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2019  
2020

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# The Automobile Industry Pocket Guide



ACEA

European  
Automobile  
Manufacturers  
Association

[WWW.ACEA.BE](http://WWW.ACEA.BE)

**BMW Group**



**DAIMLER**



**HONDA**  
The Power of Dreams



**GROUPE**  
**RENAULT**

**TOYOTA**

**VOLKSWAGEN**  
AKTIENGESELLSCHAFT



**VOLVO**

## Foreword

Each year, the European Automobile Manufacturers' Association (ACEA) publishes this Pocket Guide in order to provide you a clear and complete overview of one of Europe's key industries. Updated with the latest figures, this 2019-2020 Automobile Industry Pocket Guide is the point of reference for all those interested in automotive issues and related EU policies.

The automotive sector provides direct and indirect jobs to 13.8 million Europeans today, representing 6.1% of total EU employment. In 2018, EU manufacturers produced 16.5 million passenger cars – representing 21% of global car output – and more than 2.6 million commercial vehicles. Almost 6.1 million of those motor vehicles were exported in 2018, generating a trade surplus of €84.4 billion for the European Union.

But not only does our industry generate jobs and economic growth, automobiles are also a vital source of government revenue. New data shows that there are some 308 million motor vehicles in circulation on the EU's roads, of which 268 million are cars. Taxation on these vehicles is worth €428 billion per year in the EU15 countries alone – that is more than two and a half times the total EU budget!

At the same time, Europe's auto industry remains committed to addressing tomorrow's challenges. Manufacturers are working hard to decouple their environmental footprint from the production of vehicles, for example. Total CO<sub>2</sub> emissions from car production have been reduced by 34.7% since 2005, while the use of water per car produced was cut by a staggering 44.1% during the same period.

The same level of ambition also applies to ACEA's objective of making mobility cleaner, smarter and safer in the future. To that end, EU automakers and suppliers have increased their R&D investments by 6.7%, to reach an all-time high of €57.4 billion per year. This makes the automotive sector Europe's number one investor in innovation, responsible for 28% of total EU spending on R&D.

And these investments are clearly paying off. As the newly-added road safety chapter of this Guide shows, our vehicles are becoming increasingly safer. Because while the number of vehicles on EU roads increased by almost 46 million since 2005, the number of road fatalities fell by 45%. What is more, the EU counts 49 road fatalities per million inhabitants annually, while the global average is 182. Indeed, Europe has by far the safest roads in the world.

# ACEA represents Europe's car, van, truck and bus makers

## **Members and partners**

The European Automobile Manufacturers' Association (ACEA) is the advocate for the automobile industry in Europe, representing the 15 major manufacturers of passenger cars, vans, trucks and buses with production sites in the EU.

ACEA's members are: BMW Group, CNH Industrial, DAF Trucks, Daimler, Fiat Chrysler Automobiles, Ford of Europe, Honda Motor Europe, Hyundai Motor Europe, Jaguar Land Rover, PSA Group, Renault Group, Toyota Motor Europe, Volkswagen Group, Volvo Cars and Volvo Group.

ACEA has permanent cooperation with the European Council for Automotive R&D (EUCAR), which is the industry body for collaborative research and development.

ACEA works closely with the 29 national automobile manufacturers' associations in Europe, and maintains a dialogue on international issues with automobile associations around the world.

## ACEA's mission and priority areas

### **ACEA's mission**

- Define and advocate the common interests, policies and positions of the European automobile industry.
- Engage in dialogue with the European institutions and other stakeholders in order to advance understanding of industry issues, and to contribute to effective policy and legislation at both European and global levels.
- Act as a portal for expert knowledge on vehicle-related regulation.
- Communicate the role and importance of the industry, using reliable data and information.
- Monitor activities that affect the automobile industry, cooperating with the other stakeholders involved.
- Undertake strategic reflection on the increasingly global challenges of mobility, sustainability and competitiveness.

### **Priority fields**

Through its member companies, ACEA taps into a wealth of technical, regulatory and practical expertise in the following priority fields:

- Connected and automated driving
- Competitiveness, market and economy
- Environment and sustainability
- International trade
- Research and innovation
- Road safety
- Transport policy

## How ACEA works

The ACEA Board of Directors is composed of the CEOs and Presidents of its member companies. Additionally, a Commercial Vehicle Board of Directors addresses the specific issues that face the commercial vehicle manufacturers that ACEA represents: DAF Trucks, Daimler Trucks, Iveco, MAN Truck & Bus, Scania, and Volvo Group.

The day-to-day work of the ACEA secretariat is overseen by the Secretary General, who ensures that the Board of Directors' priorities are addressed. Technical expertise and advisory input comes from working groups on topics as diverse as emissions, road and vehicle safety, general transport policy, and regulatory compliance. These specialist working groups are made up of experts from the member companies.



## About EUCAR

The European Council for Automotive R&D (EUCAR) is the collaborative research organisation of the major automobile manufacturers in Europe, with the mission to strengthen their competitiveness through strategic collaborative research and innovation.

EUCAR is committed to help society achieve safer, cleaner, smarter and more efficient transport solutions. Together with its members, EUCAR drives the strategy and assessment of collaborative automotive research and innovation, and establishes common work with the European Commission, member states and other key stakeholders.

EUCAR collaborative research and innovation activities cover both passenger and commercial vehicles, focused on the following strategic pillars:

- Sustainable propulsion
- Affordability and competitiveness
- Safe and integrated mobility
- Commercial vehicles
- Urban mobility

EUCAR's members participate in high-quality projects with relevant results for the industry. Projects are mainly financed through the European Union Framework Programmes for research and innovation, matched with industry funding.

Visit EUCAR's website to see the project book with an overview of all the current projects: **[www.eucar.be](http://www.eucar.be)**

EUCAR is governed by its Council, composed of the heads of the research and advanced development divisions of the member companies. The EUCAR Chairman is nominated annually from the Council on a rotating basis.

EUCAR's members are: BMW Group, CNH Industrial, DAF Trucks, Fiat Chrysler Automobiles, Ford of Europe, Honda Motor Europe, Hyundai Motor Europe, Jaguar Land Rover, PSA Group, Renault Group, Toyota Motor Europe, Volkswagen Group, Volvo Cars and Volvo Group.

# Key figures

## EMPLOYMENT

Manufacture of motor vehicles (EU)	2.6 million people = 8.5% of EU employment in manufacturing	2017
Total (EU manufacturing, services and construction)	13.8 million people = 6.1% of total EU employment	2017

## PRODUCTION

Motor vehicles (world)	98.1 million units	2018
Motor vehicles (EU)	19.2 million units = 20% of global motor vehicle production	2018
Passenger cars (world)	79.3 million units	2018
Passenger cars (EU)	16.5 million units = 21% of global passenger car production	2018

## REGISTRATIONS

Motor vehicles (world)	97.2 million units	2018
Motor vehicles (EU)	17.6 million units = 18% of global motor vehicle registrations/sales	2018
Passenger cars (world)	78.7 million units	2018
Passenger cars (EU)	15.2 million units = 19% of global passenger car registrations/sales	2018
Petrol (EU)	56.7%	2018
Diesel (EU)	35.9%	2018
Electrically-chargeable (EU)	2.0%	2018

## TRADE

Exports (extra-EU)	€138.4 billion	2018
Imports (extra-EU)	€54.0 billion	2018
Trade surplus	€84.4 billion	2018

## VEHICLES IN USE

Motor vehicles (EU)	308.3 million units	2017
Passenger cars (EU)	268.0 million units	2017
Motorisation rate (EU)	602 vehicles per 1,000 inhabitants	2017
Average age of cars (EU)	11.1 years	2017

## ROAD SAFETY

Road fatalities per million inhabitants (EU)	49 people (global average = 182)	2017
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## ENVIRONMENT

Average CO2 emissions (EU)	120.6g CO2/km	2018
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## INNOVATION

Automotive R&D investment	€57.4 billion	2017
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## TAXATION

Fiscal income from motor vehicles (EU15)	€428 billion	2017
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# Employment



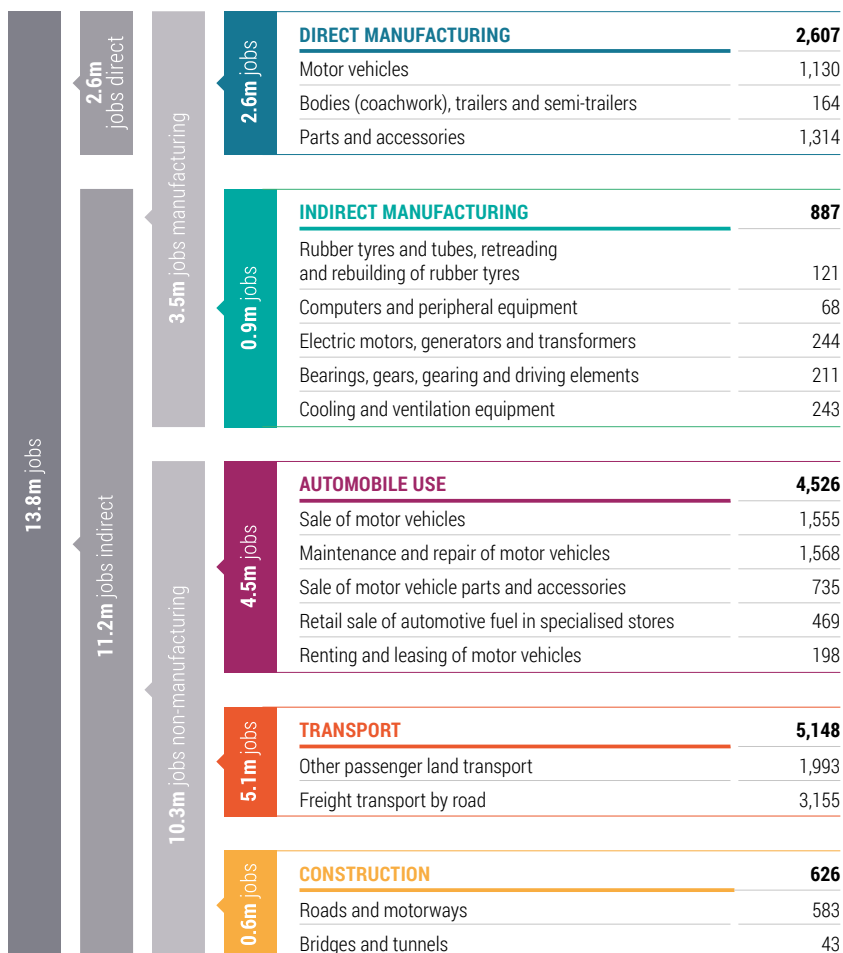
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## Automotive sector: direct and indirect employment in the EU

