The economic and societal benefits deriving from the presence of Hyundai and Kia in Europe

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About the study

This study was commissioned by Hyundai Motor Company, the motor vehicle manufacturer headquartered in Seoul. The aim was to quantify the contribution of Hyundai and Kia to Europe's economy and society. London Economics was asked to undertake the research and analysis to complete this task.

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Glossary

ACEA	Association des Constructeurs Européens d'Automobiles
CAR	Center for Automotive Research
EU	European Union
EVTA	European Vocational Training Association
GDP	Gross Domestic Product
GVA	Gross Value Added
HME	Hyundai Motor Europe
HMETC	Hyundai Motor Europe Technical Center
HMMC	Hyundai Motor Manufacturing Czech
KMC	Kia Motor Corporation
KMS	Kia Motors Slovakia
LFS	Labour Force Survey
OEM	Original Equipment Manufacturer
OICA	Organisation Internationale des Constructeurs d'Automobiles
R&D	Research & Development
SBS	Structural Business Statistics
VDA	Verband der Automobilindustrie (DE)

NOTE: In this report, the terms 'Hyundai' and 'Kia' refer to the companies or their products in Europe.

Executive summary

The report

This report is aimed at highlighting the contribution of Hyundai and Kia, two of the most successful car manufacturers operating in Europe, in a number of dimensions:

- Contribution to employment and GDP;
- Training and development of the labour force;
- Contribution to European R&D and innovation;
- Contribution to the development of the automotive supply chain in Europe;
- Contribution to the development of entrepreneurship in Europe;
- Total tax contributions; and
- Wider social contributions.

The context

- The economic situation in the EU remains difficult. According to the European Commission's autumn forecast, real GDP is set to contract by 0.3% in the EU and 0.4% in the euro area in 2013.
- Growth relies increasingly on exports, which enhances the role of export-oriented industries such as automotive manufacturing.
- The industry is:
  - A direct employer of a large and highly-skilled workforce, with an even larger effect on overall employment through the multiplier effect on jobs along the automotive value chain;
  - A major contributor to exports, the crucial source of growth over the foreseeable future;
  - A magnet for foreign direct investment (FDI);
  - A vital source of innovation and technology development.

Key findings

- *Over 268,000 people owe their jobs to the presence of Hyundai and Kia in Europe.*
- *Including customs duties, sales and income taxes, Hyundai and Kia contribute a total of almost €1.7 billion in taxes annually to European governments.*
- *The majority (55%) of Hyundai and Kia cars sold in Europe are produced in Europe.*

- Hyundai and Kia are two success stories at the heart of the European automotive industry.

  - In 2012, Hyundai sales in the EU+EFTA increased by 9.4% and Kia's by 15.6% as compared to 2011 while the market overall declined by 7.8%.
  - Market shares for Hyundai and Kia grew from 2.9% and 2.2% respectively in 2011 to 3.5% and 2.7% respectively in 2012[1].
- Hyundai and Kia have invested in two large manufacturing facilities in the EU, one in the Czech Republic (Nošovice) and one in Slovakia (Žilina).
  - They produce gross value added (GVA) of almost €800 million from a turnover of €6.5 billion and provide high-quality employment to 7,345 full-time staff and agency workers.
  - They purchase supplies worth €4.8 billion, €3.4 billion of which (72%) is sourced from within Europe.
- The majority (55%) of Hyundai and Kia cars sold in the EU are produced locally in Slovakia and the Czech Republic.
- Demand by Hyundai and Kia provides employment for over 18,000 people in the supplier industry whose additional gross value added is estimated at €835 million.
- The entire value chain, from R&D to distribution, can be found within Europe. Hyundai and Kia have a sales distribution network covering all EU Member States and EFTA countries.
  - This network adds an additional €2.2 billion to European GDP[2].
- The commitment of Hyundai to Europe is ongoing, with a €5.5 million investment to build a new vehicle test centre in Germany announced in January 2013.
- The GVA of Hyundai and Kia amounts to €3.9 billion. GVA may be seen as an economic entity's contribution to gross domestic product and is the value of the goods and services produced by the company net of input costs (or output minus intermediate consumption).
  - This figure includes the GVA of external suppliers and independent retailers of the two brands.
  - This is equivalent to about 2.3% of the increase in EU GDP in 2011.
- The additional output generated by Hyundai's and Kia's activities in Europe throughout the economy amounts to €11.6 billion. This figure is based on an estimated multiplier of 3 for the automotive industry[3].
  - Given that the European economy supports one job per €58,000 of GDP on average, the €11.6 billion in output induced by Hyundai and Kia through a multiplier of 3 supports 202,000 jobs.
- The workforce employed directly by Hyundai and Kia and supported by their operations in the upstream and downstream markets numbers over 66,000 individuals.
  - Over 268,000 people owe their jobs to the presence of Hyundai and Kia in Europe.
- Including customs duties, sales and income taxes, Hyundai and Kia contribute a total of almost €1.7 billion in taxes to European governments.

[1] ACEA New Passenger Car Registrations, Press Release 16 January 2013.

[2] GDP is the market value of goods and services produced in a country within a specified period of time.

[3] For the methodology underpinning use of this multiplier, see Haugh et al (2010).

- The companies making up the operations of Hyundai and Kia in the European Union have a variety of training programmes to develop, maintain and enhance employees' skills over a broad range of specialisations.
- Hyundai and Kia have initiated and continue to support financially and in other ways a wide variety of local and national projects focusing on social and educational issues.

1 Background and context

1.1 The economic context

Many Member States continue to experience low growth and rising unemployment. In the current economic climate, any expansion in the European activities of a major motor manufacturer has special significance.

