including vocational education and higher professional education, as well as various courses and workshops. Notably, there has been an increasing number of participants in short training programs of less than one week in duration. However, achieving the national target of a lifelong learning participation rate of 20% among adults aged 25 to 64 years is yet to be realized. Overall, the Netherlands places a strong emphasis on lifelong learning, recognizing its significance in maintaining a skilled and adaptable workforce.

Employees without a basic qualification (equivalent to secondary vocational education (MBO), level 2) who were previously unemployed are often the first to lose their jobs when the economy is in a downturn. To ensure that this group has a better chance of staying at work, in the Netherlands, it is seen as essential that they have the opportunity, while working or before starting a job, to obtain a basic qualification. The Dutch Government has deployed the following instruments for this purpose:

- Reductions in tax and social insurance contributions to offset the wage costs of employees on day release schemes;
- Training for the employed to basic qualification level, upgrading to MBO level 4 and cross-sectoral training.
- Special compulsory courses designed to help newcomers to integrate into Dutch society.
- Work experience was made compulsory for training providers in the Adult and Vocational Education Act to guarantee the relevance of the courses to practice and thus strengthen the ties between education and the labour market.

Spain

Spain's Vocational Education and Training (VET) system is regulated by the 2002 Act on Capabilities and Professional Schooling. VET aims to prepare students for professions, facilitate their adaptation to the changing labor market, and contribute to personal development and lifelong learning. However, the system lacks coordination and joint planning, hindering recognition and transition between vocational training systems. To address this, the government plans to invest €2.4 billion between 2021 and 2024 to modernize and make VET more flexible, combat youth unemployment, and provide alternatives for those who left education prematurely.

VET in Spain includes basic and intermediate programs, offering qualifications in various fields. Basic programs support students at risk of leaving education and provide a foundation for future occupations. Intermediate programs lead to technician qualifications, while higher programs lead to advanced technician qualifications. The introduction of Dual Vocational Training allows students to alternate between educational centers and workplaces, gaining practical experience. Despite these efforts, Spain's enrollment in vocational programs (28%) is below the OECD average, with the majority of students in upper secondary education.

Portugal

The furniture sector plays an important role in the vocational education and training (VET) system in Portugal. Portugal has a strong tradition in furniture manufacturing, and the sector represents a significant part of the country's economy. VET programs in Portugal often offer training in furniture manufacturing and design, with a focus on developing the skills and knowledge necessary for the industry. This includes training in traditional woodworking techniques, as well as modern technologies used in the sector such as computer-aided design and manufacturing (CAD/CAM) software and robotics. The furniture sector also provides opportunities for apprenticeships and on-the-job training, allowing students to gain practical experience and develop their skills in a real-world setting. Many furniture manufacturers in Portugal work closely with vocational schools and training centers to provide opportunities for students to gain work experience and to recruit talented graduates. In addition to providing training and employment opportunities, the furniture sector also contributes to Portugal's overall economic growth. According to data from the AIMMP (Portuguese Association of Wood and Furniture Industries - https://aimmp.pt/en/), the sector generates around €2 billion in revenue each year and employs over 25,000 people (AIMMP, 2023). Overall, the furniture sector is an important part of the VET system in Portugal, providing training and employment opportunities for students and contributing to the country's economic growth. A detailed description of the Vocational education and training in Portugal are available at European CEDEFOP website https://www.cedefop.europa.eu/en/tools/vet-in-europe/systems/portugal-2019

Estonia

Vocational education and training (VET) plays an essential role in the development of the furniture sector in Estonia. The furniture industry is considered one of the most important sectors in the Estonian economy, and VET provides the industry with a skilled workforce. To further support the development of the furniture industry, the Estonian Furniture Industry Association (EMAL) works closely with VET institutions to ensure that the courses and programs offered align with the industry's needs. EMAL also organizes training programs, seminars, and conferences for professionals in the industry to enhance their skills and knowledge. Overall, the VET sector in Estonia plays a crucial role in developing and sustaining the furniture industry. The industry continues to evolve and innovate, and VET institutions are committed to providing a skilled workforce to meet the demands of the sector.

z. **4.2 Qualified Labour (Schools)**

Türkiye

Labour schools in Türkiye offer a wide range of vocational programs, including fields such as automotive technology, electronics, construction, culinary arts, and more. These programs combine classroom instruction with hands-on training, allowing students to gain practical experience in their chosen field. The curriculum is tailored to the specific needs of each industry, ensuring that students acquire the skills and knowledge required for successful employment.

The goal of labour schools is to produce a qualified workforce that meets the demands of the labor market. By providing vocational education and training, these schools contribute to the development of skilled professionals in various sectors, helping to address the shortage of qualified workers and enhance the competitiveness of Turkish industries. The close collaboration between labor schools and industry stakeholders is crucial in ensuring that the programs offered align with industry needs and provide students with the necessary skills for successful careers.

Greece

Educational institutions in Greece offer various VET programs in a range of fields, including the furniture industry. These programs are designed to provide individuals with the skills and knowledge needed to succeed in their chosen field and can help to bridge the gap between education and employment. In Greece, there are several types of VET programs available, including vocational schools, technical colleges, specialized training centers, and apprenticeships. These programs can vary in length and intensity, depending on the specific field and level of training. VET programs in the furniture industry can provide training in a range of areas, including furniture design, manufacturing, installation, and repair. Some programs may focus on specific aspects of the industry, such as upholstery or woodcarving, while others may offer a more comprehensive approach. In addition to providing training in the skills and competencies needed in the furniture industry, VET programs in Greece may also offer certification options, such as the National Vocational Qualification (NVQ) or the European Qualification Framework (EQF). These certifications provide recognition of the skills and knowledge gained through VET programs and can be a valuable asset for individuals seeking employment or career advancement opportunities.

Some examples of schools offering such programs include the Public Employment Office (DYPA), Centres for Vocational Training and Lifelong Learning (VET schools/institutions), and Technical Vocational School. These schools provide students with the theoretical and practical knowledge needed to work in the furniture industry.

The Netherlands

In the Netherlands, vocational education programs related to furniture production are offered primarily at the MBO level. These programs aim to develop skills in areas such as furniture design, woodworking, upholstery, and furniture restoration. Some of the renowned institutions offering vocational education in furniture production include

- Hout- en Meubileringscollege (HMC) - HMC is a specialised vocational school with campuses in Amsterdam, Rotterdam, and Amsterdam West. It offers various furniture production programs, including Furniture Making, Interior Design, and Upholstery.
- Hout- en Bouwcollege Rotterdam - This vocational school in Rotterdam focuses on wood-related trades and offers Furniture Making and Interior Design programs.

In the 2019-2020 school year, 4,425 MBO students are following a course in Wood and furniture.

Over the past five years, the number of students in this sector has increased by 30 per cent. Most (69 per cent) of the students within Hout en Meubel follow a BOL course, 31 per cent of the students follow a BBL course (SBB, 2020).

Spain

In Spain, the VET system offers a range of programs and qualifications designed to meet the needs of various industries, including the furniture industry. These programs typically combine theoretical knowledge with practical, hands-on training, enabling students to acquire the skills required for specific trades.

Within the furniture industry, vocational education programs focus on areas such as carpentry, joinery, cabinetmaking, furniture design, and upholstery. Students learn about different types of materials, woodworking techniques, furniture production processes, design principles, and craftsmanship. They also gain knowledge about industry-specific tools, machinery, and technologies. Vocational education in the furniture industry is offered through a network of vocational training centres, trade schools, and institutes across Spain. These institutions collaborate with industry stakeholders, including furniture manufacturers, to develop curricula that align with the needs and demands of the sector. This collaboration ensures that students receive relevant and up-to-date training, enhancing their employability upon graduation. Moreover, vocational education programs often include practical internships or apprenticeships, allowing students to gain real-world experience in furniture companies. This hands-on training provides valuable industry exposure and helps students to develop essential skills while establishing professional networks. The Spanish government, through the Ministry of Education and Vocational Training, actively supports vocational education and its integration into the furniture industry. It promotes partnerships between educational institutions and businesses, fostering the exchange of knowledge, expertise, and resources.

