CBI
Ministry of Foreign Affairs

CBI Product Factsheet: Suspension Systems for passenger vehicles in Eastern Europe

'Practical market insights for your product'

The Eastern European aftermarket sector offers excellent opportunities for exporters from the Developing Countries (DCs) to supply suspension systems and their related parts. Poland and Slovakia are the biggest markets, with Poland being most likely to source components from developing countries - roughly 20% of its imports originate from the DCs. All other Eastern European countries have seen their shares of DC imports increase during the past five years. In the future, it is expected that advanced suspension systems, such as air and acoustic suspension systems, will drive growth in the market, and it may become the most opportune sector for suspension system manufacturers.

Product definition

Suspension systems and their parts are grouped under "Suspension systems and Parts thereof, including shock absorbers" (HS codes 87088010, 87088020, 87088035, 87088090, 87088091 and 87088099). This Product Factsheet analyses the market for suspensions and their parts as used in the passenger vehicles for the Eastern European market, including Poland, the Czech Republic, Hungary, Bulgaria, Romania, Slovakia and Slovenia.

Product specifications

Quality: Compliance with international standards and the European standards on safety is required, as well as conformity to existing EU and national legislation and practices. The ISO/TS 16949 standard is considered to be the highest level of quality. This standard is important for the European automotive industry as it outlines the best practices when designing, developing, manufacturing, installing or servicing automotive products.

The quality of materials used in the production suspension systems for European vehicles is very high in order to ensure their durability and safety, so the supplied parts have to be carefully manufactured and inspected, as defective parts may be returned.

Materials: Most modern suspension systems are made of steel. In recent times aluminium has been replacing steel in order to reduce the

Considerations for action

- For more information on requirements for exporting casting and forgings to the EU, please refer to the CBI Buyer Requirements

component weight of suspension systems. Suspension system parts include mainly:

- Coil springs, air springs, torsion bars, shock absorbers, struts and ant-sway bars, front and rear suspensions.

***Packaging & Labelling**:* Suspension system parts are typically packaged in plastic bags and placed in cardboard boxes to protect them from being damaged. The packages would typically be labelled with a picture and description of the contents, including the technical parameters of parts and their specific part serial number.

In general, packaging is dependent on the buyer, either OEM or end-user consumer (aftermarket). For aftermarket applications, the packaging is typically one-way packaging, in which the packaging is discarded after a single use. Returnable packaging is the most often used by OEM suppliers, in order to reduce cost and improve efficiency of the packaging operations. Returnable packaging is not thrown away after use. The empty packaging is circulated by the OEM or a designated packaging operator. If you want to export to the EU, you must ensure that the packaging you use for your products meets all EU requirements. To reduce the harmful impact of packaging on the environment, the EU has specified legislation concerning the management of packaging and packaging waste.

database for more information on Labels and Standards: Sustainability in Casting and Forging

Considerations for action

- For more information on requirements for packaging and packaging waste, please refer to the European Commission.

***Design**:* The weight, size and characteristics of suspension systems vary considerably according to the vehicle for which they have been developed and according to the type of suspension. There are different suspension system types including: 1) Double wishbone suspension: Independent suspension which uses two wishbone-shaped cars and is common for medium to large cars; 2) Multi-link: independent suspension using three or more lateral arms and one or more longitudinal arms. This type of suspension is most commonly found in racing and off-road vehicles; 3) Strut suspension: does not have an upper control arm and wheels are held in place by an upper strut mount; 4) Air suspension: mostly used in luxury and heavy duty vehicles, it is lighter and potentially more durable than other systems; and 5) Acoustic suspension: uses electromagnetic motors, power amplifiers, control algorithms and computation speed. Typically used in the luxury vehicles. Future generations of suspension systems will interact with chassis functions like ABS, ESP and brakes.

Figure 1: Suspension system parts




Source: Fotolia/Internet

Buyer Requirements

Legislative Requirements: The most important requirement for automotive components is that they comply with the technical standards set by EU legislation in order to guarantee vehicle and environmental safety.