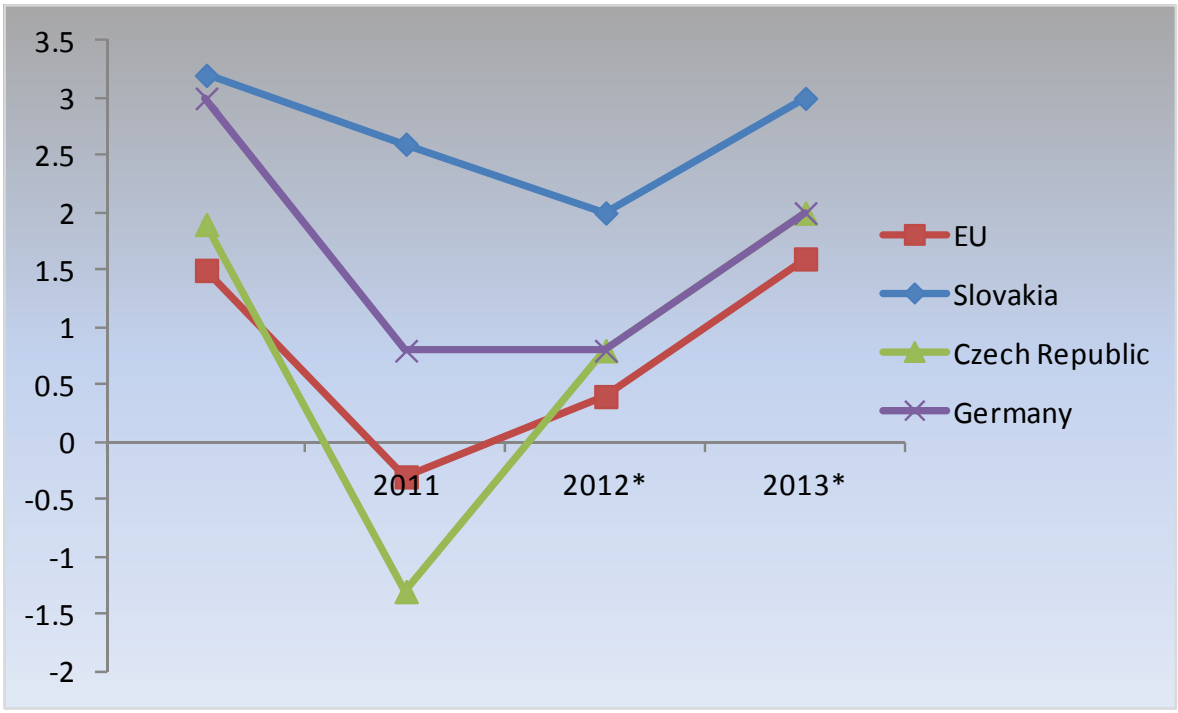
The European Commission's latest (autumn 2012) *European Economic Forecast* points out that "domestic demand has continued to contract while the global economy has also slowed down, and consumers as well as firms have become more pessimistic about the near-term perspectives. The EU economy has dipped back into contraction in the second quarter with further weakness expected in the second half of the year. Unemployment has risen and cross-country divergences have widened. Domestic demand continues to be held back by the legacy of the crisis of 2008-09".

In particular, "domestic demand has made negative contributions to GDP growth for more than a year and is likely to do so also in the second half of 2012 and well into the first half of 2013. This leaves net exports, which are set to benefit from a gradual recovery of global demand, as the only positive contributor to GDP growth in the EU for some more quarters to come"[4]. This underlines the role of export-oriented industries such as the automotive sector. According to the Commission's forecast, real GDP is set to contract by 0.3% in the EU and 0.4% in the euro area in 2013[5]. The forecast predicts no reduction in unemployment: "The weak short-term growth outlook raises concerns for the labour markets, where a further rise in the already high unemployment rate next year appears likely".

[4] European economic forecast autumn 2012, see http://bit.ly/RF7Agb.

[5] Ibid.

Figure 1: Growth 2011-2014



Note * forecast values

Source: European Economic Forecast, autumn 2012

1.2 The automotive sector in Europe

> *"The EU is the world's largest producer of motor vehicles. The automotive industry is therefore central to Europe's prosperity. It is a huge employer of skilled workforce and a key driver of knowledge and innovation. It represents Europe's largest private investor in research and development (R&D). It also makes a major contribution to EU's Gross Domestic Product (GDP), and exports far more than it imports."*
>
> *European Commission DG Enterprise and Industry*[6]

The importance of the automotive industry for the European economy is well understood. Its unique position at the heart of advanced economies all over the world is due to its role as:

- a direct employer of a **large and highly-skilled workforce;**
- an even larger effect on overall employment through the **multiplier effect on jobs** along the automotive value chain;
- a major contributor to exports, the crucial **source of growth** over the foreseeable future;
- a magnet for **foreign direct investment** (FDI);

[6] Available at: http://bit.ly/O5ydcD [accessed 22 August 2012].

- a vital source of **innovation and technology development**.

In 2011, motor manufacturers operated 177 manufacturing sites in 16 EU Member States[7] and directly employed over 3 million people in Europe[8]. According to the industry body ACEA (2012), a further 1.2 million are employed by automotive suppliers[9]. Together, automotive manufacturing directly creates **jobs for 4.2 million Europeans**, equivalent to **13.6% of the manufacturing jobs in Europe**[10] and 2.0% of the total European workforce[11]. According to the European Commission's CARS 21 Report (2012), the automotive industry as a whole, including vehicle manufacturers, suppliers and aftermarket, provided over 12 million jobs in 2011[12].

The automotive industry provides high-quality manufacturing jobs, both for skilled and semi-skilled manual workers and for highly-skilled engineers and management professionals. A detailed study of the European automotive sector[13] that was completed in 2008 found that manual workers still represent the bulk of the workforce in most countries: around 60% in the EU15 and over 70% in the new Member States, but also in Spain[14]. Overall, the study found that the relative number of managers, engineers and other professionals and technicians increases over time compared with the number of manual workers. However, skilled manual jobs are still in demand, with the increasing use of information technology in cars increasing the need for electricians and electronics specialists, for example. The automotive industry has been a crucial factor in maintaining employment levels during the recent economic crisis (Figure 2), in a number of countries. Germany, for example, added 25,000 jobs in the car sector in 2011[15], while new investment in the last two years led to the creation of around 8,400 new jobs and the safeguarding of over 12,000 existing jobs in the sector[16].

[7] See ACEA (2012), p. 7.

[8] Eurostat (LFS): employment in "manufacture of motor vehicles, trailers and semi-trailers" (NACE R2), ages 15 to 64 years = 3,045,900 (2011).

[9] E.g., in the manufacture of tyres, bearings and gears, ventilation and IT equipment, electric motors, etc. See ACEA (2012), p. 31.

[10] EU27 employed population in the manufacturing sector = 31.2 million, see ACEA (2012, based on Eurostat, 2009), p. 31.

[11] EU27 total employment (total employment, ages 15 to 64 years, resident population concept) is 213.0 million, see Eurostat (LFS), 2011.

[12] CARS 21 High Level Group on the Competitiveness and Sustainable Growth of the Automotive Industry in the European Union, Final Report 2012, p. 11. Available at: http://bit.ly/MbKkjm [accessed 21 November 2012].