Vocational education plays a significant role in the development of the furniture industry in Spain. It is a key sector of the Spanish economy, and vocational education programs provide the necessary skills and training for individuals to enter and excel in this industry. However, there may still be some areas where there is a perceived or actual lack of competencies or skills, mostly regarding the transversal skills. Indeed, creativity, design thinking and other soft skills, such as, effective communication, teamwork, adaptability should be incorporated and promoted among these technical profiles. In addition, there may be room for entrepreneurial skills such as, project management, marketing, sales and budgeting. These transversal skills would offer a wide variety of points of view but also an effective knowledge if they want to start their own business and become a well-rounded professional. Finally, sustainable development should be addressed during the training, for instance, learning about sustainable material sourcing, waste reduction, etc.

Portugal

The offer of degrees in the field of furniture and similar is not wide in Portugal. A few HEI (Higher Education Institutions) have programmes to specifically prepare students for a qualified labour in this sector. We found two HEIs worth mentioning, one in the north of the country (half an hour's drive from Paços de Ferreira) and another one in the capital (Lisbon).

In ESAD (Superior School of Arts and Design) we can find some degrees related with the sector (ESAD, 2023):

A BA Degree in Interior Design that presents the living space as raw material and motivates students to reflect and work actively on the emerging needs, using updated tools. "Throughout the course, students will acquire all the necessary tools for the manipulation, organisation and construction of space in relation with furniture and body, in a constant dialogue between conceptual and practical dimensions."

A Master Degree in Interior Design which privileges the rehabilitation of spaces, updating their day-to-day functions in an inclusive reflection of values of the past and present day needs. "The Master's Degree in Interior Design thus becomes a space for contact with reality and with the job market, through partnerships with companies in the industrial and real estate sectors. This training also constitutes a space for experimentation and a constant relationship with the materiality of the project, through self-construction workshops that promote the return to the manual dimension as a complement to the intellectual dimension."

A Postgraduate Diploma in Furniture Design which engages fundamental challenges to educate the next generation of designers, through specialised levels of creative discourse and technical skills to create innovative furniture forms for living and working. Accordingly with their website "The Postgraduate Diploma in Furniture Design is for students with a passion for furniture design (…) Students will develop the fundamental knowledge of design practise, explore new opportunities and emerging technologies to enhance their work and stimulate personal design identity and ambition as furniture designers."

In the LSD (Lisbon School of Design) we can find some degrees in the field of furniture industry or similar fields, such as (LSD, 2023):

Furniture Design (280h programme)

"The annual Furniture Design course is an excellent way to provide each student, in a short space of time, with a transversal and detailed approach to the activity of the Furniture Designer, in all its valences. It also serves as a great complement to other professional activities. All professors of the course are a reference in the current panorama of furniture design nationally and internationally, with proven experience in teaching the discipline.″

Interior Design (280h programme)

″The Interior Design course at Lisbon School of Design organizes your training in the simultaneity of technical and scientific knowledge with artistic, creative and cultural thinking. From construction to decoration, and between the process, project and product phases, the future interior designer."

Other HEI schools could be found in :https://sketchwood.pt/rede/escolas-superiores-de-design-arquitetura-eletronica-e-automacao/

Estonia

There are several VET institutions in Estonia that offer furniture-related courses and programs, such as the Tartu Art College, Tallinn School of Service, and Kuressaare Regional Training Centre. These institutions offer various training programs that cater to different levels of expertise, from basic woodworking and furniture assembly to design and manufacturing.

The VET courses and programs are designed to provide students with a practical and hands-on approach to learning, where they gain real-world experience and knowledge about the furniture industry. Students learn not only technical skills but also gain knowledge in areas such as environmental sustainability, product design, and entrepreneurship.

aa. 4.3 Qualified Labour (Employees)

Türkiye

The furniture sector in Türkiye faces a significant challenge in terms of the inadequacy of vocational education, which has resulted in a lack of qualified labor employees. This inadequacy not only hinders the sector's development and competitiveness but also poses difficulties in the transition to the labor market. To address this issue and strengthen university-industry cooperation, it is crucial to eliminate the inadequacy in vocational education through effective policies. The Ministry of Industry and Technology's 2020 Furniture Industry report highlights the dominance of small businesses in the sector, often employing traditional methods and focusing primarily on the domestic market.

According to the Türkiye Furniture Products Assembly Sector Report, the lack of qualified workforce, employment, and experience is directly linked to the inadequacy in education within the sector. To promote employment and increase the number of technical staff and engineers, it is necessary to update the education programs of relevant departments in vocational high schools and universities to align with the sector's needs and advancements. There is a need for production and design education specifically tailored to the furniture sector in both vocational high schools and universities.

It is essential to establish engineering departments in universities that integrate furniture and space, combining art and science in line with the "Furniture Life Cycle." Within the framework of university-industry cooperation, academic studies in the furniture industry should be intensified, and plans and programs should be developed to effectively utilize the knowledge and workforce trained in this field. Making furniture vocational education attractive is seen as beneficial for addressing and resolving the sector's fundamental issues. However, the existing schools providing furniture education are considered insufficient in terms of quality and quantity to meet sector expectations. To overcome these shortcomings, it is necessary to upgrade the schools' technologies, foster active university-industry cooperation, enhance the quality of teaching staff and students, update programs according to practical applications and current technology, and make the sector more appealing.

Greece

Qualified employees in the furniture sector in Greece generally have the necessary skills and experience to perform their job roles effectively. Vocational education and training (VET) programs, apprenticeships, and other forms of training and education provide individuals with the skills and knowledge needed to succeed in the industry. In addition to formal training and education, many employees in the furniture sector in Greece gain valuable experience through on-the-job training and work experience. This can help to further develop their skills and competencies and provide them with a deeper understanding of the industry and its needs. Their roles can include furniture designers, carpenters, upholsterers, painters, and production managers. To be qualified, employees need to have knowledge of materials, manufacturing techniques, design principles, and marketing practices.

The Netherlands

The demand for skilled furniture production professionals remains strong, both domestically and internationally. Furniture manufacturers, interior designers, and restoration studios seek skilled workers in areas such as furniture design, craftsmanship, and restoration.According to the UWV (2019), employee jobs in the wood and furniture industry are quite stable. The attention to sustainable employability of employees is increasing. The shortage of skilled personnel in the wood and furniture industry is growing due to an ageing population that is insufficiently compensated by the new influx. The current labour market in the furniture sector is outgrown and ageing. The ageing and dejuvenation result in a replacement demand of 1,100 people annually. The same number of students leave the MBO schools each year with a diploma, but a third of this group does not go to work in a company that falls under the collective labour agreement. There is a 'leak' resulting in an annual shortage of approximately 400 students from 2015. That makes the responsible deployment of personnel so important. More attention will be paid to vitality programs and digital methods of personnel monitoring to ensure a qualitative deployment of personnel.From January 2019 to September 2019, there were 1,570 MBO vacancies in the field of Wood and Furniture. This is an 11 per cent decrease compared to Q2 to Q4 2018.

Spain

Qualified labour plays a crucial role in the furniture industry in Spain. Vocational education programs in the country aim to provide students with the necessary skills and knowledge to meet the industry's demands. Within the furniture sector, qualified employees are trained in various areas such as carpentry, joinery, cabinetmaking, furniture design, and upholstery.Vocational education programs in Spain's furniture industry focus on developing technical expertise and craftsmanship. Students gain knowledge about different materials, woodworking techniques, furniture production processes, and design principles. They also receive training on industry-specific tools, machinery, and technologies.To ensure the relevance and quality of vocational education, educational institutions collaborate closely with furniture manufacturers and other industry stakeholders. This collaboration helps align the training programs with the sector's needs and ensures that graduates possess the skills required by employers. Furthermore, vocational education often includes practical internships or apprenticeships, enabling students to gain real-world experience in furniture companies and establish professional networks.The Spanish government, through the Ministry of Education and Vocational Training, actively supports vocational education and its integration into the furniture industry. It encourages partnerships between educational institutions and businesses, facilitating knowledge exchange and resource sharing. By nurturing a pool of qualified labor, vocational education contributes to the growth and competitiveness of the furniture sector in Spain.However, it is important to also address the development of transversal skills in addition to technical competencies. Soft skills such as creativity, design thinking, effective communication, teamwork, adaptability, and entrepreneurial skills should be incorporated into vocational education programs. This holistic approach prepares employees not only for technical roles but also for broader responsibilities in project management, marketing, sales, and sustainable practices. By equipping the workforce with a diverse skill set, the furniture industry in Spain can thrive in a rapidly evolving market and contribute to sustainable development.

