

CBI Ministry of Foreign Affairs

CBI Product Factsheet:

Seats for vehicles in the European Union

Introduction

The market for vehicle seats is changing globally. Increases in the demand for lightweight products and increasing concern for safety and cost reduction are generating new designs and encouraging the use of innovative materials. Although suppliers from developing countries are not yet in a position to manufacture complete passenger seats, there is a market for metal frames, textiles, foams and other materials. This report therefore explains the potential and most relevant trends in the European automotive seat market, as well as their implications for lower-tier suppliers.

Product Description

In this study, we focus on seats used in the automotive industry. These seats are sold primarily to original equipment manufacturers (OEMs), although there is potential for the after-market as well.

A seat typically consists of armrests, a frame, a backrest, a headrest and a seat base. They are made out of various materials, including metals, composites, foam and polyester or leather. We define vehicle seats using the 'HS code 940120: Seats used for motor vehicles'. The statistics in this study thus refer only to complete vehicle seats as single entities, and not to parts of seats or seats assembled in a vehicle.

Although the European Union (EU) is treated as a single entity in this report, we also provide deeper insight into six focus countries: Germany, France, Belgium, Spain, Italy and the United Kingdom. These countries were selected because they exhibit the highest import values for seats in the automotive industry.

Packaging

In general, packaging is determined by the buyer (i.e. the OEM, the retailer or the wholesaler in the after-market). In order to reduce costs and improve the efficiency of packaging operations, OEM suppliers use returnable packaging in most cases. Returnable packaging is not discarded after use, and the empty packaging is recycled by the OEM or by a designated packaging operator. In the after-market sector, the packaging is typically disposable, as it is discarded after being used only once.

In order to export to the EU, product packaging must comply with EU standards and legislation. This means that the packaging is restricted to maximum levels of heavy metals (<u>Directive 94/62/EC</u>). When shipped, vehicle seats are typically packaged in boxes, metal racks, small containers or trays. Such packaging is usually made of metal or composites. In some cases, seats are covered in foam for additional protection.

Tip:

• For additional information on requirements for packaging and packaging waste, refer to the <u>European</u> <u>Commission</u>. Additional requirements apply to <u>wood packaging</u>.

What is the demand for seats in the European Union?

Macroeconomic statistics

The gross domestic product (GDP) is an important economic indicator and therefore a predictor of both the production of and the demand for automotive seats. With a national GDP value of ≤ 2.9 trillion, Germany has the largest and most industrious economy in the EU. Its manufacturing base (i.e. the part of the GDP added by the manufacturing of goods) amounts to 21%. The manufacturing bases of the other focus countries range from 11% to 15%.

Tip:

• If you are considering exporting to the European market, this would be a good time to start, as the European economic forecast is quite positive.

Imports

In 2014, the total value of seats imported to the EU was €972 million. The import of seats has increased at a compound annual growth rate (CAGR) of 0.5% since 2010. This reflects slightly positive growth over the past five years. It is

important to note, however, that all of this growth was realised between 2010 and 2011, and imports have been declining since. Although total imports have stagnated, imports from developing countries have demonstrated a positive CAGR of 2.3%. The share of the imports from developing countries is small, but growing – from 8.7% in 2010 to 9.3% in 2014.



Figure 1: Imports of seats from the EU, by main origin

Source: Eurostat, 2016

Within the EU, France is by far the most important importer of vehicle seats, with imports valued at \in 237 million in 2014. France is followed by Germany (\in 189 million) and Belgium (\in 175 million). While Germany has one of the most important automotive industries in the world, the high import values of France and Belgium are explained by the presence of <u>Faurecia</u>, which is one of most important global suppliers of vehicle seats.