IN THOUSANDS / 2017<sup>1</sup>

SOURCE: EUROSTAT

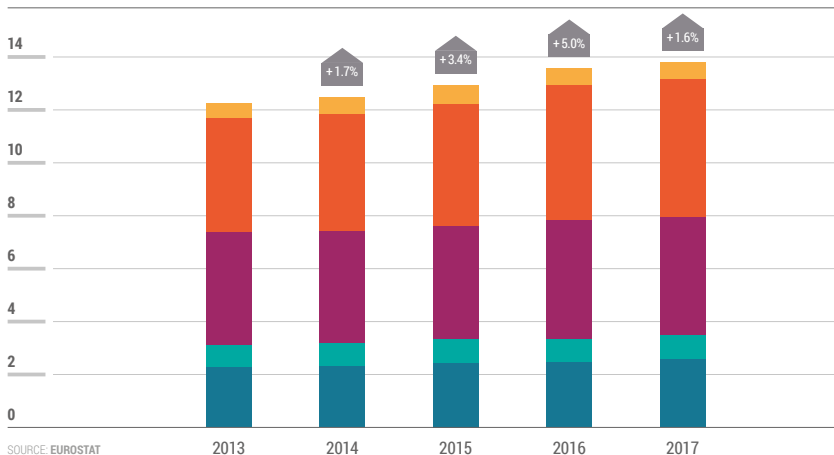
1. Provisional figures

**The auto industry provides indirect and direct jobs for 13.8 million Europeans**

## Employment in the EU automotive sector

IN MILLION UNITS / 2013 – 2017

● Manufacturing direct ● Manufacturing indirect ● Automobile use ● Transport ● Construction



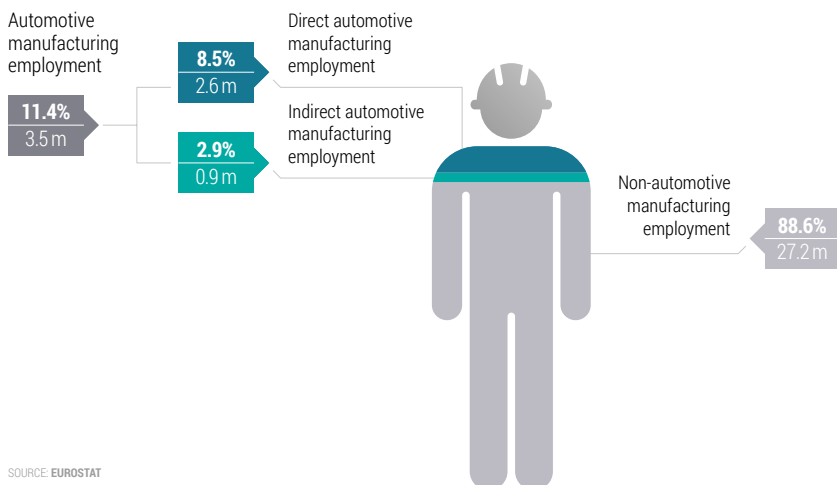
EU automotive employment	2013	2014	2015	2016	2017	% change 17/16
Manufacturing direct	2,291,594	2,369,570	2,451,219	2,503,658	2,607,477	4.1
Manufacturing indirect	811,344	818,630	890,110	882,627	887,350	0.5
Automobile use	4,261,539	4,256,382	4,303,637	4,448,071	4,525,639	1.7
Transport	4,335,551	4,450,654	4,633,609	5,120,469	5,147,575	0.5
Construction	591,269	607,908	647,600	621,334	625,658	0.7
<b>TOTAL</b>	<b>12,291,297</b>	<b>12,503,144</b>	<b>12,926,175</b>	<b>13,576,158</b>	<b>13,793,699</b>	<b>1.6</b>

SOURCE: EUROSTAT

**The automotive sector  
accounts for 6.1% of all EU jobs**

## EU manufacturing employment

% SHARE / 2017



SOURCE: EUROSTAT

Direct automotive  
manufacturing employment**2.6 million people**  
= 8.5% of EU employment in manufacturingDirect & indirect automotive  
manufacturing employment**3.5 million people**  
= 11.4% of EU employment in manufacturingTotal automotive employment  
(manufacturing, services and construction)**13.8 million people**  
= 6.1% of total EU employment

EU employment in the manufacturing sector

**30.7 million people**  
= 13.5% of total EU employment

EU total employment

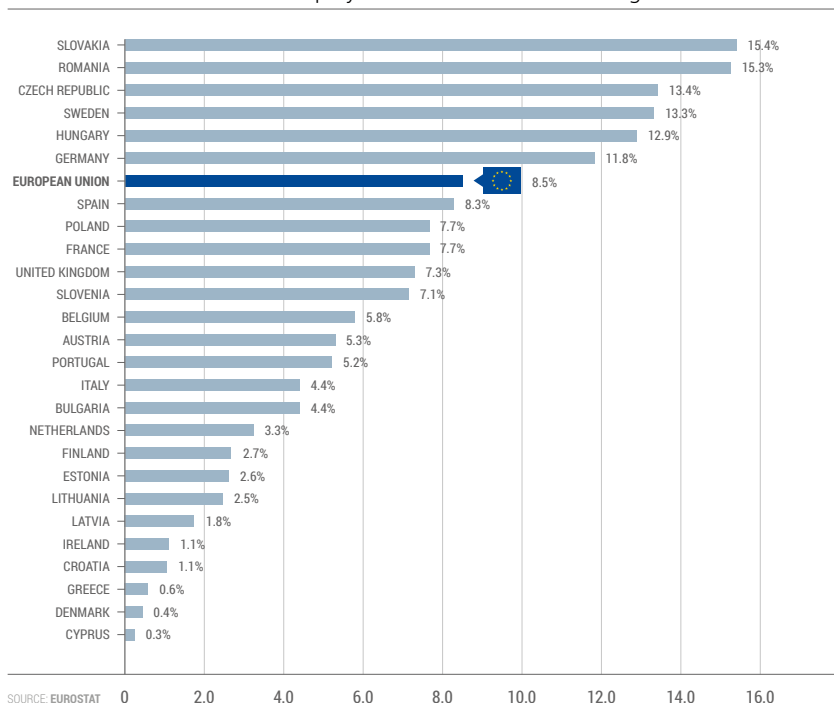
**227.0 million people**

SOURCE: EUROSTAT

**11.4% of EU manufacturing jobs  
are in the automotive sector**

## Share of direct automotive employment in total manufacturing

BY COUNTRY / 2017



## Direct automotive manufacturing employment

BY COUNTRY / 2017

Austria	33,843	France	223,000	Poland	202,858
Belgium	29,181	Germany	869,118	Portugal	37,071
Bulgaria	24,380	Greece	1,928	Romania	185,242
Croatia	2,861	Hungary	97,688	Slovakia	77,062
Cyprus	85	Ireland	2,359	Slovenia	14,582
Czech Republic	177,156	Italy	162,876	Spain	157,610
Denmark	1,317	Latvia	2,087	Sweden	79,600
Estonia	2,860	Lithuania	5,376	United Kingdom	186,000
Finland	8,655	Netherlands	22,682		



European Union 2,607,477

SOURCE: EUROSTAT

**The EU automotive sector directly employs  
2.6 million people in manufacturing**

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# Production



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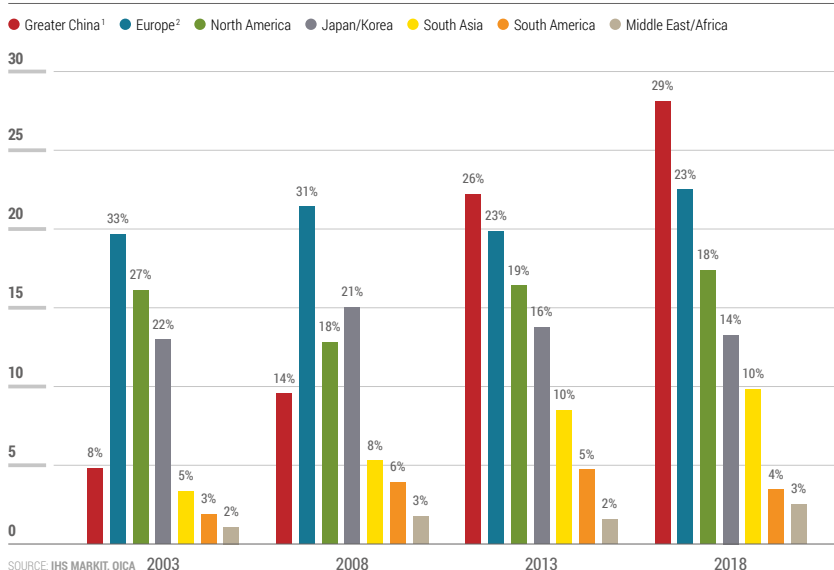
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## World motor vehicle production