Portugal

Nowadays we are witnessing a decrease in the training offer in areas that require manual work such as furniture, although there is a market demand for these professionals. By consulting the IEFP we can find the following employment needs in the sector (IEFP, 2023):

Carpenter; Upholsterer; Clean and rough Carpenter; Sewing and related occupations; Other Carpenters and Builders; Designer of Industrial Product or Equipment; Designers and related technicians.

Estonia

The Estonian furniture industry offers several levels of training for individuals interested in pursuing a career in the field. The following are descriptions of the prerequisites and profiles for each level PMV-tase (Level of Woodworking Machinery Operator) - This level of training focuses on providing individuals with the knowledge and skills necessary to operate woodworking machinery. The prerequisites for this level include a basic understanding of woodworking and the ability to read technical drawings. The profile of a PMV-tase graduate includes being able to operate woodworking machinery safely and efficiently, maintain machinery, and produce high-quality furniture components. PPO-tase 3 (Level of Woodworking and Furniture Manufacturing) - This level of training is designed for individuals who wish to acquire comprehensive knowledge and skills related to woodworking and furniture manufacturing. The prerequisites for this level include completing PMV-tase training or equivalent work experience. The profile of a PPO-tase 3 graduate includes being able to understand and interpret technical drawings, use woodworking machinery and tools, and produce high-quality furniture components and products. Tisler-tase 4 (Level of Furniture Master) - This level of training is aimed at individuals who wish to become furniture masters. The prerequisites for this level include completing PPO-tase 3 training or equivalent work experience. The profile of a Tisler-tase 4 graduate includes being able to design, plan, and produce custom furniture pieces using traditional and modern techniques, as well as having a comprehensive understanding of woodworking and furniture manufacturing. Tisler-tase 4 Hindamisstandard (Assessment Standard for Furniture Master Level) - This document outlines the assessment criteria for individuals seeking certification as a Tisler-tase 4 graduate. The assessment covers various aspects of woodworking and furniture manufacturing, including design, planning, production, and quality control. CNC-PPO-tase 4 (Level of CNC Operator and Programmer) - This level of training focuses on providing individuals with the knowledge and skills necessary to operate and program CNC machinery. The prerequisites for this level include completing PPO-tase 3 training or equivalent work experience. The profile of a CNC-PPO-tase 4 graduate includes being able to operate and program CNC machinery safely and efficiently, as well as being able to produce high-quality furniture components and products using CNC technology.

bb. **4.4 Qualified Labour (Directors)**

The qualification requirements for directors in the furniture sector vary across different countries. In the Netherlands, problem-solving abilities are considered essential skills for CEOs, according to a 2016 survey. In Spain, vocational education plays a significant role in developing the furniture industry, providing skills and training for individuals to excel in the sector. However, there may be a perceived or actual lack of competencies in certain areas, such as creativity, design thinking, effective communication, teamwork, adaptability, and entrepreneurial skills. It is important to incorporate these transversal skills and address sustainable development in vocational training programs.

In Türkiye, the furniture sector faces challenges due to the inadequacy of vocational education. The lack of qualified workforce and employment opportunities affects the sector's competitiveness. To address these issues, vocational education programs in relevant departments of vocational high schools and universities should be updated to align with sector needs and developments. Opening engineering departments that integrate furniture and space can meet industry expectations. University-industry cooperation, active school technologies, and improved teaching staff and programs are necessary to attract qualified labor and enhance the sector's quality and quantity.

In Greece, qualified directors in the furniture sector typically possess significant experience and expertise in the industry. They may have a background in design, manufacturing, or business and must also demonstrate strong leadership, management, and communication skills. In Estonia, managerial positions in the furniture sector are often filled by graduates of higher education institutions who have studied business-related fields such as management, marketing, or entrepreneurship. These directors handle various aspects, including product development, marketing, financial management, and supply chain operations.

Portugal currently experiences a decrease in training opportunities for manual work areas such as furniture, despite market demand for these professionals. There is a need for carpenters, upholsterers, sewing professionals, industrial product or equipment designers, and related technicians in the sector.

Overall, qualified directors in the furniture sector require a combination of technical expertise, leadership skills, and industry-specific knowledge. They should possess problem-solving abilities, adaptability, effective communication, and the capacity to understand and respond to market demands. Continuous professional development, networking, and staying up-to-date with new technologies and trends are also crucial for success in this role. By addressing the challenges and promoting adequate vocational education, the furniture industry can attract and cultivate qualified directors who contribute to its growth and competitiveness.

cc. **4.5 VET for Labour Market Needs**

Vocational Education and Training (VET) programs in the furniture industry play a crucial role in addressing labor market needs and ensuring a skilled workforce. In the Netherlands, VET programs focus on various areas such as furniture design, craftsmanship, upholstery, furniture sales, and retail. By providing training in these specific fields, VET programs meet the demand for skilled furniture designers, manufacturers, upholsterers, and sales professionals. Moreover, with the increasing emphasis on sustainability, VET programs incorporate training on eco-friendly practices and materials, contributing to the demand for professionals in sustainable furniture production.

In Türkiye, an active university-industry cooperation, technology renewal, and improved teaching staff and programs are necessary to attract and produce a qualified workforce. Furthermore, the coordination of solution partners and stakeholders in both the public and private sectors, following EU standards, can lay the foundation for vocational education in the furniture sector. By keeping up with new generation technologies and creating appealing programs, the sector can develop a skilled labor force and overcome basic challenges.

In Greece, VET programs are designed to cover a wide range of labor market needs in the furniture industry. Programs in furniture design and production, upholstery, woodworking, and business and management equip individuals with the necessary skills and knowledge to succeed in different roles within the industry. Additionally, apprenticeships offer hands-on training and experience, preparing individuals for specific tasks in the sector. To address emerging trends, VET programs need to adapt and provide training in advanced technologies used in e-commerce, logistics, supply chain management, and customer service. They should also emphasize transversal skills such as effective communication, marketing, and entrepreneurship to support personal and professional growth in the sector. Furthermore, sustainability should be integrated into training programs, fostering knowledge about sustainable practices in furniture production and design.

In Portugal, there is a decreasing training offer for manual work areas like furniture, despite market demand. The industry requires carpenters, upholsterers, sewing professionals, and industrial product designers. VET programs need to focus on these specific needs, providing training in carpentry, upholstery techniques, sewing, and design. By addressing these labor market needs, VET programs can help bridge the skills gap and meet the demand for skilled professionals in the furniture sector.

In summary, VET programs in the furniture industry across different countries contribute to addressing labor market needs. By providing specialized training in areas such as furniture design, craftsmanship, upholstery, sales, and sustainable practices, VET programs prepare individuals for various roles within the sector. Adapting to emerging trends, incorporating technology, transversal skills, and sustainability, VET programs ensure that the workforce meets the evolving demands of the furniture industry, promoting growth, and competitiveness.

dd. 4.6 Cooperation Between Educational Institutions and Business

Cooperation between educational institutions and businesses is essential in addressing the labor market needs of the furniture industry in various countries. In the Netherlands, this collaboration, known as the "dual system," is deeply ingrained. Educational institutions work hand in hand with furniture manufacturers, retailers, and related businesses to provide apprenticeship opportunities and work-integrated learning programs. By involving businesses in curriculum development, mentorship, and workplace training, vocational education in the Netherlands ensures that students gain practical experience while acquiring theoretical knowledge. Industry advisory boards further enhance this collaboration by providing guidance on curriculum development and fostering ongoing dialogue between educational institutions and businesses.

Similarly, in Greece, vocational education programs in the furniture sector benefit from collaboration between educational institutions and industry stakeholders. Trade schools, vocational training centers, and institutes partner with furniture manufacturers to develop curricula aligned with industry needs. Internship and placement programs allow students to gain real-world experience while providing businesses with an opportunity to identify potential talent. Collaboration also extends to research and development projects, where educational institutions and businesses work together to drive innovation and improve products, processes, and technologies.

In Spain, vocational education and training (VET) are coordinated by Act 5/2002, which emphasizes the collaboration between education and employment authorities. Educational institutions collaborate with businesses to offer work-based learning programs, internships, and apprenticeships. Industry experts are invited to give guest lectures and share their insights, while collaborative research projects drive innovation and address industry challenges. The Spanish government actively supports vocational education through budgetary boosts and aims to modernize and make these studies more flexible.