Type-approval is a certification for various types of motor vehicles and their components, which includes agricultural and forestry tractors. The type-approval or certification is valid in all EU Member States and is required when selling any products in the EU. Many automotive components are not approved until the final assembly, in which case certification of individual components is not necessary, although these components will still have to comply with type-approval requirements.

The End of Life Vehicles (ELV) Directive aims to avoid environmental pollution during the scrapping process through reducing the hazardous materials used in vehicle production. Vehicles must be designed to facilitate proper dismantling and recycling (by coding the components) and the use of heavy metals such as lead, mercury, cadmium and hexavalent chromium is prohibited (with the exception of a few applications).

Considerations for action

- Check with your buyer, or with the approval authority of the country you want to export to, what the specific standards are for the parts you are manufacturing.
- Read more about type approval at the EU Export Helpdesk.

- Check if your buyer uses the International Material Data System (IMDS). 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.

Common buyer requirements: In addition to legislative approval, there are other common buyer requirements. While these are not obligatory in the legal sense, they are implemented by various competitors in the market and are thus necessary in order to compete effectively.

Quality Management: In order to apply for type-approval, production processes need to meet quality management criteria. ISO TS/16949 and ISO 9001 are accepted as standard requirements and EU buyers and manufacturers often insist on them.

☐Corporate social responsibility (CSR) and the extent to which buyers expect a certain level of social and environmental performance is becoming increasingly important. Bigger EU

Considerations for action

- Implement ISO 9001 and ISO TS/16949, as it is a standard requirement of EU buyers. Click here for more information on ISO TS/16949 at the ISO website

- Most big car brands publish their CSR policies and supplier code of conduct on their websites. An internet search for these may give valuable insight into assessing

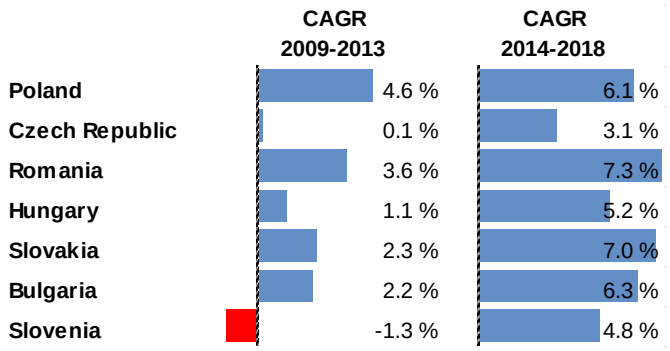
companies have developed their own CSR policies and require their suppliers (and their sub-suppliers) to conform to these. Signing a supplier code of conduct is often a prerequisite. These codes of conduct generally cover compliance with local laws, protection regarding workers' health and safety, respecting basic labour rights and also business ethics. The implementation of an environmental management system is often a requirement for core suppliers.

your company's performance by comparison.
- Implement an environmental management system, such as ISO 14001, as it is a common requirement.

Macro-economic statistics

In 2013, Eastern Europe saw an average growth of 5.5% after the previous year's 6.8% contraction. Forecasts for 2014 and 2015 growth are estimated at 4.1% and 5.7%, respectively. Poland, one of Eastern Europe's largest markets, as well as Romania and Slovakia are all forecasted to have strong average growth of more than 6% through 2018.

Figure 2: GDP (current prices) Compound Annual Growth Rate (CAGR) for 2009-2013 and estimate for 2014-2018 for selected Eastern European Countries



Data source: IMF 2014, World Economic Outlook Database

The value of GDP for the seven Eastern European countries covered by this document was estimated at €899 (or roughly one-tenth of the GDP value for the EU5 countries i.e. the biggest Western European economies: Germany, France, the UK, Italy and Spain) in 2013. Poland is the largest market in Eastern Europe, with a GDP of approximately €377 billion and value of manufacturing at €62 billion, accounting respectively for more than 40% share of total GDP and manufacturing values for the seven Eastern European countries in question. The Czech Republic is the second largest Eastern European economy with a strong manufacturing base, followed by Romania and Hungary. Bulgaria and Slovenia are relatively small economies, together accounting for less than 10% of the total Eastern European GDP.