IN MILLION UNITS, % SHARE / 2003 – 2018



## World motor vehicle production

IN 1,000 UNITS / 2018

	2018	2017	% change 18/17	% share 2018
Europe <sup>2</sup>	22,777	22,831	-0.2	23.2
Greater China <sup>1</sup>	28,399	29,581	-4.0	28.9
Japan/Korea	13,416	13,525	-0.8	13.7
Middle East/Africa	2,551	2,609	-2.2	2.6
North America	17,528	17,548	-0.1	17.9
South America	3,540	3,405	3.9	3.6
South Asia	9,890	9,222	7.2	10.1
<b>WORLD</b>	<b>98,101</b>	<b>98,721</b>	<b>-0.6</b>	<b>100.0</b>

SOURCE: IHS MARKIT, OICA

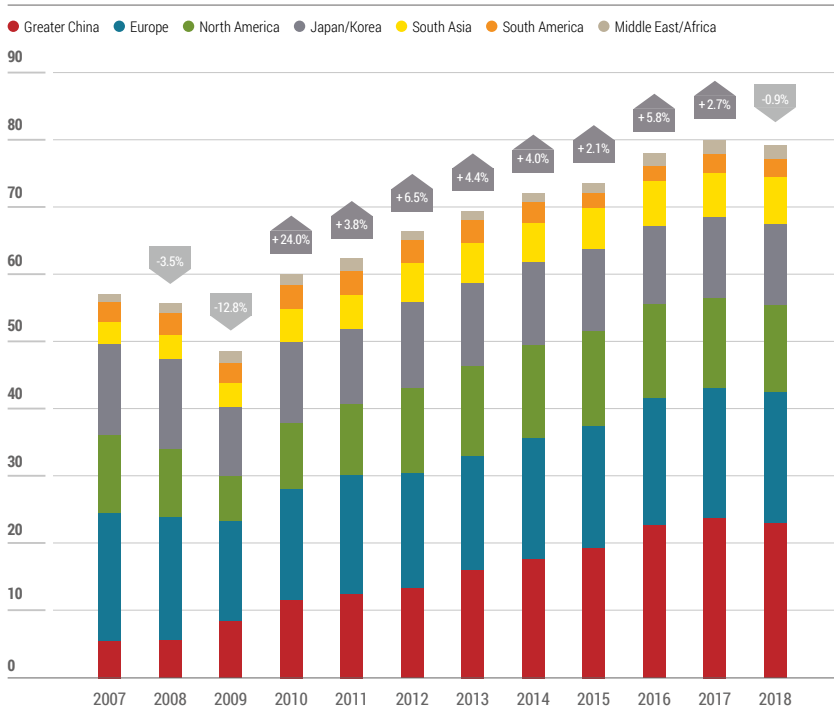
1. Includes Hong Kong and Taiwan

2. Includes Turkey and CIS countries

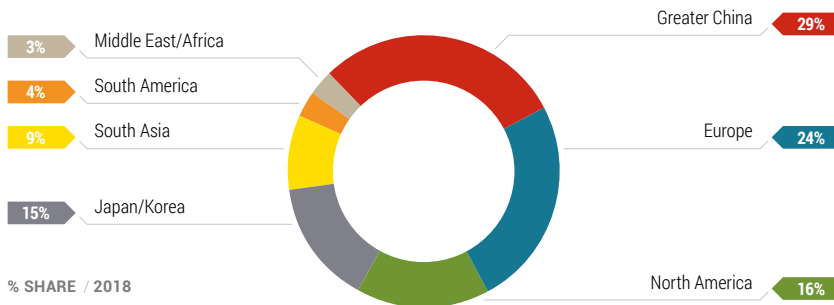
**98.1 million motor vehicles  
were produced globally in 2018**

## World passenger car production

IN MILLION UNITS, % CHANGE / 2007 – 2018



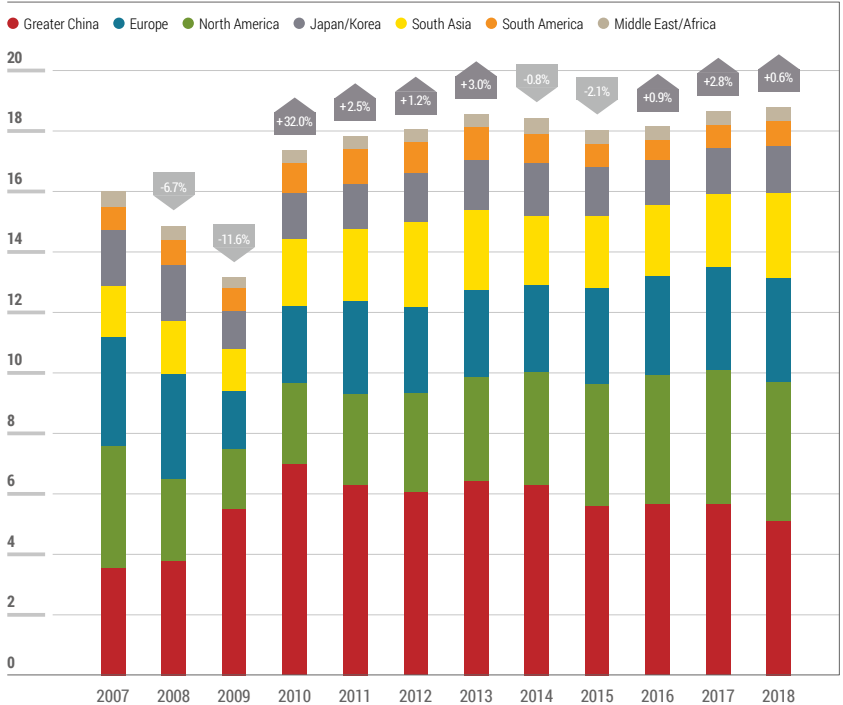
SOURCE: IHS MARKIT, OICA



**A quarter of all cars produced worldwide  
are made in Europe**

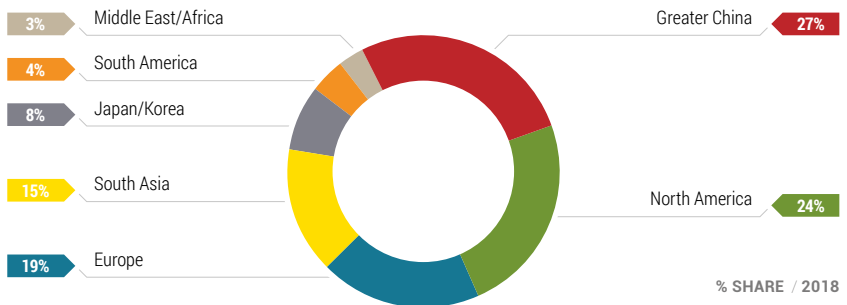
World commercial vehicle production<sup>1</sup>

IN MILLION UNITS, % CHANGE / 2007 – 2018



SOURCE: IHS MARKIT, OICA


1. Includes buses



**19% of all commercial vehicles  
are manufactured in Europe**

## Motor vehicle production in the EU

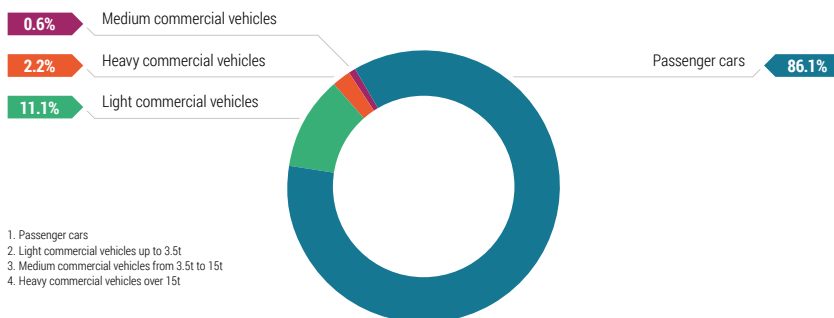
BY COUNTRY / 2018

	PC <sup>1</sup>	LCV <sup>2</sup>	MCV <sup>3</sup>	HCV <sup>4</sup>	TOTAL
Austria	144,500	–	8,663	8,967	162,130
Belgium	265,958	–	–	42,189	308,147
Czech Republic	1,345,041	–	61	744	1,345,846
Finland	112,104	–	–	148	112,252
France	1,763,300	506,000	15,793	52,817	2,337,910
Germany	5,120,409	362,438	27,899	131,986	5,642,732
Hungary	430,988	–	–	–	430,988
Italy	670,932	317,885	32,223	7,276	1,028,316
Lithuania	–	–	–	92	92
Netherlands	215,803	–	–	87,193	302,996
Poland	451,600	180,058	6,392	15,650	653,700
Portugal	234,151	67,926	4,620	–	306,697
Romania	476,769	–	–	–	476,769
Slovakia	1,031,241	–	–	–	1,031,241
Slovenia	209,316	–	–	–	209,316
Spain	2,267,396	632,981	10,083	18,495	2,928,955
Sweden	281,104	–	–	48,054	329,158
United Kingdom	1,519,440	60,569	4,396	13,445	1,597,850
 European Union	16,540,052	2,127,857	110,130	427,056	19,205,095