In Türkiye, collaboration between vocational schools and the industry is seen as a solution to address the inadequacies in vocational education. The establishment of industry advisory boards and the involvement of businesses in curriculum design can help ensure that vocational education meets the needs of the labor market. Vocational schools collaborate with industry stakeholders to offer internships, work-based learning opportunities, and apprenticeships. By renewing technologies, increasing the quality of teaching staff and programs, and fostering active university-industry cooperation, vocational education can become more attractive and effective in preparing individuals for the furniture industry.

Cooperation between educational institutions and businesses in the furniture sector is crucial for bridging the skills gap and meeting labor market needs in different countries. By involving businesses in curriculum development, providing work-integrated learning opportunities, and fostering ongoing dialogue, vocational education programs can ensure that students acquire the necessary skills and knowledge required by the industry. This collaboration promotes the exchange of expertise, resources, and innovation, ultimately contributing to the growth and competitiveness of the furniture sector.

ee. **4.7 Internationalisation Trainings for micro-SMEs in Furniture Industry**

Internationalization training programs for micro-SMEs in the furniture industry play a significant role in supporting their efforts to expand into international markets. These programs provide valuable knowledge and resources to help micro-SMEs from different countries navigate the complexities of international trade and develop effective strategies for entering and succeeding in new markets.

In Spain, micro-SMEs in the furniture industry can benefit from government organizations such as the Spain Chamber of Commerce (Cámara de Comercio de España) and the Spain Trade and Investment Agency (ICEX España Exportación e Inversiones). These organizations offer tailored services, training, and mentoring to support micro-SMEs in their internationalization endeavors. They provide market research, guidance on export processes and logistics, financial support options, and assistance in developing marketing and branding strategies for international markets.

In Estonia, micro-SMEs in the furniture industry can seek support from institutions such as the Estonian Furniture Manufacturers Association. This association promotes the innovative work of VET teachers, facilitates networking, and offers opportunities to showcase work and best practices in the sector. Additionally, universities, vocational schools, and research institutions specializing in business and entrepreneurship provide resources and training to support micro-SMEs in their internationalization efforts. Trade fairs and events related to the furniture industry offer valuable networking and partnership opportunities for micro-SMEs to connect with industry stakeholders and explore international markets.

In the Netherlands, micro-SMEs in the furniture industry can turn to the Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland) and the Chamber of Commerce (Kamer van Koophandel) for support. These government organizations provide tailored services, training, and mentoring to assist micro-SMEs in their internationalization endeavors. They offer market research and analysis, guidance on export processes and logistics, financial support options, and assistance in developing marketing and branding strategies for international markets. Additionally, industry-specific trade associations and business networks in the furniture industry provide specialized support and networking opportunities for micro-SMEs.

These internationalization training programs and support initiatives are designed to address the specific needs and challenges faced by micro-SMEs in the furniture industry. By participating in these programs and leveraging the resources and support available, micro-SMEs can enhance their competitiveness, expand their market reach, and seize opportunities for growth in international markets.

For Portugal, The AEPC Business Support Department, through a multidisciplinary technical team, experienced and highly qualified in their respective areas of intervention, is positioned as a provider of services of excellence, appropriate to the business reality and based on a logic of integrating business solutions "turn-key". The AEPC has joint projects for business capacity building, such as:

Melhor Turismo [Beter Tourism]

The project aims to promote the transfer of knowledge and successful practices in the management and leadership of SMEs, with a view to increasing the specific qualification of workers in areas relevant to the innovation strategy, internationalisation and modernisation of enterprises; increase the management capabilities of companies to initiate processes of change and innovation and promote actions to stimulate and raise awareness for change and the exchange of good practices.

Formação PME [SMEs trainning]

The project aims to promote the transfer of knowledge and successful practices in successful in the management and leadership of SMEs, with a view to increasing the specific qualification of the employees in areas relevant to the innovation strategy, internationalisation and modernisation of the enterprises; increase of the managerial management capacities of companies to initiate change and innovation processes and the promotion of actions to stimulate and raise awareness for change and the exchange of good practices.

MOVE PME [SMEs MOVE]

To promote the transfer of knowledge and successful practices in the management and leadership of SMEs, with a view to strengthening the capacity to implement innovative and international growth strategies, contributing to the improvement of global competitiveness.

Internacionalização das PME [SMEs internationalisation]

The Joint Project "Internationalisation of SME's" developed by AEPF has as main objective the business capacitation of SME's in the Sousa Valley region for internationalisation.

Capital do Móvel – Feeling the Essence [Furniture Capital – Feeling the Essence]

The project integrates a set of actions to empower the business fabric of the wood furniture sector to increase the internationalisation of its business by improving its image, marketing innovation, information on foreign trade and dissemination of the offer for export.

M&V: Desafio à Competitividade [M&V: Challenge to Competitiveness]

The main objective of this project is: To improve the capacity of governance of the business fabric of the furniture and clothing sectors in Paços de Ferreira, Lousada and Paredes.

ff. 4.8 Creating New, Innovative Joint Curricula and Courses

Creating new, innovative joint curricula and courses is crucial in addressing the evolving needs of the labour market, promoting sustainability, and fostering the growth and competitiveness of micro-SMEs in the furniture industry. These joint curricula and courses can bridge the skills gap, equip individuals with relevant knowledge and skills, and prepare them for the challenges of the modern workplace.

In today's dynamic and globalized economy, the furniture industry, like many other industries, requires a diverse range of skills and competencies. By developing joint curricula between the furniture sector and other eco sectors, such as sustainable materials and renewable energy, micro-SMEs can foster innovation and sustainability. This integration allows for the exploration of new materials and manufacturing processes, leading to the development of environmentally friendly furniture and reduced carbon emissions. Additionally, joint curricula can help micro-SMEs tap into the growing demand for sustainable and eco-friendly products, enabling them to gain a competitive edge in the market.

Moreover, integrating business administration courses, particularly those focused on innovation management and internationalization management, provides micro-SMEs with the necessary tools to thrive in today's global business landscape. Innovation management courses empower furniture designers and manufacturers to identify and capitalize on opportunities for new product development. They also foster a culture of innovation within micro-SMEs, enabling them to adapt to changing consumer preferences and market trends. Similarly, courses in internationalization management equip micro-SMEs with the knowledge and skills required to enter new markets, establish international partnerships, and expand their businesses globally.

The benefits of creating new, innovative joint curricula and courses extend beyond individual skills development. They contribute to the overall growth and competitiveness of the furniture industry. By aligning educational programs with the needs of the labour market, these curricula ensure that graduates possess the skills and knowledge sought after by employers. This, in turn, enhances employability, reduces unemployment rates, and drives economic growth.

Furthermore, joint curricula promote interdisciplinary collaboration and a holistic approach to problem-solving. By integrating knowledge from different sectors, such as eco sectors and business administration, individuals gain a broader perspective and a more comprehensive skill set. This allows them to tackle complex challenges, drive innovation, and contribute to the sustainable development of the furniture industry.

In conclusion, the creation of new, innovative joint curricula and courses is essential to address the skills gap, foster innovation and sustainability, and enhance the competitiveness of micro-SMEs in the furniture industry. By combining knowledge from various sectors and aligning educational programs with the needs of the labour market, these curricula prepare individuals for the challenges of the modern workplace and contribute to the overall growth and success of the industry.

In conclusion, the furniture industry benefits greatly from the vocational education and training programs offered in these countries. By fostering a skilled and adaptable workforce, promoting innovation and sustainability, and facilitating internationalization efforts, VET plays a crucial role in supporting the growth and competitiveness of the furniture industry on a global scale.