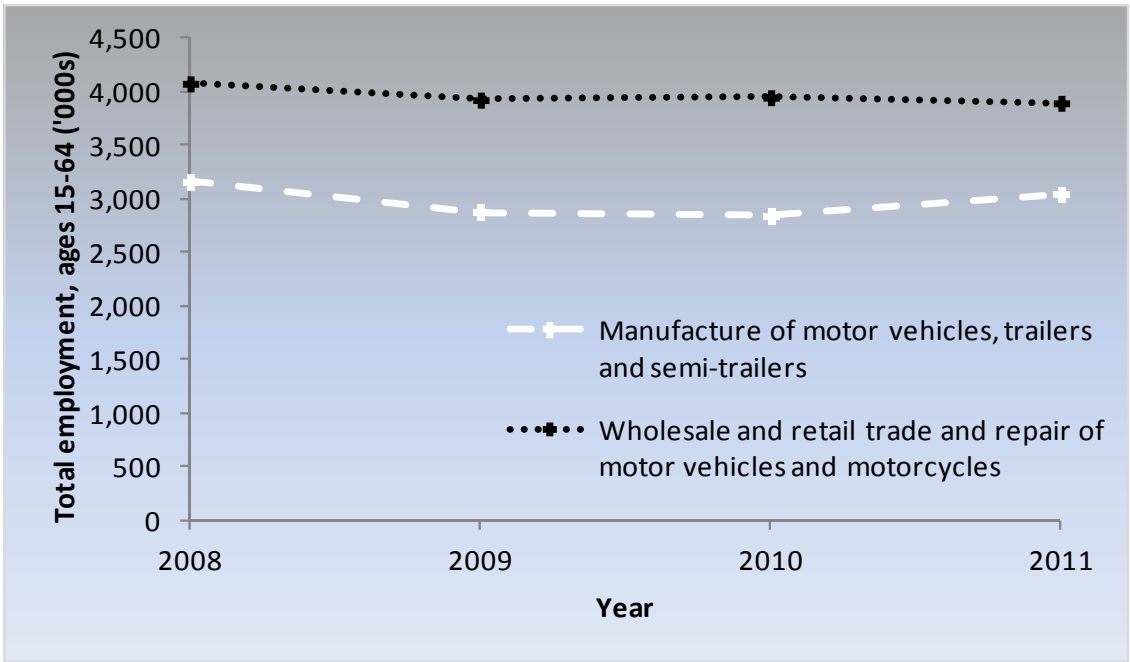
[13] Loire et al. (2008).

[14] 2007 data. See Loire et al. (2008), p. 63.

[15] VDA (2012), p. 7.

[16] Society of Motor Manufacturers and Traders (SMMT), see http://bit.ly/UTdoQK [accessed 21 November 2012].

Figure 2: Direct employment in the automotive sector in the EU (2008-2011)



Source: Eurostat (LFS)

The importance of exports and FDI for the European economy has further increased over recent years, given the collapse in spending by consumers, government and domestic businesses[17]. Expenditure by the government sector is likely to fall, and together with the erosion of consumer incomes, this leaves the export sector offering the only growth viable prospects over the foreseeable future. The role of the car industry as an export motor is thus enhanced even further. **The trade surplus of Europe's car industry stands at €90 billion for 2011**[18], which is distributed across the 16 Member States that have automotive sectors. The largest beneficiaries by value are still in the big-5 economies (DE, FR, ES, IT, UK), but relative to the size of the national economy, the automotive sector is also pivotal in central European countries like Hungary, Slovakia and the Czech Republic. Of the 252,000 vehicles made by Hyundai in 2011, 44,400 (18%) were exported outside the EU/EFTA.

[17] See for example London Economics' 2011 research on the relative importance of the export sector for the UK, available at http://bit.ly/rtsvLJ.

[18] CARS 21 Report (2012). ACEA (2012) puts the net trade contribution of the automotive industry net trade contribution at €75 billion (this includes commercial Vehicles (over 5t) + Buses & Coaches).

Table 1: EU Exports of Passenger Cars (in value)	
Partner	**Share of EU exports (%)**
North America (NAFTA)	20.4
South America & Caribbean	3.1
EFTA & Eastern Europe	28.0
Middle East	4.4
Africa	5.5
Asia & Oceania	34.6

Source: ACEA (2012)

According to Ernst & Young, foreign direct investments in the automotive sector doubled in 2010, initiating **258 projects** and **creating 33,090 jobs** – more than any other sector and 25% of all European jobs created by FDI[19]. It tops the list of sectors in a diverse set of European economies: Belgium, Hungary, Poland, Russia, Spain and the Czech Republic. Of the ten largest investors in Europe by jobs created, seven are in this industry.

Car manufacturers are also **the largest private investors in R&D** in Europe[20]. A University of Cambridge report[21] argues the industry is a huge source of process innovation with spillovers to other manufacturing industries such as just-in-time production and lean production methods. Product innovations from the sectors include new advanced materials, such as polymers, and low-carbon technologies.

The industry invests €26 billion, or 5% of turnover, in R&D every year[22], which rises to €32.8 billion when including trucks, commercial vehicles and parts[23]. The focus of innovation is on improving fuel efficiency and introducing further electronic systems into cars. The fuel efficiency aim encompasses several strategies, principally lithium-ion batteries, hydrogen fuel-cells, biofuels and improvements to conventional engines. Electronic systems innovation centres on navigational systems to reduce congestion, driverless cars and systems designed to increase fuel economy. Car manufacturers filed **8,568 patents** at the European Patent Office in 2011[24].

In recognition of the sector's contribution to innovation, the European Union supports it through framework programmes for RDI (research, development and innovation), currently (FP7) worth around €200 million annually, mainly used for pre-competitive research[25].

1.3 Hyundai and Kia in the EU

Globally the Hyundai Motor Group is composed of companies and affiliates active across a range of different business sectors. The automotive sector, made up of companies using the Hyundai and

[19] Ernst & Young (2011), p. 19.

[20] See ACEA (2012), p. 7.

[21] Holweg et al. (2009).

[22] ACEA (2012), p. 25.

[23] ACEA (2010), p. 25.

[24] ACEA (2012), p. 27.

[25] CARS 21 Final Report (2012), p. 52.

Kia names, is the most significant in terms of Group revenue and profit. In 2011 the Group reported revenues of €143 billion ($191 billion) – 53% of revenue and 62% of profit came from the automobile sector. Furthermore the automotive sector has grown quickly. In 2011 Hyundai and Kia together became the world's fifth largest automaker by global sales having occupied tenth position as recently as 2000.[26]

Given this context, it is no surprise that Hyundai and Kia are two success stories at the heart of the European automotive industry. In 2012 Hyundai sales in the EU+EFTA increased by 9.4% and Kia's by 15.6% while the market overall declined by 7.8% as compared to 2011. Market shares for Hyundai and Kia grew from 2.9% and 2.2% respectively in 2011 to 3.5% and 2.7% respectively in 2012.[27]

Consumer success has been driven by very significant investments, and exceeding customer expectations has in turn stimulated further investment. Major facilities are located in three Member States. Design and R&D and sales and marketing headquarters are in Germany and manufacturing is in the Czech Republic and Slovakia. These represent significant continuing investment in Europe.