SOURCE: IHS MARKIT, OICA

## EU motor vehicle production by type

% SHARE / 2018

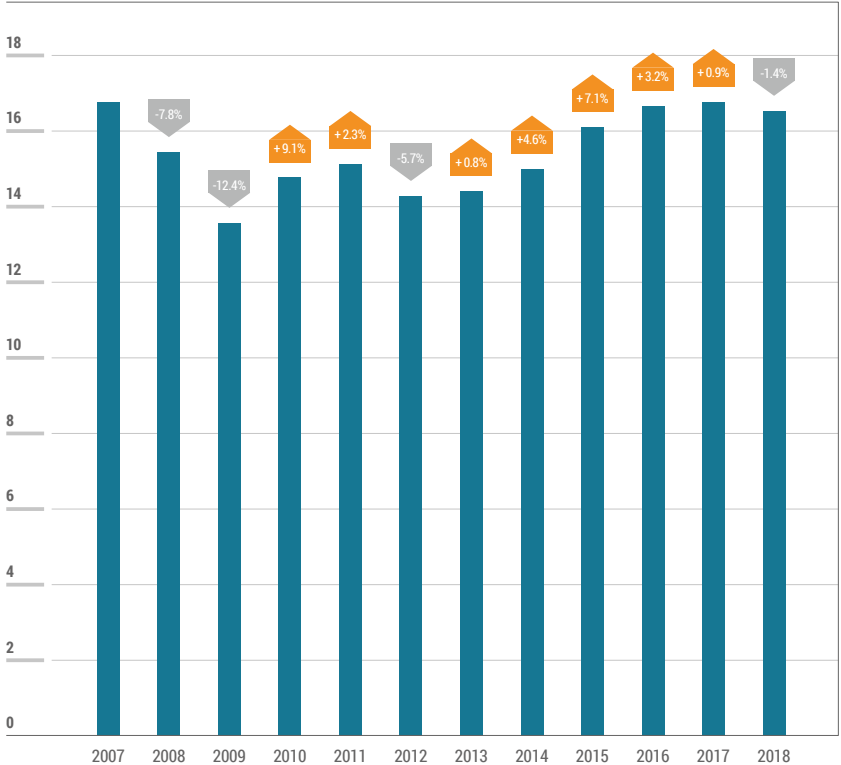


**19.2 million motor vehicles  
were manufactured in the EU in 2018**

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## Passenger car production in the EU

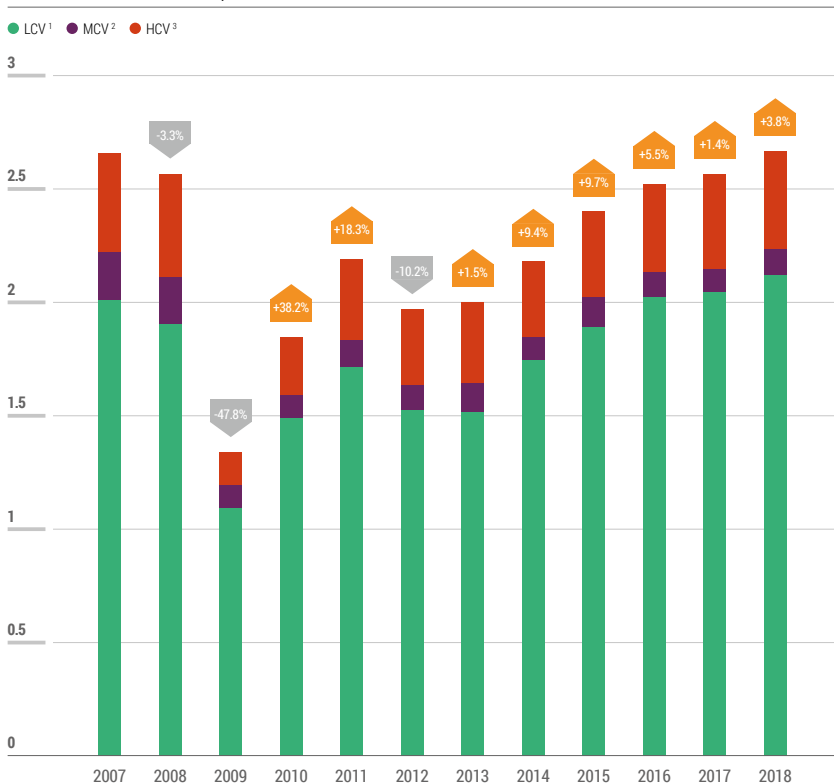
IN MILLION UNITS, % CHANGE / 2007 – 2018



SOURCE: IHS MARKIT, OICA

## Commercial vehicle production in the EU

IN MILLION UNITS, % CHANGE / 2007 – 2018

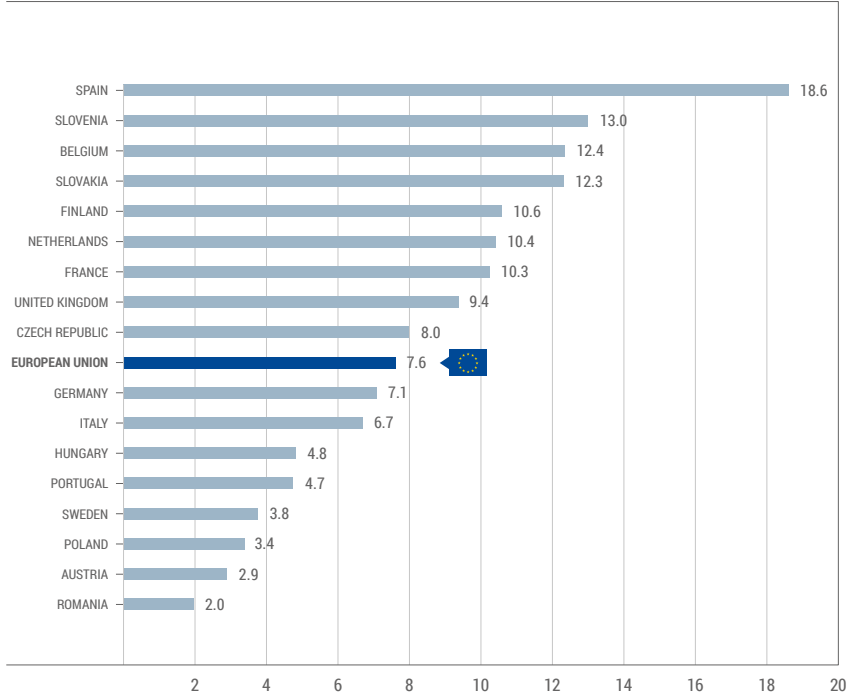


SOURCE: IHS MARKIT, OICA

1. Light commercial vehicles up to 3.5t
2. Medium commercial vehicles from 3.5t to 15t
3. Heavy commercial vehicles over 15t

**Over 2.6 million commercial vehicles  
were produced in the EU in 2018**

## Motor vehicle production per direct automotive manufacturing employee

BY COUNTRY / 2017<sup>1</sup>

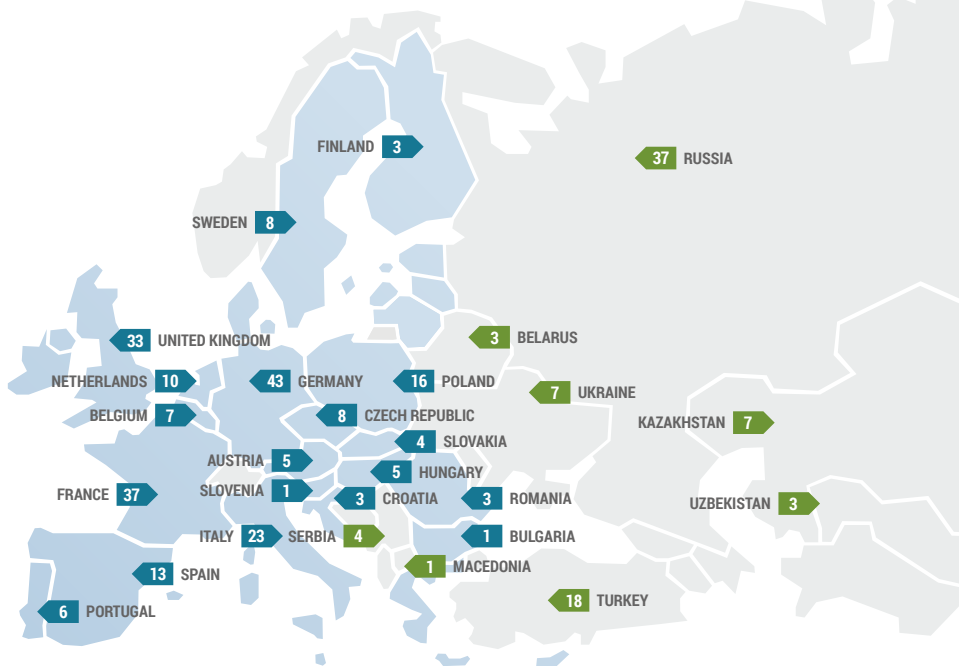
SOURCE: EUROSTAT, IHS MARKIT, OICA

1. Based on direct automotive manufacturing employment, most recent data available

**Each year the average EU auto industry worker  
makes 7.6 motor vehicles**

## Automobile assembly and engine production plants in Europe

2018



SOURCE: ACEA

**There are 229 automobile assembly and production plants in the EU**

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# Registrations



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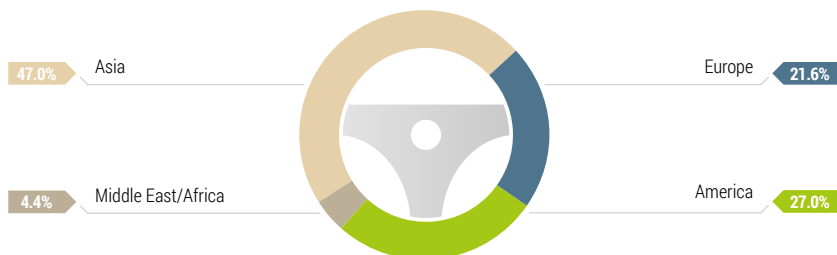