1.7. 5. Environmental Concerns in the Furniture Sector

Türkiye

Sustainability is an issue that has gained more and more importance in recent years and is of great importance for the future of most industries. For this reason, in order to create a sustainable future in the Furniture Industry, as in many sector groups, it is necessary to accelerate the studies and infrastructure formations for this. The importance of sustainability is also mentioned in the “Sustainability” report of the Istanbul Chamber of Industry (ISO). According to the Sustainability Report of the Istanbul Chamber of Industry: This meaning of the word sustainability was shaped after the report "Our Common Future" published by the United Nations in 1987. According to this report, sustainability is defined as meeting our daily needs and developing without compromising the ability of nature and future generations to respond to their own needs. The historical development process of the concept of sustainable development actually shows us that human development policies have evolved from approaches that only deal with economic growth to approaches that consider environmental and social sustainability as indispensable for human development. While the effects of climate change are beginning to be felt more and more all over the world, the measures to be taken and the work to be done in order to accelerate decarburization, both individually and socially, are of great importance. As stated in the ISO report; Decarburization of the "Forest, Paper Products, Furniture and Printing Industry" and its contribution to the goal of climate neutrality is one of the prominent issues within the scope of the European Green Consensus. Building on the new EU Forest Strategy (2030) and the EU Biodiversity Strategy for 2030, the European Union aims to increase healthy and resilient forests that contribute to biodiversity, climate goals and secure livelihoods and support a circular bio-economy. The strategy focuses on the conservation, restoration and sustainable management of European forests, as well as on world forests that have not yet been addressed. By promoting the transition to wood and paper products, which are a sustainable material, with the Green Deal; sector-specific new opportunities are also created. In addition, encouraging the use of more and more suitable packaging as a precaution against wastage in foodstuffs, which amounts to one third, will also create developments in favor of the sector.

- Forestry process industry
- Producing low-carbon materials and by-products in various parts of the value chain while increasing efficiency through reuse and recycling. In doing so:
- Offering sustainable alternatives to fossil-based materials and fossil energy,
- Turning waste into cyclic value-added products
- Production and conversion of cellulose, paper and cardboard
- Using both raw wood and recycled material to manufacture products with pulp and paper, as well as graphic, hygienic, packaging and specialty paper grades,
- To operate in growing markets with the production of packaging materials, hygiene products, textile products and building materials by offering low-carbon alternatives to fossil fuel-based products.
- Furniture and printing industries
- Eco-design, efficient use of materials, producing recyclable and repairable products,
- Green Product markings (Eco-label),
- Avoiding non-environmentally friendly materials, especially not using potentially dangerous, flame-retardant chemicals used in the furniture industry.

The furniture industry is one of the most significant industries that maintain the constant development of economies worldwide. The demand to produce wood-based boards has highly increased in residential and commercial construction across the world. In 2016, the worldwide demand for particleboard (PB) was 93 million m3, and was 99 million m3 for medium-density fiberboard (MDF; FAOSTAT 2018). Parallel to this, consumption of wood-based boards has rapidly reached high levels in recent years. These boards are commonly used in related sectors driven mostly by demand from building and furniture industries. Many people are aware of the growing need for more sustainable products that protect the environment. However, not as many are as enlightened about the production process of these items and why an environmentally conscious production process is necessary. As people all over the world become more aware of the importance of protecting the environment and using green products, the demand for green products will become increasingly higher. Eco-design considers environmental values in the manufacture and design process of products. This approach requires a totally new kind of design concept and environmental impact information on the used materials. This enhanced awareness has caused consumers, investors, shareholders, and regulatory agencies to improve environmental sustainability requirements. This affects the forest and furniture industries regarding the production of furniture and their environmental aspects. One of the most commonly used chemical compounds in board manufacturing is urea-formaldehyde (UF) resin because of its high performance and low cost. UF resin is the second most commonly used resin in the wood-based board industry (Park and Kim 2008, Tang et al. 2009). However, the substantial disadvantage of UF resin is FE. The hydrolysis of weak chemical bonds during board production and lifetime stage causes indoor emissions resulting in human exposure to these chemicals. At concentrations between 0.1 and 0.5 parts per million (ppm), formaldehyde is detectable by smell; some sensitive individuals experience slight irritation in the eyes, nose, and throat (Salem and Böhm 2013). At levels from 0.5 to 1.0 ppm, formaldehyde produces irritation in the skin, eyes, nose, and throat. It is often associated with breathing difficulties and nosebleeds, and it is a suspected carcinogen (Pearson 1994). At concentrations above 1.0 ppm, exposure to formaldehyde produces extreme discomfort. It can also cause dermatitis on contact, which is associated with an allergic reaction to the chemicals (Isaksson et al. 1999). With increased awareness of the human impact on the environment and the integration of environmental considerations into the furniture industry, sustainability is a crucial issue for wood-based board manufacturers and furniture designers. Consequently, the production stages of furniture have become a crucial issue in terms of being an environmentally friendly process using wood-based boards. The Turkish wood-based board production industry is the third largest manufacturer, with a volume of 5.1 million m3 for PBs and 6.8 million m3 for MDF per year (TUIK 2017) and is the 13th biggest exporter of furniture in the world (TOBB 2017). It is possible that wood-based boards made into furniture before entering houses could have lower FE after the manufacturing process. Most environmental impacts can be effectively reduced by addressing them at the design stage. Global industrialization and the subsequent dwindling of many natural resources have become drivers for product differentiation in wood industries. People involved in the manufacture, repair or restoration of furniture and other wood products, or in the building industry, are exposed to hazardous chemicals. Environmental pressure is directly influenced by consumers that are aware of the growing need for more sustainable products. To mitigate negative public sentiment regarding timber harvesting and management, the wood products industry has begun to differentiate products through environmental processes. Moreover, the consumption of wood materials has greatly increased due to the production of wood-based boards, which are commonly used to meet demands from the building and furniture industries. Increased awareness has caused consumers, investors, shareholders, and regulatory agencies to improve environmental sustainability requirements. This affects the forest and furniture industries regarding the production of wood-based boards and their environmental aspects (Cinar and Erdogdu 2018). Both solid wood and wood-based boards such as plywood, particleboard (PB), and fiberboard (FB) are utilized because PB and FB increase the mechanical stability of wood. Consequently, the production stages of wood-based boards have become a crucial issue in terms of environmentally friendly wood based products. Particularly, important amounts of urea or phenol formaldehyde are required for the manufacture of boards. Considering the number of wood-based boards and complementary elements that go into the present furniture industry design projects, designers should be aware of the consequence of their work and must begin to consider the impact on the environment. Soon, “green” design might be as expected in project solutions as universal design is today. Further investigation of the influence of design decisions on the product quality and environmental performance of products is encouraged for furniture industry.

Greece

The furniture industry is one of the largest consumers of wood and other natural resources and is also a significant contributor to greenhouse gas emissions and other forms of pollution. As a result, there is growing interest in sustainable and environmentally friendly furniture production practices:

Deforestation: The furniture industry is a major consumer of wood products, and as a result, deforestation is a major concern. To address this issue, many furniture companies in Greece are implementing sustainable sourcing practices and using certified wood products that come from responsibly managed forests.

Chemical pollution: The furniture industry also makes use of a range of chemicals, such as adhesives, coatings, and finishes, which can be harmful to the environment. For this reason, many businesses in Greece are implementing safer and more environmentally friendly chemical alternatives.

Waste and recycling: The furniture industry generates a significant amount of waste, both in the production process and at the end of a product's lifecycle. As a result, many Greek companies are implementing waste reduction and recycling programs and are exploring ways to reuse and repurpose furniture components.

Energy consumption: The furniture industry is also a significant consumer of energy, and as a result, greenhouse gas emissions are a major concern. To address this issue, a lot of furniture businesses in Greece are implementing energy-efficient practices, such as using renewable energy sources or optimizing their manufacturing processes to reduce energy consumption.

Overall, environmental concerns are becoming increasingly important in the furniture sector in Greece, and there is growing interest in sustainable and environmentally friendly furniture production practices. By addressing these concerns, the industry can help to reduce its environmental impact and meet the growing demand for sustainable and eco-friendly furniture products.

The Netherlands

The furniture industry in the Netherlands has shown significant progress in addressing environmental concerns and promoting sustainable practices. A key initiative in the country is the adoption of circular economy principles, where the government has launched the "From Waste to Resource" program to promote the use of recycled materials and reduce waste in the furniture industry. Dutch manufacturers have embraced circular design principles, creating products that are durable, repairable, and recyclable.

Sustainable materials play a crucial role in the Dutch furniture industry. Manufacturers are increasingly using eco-friendly materials such as bamboo, recycled plastic, and reclaimed wood. Innovative materials like mycelium, a mushroom-based alternative to plastic or wood, are also being utilized. This shift towards sustainable materials reduces the environmental impact of furniture production.