The centrepieces of the companies' investment in Europe are the **manufacturing facilities in Žilina, Slovakia and Nošovice, Czech Republic**. Hyundai opened its plant in Nošovice, which has an annual production capacity of 300,000 units[28], in 2008, following an investment of over €1 billion. The plant produced 251,000 vehicles in 2011[29] and is set to operate at full capacity in 2012[30]. Kia Motors' Žilina Plant, completed in 2007[31], is also expected to exceed its production goal of 285,000 SUVs, compact and family cars in 2012[32]. Investment by Hyundai and Kia has been instrumental in making the Czech Republic and Slovakia the world's top two producers of cars per capita[33].

The majority (55%) of Hyundai and Kia cars sold in the EU are produced locally in Slovakia and the Czech Republic.

Development of high quality automobiles and engines that meet or exceed European customer expectations and environmental regulations takes place in **Hyundai Motor Europe Technical Center**, a high-tech multifunctional building located in Rüsselsheim near Frankfurt, Germany and responsible for design and R&D[34].

In addition, construction of a new Hyundai vehicle test centre at the Nürburgring race track in Germany was announced in January 2013. The new facility represents a €5.5 million investment.

[26] Hyundai Motor Group Overview 2011, Overview 2012.

[27] ACEA New Passenger Car Registrations, Press Release 16 January 2013.

[28] http://worldwide.hyundai.com/WW/Corporate/CorporateInformation/History/index.html

[29] Hyundai Motor Company Annual Report 2011, p. 38.

[30] Reuters (2012).

[31] KIA Motors Annual Report 2011, p. 117, available at: http://www.kmcir.com/eng/library/annual.asp.

[32] Reuters (2012).

[33] Ibid.

[34] Hyundai Motor Company Annual Report 2011, p. 33.

Tests carried out at the new facility will be used by engineers at the company's existing R&D centre in Rüsselsheim to improve the quality and driving performance of Hyundai's European-designed vehicles. In 2012, almost 95% of the 444,000 Hyundai cars sold in Europe were designed and engineered in Rüsselsheim, including the European best-sellers i30, ix35 and i40.

Within this context, this report is aimed at highlighting the specific contribution of Hyundai and Kia in a number of dimensions. Specifically, the report will concentrate on the following:

- Contribution to employment and GDP
- Training and development of the labour force
- Contribution to European R&D and innovation
- Contribution to the development of the automotive supply chain in Europe
- Contribution to the development of entrepreneurship in Europe
- Total tax contributions
- Wider social contributions.

Unless otherwise specified, the data used in the following sections was provided by the different operating entities of Hyundai and Kia in Europe.

2 Contribution to employment and GDP

The following tables illustrate the contribution of Hyundai and Kia to the EU economy. The selected indicators are:

- Turnover
- Gross value added
- Employment
- Wages and salaries.

The tables are based on data supplied by the different Europe-based Hyundai and Kia entities and comparison data from Eurostat. The analysis distinguishes the impact of Hyundai's manufacturing, R&D, distribution and retail activities. For reference, the tables summarising the direct impacts are also presented separately in Annex 1 (p. 18).

2.1 Manufacturing

Hyundai and Kia have two large manufacturing facilities in the EU, one in the Czech Republic (Nošovice) and one in Slovakia (Žilina). The numbers involved speak for themselves: Hyundai and Kia produce value added of almost €800 million from a turnover of €6.5 billion and provide high-quality employment to 7,345 full-time staff and agency workers[35].

[35] Both plants are comparable in size to the PSA plant at Trnava (Slovakia), which employs a total workforce of 3,000. See "PSA Peugeot Citroën in Slovakia – December 2011, Facts and Figures". Available at: http://bit.ly/WXI5Ja [accessed 05 February 2013].

Table 2: Impact of Hyundai/Kia manufacturing					
Indicator	**Hyundai[1)]**	**Kia[2)]**	**Total HMC (Hyundai + Kia)**	**Total manufacture of motor vehicles (EU27)[3)]**	**HMC as % of EU27**
Turnover (€)	3,155,632,371	3,328,382,627	6,484,014,998	526,000m	1.2%
Gross value added (€)[4)]	432,899,553	358,883,886	791,783,439	88,000m	0.9%
Employment[5)]	3,440	3,905	7,345	1,034,500	0.7%
Wages & salaries(€)[6)]	46,997,723	65,842,680	112,840,403	58,000m	0.2%

Note: (1) Nošovice plant (CZ) (2) Žilina plant (SK) (3) Eurostat Structural Business Statistics (SBS) (NACE Rev.2), 2010 (4) Eurostat SBS = value added at factor cost (5) Eurostat SBS = number of persons employed (2009 data) (6) Further explanations: Hyundai = "including agency"; Kia = "including social insurance & health insurance payable by employer"; Eurostat SBS = personnel costs
Source: Hyundai/Kia, Eurostat (SBS)

2.1.1 Regional impact in Slovakia and the Czech Republic

The impact of the Hyundai and Kia manufacturing operations on the national and regional economies of the Czech Republic and Slovakia is considerable. In the Czech Republic, the Hyundai plant is one of the country's five plants producing passenger cars. The 3,440 employees represent 0.64% of total employment in the Moravskoslezsko region. The contribution to GDP of the Moravskoslezsko region is even more substantial: the plant's GVA represents 3.1% of the region's GDP. Note that employment figures are available only at the NUTS 2 region level.

In Slovakia, the Kia plant in Žilinský kraj is one of three car factories in the country. Given the plant's size compared with the national economy, the impact of Kia's operation in Slovakia is even more significant, especially when we look at the NUTS 3 level region Žilinský kraj, where the plant accounts for 5.1% of GDP.

Table 3: Hyundai/Kia share of national and regional (NUTS 2) employment[1)]			
	Kia	**Slovakia**	**Stredné Slovensko**
Employment	3,905	2.3m	562,100
Kia %	100%	0.17%	0.69%
	Hyundai	**Czech Republic**	**Moravskoslezsko**
Employment	3,440	4.8m	541,300
Hyundai %	100%	0.07%	0.64%

Note: 1) total employment (2011) for individuals aged 15 to 64 years.
Source: Hyundai/Kia, Eurostat (LFS)

Table 4: Hyundai/Kia share of national and regional (NUTS 3) GDP[1)]			
	Kia	**Slovakia**	**Žilinský kraj**
GVA/GDP*	€358.9m	€62.9bn	€7.0bn
Kia %	100%	0.57%	5.13%
	Hyundai	**Czech Republic**	**Moravskoslezský kraj[2)]**
GVA/GDP*	€432.9m	€141.5bn	€13.9bn
Hyundai %	100%	0.31%	3.12%

Note: 1) GPD at current prices, 2009 (latest available year). 2) this is the same as the NUTS 2 region "Moravskoslezsko".
Source: Hyundai/Kia, Eurostat

2.1.2 Suppliers (parts)

The Hyundai and Kia manufacturing operations are major customers of the automotive supply industry, including at the national level in Slovakia and the Czech Republic, on the European level, and internationally. Together, they purchase supplies worth €4.8 billion, €3.4 billion of which (72%) is sourced from within Europe.