## World new motor vehicle registrations

MARKET SHARES / 2018

Motor vehicles	In 1,000 units	2018	2017	% change 18/17	% share 2018
<b>EUROPE</b>		<b>21,009</b>	<b>21,046</b>	<b>-0.2</b>	<b>21.6</b>
EU <sup>1</sup>		17,643	17,542	0.6	18.1
EFTA		551	577	-4.5	0.6
Russia		1,901	1,688	12.6	2.0
Turkey		644	986	-34.7	0.7
Ukraine		90	91	-0.7	0.1
Others: Europe <sup>2</sup>		181	162	11.4	0.2
<b>AMERICA</b>		<b>26,213</b>	<b>25,859</b>	<b>1.4</b>	<b>27.0</b>
North America		21,352	21,335	0.1	22.0
of which the US		17,858	17,686	1.0	18.4
South America		4,861	4,524	7.5	5.0
of which Brazil		2,550	2,234	14.2	2.6
<b>ASIA</b>		<b>45,726</b>	<b>46,025</b>	<b>-0.6</b>	<b>47.0</b>
China		28,546	29,465	-3.1	29.4
Japan		5,256	5,224	0.6	5.4
India		4,445	4,052	9.7	4.6
South Korea		1,821	1,798	1.3	1.9
Others: Asia <sup>3</sup>		5,658	5,485	3.1	5.8
<b>MIDDLE EAST/AFRICA</b>		<b>4,297</b>	<b>4,727</b>	<b>-9.1</b>	<b>4.4</b>
<b>WORLD</b>		<b>97,244</b>	<b>97,657</b>	<b>-0.4</b>	<b>100.0</b>

SOURCE: ACEA, IHS MARKIT

<sup>1</sup>. Data for Malta not available<sup>2</sup>. Includes Belarus, Bosnia-Herzegovina, Kazakhstan, North Macedonia, Serbia, Uzbekistan<sup>3</sup>. Includes Hong Kong, Taiwan and all the other South Asian countries

**Europe accounts for 21.6%  
of the world's motor vehicle sales**

## New passenger car registrations

MARKET SHARES / 2018

Passenger cars	In 1,000 units	2018	2017	% change 18/17	% share 2018
<b>EUROPE</b>		<b>18,012</b>	<b>18,035</b>	<b>-0.1</b>	<b>22.9</b>
EU <sup>1</sup>		15,159	15,137	0.1	19.3
EFTA		466	494	-5.7	0.6
Russia		1,682	1,476	13.9	2.1
Turkey		486	723	-32.7	0.6
Ukraine		77	79	-3.5	0.1
Others: Europe <sup>2</sup>		142	126	13.1	0.2
<b>AMERICA</b>		<b>20,407</b>	<b>20,334</b>	<b>0.4</b>	<b>25.9</b>
North America <sup>3</sup>		16,664	16,849	-1.1	21.2
<i>of which the US</i>		<i>13,910</i>	<i>13,965</i>	<i>-0.4</i>	<i>17.7</i>
South America		3,743	3,485	7.4	4.8
<i>of which Brazil</i>		<i>2,090</i>	<i>1,855</i>	<i>12.7</i>	<i>2.7</i>
<b>ASIA</b>		<b>36,642</b>	<b>37,152</b>	<b>-1.4</b>	<b>46.6</b>
China		23,220	24,016	-3.3	29.5
Japan		4,374	4,377	-0.1	5.6
India		3,464	3,301	4.9	4.4
South Korea		1,520	1,482	2.6	1.9
Others: Asia <sup>4</sup>		4,065	3,977	2.2	5.2
<b>MIDDLE EAST/AFRICA</b>		<b>3,648</b>	<b>4,046</b>	<b>-9.8</b>	<b>4.6</b>
<b>WORLD</b>		<b>78,709</b>	<b>79,566</b>	<b>-1.1</b>	<b>100.0</b>

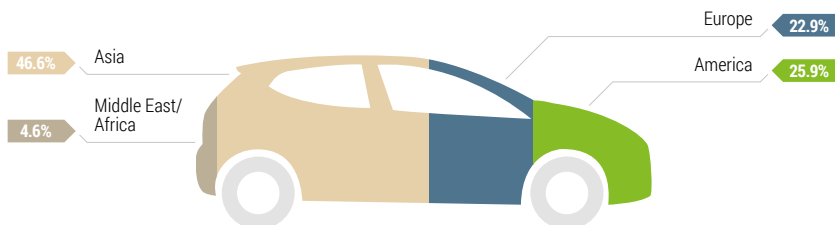
SOURCE: ACEA, IHS MARKIT

1. Data for Malta not available

2. Includes Belarus, Bosnia-Herzegovina, Kazakhstan, North Macedonia, Serbia, Uzbekistan

3. Based on production type

4. Includes Hong Kong, Taiwan and all the other South Asian countries

**78.7 million cars were registered worldwide in 2018**

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## New commercial vehicle registrations

MARKET SHARES / 2018

Commercial vehicles <sup>1</sup> in 1,000 units	2018	2017	% change 18/17	% share 2018
<b>EUROPE</b>	<b>2,997</b>	<b>3,011</b>	<b>-0.5</b>	<b>16.2</b>
EU <sup>2</sup>	2,484	2,405	3.3	13.4
EFTA	85	83	2.7	0.5
Russia	219	212	3.2	1.2
Turkey	157	263	-40.2	0.8
Ukraine	13	11	18.8	0.1
Others: Europe	38	36	5.7	0.2
<b>AMERICA</b>	<b>5,806</b>	<b>5,526</b>	<b>5.1</b>	<b>31.3</b>
North America <sup>3</sup>	4,687	4,487	4.5	25.3
of which the US	3,948	3,721	6.1	21.3
South America	1,118	1,039	7.6	6.0
of which Brazil	461	379	21.4	2.5
<b>ASIA</b>	<b>9,083</b>	<b>8,872</b>	<b>2.4</b>	<b>49.0</b>
China	5,326	5,449	-2.3	28.7
Japan	883	847	4.2	4.8
India	981	752	30.5	5.3
South Korea	301	317	-4.9	1.6
Others: Asia	1,593	1,508	5.6	8.6
<b>MIDDLE EAST/AFRICA</b>	<b>649</b>	<b>681</b>	<b>-4.8</b>	<b>3.5</b>
<b>WORLD</b>	<b>18,535</b>	<b>18,091</b>	<b>2.4</b>	<b>100.0</b>

SOURCE: ACEA, IHS MARKIT

1. Includes light, medium and heavy commercial vehicles, and buses and coaches

2. Data for Malta not available


3. Based on production type



**18.5 million vans, trucks and buses  
were registered globally in 2018**

## Motor vehicle registrations in the EU<sup>1</sup>

BY COUNTRY / 2018

	PC <sup>2</sup>	LCV <sup>3</sup>	CV <sup>4</sup>	BC <sup>5</sup>	TOTAL
AUSTRIA	341,068	43,641	8,204	1,125	394,038
BELGIUM	549,632	77,936	10,816	1,060	639,444
BULGARIA	34,332	6,282	–	–	40,614
CROATIA	59,856	8,901	1,397	224	70,378
CYPRUS	12,956	1,815	121	–	14,892
CZECH REPUBLIC	261,437	20,225	9,894	1,203	292,759
DENMARK	218,565	33,859	4,998	578	258,000
ESTONIA	25,387	5,012	1,078	137	31,614
FINLAND	120,499	15,515	3,897	475	140,386
FRANCE	2,173,481	457,573	55,463	6,230	2,692,747
GERMANY	3,435,778	285,191	94,404	6,687	3,822,060
GREECE	103,431	6,905	351	263	110,950
HUNGARY	136,594	22,728	6,258	659	166,239
IRELAND	125,557	25,561	2,144	446	153,708
ITALY	1,910,025	181,590	25,582	4,584	2,121,781
LATVIA	16,879	2,393	1,645	126	21,043
LITHUANIA	32,447	3,577	8,290	696	45,010
LUXEMBOURG	52,811	4,853	1,032	217	58,913
NETHERLANDS	443,812	79,171	15,971	562	539,516
POLAND	531,889	68,819	29,870	2,687	633,265
PORTUGAL	228,290	39,282	5,133	510	273,215
ROMANIA	130,919	17,585	6,903	1,324	156,731
SLOVAKIA	98,080	9,126	4,308	351	111,865
SLOVENIA	72,835	12,709	2,761	187	88,492
SPAIN	1,321,438	214,553	24,178	3,327	1,563,496
SWEDEN	353,729	56,628	6,802	931	418,090
UNITED KINGDOM	2,367,147	357,325	51,825	7,236	2,783,533
 <b>European Union</b>	<b>15,158,874</b>	<b>2,058,755</b>	<b>383,325</b>	<b>41,825</b>	<b>17,642,779</b>
ICELAND	17,967	1,918	422	109	20,416
NORWAY	147,929	37,204	7,068	1,026	193,227
SWITZERLAND	299,716	32,386	4,389	681	337,172
<b>EFTA</b>	<b>465,612</b>	<b>71,508</b>	<b>11,879</b>	<b>1,816</b>	<b>550,815</b>
<b>EU + EFTA</b>	<b>15,624,486</b>	<b>2,130,263</b>	<b>395,204</b>	<b>43,641</b>	<b>18,193,594</b>