Figure 2: Imports of seats by EU focus countries

Source: Eurostat, 2016

Of the six focus countries, the highest import values for seats from developing countries have thus far been realised by Germany (≤ 21.9 million) and France ($\in 19.6$ million). Germany's CAGR for imports from developing countries has been declining since 2010, however, and France therefore offers the best opportunities for the future. In the 2010–2014 period, the CAGR for imports from developing countries in France was 41.2%. Italy has by far the highest share of seats imported

from developing countries (almost 25%), thus reflecting its willingness to source from these countries. The following figures provide a more detailed impression of the main origins of imported seats for each focus country.





European buyers do business with suppliers from only a few developing countries. Seat suppliers from Turkey have had considerable success, having gained a market share of 70.3% (\in 63.6 million) of the total EU imports from developing countries in 2014. China is the second most important supplier, with a market share of 21.6% (\in 19.6 million). The third and fourth leaders, at a considerable distance, are Tunisia (2.7%) and Albania (1.9%). While the CAGRs for China (-5.0%) and Tunisia (-6.8%) have been negative since 2010, Turkey and Albania are experiencing positive growth. The CAGR for Turkey was 6.0% for the same period, and exports from Albania to the EU have grown from \in 0 in 2010 to \in 1.7 million in 2014.

- Seek partnerships with suppliers in Turkey, given its status as a major trade hub for access to the European market.
- All of the EU focus countries offer opportunities, given their high import values. Comparison of the six focus
 countries indicates that Germany and France offer the most potential, given their high import values from
 developing countries. Italy shows potential as well, given its relatively high willingness to source from developing
 countries.

Source: Eurostat, 2016



Figure 4: Imports of seats from developing countries

Source: Eurostat, 2016

Exports

In 2014 the total value of seats exported by the EU was €1.2 billion. The EU thus has a positive trade balance (exports minus imports) of €228 million. The trade balance would be even larger if seats assembled in vehicles were to be taken into account. The CAGR for seat exports has been 1.5% since 2010. The majority of these seats were exported within the EU (84.0%). Only 6.8% were exported to developing countries. Exports to developing countries have remained stable in recent years, with an average CAGR of 0.1% between 2010 and 2014.



Figure 5: Exports of seats from the EU, by main origin

Source: Eurostat, 2016

Of the seats exported to developing countries, most were destined for China (≤ 22.6 million), India (≤ 19.2 million), Turkey (≤ 13.3 million) and Brazil (≤ 8.0 million). The value of exports to all of these countries has increased during the 2010–2014 period.

Within the EU, Germany and France are by far the largest exporters of vehicle seats, with export values of \leq 424 million and \leq 233 million, respectively. These countries were followed at considerable distance by the Netherlands, which had an export value \leq 83 million.

Production

The total production value for vehicle seats within the EU is around \in 12 billion per year. Production values have fluctuated through the years, and there is no clear trend towards decline or growth.

With regard to production in each country, Germany offers the most interesting market, as it accounts for 37.5% of the total production within the EU. The United Kingdom has the second-highest production value, accounting for 13.1% of the total production value of seats. The Czech Republic also offers opportunities. With a CAGR of 16.0% over the 2010–2014 period, this country is the fastest-growing production base within the EU.



Figure 6: Production of seats in the EU

Source: Eurostat Prodcom, 2016

Tip:

• When supplying seat parts or materials used in seats, your focus should be on Central Europe. With Germany as the most important market and the rapidly growing market in the Czech Republic, this area offers the most opportunities.

Which trends offer opportunities for seats in the European Union?

The European market for car seats is in constant development, driven by various trends. Developing countries wishing to continue playing a role in the supply of car-seat materials or parts to the European market should stay abreast of current developments. The wide range of relevant trends can be classified into four main categories: safety-driven trends, comfort-driven trends, convenience-driven trends and environment-driven trends. Given that economic motives obviously play a role in each of these categories, they are not treated as an independent driver.

Safety-driven trends

Given that they come into direct contact with passengers, car seats play a crucial role in case of a crash. Development focuses specifically on the following two areas.