Data on GVA, employment and wages at the independent enterprises that supply the inputs used in the manufacturing plants operated by Hyundai and Kia were not available for this study. To estimate the impact of Hyundai and Kia on these variables, we assume that the impact is proportional to the fraction of supplier sales that are accounted for by Hyundai and Kia purchases. This means that, if Hyundai and Kia purchases are responsible for 50% of the sales of a supplier firm, we assume that 50% of the employment at that firm is also directly attributable to the demand from Hyundai and Kia[36].

Hence – assuming the impact on the supplier base is proportional to the overall magnitude of the purchases by Hyundai and Kia from European manufacturers of parts and accessories for motor vehicles, i.e. 1.8% – the direct effects include the employment of over 18,000 people in the supplier industry as well as additional gross value added (and hence a GDP contribution) of €835 million.

[36] The figures for GVA, employment and wages and salaries in Table 5 are derived as follows: first, we take the value of the supplies purchased by the Hyundai and Kia manufacturing plants within Europe. This is assumed to be equal to the turnover of automotive suppliers in Europe. Dividing this by the total turnover of the sector ("manufacture of parts and accessories for motor vehicles") in the EU27 yields a contribution of 1.8% from Hyundai and Kia. By multiplying the EU-totals for GVA, employment and personnel costs in the sector by 1.8% (the proportion assumed to be attributable to demand by Hyundai and Kia), we derive an estimate of the combined EU-wide impact of Hyundai and Kia (column 4). The estimated figures for the two brands combined are divided again by assuming the contribution of each is proportional to the fraction of sales attributable to them. The figures presented in the table are rounded to full integers (or one decimal in the case of the percentage figure).

Table 5: Impact of Hyundai/Kia parts suppliers					
Indicator	**Hyundai suppliers[1)]**	**Kia suppliers[2)]**	**Total HMC suppliers (Hyundai + Kia)**	**Total manufacture of parts and accessories for motor vehicles (EU27)[3)]**	**HMC as % of EU27**
Turnover (€)	1,322,100,000	2,108,814,400	3,430,914,400	188,849m	1.8%
Gross value added (€)[4)]	**321,844,897**	**513,358,409**	**835,203,306**	45,972m	**1.8%**
Employment[5)]	**7,069**	**11,276**	**18,346***	1,009,800	**1.8%**
Wages & salaries(€)[6)]	**225,581,662**	**359,813,824**	**585,395,486**	32,222m	**1.8%**

Note: The row indicated * does not sum to total due to rounding: figures rounded to the nearest integer. Rounding occurs through estimation procedures as explained in footnote 36. Numbers in **red** are imputed assuming that GVA, employment and wage payments by the European suppliers to Hyundai and Kia are proportional to their share of the of the industry's turnover in the EU (=1.8%). The values are allocated Hyundai and Kia according to their share in EU purchasing expenditures (Hyundai = 39%, Kia = 61%) (1) purchases from suppliers for the Nošovice plant (2) purchases from suppliers for the Žilina plant (3) Eurostat SBS (NACE Rev.2), 2010 (4) Eurostat SBS = value added at factor cost (5) Eurostat SBS = number of persons employed (2009 data) (6) Eurostat SBS = personnel costs
Source: Hyundai/Kia, Eurostat (SBS)

2.2 Sale and distribution

Both Hyundai and Kia maintain distribution networks throughout the European Union. Figures for the national distributors were provided by Hyundai and Kia. The number of employees at Kia dealerships was estimated by assuming the number of employees per dealer is the same as for Hyundai (8.7). For estimates of turnover and GVA, all Hyundai and Kia dealerships were assumed to have turnover and GVA equal to the per-enterprise average from Eurostat. Multiplying the average values (€323,688 GVA and €3.6m turnover) by the number of Hyundai and Kia dealerships (2,369 and 2,040 respectively) results in estimated figures for turnover of €16.1 billion and of GVA of €1.4 billion for the dealerships of the two brands. Adding to this the reported GVA and turnover of the distributors, the total GVA of Hyundai's and Kia's distribution is €2.2 billion, and turnover is €31.9 billion.

Table 6: Impact of Hyundai/Kia sale and distribution

Indicator	Hyundai[1)]	Kia[2)]	Total HMC (Hyundai + Kia)	Total sale of cars and light motor vehicles (EU27)[3)]	HMC as % of EU27
Turnover (€)	18,014,050,384	13,916,331,058	31,930,381,442*	678,768m	4.7%
Gross value added (€)[4)]	1,082,071,132	1,136,332,960	2,218,404,093*	59,593m	3.7%
Employment[5)]	21,896 (distributor: 1,301)	18,700 (distributor: 965)	40,596 (distributor: 2,266)	1,398,600	2.9%
Wages & salaries(€)[6)]	805,556,819	595,809,626	1,401,366,445	41,512m	3.4%

Note: The rows indicated * do not sum to total due to rounding: figures rounded to the nearest integer. Rounding occurs through estimation procedures (see below) and currency conversion (1), (2) figures for the national and European distributors were provided by Hyundai and Kia; Eurostat average figures for GVA and Turnover were used for the Hyundai and Kia retail network (3) Eurostat SBS (NACE Rev.2), 2010 (4) Hyundai/Kia = sales revenue, dealerships' revenue is assumed to be equal to the average turnover per enterprise in the NACE sector 'sale of cars and light motor vehicles' = €3,643,763; Eurostat SBS = value added at factor cost (2009 data) (5) Eurostat SBS = number of persons employed; Hyundai/Kia shares are computed based on the number of employees at the national distributor + dealers' employees. To compute the number of dealers' employees for Kia, we assumed the same number of dealers' employees per dealer as for Hyundai (8.7), multiplied by the number of dealers (2,040). (6) Eurostat SBS = personnel costs; wages and salaries of employees of the Hyundai and Kia national/European distributors were provided by Hyundai/Kia; no data available on wages and salaries paid by Hyundai/Kia dealers; wages and salaries of dealership employees were assumed to be equal to the EU average for employees in 'sale of cars and light motor vehicles' = €29,681.