In 2013, the EU agricultural machinery market was estimated to be worth €24.8 billion – equivalent to 30% of global sales. The EU is also the biggest manufacturer of agricultural machinery, with sales of more than €26 billion in 2011.

Figure 3: Key 2013 macroeconomic indicators for Eastern Europe, in € billions (population in millions)

**No data available for Bulgaria and Romania*
Data source: IMF and OECD 2014

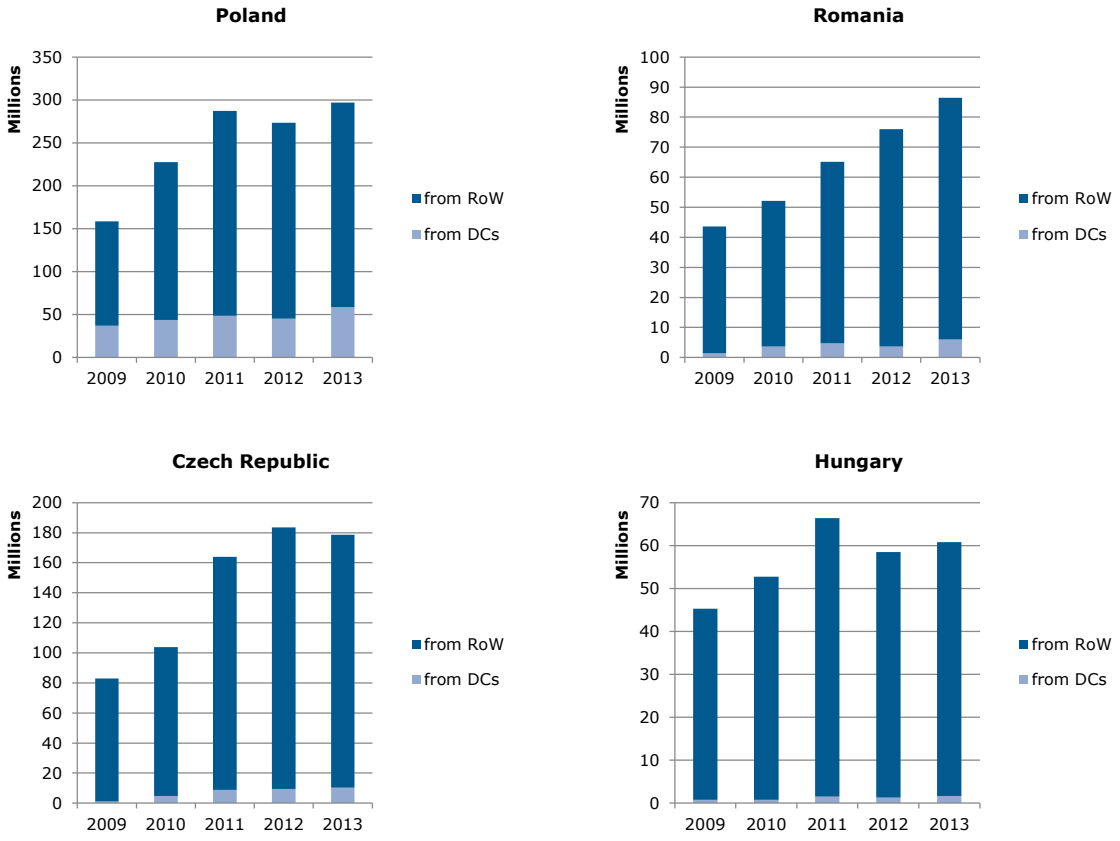
Trade Statistics

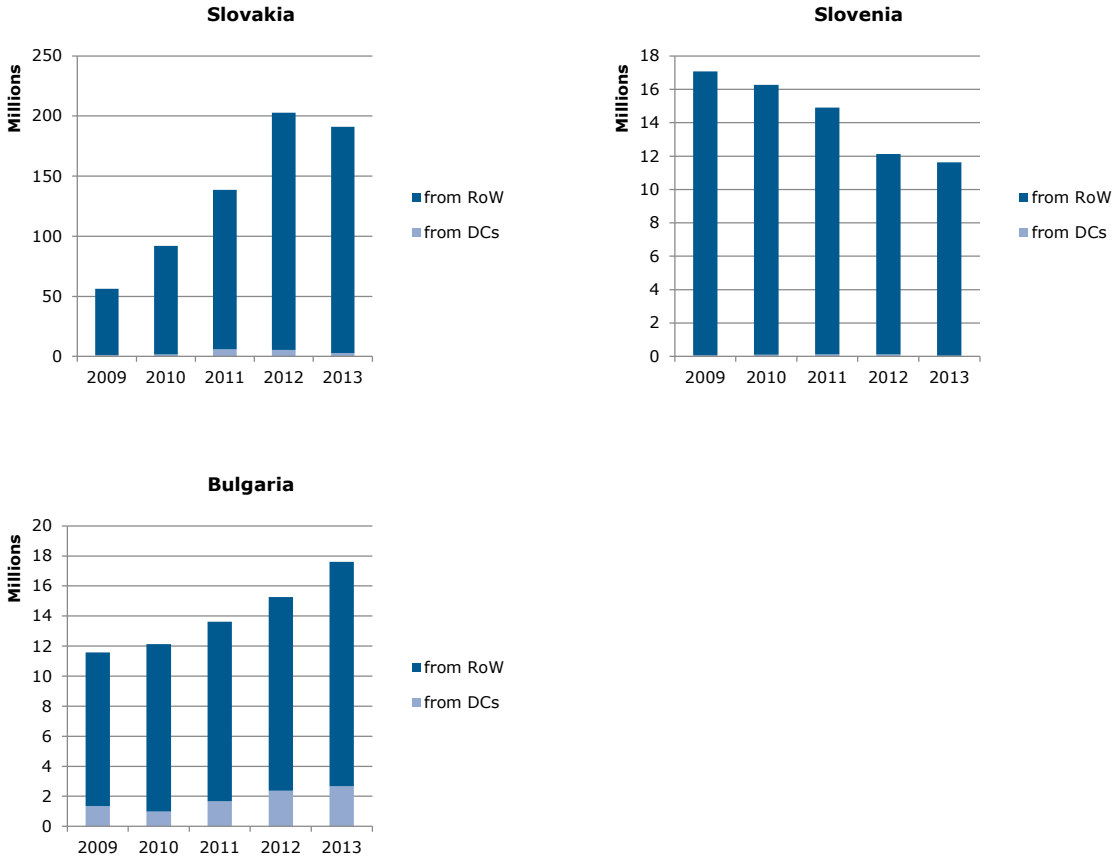
Imports and exports:
Eastern Europe imports roughly €843 million worth of suspension system parts. Combined, Poland, the Czech Republic and Slovakia represent almost 80% of the total imports of suspension system parts into Eastern Europe. The imported suspension system parts are mainly shipped from Eastern and Western Europe as well as other developed countries such as Korea.

The value of suspension system imports from DCs to Eastern Europe was estimated at €82 million (9.7% of total suspension system imports) in 2013 and has grown at a 17.5% CAGR between 2009 and 2013. Poland imports by far the most from the DC in absolute terms (€59 million), followed by the Czech Republic (€10 million). Poland has actually seen a sharp increase in its DC suspension system imports growing by almost 60% since 2009.

The biggest DC exporters of suspension systems to Eastern Europe are China (with €45 million it is Eastern Europe's fifth largest exporter) Turkey (€15 million) and India (€12 million) together accounting for €72 million or close to 88% of all suspension system imports from DCs. The future outlook is that imports from the DCs will continue to increase at a rate close to overall import growth, i.e. at approximately 6%. Poland and the Czech Republic will experience the biggest relative and absolute growth for DC imports, while Slovakia and Slovenia will experience declines.