- Whiplash is the most common type of injury associated with car crashes. Even though the mechanisms of whiplash injuries are not yet fully understood, there is consensus within both the automotive industry and medical institutions that good seat design can reduce the effects of whiplash. Multiple car companies have introduced some variation of the 'active head restraint' (AHR). These systems make use of technology that senses when a vehicle is hit from behind, making the headrests move upwards and support the passenger's head early in the crash.
- Crash tests are becoming increasingly stringent. Years of testing and development have improved the safety of frontseat passengers, although developments for rear seats have not kept pace. Various technologies (e.g. the highimpact resistance BMW Sandwich Seatback) have been designed to contribute to impact resistance, although their contributions to the reduction of weight and costs appear to be more than simply side effects. Passing statutory impact tests have long taken priority over actively improving rear-seat safety.

Tips:

- Instead of simply adhering to existing safety requirements, offering additional features to secure passenger safety could provide you with a competitive advantage on the European market.
- Rear-seat safety is still relatively primitive, as compared to front-seat safety features. Innovative features in this area are likely to translate into immediate rewards.

Comfort-driven trends

For buyers, the most important characteristic of car seats is comfort. Moreover, discomfort reduces driving performance. Luxury functions (e.g. seat massage and ventilation) remain as options for the high-end of the market, while the lower segments have other passenger comfort, including lumbar supports and breathable materials. Comfort enhancement can be divided in two specific types: thermal comfort and long-term comfort.

Thermal comfort

- Active climate control is one way of managing the micro-climate of a car seat. In active climate control, the cooling
 and heating of the car seat is regulated by mechanically and electrically operated air conditioning and ventilation.
 Given the costs of this kind of climate control, it is offered only at the high-end of the segment, where heated seats
 are especially likely to be offered as standard features. There is a positive trend in the introduction of cooled and
 ventilated seats as well. Because of the expensive nature of active climate control, the market penetration of this
 functionality is advancing at a very slow pace.
- Passive climate control does not use technology to manage the micro-climate of the seats themselves, instead relying
 on the use of breathable materials. For example, despite the popularity of the more expensive leather seats, textile
 seat covers perform much better in terms of breathability. The same is true of seat paddings that use spacer fabrics
 and rubberised hair pads, which are better at controlling body temperature than are the more commonly used foam
 blocks. Nevertheless, car seat manufacturers make frequent use of a wide range of paddings.

Long-term comfort

- The main objective of a car seat is to provide its passenger with basic long-term comfort. One of the most important issues in this regard is the amount of support that a car seat will offer its passenger.
 - One important development involves the production of extremely high stiffness in car seats through the use of continuous filament reinforcement material.
 - The type of foam plays an essential role in reducing the vibrations felt by passengers, with MDI foam preferred above the more commonly used TDI foam. Although a trend towards greater use of MDI foam has been predicted, such a development would first require major changes in the manufacturing technology used within the European market.
 - Multiple car companies have introduced systems that enable the passenger to adjust the bottom of the backrest to four different positions for optimal support of the lumbar region.
- In addition to basic comfort features, many car producers offer various luxury options (e.g. cushion extensions and seat massage). Given the relatively high expense of these options, they remain limited to cars in the premium segment. Moreover, manufacturers have reported that these types of high-end comfort developments are making it increasingly difficult to deliver basic seat comfort.

Tip:

• Focus on delivering basic comfort features (e.g. breathable materials) instead of luxury comfort features, as the market for the latter is still relatively small.

Convenience-driven trends

In line with the comfort-driven trends, buyers are also looking for convenience. The manner in which passengers enter and exit the vehicle is an important issue in the choice of a car, especially for older passengers. Manufacturers have introduced swivelling seats in the standard equipment of certain models. For other users, convenience issues largely involve the amount of knee space and the systems for folding the rear seats flat.

Environment-driven trends

As demonstrated by the Paris Climate Conference in December 2015, environmental issues are vitally important drivers of the world economy. In short, two major environment-driven trends can be distinguished: weight savings and the use of sustainable materials.