Renewable energy adoption is another notable practice in the Dutch furniture industry. Many manufacturers have implemented renewable energy systems, such as solar panels and wind turbines, to reduce their carbon footprint and energy costs. This commitment to clean energy sources showcases the industry's dedication to sustainability.

Waste reduction and recycling are significant focuses within the Dutch furniture sector. Take-back programs offered by manufacturers allow consumers to return old furniture for recycling or repurposing. Collaborations with circular economy organizations and participation in government initiatives, such as the Green Deals, further promote sustainable practices and waste reduction.

Certifications play a vital role in ensuring sustainable practices. Many furniture manufacturers in the Netherlands have obtained certifications such as Cradle to Cradle, Forest Stewardship Council (FSC), and Global Organic Textile Standard (GOTS). These certifications assure consumers that the products they purchase have been produced using sustainable materials and practices.

Furthermore, Dutch furniture designers are incorporating sustainability principles into their designs, creating products that are aesthetically pleasing, functional, and eco-friendly. Public awareness campaigns, such as the "Don't Waste Your Furniture" initiative, encourage responsible furniture consumption by advocating for donation or resale instead of disposal.

Despite these positive steps, challenges remain in the Dutch furniture sector. Sustainable materials and design practices need to be further integrated into production processes, and efforts should focus on reducing the environmental impact of packaging and transportation. Consumer awareness and access to information regarding sustainable options need improvement to drive widespread adoption.

In conclusion, the furniture industry in the Netherlands has made significant strides in addressing environmental concerns and promoting sustainability. Through circular economy principles, the use of sustainable materials, renewable energy adoption, waste reduction efforts, and certifications, the industry showcases its commitment to environmental responsibility. Continued collaboration, innovation, and consumer education are essential for creating a more sustainable future in the Dutch furniture sector.

Spain

Current patterns of production and consumption have led in recent years to a series of environmental problems with a direct impact on the economy and society, caused by an increase in waste generation, atmospheric emissions and discharges, as well as excessive resource consumption that is causing the degradation of natural ecosystems . This context makes it necessary for companies to move towards more sustainable business models that enable them to cope with these new conditions and to adapt to current legislative changes and new economic and market trends.

In general, most environmental impacts are associated with the product manufacturing phase, due to excessive consumption of raw materials such as wood and energy, the use of certain products containing substances that are toxic and/or hazardous to health and the environment, and the generation of both hazardous and non-hazardous waste.

In fact, one of the most complicated and challenging environmental issues that society and companies are currently facing is the generation and management of waste, principally due to the linear economy. The inadequate waste management has a negative impact on the environment, as it is the main cause of environmental pollution contributing significantly to climate change and the degradation of ecosystems. As it is stated in the Paris Agreement on climate change and the 2030 Agenda for Sustainable Development or the Ministerial Declaration of the United Nations Environment Assembly "Towards a pollution-free planet" at the end of 2017, there is a need to make progress in establishing a development and growth model that optimises the use of resources and reduces waste generation.

For that, the circular economy is conceived as a process that optimises the use of resources and promotes the efficiency of production systems. As wood is a renewable, sustainable material that can be used, reused and recycled, it is therefore a key raw material for the transition model towards a circular economy that drives global competitiveness, sustainable economic growth and the creation of new jobs.

Another producing manner could contribute to lower the negative impact of this sector. The “eco-design” is viewed as a key tool to sustainable development. This practice incorporates environmental aspects in all the stages of the process of the product development, with the aim to reduce the environmental impact during the life cycle of the product. For that, a large number of tools have been developed, such as guidelines, material, energy and toxicity matrix (MET).

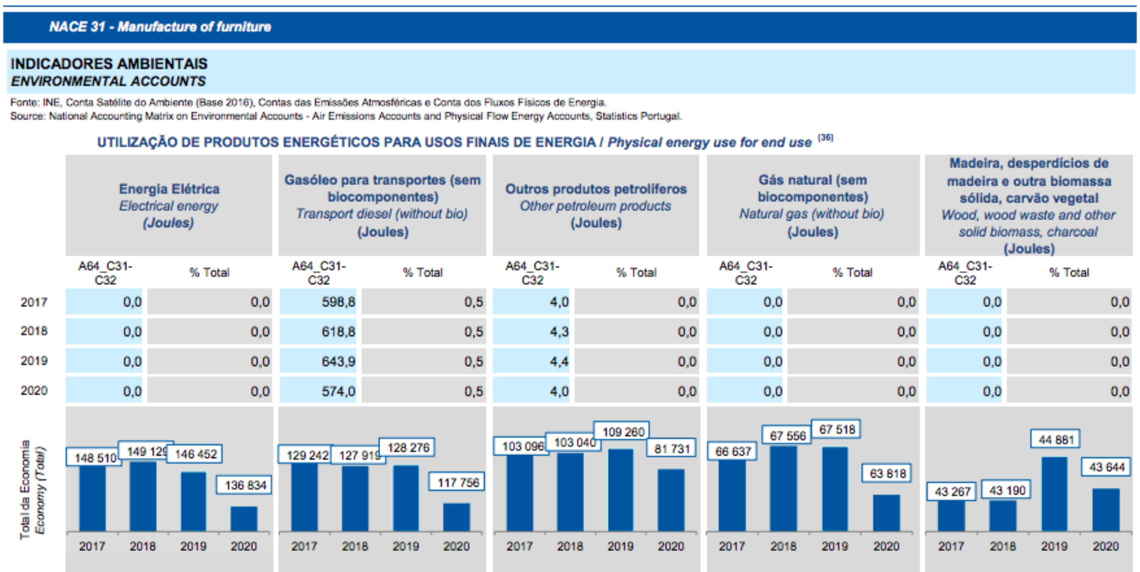
The Spanish furniture sector is regulated by legal instruments, in order to reduce the environmental impact. The environmental legislations are most of the time, coming from the European Directives related to industrial emissions, the use of organic solvents and other chemical substances used in the process. In addition, we can also find voluntary instruments that will contribute to improving the Spanish furniture sector companies’ environmental performance, such as eco-design or environmental management. There is a Spanish eco-design standard, UNE 150301, that implements eco-design criteria in the organisations. Regarding the environmental management systems, there are tools for companies that allow them to evaluate, report and improve their environmental performance: the International

Organization for Standardization (ISO 14001) and the EU Eco-Management and Audit Scheme (EMAS).

Portugal

Waste generated during production, carbon emissions from the transportation of raw materials and finished products, use of non-renewable resources such as wood, and energy consumption are some of the key environmental concerns in the furniture sector of Portugal.

The bellow figures (Figure 65 and Figure 66) show the environmental indicators for the furniture sector. Despite the high weight of the indicators, we can see a downward trend in their development since 2017.



NACE 31 - Manufacture of furniture

INDICADORES AMBIENTAIS
ENVIRONMENTAL ACCOUNTS

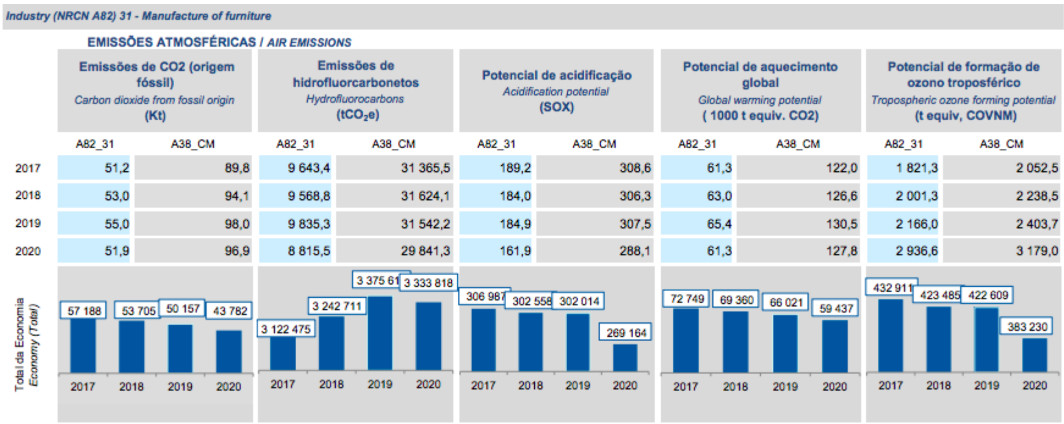
Fonte: INE, Conta Satélite do Ambiente (Base 2016), Contas das Emissões Atmosféricas e Conta dos Fluxos Físicos de Energia.
Source: National Accounting Matrix on Environmental Accounts - Air Emissions Accounts and Physical Flow Energy Accounts, Statistics Portugal.