SOURCE: ACEA

1. Data for Malta not available

2. Passenger cars

3. Light commercial vehicles up to 3.5t

4. Commercial vehicles over 3.5t (trucks)

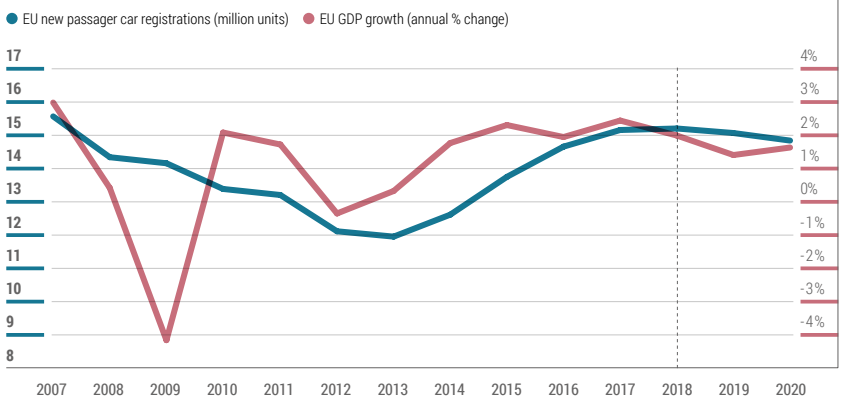
5. Buses and coaches over 3.5t

**The EU represents a market of  
17.6 million motor vehicles**

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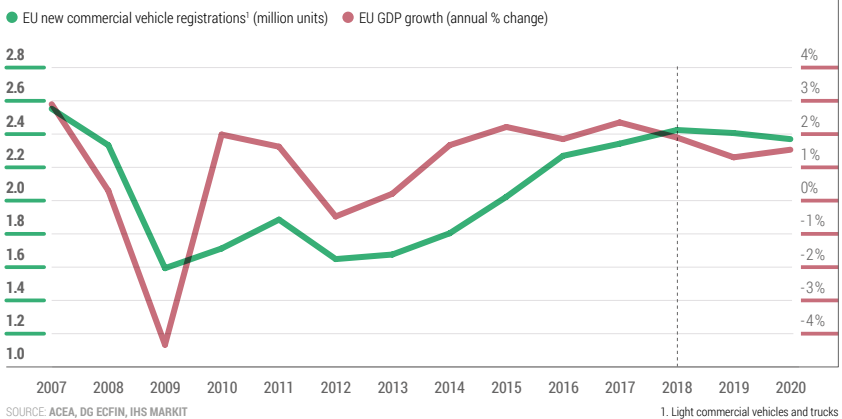
## New passenger car registrations and annual GDP growth in the EU

2007 – 2020



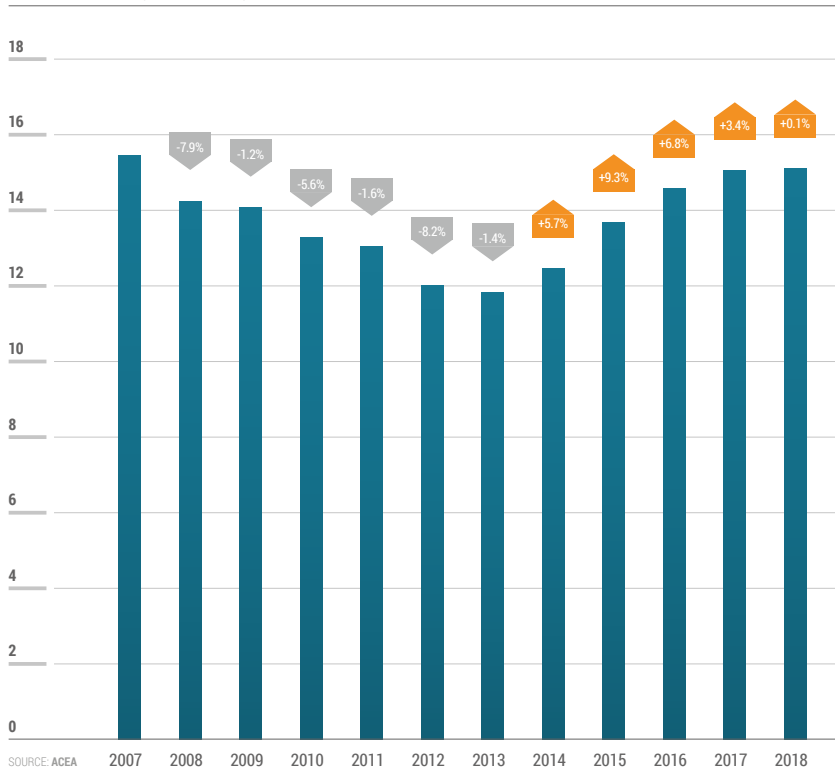
## New commercial vehicle registrations and annual GDP growth in the EU

2007 – 2020



## New passenger car registrations in the EU

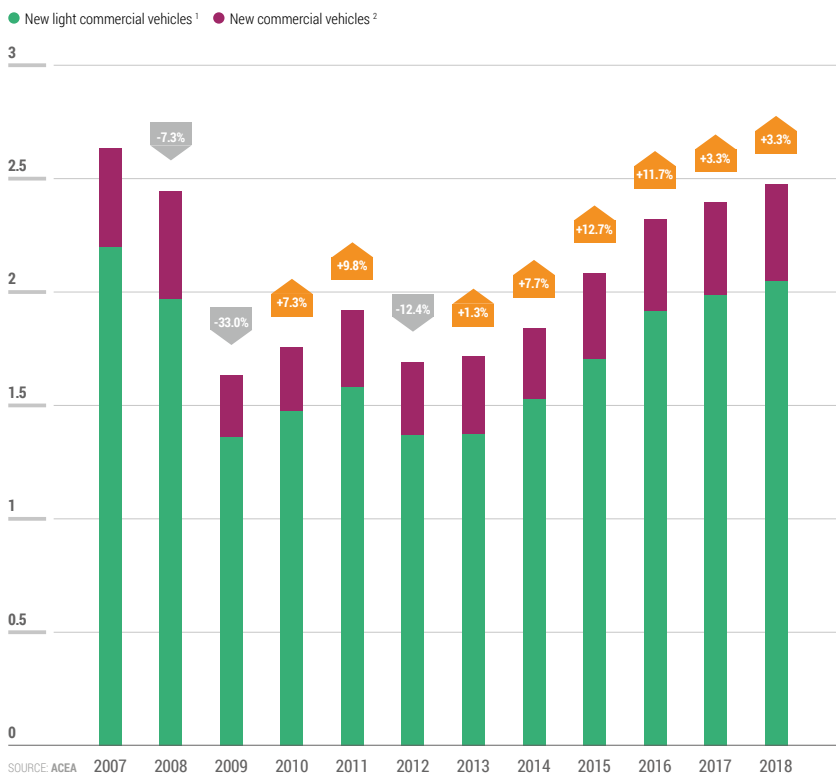
IN MILLION UNITS, % CHANGE / 2007 – 2018