Weight savings

Depending upon the vehicle, seats account for between 40% and 80% of the interior weight. This means that there is considerable success to be gained by reducing the weight of the materials used in car seats, thereby reducing per-vehicle emissions as well.

- Although some producers have worked to achieve weight reductions in the use of foam and seat covers, most efforts
 have been concentrated on the metal frame, as it is the heaviest part of the seat. Extremely lightweight expanded
 polypropylene (EPP) is sometimes used to replace the seat frames. In Europe, this material is used primarily for rear
 seats.
- Other manufacturers have introduced all-plastic and blow-moulding seats, thereby achieving weight savings of up to 30%, in addition to reducing the number of frame parts.
- Some producers argue that alternatives have failed to deliver the expected weight reduction, as steel is still used for the fixings and attachments of the frame. Lightweight steel could provide a solution to this problem.

One promising development in the production of car-seat material has been the introduction of Flash Bainite, a lightweight steel that combines the strength of steel with surprising flexibility. In addition to reducing the weight of seat components reduced by 30%–50%, the moulding qualities of the material can result in considerable energy savings in the production process.

Sustainable materials

Another environmental issue has to do with the sustainability of the used materials. Although plastic frames provide the environmental advantage of weight reduction, the environmental effects of plastics as a resource are far less positive. Biobased plastics could be a good area to consider, as no environmentally friendly alternatives to car-seat frames appear to be available yet.

For now, sustainability issues are largely restricted to the foam, paddings and covers used in car seats. Made of 100% renewable material, soybean foam is making a particularly rapid transfer from North America to the European automotive market.

- The materials used in car seats are changing rapidly. Although this offers opportunities for suppliers, it is important to spread risks and stay abreast of new developments, as even newer materials may already be on the rise.
- For additional information on the use of plastics in the automotive industry, read the CBI study on Plastics for Vehicles in the European Union.
- Read the <u>CBI study on trends in the automotive industry</u>.

With which requirements should vehicle seats comply in order to be allowed on the European market?

Requirements can be divided into the following categories: (1) 'musts', which must be met in order to enter the market, and (2) 'additional requirements', which consist of the relatively common requirements that most competitors have already implemented (in other words, requirements that should be met in order to stay abreast of the market). In addition (3), we have described several musts and additional requirements for certain niche markets.

Musts

<u>Whole Vehicle Type Approval</u> (WVTA) is a certification for various types of motor vehicles and their components, including agricultural and forestry tractors. The WVTA is valid in all EU member states, and it is required when selling any products within the EU. Many automotive components are not approved until the final assembly, in which case certification of individual components is not necessary. These components must nevertheless comply with type-approval requirements.

In the WVTA system, various aspects of the seats are tested as well. According to the <u>1958 Agreement</u> of the United Nations Economic Commission for Europe (UNECE), the seats of passenger cars and small carrying buses are tested for the strength of seat belts and their anchorages (<u>Directive 76/115/EEC</u>), the strength of seats and their anchorages (<u>Directive 74/408/EEC</u>), seat belts and restraint systems (<u>Directive 74/60/EEC</u>), head-restraint systems (<u>Directive 77/541/EEC</u>) and the strength, anchorage and energy absorption of seats (<u>Directive 78/932/EEC</u>).

The <u>End of Life Vehicles</u> (ELV) Directive aims to avoid environmental pollution during the scrapping process by reducing the use of hazardous materials in vehicle production. Vehicles must be designed to facilitate proper dismantling and recycling (by coding the components).

When exporting chemicals, consult the <u>REACH regulations</u>. In the EU, buyers are responsible for <u>CE marking</u>, which entails additional requirements in the areas of safety, health and environmental protection.

Tips:

- Read our study on buyer requirements for additional information on legal and non-legal requirements.
- For additional information on legal requirements applying to your products, we refer to the EU Export Helpdesk.