Figure 4: Imports of suspension system parts by country, in € million (the range of the y-axes varies by country due to different import levels)



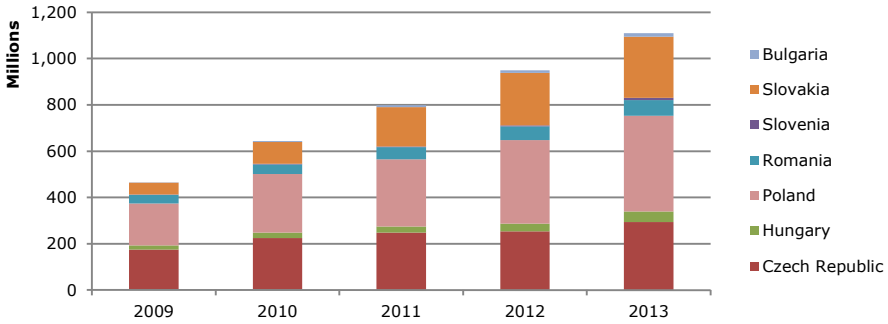


RoW: Rest of the world
Data source: Eurostat 2014

Eastern Europe is a net exporter of suspension system parts, having exported approximately €1.1 billion of those in 2013. Poland is the largest exporter with €413 million, followed by the Czech Republic with €294 million and Slovakia with €264 million. Together these countries account for nearly 88% of Eastern Europe's suspension system parts exports. The suspension systems are mainly exported within the EU countries as well as to other developed countries such as Russia and the United States.

Eastern Europe exports approximately €93 million worth of suspension system parts to the Developing Countries. The biggest DC importers of suspension systems from Eastern Europe include Ukraine (€21 million), Turkey (€12 million), Mexico (€11 million) and Serbia (€7.5 million).

Figure 5: Exports of suspension system parts, in € million



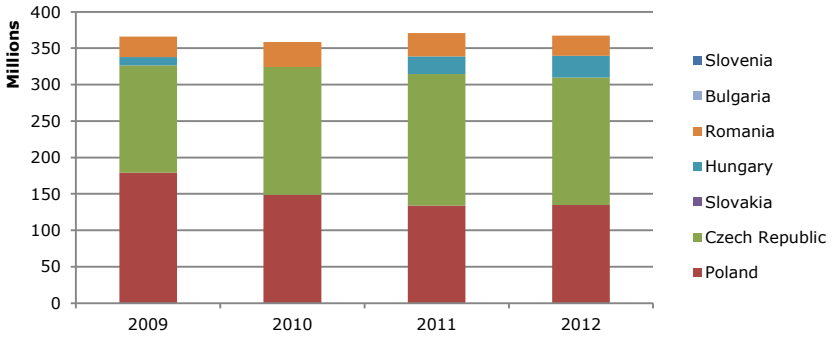
Data source: Eurostat 2014

Production and consumption:

The production and consumption data is partly incomplete for Eastern Europe. There are no numbers for suspension system production in Slovakia, Bulgaria and Slovenia.

Based on the available data, the Czech Republic is the biggest producer of suspension system parts with apparent production of €175 million in 2012. Poland follows with reported 2012 production at €135 million, down 25% from €180 million in 2009. Production levels for suspensions systems will likely continue to remain unchanged in Eastern Europe in the future.

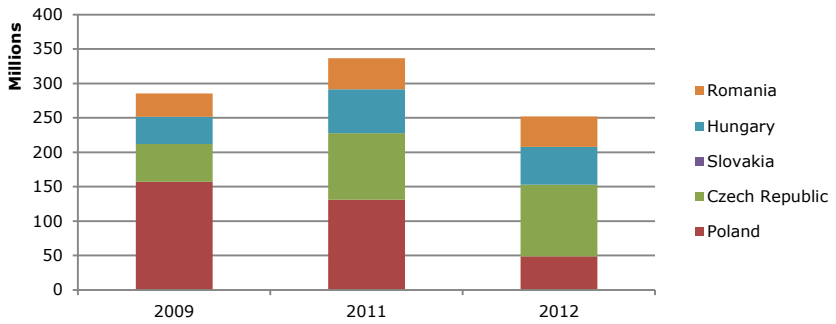
Figure 6: Apparent production of suspension system parts in the EE countries, in € million



Data source: Eurostat (Prodcom) 2014

The unavailability of production data for Slovakia, Bulgaria and Slovenia has made it impossible to calculate the apparent consumption for these countries. The apparent level of consumption of suspension system parts in Eastern European grew between 2009 and 2011 and then declined to a pre-2009 level. The Czech Republic is the biggest reported consumer of suspension systems with apparent consumption in 2012 at the €105 million level, followed by Hungary with 2011 consumption at €55 million level.