**15.2 million cars were sold across the EU in 2018**



## New commercial vehicle registrations in the EU IN MILLION UNITS, % CHANGE / 2007 – 2018

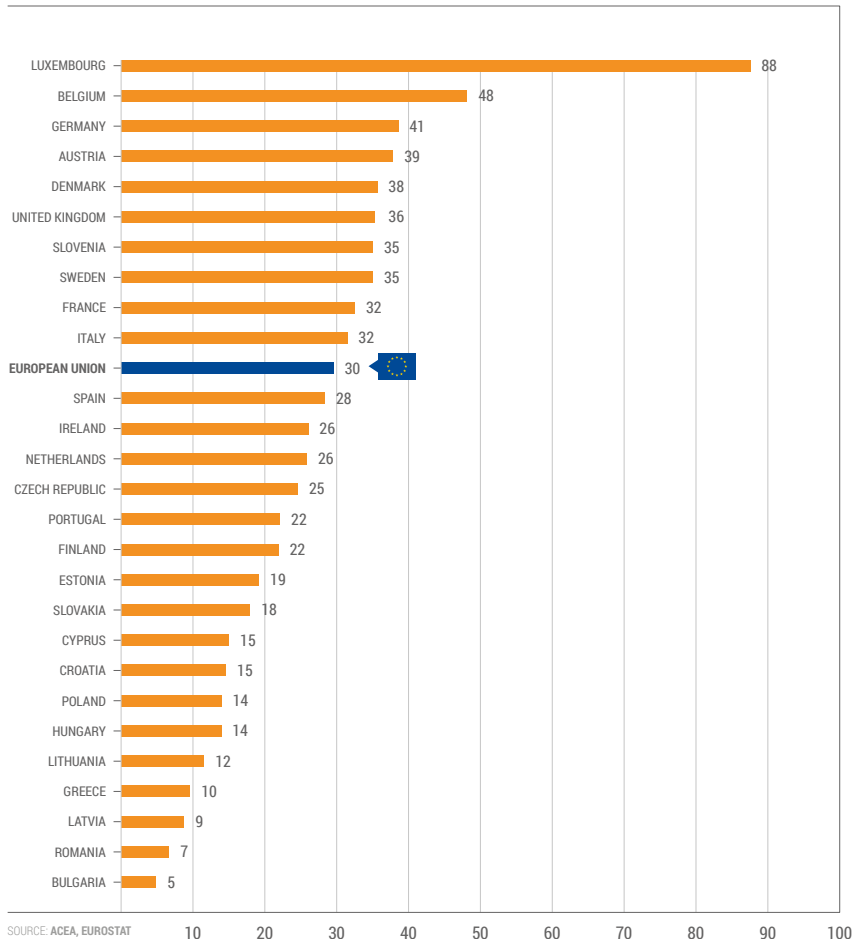


1. Up to 3.5t  
2. Trucks, buses and coaches over 3.5t

**2.5 million commercial vehicles  
were registered in the EU in 2018**

## New passenger car registrations per 1,000 inhabitants

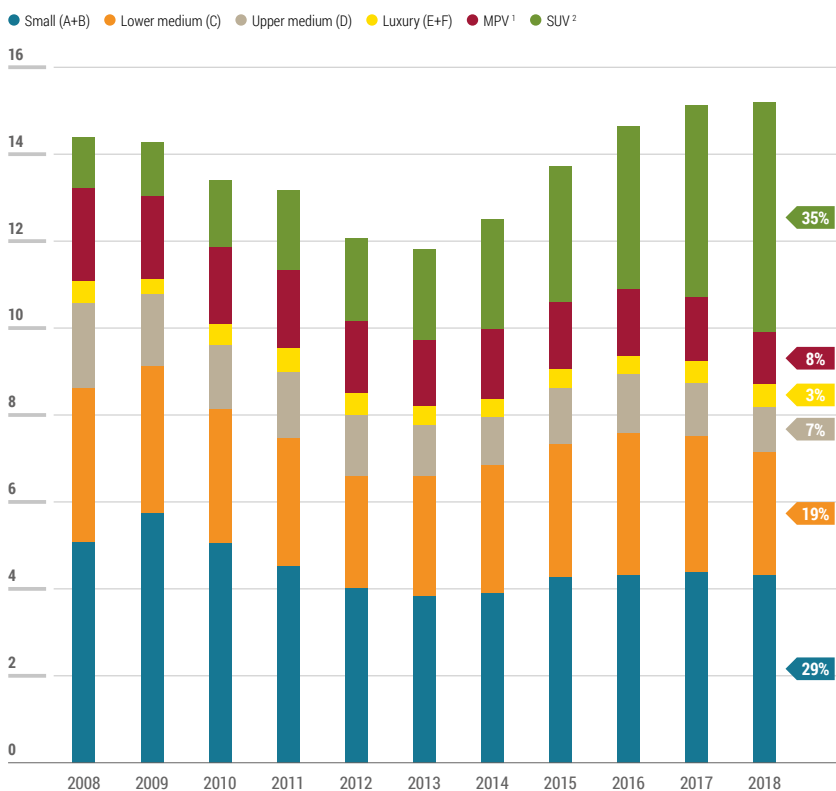
BY COUNTRY, IN UNITS / 2018



**30 new cars were registered per  
1,000 inhabitants in the EU in 2018**

## New passenger cars by segment in the EU

IN MILLION UNITS, % SHARE / 2008 – 2018



SOURCE: IHS MARKIT

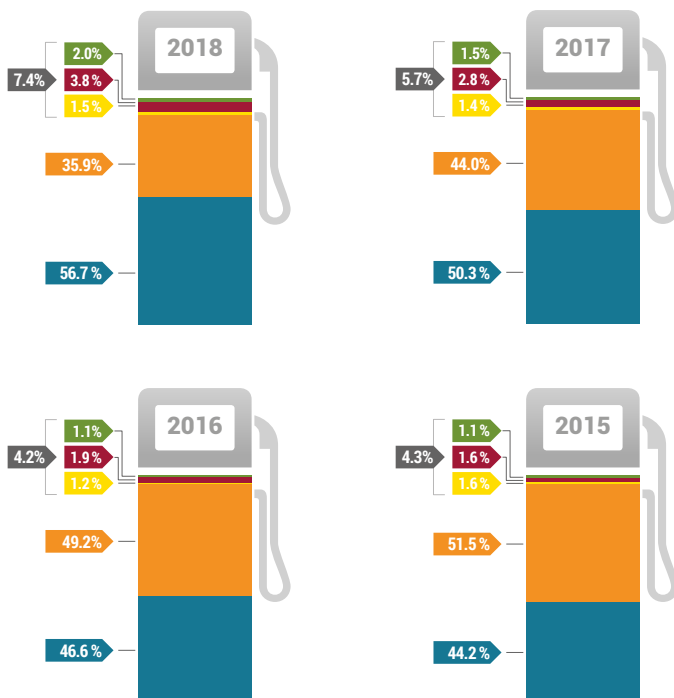
1. Multi-purpose vehicles  
2. Sport utility vehicles

**Small and medium cars account for  
over half of total EU car sales**

## New passenger cars by fuel type in the EU<sup>1</sup>

% SHARE / 2015 – 2018

● Petrol ● Diesel ● Electrically-chargeable vehicles<sup>2</sup>  
● Hybrid electric vehicles<sup>3</sup> ● Other than electric<sup>4</sup> ● Total alternatively-powered vehicles



SOURCE: ACEA

1. Data for Croatia, Cyprus, Luxembourg and Malta not available
2. Includes battery electric vehicles, fuel-cell electric vehicles, extended-range and plug-in hybrid electric vehicles
3. Includes full and mild hybrids
4. Includes LPG, natural gas and ethanol vehicles

**Petrol cars are the most sold fuel type  
in the European Union (56.7%)**

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4

THE AUTOMOBILE INDUSTRY  
POCKET GUIDE 2019/2020

# Trade



ACEA

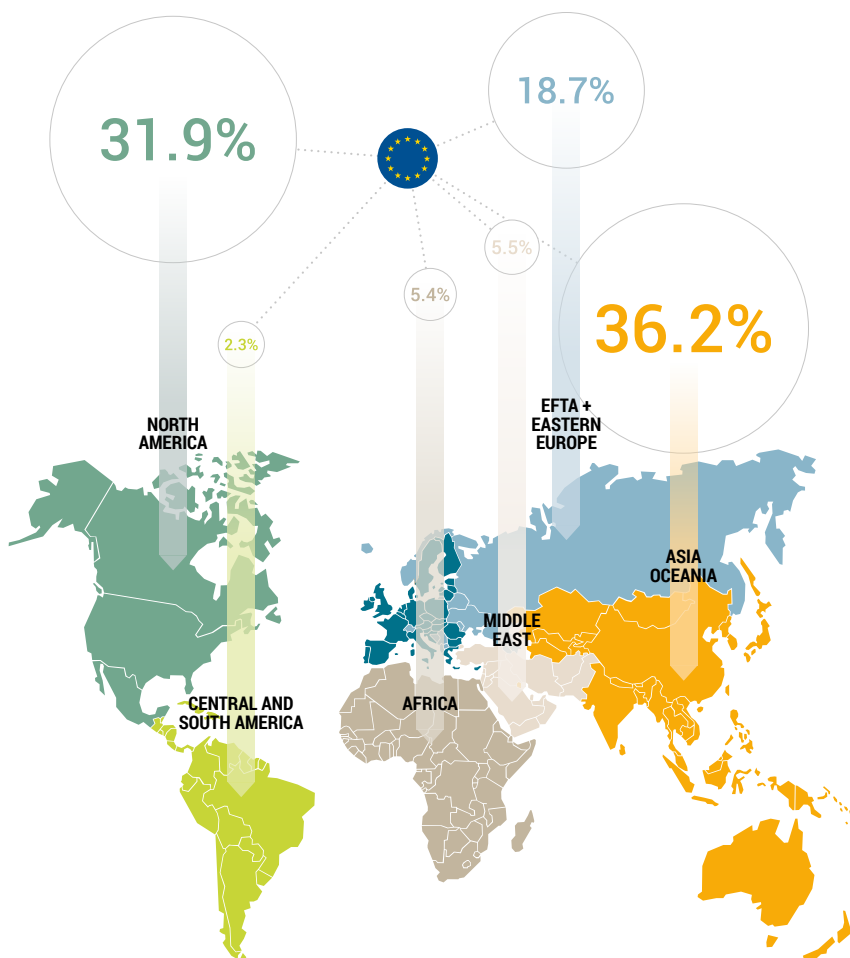
European  
Automobile  
Manufacturers  
Association

[WWW.ACEA.BE](http://WWW.ACEA.BE)



## EU exports of motor vehicles

VALUE MARKET SHARE / 2018



SOURCE: EUROSTAT

## EU motor vehicle trade

BY TYPE, IN MILLION € / 2018

Trade in value	PC <sup>1</sup>	LCV <sup>2</sup>	CV & BC <sup>3</sup>	TOTAL
<b>2018</b>				
Imports	45,976	5,982	2,044	54,002
Exports	127,572	4,161	6,657	138,390
Trade balance	81,596	-1,822	4,614	84,388
<b>2017</b>				
Imports	44,834	6,065	1,808	52,708
Exports	131,612	4,138	6,663	142,412
Trade balance	86,777	-1,927	4,854	89,704
<b>% change 18/17</b>				
Imports	2.5%	-1.4%	13.0%	2.5%
Exports	-3.1%	0.5%	-0.1%	-2.8%
Trade balance	-6.0%	-5.5%	-5.0%	-5.9%

SOURCE: EUROSTAT

## EU motor vehicle trade

BY TYPE, IN UNITS / 2018

Trade in volume	PC <sup>1</sup>	LCV <sup>2</sup>	CV & BC <sup>3</sup>	TOTAL
<b>2018</b>				
Imports	3,650,975	457,172	94,186	4,202,333
Exports	5,393,499	362,171	302,787	6,058,457
<b>2017</b>				
Imports	3,341,407	455,359	129,287	3,926,053
Exports	5,491,782	319,448	177,273	5,988,503
<b>% change 18/17</b>				
Imports	9.3%	0.4%	-27.1%	7.0%
Exports	-1.8%	13.4%	70.8%	1.2%

SOURCE: EUROSTAT

1. Passenger cars

2. Commercial vehicles up to 5t

3. Commercial vehicles over 5t, including buses and coaches

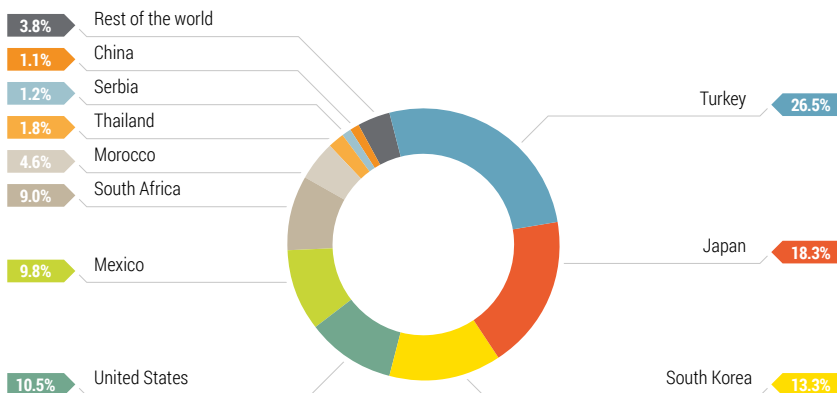
**The automobile industry generates a  
trade surplus of €84.4 billion for the EU**