Additional requirements

Buyers commonly impose their own requirements in addition to those required by law. While these are not obligatory in the legal sense, they are essential to effective competition, as they have been implemented by various competitors in the market. Additional requirements can be imposed by the public sector (e.g. standardisation bodies) or driven by the industry (e.g. buyer requirements and private standards). The use of private standards is increasing in Europe. These standards are industry-led niche or mainstream initiatives intended to enhance quality, traceability and unity in design and dimensional specifications.

In general, two types of standards can be distinguished: those focusing on product quality and those relating to social and environmental issues.

Additional quality requirements

Quality Management: In order to apply for type approval, production processes must meet quality-management criteria. The ISO TS/16949 system focuses on the design, development and production of automotive-related products, while the ISO 9001 quality system is more general in nature. Both are accepted as standard requirements, and EU buyers and manufacturers often insist on them.

Tips:

• Implement ISO 9001 and ISO TS/16949, as they are standard requirements of EU buyers.

Additional social and environmental issues

The EU has set <u>binding emission targets for new cars and vans</u>. These targets specify that every new car or van that is sold is permitted a certain amount of CO_2 emissions. The maximum amount of CO_2 emissions for passenger cars was 130

gram of CO_2/km in 2015, and it will be reduced every year until the target level of 95 gram of CO_2/km is reached in 2021. This will increase the demand for lightweight materials and cost-efficient parts from suppliers.

Corporate social responsibility (CSR) and the extent to which buyers expect a certain level of social and environmental performance is becoming increasingly important. The larger EU companies have developed their own CSR policies and require their suppliers (and their sub-suppliers) to conform to them. Signing a supplier code of conduct is often a prerequisite. These codes of conduct generally entail compliance with local laws, protection of worker health and safety, respect for basic labour rights and business ethics. The implementation of an environmental management system is often an additional requirement for core suppliers.

Tips:

- Most major car brands publish their CSR policies and supplier codes of conduct on their websites. An internet search for these codes of conduct is likely to yield valuable insight with which to assess your company's performance by comparison.
- Implement an environmental management system (e.g. <u>ISO 14001</u>), as European buyers are increasingly requiring it.
- For additional information on non-legal requirements that are generally accepted in Europe, we refer to the <u>International Trade Centre's Standards Map</u>.

Musts and additional requirements for niche markets

Most of the legal and additional requirements still apply in niche markets, although there are some exceptions. Several of these exceptions are mentioned below.

Different regulations apply for seats for cars heavier than 3.5 tonnes. For example, seats for large passenger vehicles must comply with <u>ECE Regulation No. 80</u>, which describes different rules for seats and their anchorages. Manufacturers of child seats must comply with the <u>R129 i-Size UN Regulation</u>, which is intended to improve safety through better protection of the neck, adaptation to ISOFIX and the use of 'i-Size' seating positions.

Tips:

- Be aware that the requirements stated by your buyer are likely to become even stricter in the future, in order to comply with the binding emission targets for cars and vans.
- A general overview of <u>EU buyer requirements for automotive parts and components</u> is available on the CBI Market Intelligence Platform.
- Consult with your buyer or with <u>the approval authority of the country to which you seek to export</u> to learn the specific standards that will apply to the parts you are manufacturing.
- Determine whether your buyer uses the <u>International Material Data System (IMDS)</u>. This is a collective, computer-based data system developed by automotive OEMs to manage environmentally relevant aspects of the different parts used in vehicles. It has been adopted as the global standard for reporting on material content in the automotive industry.

What competition do I face in the European Union?

The seat industry is characterised by global competition. The market is diverse, with large differences between Tier 1 suppliers and those from lower tiers.

- Background information on the various tiers in the automotive industry is provided in the <u>CBI study on channels</u> and segments.
- Additional sector-level information is provided in the CBI study on competition within the automotive industry.