Source: Hyundai/Kia, Eurostat (SBS)

2.3 Research and development

Hyundai Motor Europe Technical Center is a joint establishment servicing the needs of both brands. It is small in terms of its immediate contribution to the economy as measured by employment and value added. However, the significance of the Center for the longer term success and sustainability of the European activities of Hyundai and Kia is very considerable.

Table 7: Impact of Hyundai/Kia research and development

Indicator	Hyundai/Kia[1)]	Total research and experimental development on natural sciences and engineering (EU27)[2)]	HMC as % of EU27
Turnover (€)	47,553,523	53,000m	0.1%
Gross value added (€)[3)]	30,011,137	23,200m	0.1%
Employment[4)]	220	454,100	0.0%
Wages & salaries(€)[5)]	16,954,445	23,500m	0.1%

Note: (1) Figures relate to the joint Hyundai Motor Europe Technical Center (2) Eurostat SBS (NACE Rev.2), 2010 (3) Eurostat SBS = value added at factor cost (4) Eurostat SBS = number of persons employed (2009 data) (5) Eurostat SBS = personnel costs

Source: Hyundai/Kia, Eurostat (SBS)

2.4 EU-wide impact on GDP and employment

The contribution to GDP is measured by the combined gross value added of the different activities undertaken by Hyundai and Kia in Europe[37]. Our calculations show that the value added amounts to €3.9 billion. This figure includes the value added by external suppliers industry as well as independent retailers of the two brands. To put this number into perspective, it is equivalent to 2.3% of the total projected increase in EU GDP in 2011[38].

A 2010 OECD study[39] puts the *output multiplier* of the automobile industry[40] at **close to three** in G7 countries. The multiplier is calculated using input-output tables and combines information on both domestic and import inter-sectoral linkages. A value of three means that a €1 increase in the value added delivered by the automobile industry increases economy-wide output by €3. As Haugh et al. (2010) report, "this level of multiplier is at or close to the top of what is observed in other industries, and always stronger than the average across industry (which is estimated to be at 2.2)". For Hyundai and Kia, this means that the GVA of €3.9 billion in Europe generates output throughout the European economy of €11.6 billion, which supports 202,000 jobs throughout the European economy[41]. Note that we use a multiplier that is calculated for the automotive industry as a whole, i.e. including design, testing, manufacturing and sales. While it is likely that certain activities within the automotive value chain have a higher multiplier, we do not attempt to quantify the precise way in which the multiplier varies across different activities.

The workforce employed directly by Hyundai and Kia and supported by their operations in the upstream and downstream markets numbers over 66,000 individuals.

Table 8: Combined EU-wide impact of activities by Hyundai and Kia on GDP and employment

Hyundai/Kia activity	Gross value added (€)	No. of employees
Manufacturing	791,783,439	7,345
Suppliers	835,203,306	18,346
Sale and distribution	2,218,404,093	40,596
R&D	30,011,137	220
Total	**3,875,401,974**	**66,506**

Note: 2011 data; rows do not sum to total due to rounding: figures rounded to the nearest integer. Rounding occurs through estimation procedures (see Table 5, Table 6) and currency conversion

Source: Hyundai/Kia

[37] Gross value added is defined as the revenue net of cost of supplies, represents the additional wealth created by those activities..

[38] EU GDP is forecast to grow by €167.4 billion between 2011 and 2012 from €12,650 billion to €12,817 billion (Eurostat).

[39] Haugh et al. (2010), p. 6-7.

[40] Including their design, testing, manufacturing and sales. Ibid., footnote 2.

[41] The EU's overall GDP of €12.3 trillion supports a workforce of 213 million [Eurostat: gross domestic product at (current) market prices (2011) and Eurostat (LFS): total employment ages 16 to 64 years (2011, latest available figure)]. The employment generated via the multiplier effect is the product of the induced output of €11.6 billion and the average number of jobs supported by the EU's overall GDP.

3 Training and development of the labour force

The various organisations that make up the Hyundai and Kia operations in the European Union have put in place a variety of training programmes to develop, maintain and enhance employees' skills over a broad range of specialisms. Separate training programmes exist for technicians, sales and service staff, HR professionals as well as researchers and managers.

The training provided by Hyundai and Kia can take different forms: from highly specialised, task-specific training for technicians to training with general applicability. Often the training provided to Hyundai and Kia employees leads to externally recognised, formal qualifications.

On the manufacturing side, Hyundai provides 18 hours of formal training per year for every employee. New entrants receive a further three full days of training. All employees at Hyundai's European plant obtain formal qualifications.

The picture at Kia is similar, with 10.3 hours of annual training for each employee on average and 40 hours introductory training for new entrants. This compares to an annual average of 14 hours of continuing vocational training (CVT) in the sector in the EU[42].

At the European Technical Center, initial training is more intensive, with new employees undergoing 56 hours of training. Standard practice is a week-long training programme at the Hyundai Motor Company headquarters in Korea. In 2011, 41% of the workforce at the Technical Center received formal training of on average 13 hours' duration. Various seminars for improving specific employee skills are offered on an ongoing basis.

In addition, Hyundai provided 69,590 man-days of training to IT service and sales personnel in 2011. This equates to four days of training for each of the 15,836 employees working in the Hyundai distribution network in Europe. Technical training for service personnel and repair technicians accounts for 80% of all training. Tailored courses in technical skills are provided for four different skill levels (non-certified, certified, expert and master). Sales staff received 14,800 hours of specialist training.

For Kia, the estimated 19,500 staff employed in the distribution and dealership network received 13,193 man-days of training. The lower number reflects the fact that Kia vehicles are typically distributed through joint dealerships or multifranchises, where there are significant synergies in training.

[42] 2005 figures for "manufacture of transport equipment" (NACE Rev. 1), Eurostat.

4 Contribution to the development of entrepreneurship in Europe

4.1 Hyundai Motor Europe (HME)

Hyundai undertakes a number of initiatives to foster entrepreneurship in the European motor industry. 'Skills for the Future', a comprehensive skills programme aimed at schools was announced by Hyundai in partnership with JA-YE Europe (Junior Achievement-Young Enterprise) at the European Business Summit in 2012 and is being rolled out in schools across Europe.

At a time when youth unemployment in Europe is at an all-time high, the aim is to increase automotive sector awareness amongst students in vocational schools, to underline the importance of scientific and technical skills for future jobs opportunities and to help schools to prepare young people for their future careers. It is projected to run over an initial three year period with a budget of about €1 million.

Launching in four countries first – Germany, UK, Italy and Spain – the programme will give approximately 10,000 vocational school students in 15 countries across the European Union the chance to try their hand at enterprise, learn STEM (science, technology, engineering and mathematics) skills and apply their knowledge to practical use in their future careers. They will be exposed to a variety of learning-by-doing approaches, like creating and managing their own technical micro-companies. As well as being a formative introduction to entrepreneurship, the programme will also nurture softer skills like teamwork, management and organisation. €300,000 was spent on the programme in 2012, with a further investment of €430,000 planned for 2013.