UTILIZAÇÃO DE PRODUTOS ENERGÉTICOS PARA USOS FINAIS DE ENERGIA / *Physical energy use for end use* [36]

	Energia Elétrica *Electrical energy* (Joules)		Gasóleo para transportes (sem biocomponentes) *Transport diesel (without bio)* (Joules)		Outros produtos petrolíferos *Other petroleum products* (Joules)		Gás natural (sem biocomponentes) *Natural gas (without bio)* (Joules)		Madeira, desperdícios de madeira e outra biomassa sólida, carvão vegetal *Wood, wood waste and other solid biomass, charcoal* (Joules)	
	A64_C31-C32	% Total	A64_C31-C32	% Total	A64_C31-C32	% Total	A64_C31-C32	% Total	A64_C31-C32	% Total
2017	0,0	0,0	598,8	0,5	4,0	0,0	0,0	0,0	0,0	0,0
2018	0,0	0,0	618,8	0,5	4,3	0,0	0,0	0,0	0,0	0,0
2019	0,0	0,0	643,9	0,5	4,4	0,0	0,0	0,0	0,0	0,0
2020	0,0	0,0	574,0	0,5	4,0	0,0	0,0	0,0	0,0	0,0

Figure 65. Physical Flow Energy Accounts in Portugal

Source: National Accounting Matrix on Environmental Accounts - Air Emissions Accounts and Physical Flow Energy Accounts, Statistics Portugal cited in Gabinete de Estratégia e Estudos (2023)



Industry (NRCN A82) 31 - Manufacture of furniture

EMISSÕES ATMOSFÉRICAS / *AIR EMISSIONS*

	Emissões de CO2 (origem fóssil) *Carbon dioxide from fossil origin* (Kt)		Emissões de hidrofluorcarbonetos *Hydrofluorocarbons* (tCO_2e)		Potencial de acidificação *Acidification potential* (SOX)		Potencial de aquecimento global *Global warming potential* (1000 t equiv. CO2)		Potencial de formação de ozono troposférico *Tropospheric ozone forming potential* (t equiv, COVNM)	
	A82_31	A38_CM	A82_31	A38_CM	A82_31	A38_CM	A82_31	A38_CM	A82_31	A38_CM
2017	51,2	89,8	9 643,4	31 365,5	189,2	308,6	61,3	122,0	1 821,3	2 052,5
2018	53,0	94,1	9 568,8	31 624,1	184,0	306,3	63,0	126,6	2 001,3	2 238,5
2019	55,0	98,0	9 835,3	31 542,2	184,9	307,5	65,4	130,5	2 166,0	2 403,7
2020	51,9	96,9	8 815,5	29 841,3	161,9	288,1	61,3	127,8	2 936,6	3 179,0

Figure 66. Air Emissions Accounts in Portugal

Source: Source: National Accounting Matrix on Environmental Accounts - Air Emissions Accounts and Physical Flow Energy Accounts, Statistics Portugal cited in Gabinete de Estratégia e Estudos (2023)

Addressing the environmental concerns requires a multifaceted approach involving the government, industry players, and consumers, which can play a crucial role in regulating the furniture sector and ensuring that environmental standards are met. This can be achieved through the implementation of policies and regulations that promote sustainability, such as requiring furniture manufacturers to use eco-friendly materials and reduce their carbon footprint by investing in alternative transportation methods, such as electric vehicles, or promoting the use of renewable energy sourcesAdditionally, industry players themselves are responsible for implementing sustainable practices in their manufacturing processes. This can include the adoption of circular economy principles, such as using recycled materials for furniture production or designing products that are easily disassembled and recycled .

An important role, concerning the sustainability, will be played by the sector's associations. The Portuguese Association of Furniture and Related Industries (APIMA) seems to realize the importance that is supported on the statements of the Executive Director (Gualter Morgado):

1)"The current generation that is leading the companies of the Portuguese Home Row Industries is very sensitive to the matter of sustainability, both social, like their predecessors, but also environmental, as the climate crisis keeps growing and having an increasingly visible impact in their time and in the future of their children." .

2)"There is a true and progressive effort to turn these industries into more environmental, circular manufacturers through the use of more sustainable raw materials, locally sourced, strategies for the reduction of waste, as well as water and energy consumption, and the reuse of by-products to generate new products, among many others. The investment in R&D plays a big part in discovering and implementing more effective and sustainable ways of producing, and these companies have been exemplary in that aspect." .

3) Gualter Morgado added that many of the Portuguese companies produce "high quality pieces with the potential to last a lifetime," underscoring the importance of consumption behavior on sustainability .

4) “Thankfully, sustainable practices are no longer the exception they are becoming the norm, as consumers are more and more aware of the impact of how they consume in the world they inhabit, motivating companies to change and therefore creating a positive cycle of change,” he said. “There is urgency in change, and sustainability is no longer an option, but the only way out for us, as a collective, to survive and thrive in this world.

On the other hand, the majority of companies continue to relegate environmental and social concerns to a secondary role, despite the fact that there is greater concern about these aspects in companies that make systematic use of design. This may indicate that more frequent use of design promotes a broader view of the life cycle, and that design can contribute to improving this cycle .

Companies claim to care about sustainability, although they know very little about it. The environmental initiatives they promote are primarily focused on the company itself. On the other hand, companies that recognise the need for tools and make systematic use of design make greater efforts to implement sustainable activities. This indicates that their vision of environmental responsibility extends beyond production these results are based on a sample of 66 Portuguese companies of the sector.

Figure 67 shows the strategies promoted by the Portuguese furniture sector to reduce its environmental impact.

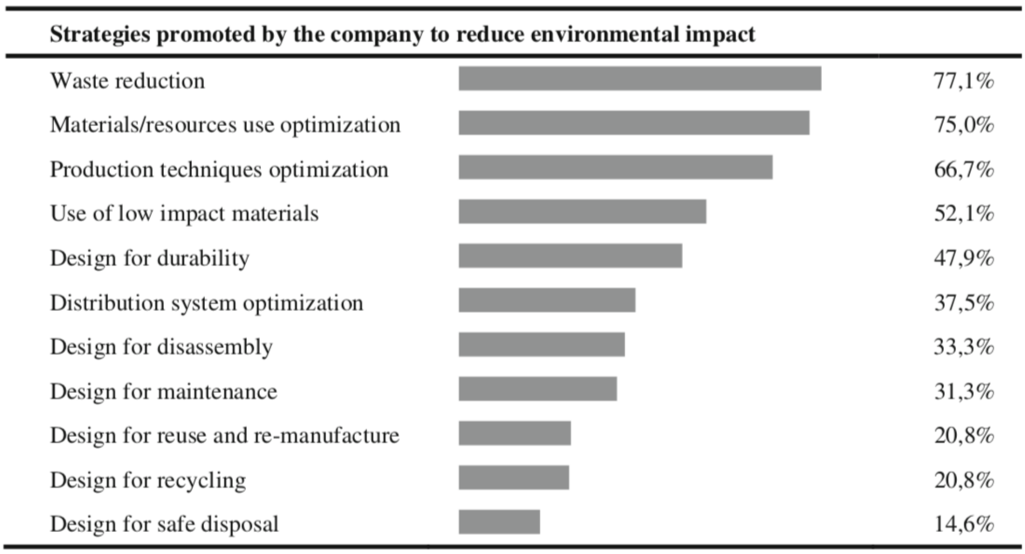


Figure 67. Strategies to reduce environmental impact in Portugal

Source: Vicente et al. (2018)

Regarding social responsibility (Figure 68), the results show that very little is known about it, although almost all aspects of social responsibility are considered relevant.