Figure 7: Apparent consumption* of suspension system parts in the EE countries, in € million



*Apparent Consumption = Production + Imports – Exports
Data source: Eurostat (Prodcom) 2014

For more information on automotive trade statistics, please refer to CBI Market Trade Statistics

Market trends and opportunities

The greatest opportunities for suspension systems lie in parts such as shocks, struts, ball joints and springs, as well as metal/rubber bonded parts. For unsprung masses such as knuckles and control arms, lightweighting presents additional advantages. The easiest way to market these components would be to approach the local automotive parts wholesalers or the OEMs and/or component/systems suppliers with a subcontracting offer. In Eastern Europe, the local OEMs are not as large as their Western counterparts and they may be easier to access for a DC exporter. Contact can be made at trade fairs, which generally are a good place to make connections with the OEMs and parts and components suppliers.

Poland is the biggest market for suspension systems and parts in Europe, with imports in 2013 estimated at €297 million (up from €159 million in 2009). It is followed by Slovakia at €191 million, which has also had a spectacular average compound growth rate of 36% annually since 2009. Poland has the highest share of suspension systems and parts originating from developing countries (roughly 20%), indicating that they are willing to source components from this part of the world. All other Eastern European countries have increased their share of DC imports in the past five years, which means that there is an overall growth in demand for the more competitively-priced parts from the developing countries.

For more information on automotive market trends, please refer to CBI Market Trends

Price

Apart from the distribution of new parts, the aftermarket for automotive parts also encompasses a lively distribution of used or overhauled parts and components. Pricing depends on the supply chain positioning. The aftermarket, in particular, is very discount-driven and has varied mark-ups at each distribution step, and for different parts and components. Due to large variation in types and models of parts, it is difficult to provide a general overview of suspension system prices, but it is possible to provide some insight into margins imposed by different players in the supply chain. Based on the margin ranges, DC suppliers selling to the tier 3 supplier in the OEM

supply chain could price their products at between 64% and 81% of the OEM delivery price. In order to better ascertain prices of specific products and models, you can search the internet to determine the appropriate range, or talk directly to wholesalers and/or retailers. The differences in price of branded spare parts will not be great among the various countries. Those players who are present in several European countries have largely harmonised their prices; any differences in pricing may occur because of different logistics and local costs. In the Original Equipment segment, the price is set by 4+ year contracts, which usually include a 3-5% price reduction each year after the first year. In the aftermarket, the prices are negotiated every year.

OEM supply chain	**Margin**
Tier 1 supplier delivering to OEM	6-8%
Tier 2 supplier delivering to tier 1	6-15%
Tier 3 supplier delivering to tier 2	10-25%
Aftermarket OES supply chain	**Margin**
Tier 1 delivering to OEM for OES sales through approved service chain	10-30%
Tier 1 delivering to OEM for OES sales through independent outlets	10-25%
OEM delivering OES parts through its approved service chain	25-65%
OEM delivering OES parts through independent outlets	30-50%

Main sources

- European Commission's macroeconomic publications
- IMF – good source for macroeconomic information
- OECD – good source for macroeconomic and industry-specific information
- European Commission's Directives and Regulations pertaining to motor vehicles, their trailers, systems and components
- CLEPA - European association of automotive suppliers
- ACEA - European automobile manufacturers association
- Ernst & Young's Automotive information - Automotive information – good source on automotive information
- Ernst & Young's European Automotive Survey 2013 – interviews mostly automotive suppliers
- Inovev - Worldwide automotive knowledge platform that offers free-of-charge and fee-based content
- Trade fairs are a good place to network, to meet buyers and to promote your company. The most prominent agricultural machinery trade fairs in Eastern Europe are: Sofia Motor Show (site in Bulgarian) – Bulgarian automotive trade fair; Motor Show Poznań – Polish automotive trade fair; Bucharest Auto Show and Accessories - Romanian automotive trade fair; AUTOSALON Brno - Czech automotive trade fair; Autosalon Bratislava (every year) - Slovak automotive trade fair

This survey was compiled for CBI by Global Intelligence Alliance

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