Students will have the opportunity to work with over 400 Hyundai Motor business volunteers from across Europe, who will serve as role models and provide insights from their fields. Every year, a Hyundai Motor prize will be awarded for the best idea for an automotive service or product among the student companies.

The 'Skills for the Future' initiative has been warmly welcomed by Mr Koos Richelle, Director General of the European Commission's DG for Employment, Social Affairs and Inclusion, who said at its launch: "'Skills for the Future' is an excellent initiative that fits squarely both with the Commission's initiative 'Europe 2020,' which strives to equip young people with the right skills for the jobs of today and tomorrow, and the Commission's strategy for Corporate Social Responsibility"[43].

The partnership will not only target students but is also designed to connect teachers and parents with business leaders. Through the Hyundai Motor 'Master Class', teachers and parents from participating schools – together with Hyundai Motor employees – will brainstorm ways to improve the quality of skills education and bridge the gap between business and learning. At the same time HME announced a new programme, 'Brilliant Entrepreneur', to complement Skills for the Future with a focus on the next generation of businesspeople.

[43] 'Hyundai Motor Invests in the Future of the European Auto Industry'. Hyundai press release No. 351, 26 April 2012. Available at: http://bit.ly/Ty4R5Y [accessed 03 December 2012].

HME also sponsors a variety of local initiatives to support marginalized young people into employment through football-themed programmes such as 'Streetfootball.' Participating organisations combine sport with a variety of support programmes, for example organising intercultural "young leaders" meetings and providing employability training and life-skill workshops. Worldwide expenditure in 2011 amounted to €4.9 million with a coverage of 61 countries including Germany, France, Spain, Italy and the UK. In 2011, HME's efforts were recognised by the **UEFA Monaco Charity Award** and the **European Social Entrepreneur of the Year** award by the Schwab Foundation.

In addition, Hyundai's national distributors support a variety of causes, often focused locally and nationally, but also involving overseas development. Hyundai Motor Germany (HMD), for example, spends a yearly budget of €160,000 on projects including car rental for charities, safety and fuel saving training for charity workers, discounts on car purchases by charities and their employees as well as aid projects in South Africa.

4.2 Hyundai Motor Manufacturing Czech (HMMC)

Separate efforts are undertaken by Hyundai's manufacturing arm in the Czech Republic. Here the focus is on cooperation with technical apprentice schools, technical secondary schools and the Technical University Ostrava, which represent major sources of the company's labour force. The cooperation takes various forms:

- **Donation of pre-production cars**: Those cars cannot be used on public roads but they are fully functional so they are used as teaching aids on which the students learn about engines, transmissions, electronic systems etc. Between 2008 and 2012, HMMC donated 54 complete cars and 14 transmissions to 21 schools.
- **University students' theses**: Hyundai managers act as thesis advisers for students from the Technical University Ostrava.
- **"World of Technologies" programme**: organised in cooperation with the regional Chamber of Commerce and the Regional Development Agency to stimulate interest in the study of science and engineering among school students before they decide their future career (age 13 – 14). Hyundai staff organise visits and site tours to the Nošovice plant and provide technical seminars for teachers and lectures for students. Students receive detailed instructions on "how to become an HMMC employee", including practical information and advice on writing CVs and motivation letters and presentational skills.

In addition to these activities to strengthen the motor industry directly through investing in the next generation of automotive specialists, HMMC maintains programmes to support local communities more broadly in areas such as environmental protection and social and community services.

- The **Hyundai Foundation** (established in November 2006) supports environmental projects in the Moravia-Silesia region. HMMC is represented in the Board and in the Supervising committee together with representatives of the region and several environmental NGOs. In years 2007-2011 HMMC invested €909,500 in the foundation, out of which €478,450 have been distributed to 69 projects.
- The HMMC fund **Good Neighbour** (established in March 2012) supports community life in 12 municipalities surrounding the HMMC plant. Eligible institutions are municipal councils and also various civic associations and institutions (voluntary firemen, hunters'

associations, schools, seniors' clubs etc.). Financial contributions go to social events including Christmas fairs and exhibitions, village balls, concerts, bus tours for senior citizens to the opera house in Ostrava etc. The fund is managed by a steering committee consisting of five HMMC managers/directors. The fund's annual budget is €20,000.

4.3 Kia Motors Slovakia (KMS)

KMS currently supports a total of 31 different charitable schemes on social issues (sports for disadvantaged youth and the disabled), transport (building of cycle paths and bridges), education and training (various programmes for schools and university students) and other activities to benefit the communities in the vicinity of Kia's manufacturing plant. The combined spend on these activities since 2010 was €705,569.

4.4 Kia Motors Europe (KME)

Kia's distribution arm KME also supports a wide variety of charitable causes throughout its European markets. Expenditure is rising despite the ongoing economic difficulties in many of the countries concerned. The budget increased from €924,280 in 2011 to €1,230,631 in 2012.

5 Tax contributions by Hyundai and Kia in Europe

Hyundai and Kia are major contributors to the public finances of EU Member States. The different activities based in Europe resulted in revenues for the public purse of €1.7 billion in 2011.

Table 9: Tax contributions by Hyundai and KIA in Europe (2011)

Activity	Hyundai	Kia
Manufacturing[1)]	€11,706,425	€48,487,314
R&D[2)]	€12,275,526	
Sale and Distribution[3)]	€925,859,112	€692,523,180
Total	**€1,690,851,557**	

Note: (1) Includes corporate and individual income tax; VAT; road tax; real estate tax and customs duties; KMBL: import duties reported as €2,987; KMH: sales tax reported as €4,263. (2) Includes social security contribution; income taxes on wage income; income tax; property tax; input VAT; sales VAT. (3) Includes total income taxes; total payroll taxes and income taxes on wage income; sales taxes (VAT, other duties, etc.), import duties on car imports and any other special taxes and levies.

Source: Hyundai/Kia

References

ACEA (2010). 'The automobile industry pocket guide 2010'. Available at: http://bit.ly/fapAAV [accessed 17 October 2012].

ACEA (2012). 'The automobile industry pocket guide 2012'. Available at: http://bit.ly/RCf3u3 [accessed 12 October 2012].

CARS 21 High Level Group on the Competitiveness and Sustainable Growth of the AutomotiveIndustry in the European Union: *Interim Report 2011*. Available at: http://bit.ly/O24Fxr [accessed 2 October 2012].

Center for Automotive Research (2011). 'Economic Impact of Hyundai in the United States'. Available at: http://bit.ly/LUUhSP [accessed 22 August 2012].