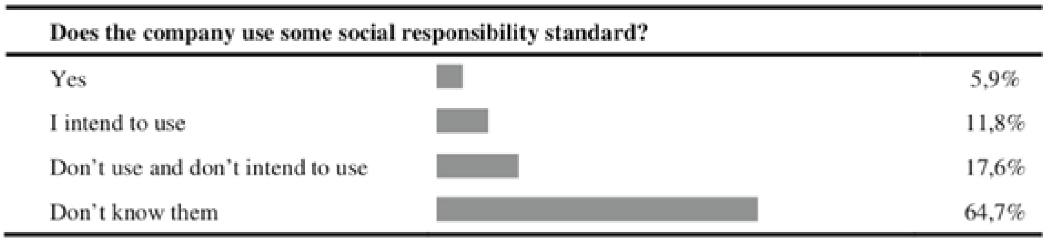


Figure 68. Social Responsibility

Source: Vicente et al. (2018)

Estonia

According to a report published by the Food and Agriculture Organization of the United Nations (FAO), the consumption of primary processed wood products is predicted to grow by 37 percent by 2050 in a business-as-usual scenario. This includes sawnwood, veneer/plywood, particle/fibreboard, and wood pulp, which are expected to total 3.1 billion cubic meters of roundwood equivalents by 2050. The report suggests that the increase in consumption can be higher by at least 8 percent in a bioeconomy scenario, where two modern wood products, mass timber and manmade cellulose fibers, are used to substitute non-renewable materials. In a more accelerated transition to the bioeconomy, the rise in consumption of primary wood products could reach 23 percent more than in the business-as-usual scenario. The report emphasizes that wood is renewable, recyclable, climate-friendly, and versatile, and is increasingly being used to replace non-renewable materials. It is a critical material to the efforts to address the global threats to climate, biodiversity, and environment caused by the excessive use of non-renewable materials. To ensure the sustainability of the forest sector, the report suggests that it will require innovation, investments, and policy coherence. The growth in consumption of wood products will be driven by higher incomes in emerging world regions, resulting in catch-up effects for consumer goods and more construction sector activities. Meeting the future demand for sustainable wood may be achieved by a combination of increased sustainable production in naturally regenerated temperate and boreal forests and in planted forests increasingly in the global South. However, estimates of the concrete contribution of forest types and regions to global timber supply in 2050 are highly uncertain, the report said. Investments required to maintain and expand industrial roundwood production may require a total of around $40 billion per annum by 2050, according to The global forest sector outlook 2050. Another $25 billion per annum investment in modernization and in establishing industries may be required. Estonia has been traditionally known as a country that relies heavily on its natural resources, such as forests and land, for its economic development. One of the sectors that have benefitted from this natural endowment is the furniture industry, which has been an important contributor to the country's economy for decades. However, the furniture sector in Estonia has also faced environmental concerns, which have become increasingly important in recent years. This paper will examine the environmental concerns on the furniture sector in Estonia, with a focus on the policies and initiatives aimed at addressing these concerns. Specifically, this paper will examine the role of the European Innovation Partnership (EIP) on raw materials and the Blueprint for the EU forest-based industries in addressing environmental concerns on the furniture sector in Estonia.

The European Innovation Partnership (EIP) on Raw Materials

The European Innovation Partnership (EIP) on raw materials is a stakeholder platform that brings together representatives from industry, public services, academia and NGOs. Its mission is to provide high-level guidance to the European Commission, EU countries and private actors on innovative approaches to the challenges related to raw materials. The EIP plays a central role in the EU's raw materials policy framework. The furniture sector in Estonia relies heavily on raw materials, such as wood, which is a major component in furniture production. Therefore, the EIP's efforts in promoting the sustainable supply of raw materials to the European economy are relevant to the furniture sector in Estonia. The EIP has been instrumental in securing research and innovation (R&I) funding for the challenges related to raw materials. While framework programme 7 (the R&I funding tool for the period 2007-2013) only included approximately €180 million for raw materials R&I, Horizon 2020 (the R&I funding tool for 2014-2020) reserved €600 million for research on the challenges related to raw materials. The EIP on raw materials aims to help raise industry's contribution to the EU GDP to around 20% by 2020. It will also play an important role in meeting the objectives of the European Commission flagship initiatives ‘innovation union and ‘resource efficient Europe’. It will do this by ensuring the sustainable supply of raw materials to the European economy while increasing benefits for society as a whole. The EIP targets non-energy, non-agricultural raw materials. Many of these are vital inputs for innovative technologies and offer environmentally-friendly, clean-technology applications. They are also essential for the manufacture of new and innovative products required by our modern society, such as batteries for electric cars, photovoltaic systems, and devices for wind turbines. With about 30 million EU jobs depending on the availability of raw materials, the EIP will have a clear, positive impact on European industrial competitiveness. The EIP's strategic implementation plan (SIP) sets out specific objectives and targets. Actions to achieve these include research and development, addressing policy framework conditions, disseminating best practices, gathering knowledge, and fostering international cooperation. The furniture sector in Estonia could benefit from the EIP's actions to address these objectives and targets, particularly in terms of sustainable supply of raw materials, research and development, and dissemination of best practices.

Blueprint for the EU Forest-Based Industries

The 2013 Blueprint accompanying the new EU Forest Strategy and the associated Staff Working Document underlines that the industry has to address a number of challenges to remain competitive. These challenges include stimulating growth for forest-based products in EU and non-EU markets, resource and energy efficiency, raw materials, better logistics, structural adaptation, innovation and RTD, education and skills, coherence of EU legislation, implementing EU Climate Policy after 2030, international competition, trade, and cooperation, and information, communications, and image.

In conclusion, the furniture sector in countries such as Spain, Estonia, Greece, the Netherlands, and Türkiye is increasingly recognizing the importance of addressing environmental concerns. Efforts to adopt sustainable practices, including the use of eco-friendly materials, circular economy principles, and renewable energy sources, are evident. However, challenges remain in responsible sourcing, waste management, and promoting sustainable consumption. Collaborative efforts involving governments, industry, and consumers are crucial to drive progress in sustainability. By raising awareness, promoting transparency, and fostering innovation, the furniture industry can work towards minimizing its environmental impact and creating a more sustainable future for all.

1.8. Conclusions

In conclusion, this Consolidated State of the Art Report has provided a comprehensive analysis of the furniture industry in Greece, Estonia, Portugal, Türkiye, and Spain, as well as its broader scope at the European and worldwide levels. Despite some variations, several similarities and common trends emerged among these countries.

Firstly, micro-SMEs play a significant role in the furniture sector across all countries, contributing to employment and economic growth. These small-scale enterprises form the backbone of the industry, demonstrating their resilience and adaptability.

Secondly, vocational education and training (VET) programs are crucial for the development of skilled professionals in the furniture sector. All countries have implemented various initiatives and collaborations between educational institutions and businesses to ensure that vocational programs align with industry needs. This focus on skill development enables workers to meet the challenges of the modern workplace and enhances the competitiveness of the furniture industry.

Furthermore, environmental concerns are shared priorities among these countries. They recognize the importance of sustainable practices in the furniture industry and have taken steps to integrate eco-friendly materials, circular economy principles, and energy-efficient technologies into their production processes. This commitment to sustainability reflects their recognition of the sector's impact on the environment and their dedication to mitigating it.

While there are commonalities, each country also has its unique characteristics and good practices in the furniture industry. For instance, the Netherlands stands out for its emphasis on sustainable practices, circular economy principles, and renewable energy adoption. Estonia has embraced digital manufacturing and innovative design approaches, leveraging technology to enhance product development and production efficiency. Spain has a strong focus on traditional craftsmanship and design excellence, contributing to its reputation for high-quality furniture. Türkiye, on the other hand, has emerged as a powerhouse in furniture production, leveraging its manufacturing capabilities, cost-efficiency, and strategic geographic location to cater to global demand.

In Portugal, the integration of sustainable materials and eco-design principles has gained momentum, emphasizing the country's commitment to environmental sustainability. Greece, on the other hand, has recognized the potential of joint curricula development and collaborative design programs to address the skills gap and foster innovation within the furniture sector.

In summary, the furniture industry in Greece, Estonia, Portugal, Türkiye, and Spain faces similar challenges and shares a common goal of sustainable growth. Through VET programs, environmental initiatives, and the promotion of good practices, these countries are striving to enhance their competitiveness, create a skilled workforce, and ensure the long-term sustainability of their furniture sectors. By building on their respective strengths and learning from one another, including Türkiye's manufacturing prowess and low-cost advantages, they can further strengthen their positions in the global furniture market and contribute to a more sustainable future for the industry.

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