Competition between Tier 1 suppliers

At the Tier 1 level, three suppliers dominate the European market. <u>JCI</u>, <u>Faurecia</u> and <u>Lear</u> represent three-quarters of the European production. This situation is unlikely to change in the short and mid-term, given the high barriers to entry and the enormous distance between the three largest producers and the fourth. In recent years, Tier 1 suppliers have all developed into fully integrated manufacturers, producing and designing the materials in-house.

Although the power of the three main Tier 1 suppliers is high, the competition is fierce. Despite the bargaining power of the Tier 1 suppliers, OEMs have succeeded in imposing higher demands on their suppliers in terms of cost and quality. Margins in this tier are thus not very high. Furthermore, European OEMs tend to avoid excessive dependence on the concentrated market of Tier 1 suppliers, as its lack of competition could lead to undesirable power relations. Vertical integration is increasing for BMW, Mercedes and other OEMs. Volkswagen is strengthening its in-house seat operations with its own car-seat manufacturing company, Sitech.

Competition between Tier 2 and Tier 3 suppliers

The competition in the lower tiers is highly diverse according to the products or materials that suppliers deliver. Nevertheless, the struggle for power between the OEMs and the Tier 1 suppliers is having several important effects on the lower tiers in general.

Many OEMs are attempting to decrease their dependence from the Tier 1 suppliers by entering partnerships with Tier 2 suppliers. This is creating opportunities for Tier 2 organisations, especially those already exporting to Europe. Second, the increasing demands of OEMS are also having effects on the Tier 2 and 3 suppliers, with margins decreasing and quality requirements increasing. Tier 1 suppliers are also trying to become more efficient by decreasing the number of suppliers. Although this poses a threat to smaller suppliers, it represents an opportunity for larger lower-tier suppliers.

Tips:

- If you are a larger lower-tier supplier, try to do business directly with OEMs, as they are likely to be interested in out-manoeuvring their Tier 1 suppliers.
- Lower-tier suppliers will need to scale up in order to be able to fulfil the increasing demands of Tier 1 suppliers.
- If you are a Tier 2 supplier, adapt your market strategy to your client's buyer strategy. Most Tier 1 suppliers have clear long-term strategies for dealing with suppliers.

What are the end-market prices for seats?

Prices for car seats differ greatly by market and segment. In the after-market, seats of lesser quality are sold to consumers for around €500–€700 per seat, while the prices for high-quality seats are between €1,000 and €2,000 per seat. Prices within the OEM supply chain are lower. The major Tier 1 suppliers have margins of 2.5% to 9%.

The market for seats is dominated by a few very powerful Tier 1 suppliers. Due to their position and the increasing cost reduction within the broader automotive industry, margins in Tiers 2 and 3 are under high pressure. Although this offers opportunities for suppliers from low-income countries, bear in mind that quality requirements are also increasing. The margins of suppliers in Tiers 2 and 3 are considered low, and prices and margins differ widely across products.

Differences in the price of branded spare parts are not very large amongst the various countries. Players in several European countries have largely harmonised their prices; any differences in pricing are likely to be related to different logistics and local costs. In the original-equipment segment, the price is set by contracts of four or more years, which usually include price reductions of 3% to 5% per year after the first year. In the after-market, the prices are negotiated every year.

- If you are a Tier 2 or Tier 3 supplier, use contracts with variable material costs.
- Include the currency risk in the contract.
- Because Tier 1 suppliers are trying to decrease the number of partners and because their margins are under pressure, you should increase your production volume. This could be achieved through strategic mergers.
- In order to gain a better overview of prices for specific products and models in Europe, speak directly to wholesalers and national experts within Europe.

CBI Market Intelligence

P.O. Box 93144 2509 AC The Hague The Netherlands

www.cbi.eu/market-information

marketintel@cbi.eu

This survey was compiled for CBI by Marktonderzoekbureau Molgo in collaboration with CBI sector expert Dhyana van der Pols Peter Nagel

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