Ernst & Young (2011). 'Restart European attractiveness survey'. Available at: http://bit.ly/mKfNPo [accessed 2 October 2012].

Holweg, M., Davies, P. and Podpolny, D., (2009). 'The competitive status of the UK automotive industry'. Available at: http://bit.ly/H5tqzH [accessed 15 October 2012].

Loire, P., Paris, J.-J., Ward, T. and Weis, C. (2008). 'Comprehensive analysis of the evolution of the automotive sector in Europe'. Available at: http://bit.ly/Xi9eFw [accessed 16 October 2012].

Haugh, D., Mourougane, A. and Chatal, O. (2010). 'The automobile industry in and beyond the crisis'. OECD *Economics Department Working Papers* No. 745. Available at: http://bit.ly/ZlneSQ [accessed 04 January 2013].l

Reuters Insight – Carmakers' fortunes seen through East Europe prism. Oct 16, 2012. Available at: http://reut.rs/Tqs6Ou [accessed 16 October 2012].

VDA (2012). 'Jahresbericht 2012'. Available at: http://bit.ly/R9xVOG [accessed 12 October 2012].

Annex 1 Summary of direct impacts

Table 10: Impact of Hyundai/Kia manufacturing

Indicator	Hyundai[1)]	Kia[2)]	Total HMC (Hyundai + Kia)	Total manufacture of motor vehicles (EU27)[3)]	HMC as % of EU27
Turnover (€)	3,155,632,371	3,328,382,627	6,484,014,998	526,000m	1.2%
Gross value added (€)[4)]	432,899,553	358,883,886	791,783,439	88,000m	0.9%
Employment[5)]	3,440	3,905	7,345	1,034,500	0.7%
Wages & salaries(€)[6)]	46,997,723	65,842,680	112,840,403	58,000m	0.2%

Note: 1) Nošovice plant (CZ) 2) Žilina plant (SK) 3) Eurostat SBS (NACE Rev.2), 2010 4) Eurostat SBS = value added at factor cost 5) Eurostat SBS = number of persons employed (2009 data) 6) Further explanations: Hyundai = "including agency"; Kia = "including social insurance and health insurance payable by employer"; Eurostat SBS = personnel costs

Source: Hyundai/Kia, Eurostat (SBS)

Table 11: Impact of Hyundai/Kia parts suppliers

Indicator	Hyundai suppliers[1)]	Kia suppliers[2)]	Total HMC suppliers (Hyundai + Kia)	Total manufacture of parts and accessories for motor vehicles (EU27)[3)]	HMC as % of EU27
Turnover (€)	1,322,100,000	2,108,814,400	3,430,914,400	188,849m	1.8%
Gross value added (€)[4)]	**321,844,897**	**513,358,409**	**835,203,306**	45,972m	**1.8%**
Employment[5)]	**7,069**	**11,276**	**18,346***	1,009,800	**1.8%**
Wages & salaries(€)[6)]	**225,581,662**	**359,813,824**	**585,395,486**	32,222m	**1.8%**

Note: Row marked * does not sum to total due to rounding: figures rounded to the nearest integer. Rounding occurs through estimation procedures as explained in footnote 36. Numbers in **red** are imputed assuming that GVA, employment and wage payments by the European suppliers to Hyundai and Kia are proportional to their share of the of the industry's turnover in the EU (=1.8%). The values are allocated Hyundai and Kia according to their share in EU purchasing expenditures (Hyundai = 39%, Kia = 61%) (1) purchases from suppliers for the Nošovice plant (2) purchases from suppliers for the Žilina plant (3) Eurostat SBS (NACE Rev.2), 2010 (4) Eurostat SBS = value added at factor cost (5) Eurostat SBS = number of persons employed (2009 data) (6) Eurostat SBS = personnel costs

Source: Hyundai/Kia, Eurostat (SBS)

Table 12: Impact of Hyundai/Kia sale and distribution

Indicator	Hyundai[1)]	Kia[2)]	Total HMC (Hyundai + Kia)	Total sale of cars and light motor vehicles (EU27)[3)]	HMC as % of EU27
Turnover (€)	18,014,050,384	13,916,331,058	31,930,381,442*	678,768m	4.7%
Gross value added (€)[4)]	1,082,071,132	1,136,332,960	2,218,404,093*	59,593m	3.7%
Employment[5)]	21,896 (distributor: 1,301)	18,700 (distributor: 965)	40,596 (distributor: 2,266)	1,398,600	2.9%
Wages & salaries(€)[6)]	805,556,819	595,809,626	1,401,366,445	41,512m	3.4%

Note: The rows indicated * do not sum to total due to rounding: figures rounded to the nearest integer. Rounding occurs through estimation procedures (see below) and currency conversion (1), (2) figures for the national and European distributors were provided by Hyundai and Kia; Eurostat average figures for GVA and Turnover were used for the Hyundai and Kia retail network (3) Eurostat SBS (NACE Rev.2), 2010 (4) Hyundai/Kia = sales revenue, dealerships' revenue is assumed to be equal to the average turnover per enterprise in the NACE sector 'sale of cars and light motor vehicles' = €3,643,763; Eurostat SBS = value added at factor cost (2009 data) (5) Eurostat SBS = number of persons employed; Hyundai/Kia shares are computed based on the number of employees at the national distributor + dealers' employees. To compute the number of dealers' employees for Kia, we assumed the same number of dealers' employees per dealer as for Hyundai (8.7), multiplied by the number of dealers (2,040). (6) Eurostat SBS = personnel costs; wages and salaries of employees of the Hyundai and Kia national/European distributors were provided by Hyundai/Kia; no data available on wages and salaries paid by Hyundai/Kia dealers; wages and salaries of dealership employees were assumed to be equal to the EU average for employees in 'sale of cars and light motor vehicles' = €29,681.

Source: Hyundai/Kia, Eurostat (SBS)

Table 13: Impact of Hyundai/Kia research and development

Indicator	Hyundai/Kia[1)]	Total research and experimental development on natural sciences and engineering (EU27)[2)]	HMC as % of EU27
Turnover (€)	47,553,523	53,000m	0.1%
Gross value added (€)[3)]	30,011,137	23,200m	0.1%
Employment[4)]	220	454,100	0.0%
Wages & salaries(€)[5)]	16,954,445	23,500m	0.1%

Note: (1) Figures relate to the joint Hyundai Europe Technical Center (2) Eurostat SBS (NACE Rev.2), 2010 (3) Eurostat SBS = value added at factor cost (4) Eurostat SBS = number of persons employed (2009 data) (5) Eurostat SBS = personnel costs

Source: Hyundai/Kia, Eurostat (SBS)