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## Countries of origin of EU motor vehicle imports

VALUE MARKET SHARE / 2018



SOURCE: EUROSTAT

## Main countries of origin of EU motor vehicle imports

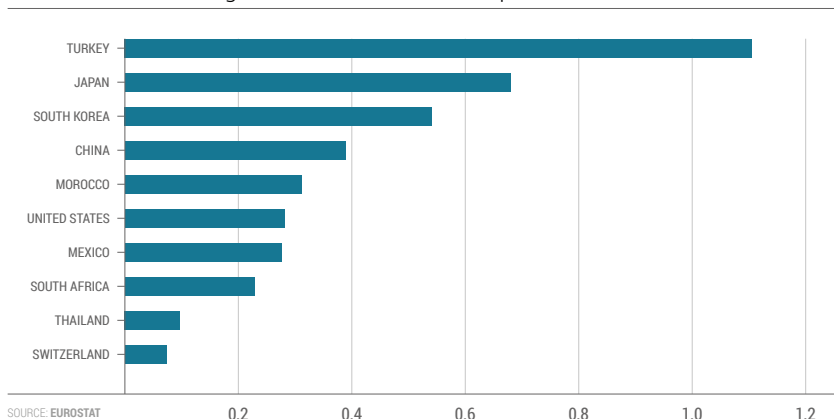
BY VALUE, IN MILLION € / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>28,286</b>	<b>31,327</b>	<b>39,109</b>	<b>45,932</b>	<b>52,708</b>	<b>54,002</b>	<b>2.5</b>	<b>100.0</b>
Turkey	6,760	7,931	9,872	11,961	13,870	14,322	3.3	26.5
Japan	5,911	6,669	7,738	9,196	9,739	9,905	1.7	18.3
South Korea	4,106	4,027	4,354	4,828	6,599	7,195	9.0	13.3
United States	4,349	4,949	7,008	7,302	6,590	5,672	-13.9	10.5
Mexico	1,610	1,075	1,652	2,223	4,744	5,282	11.3	9.8
South Africa	916	1,609	2,757	3,639	3,901	4,862	24.6	9.0
Morocco	917	1,363	1,530	1,742	2,108	2,491	18.2	4.6
Thailand	506	751	931	1,134	1,139	965	-15.3	1.8
Serbia	1,083	1,152	1,049	1,032	854	672	-21.3	1.2
China	313	192	212	284	469	568	21.2	1.1

SOURCE: EUROSTAT

## Main countries of origin of EU motor vehicle imports

IN MILLION UNITS / 2018



## Main countries of origin of EU motor vehicle imports

IN UNITS / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>2,442,098</b>	<b>2,629,627</b>	<b>3,034,580</b>	<b>3,406,220</b>	<b>3,926,053</b>	<b>4,202,333</b>	<b>7.0</b>	<b>100.0</b>
Turkey	584,697	708,860	842,209	988,571	1,110,899	1,105,881	-0.5	26.3
Japan	384,699	438,278	481,314	580,691	646,679	680,484	5.2	16.2
South Korea	406,381	349,230	376,181	404,067	520,098	541,742	4.2	12.9
China	184,256	191,228	214,486	148,369	223,895	389,932	74.2	9.3
Morocco	99,503	168,995	188,370	217,969	264,607	311,305	17.6	7.4
United States	221,995	243,228	251,581	264,178	258,867	280,687	8.4	6.7
Mexico	107,429	76,142	122,005	138,477	237,580	275,412	15.9	6.6
South Africa	59,515	88,170	141,633	188,629	185,920	229,063	23.2	5.5
Thailand	41,066	68,330	94,917	106,597	106,313	96,086	-9.6	2.3
Switzerland	35,002	41,235	48,471	67,805	71,547	73,116	2.2	1.7

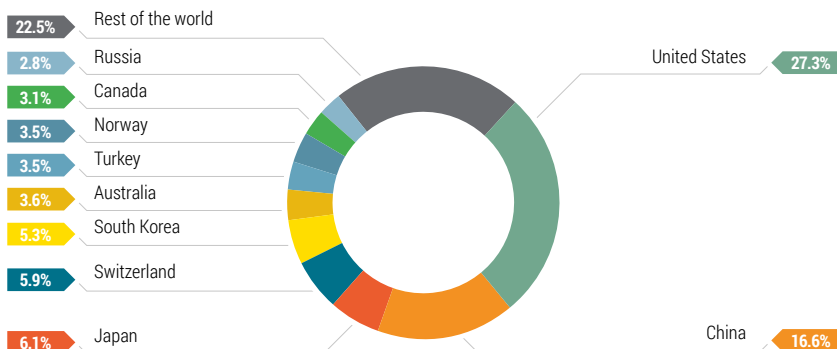
SOURCE: EUROSTAT

**4.2 million vehicles were imported to the EU in 2018**

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## Destinations for EU motor vehicle exports

VALUE MARKET SHARE / 2018



SOURCE: EUROSTAT

## Main destinations for EU motor vehicle exports

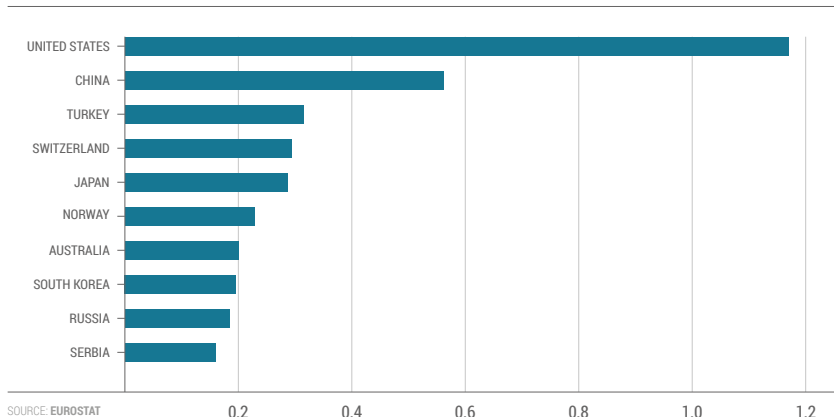
BY VALUE, IN MILLION € / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>123,042</b>	<b>125,278</b>	<b>139,349</b>	<b>135,207</b>	<b>142,412</b>	<b>138,390</b>	<b>-2.8</b>	<b>100.0</b>
United States	28,254	30,234	41,145	38,298	38,983	37,826	-3.0	27.3
China	20,033	23,735	18,137	19,961	22,657	22,935	1.2	16.6
Japan	6,410	6,031	6,507	7,362	8,192	8,442	3.1	6.1
Switzerland	7,092	7,374	8,648	8,269	8,429	8,097	-3.9	5.9
South Korea	3,291	4,937	7,234	6,325	6,840	7,314	6.9	5.3
Australia	4,123	3,958	4,980	5,167	5,373	4,932	-8.2	3.6
Turkey	6,788	5,971	8,577	8,673	7,554	4,840	-35.9	3.5
Norway	4,222	4,110	4,294	4,382	4,843	4,813	-0.6	3.5
Canada	2,970	3,188	3,826	4,094	4,508	4,265	-5.4	3.1
Russia	8,094	5,809	3,892	3,207	3,602	3,814	5.9	2.8

SOURCE: EUROSTAT

## Main destinations for EU motor vehicle exports

IN MILLION UNITS / 2018



## Main destinations for EU motor vehicle exports

IN UNITS / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>6,695,939</b>	<b>6,064,955</b>	<b>6,084,750</b>	<b>6,255,069</b>	<b>5,988,503</b>	<b>6,058,457</b>	<b>1.2</b>	<b>100.0</b>
United States	963,178	1,010,196	1,271,612	1,201,019	1,190,794	1,169,382	-1.8	19.3
China	596,703	613,632	472,698	535,005	580,559	561,662	-3.3	9.3
Turkey	533,957	418,346	592,114	585,256	525,417	315,267	-40.0	5.2
Switzerland	303,550	301,777	331,908	315,256	303,729	293,301	-3.4	4.8
Japan	246,658	237,991	250,839	279,788	282,042	286,636	1.6	4.7
Norway	227,358	171,125	176,945	181,192	178,077	228,144	28.1	3.8
Australia	188,736	183,084	227,920	206,823	210,304	200,325	-4.7	3.3
South Korea	118,431	177,603	230,811	182,736	190,653	196,009	2.8	3.2
Russia	491,888	328,960	191,707	145,352	160,841	185,167	15.1	3.1
Serbia	115,268	77,930	97,634	129,890	131,266	160,126	22.0	2.6

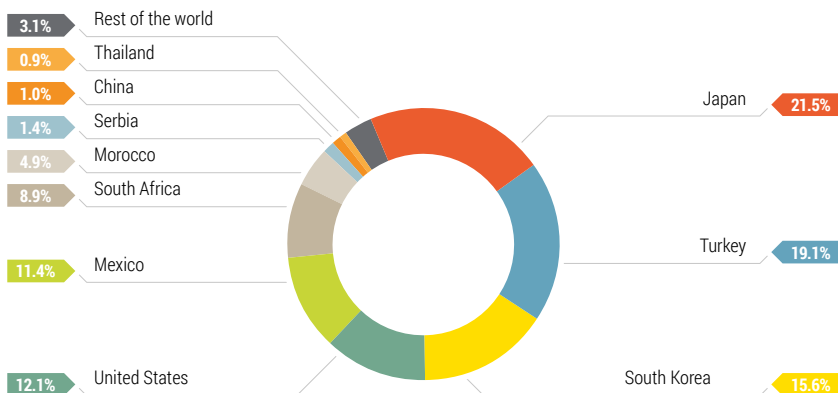
SOURCE: EUROSTAT

**19.3% of EU vehicle exports go to the US**

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## Countries of origin of EU passenger car imports

VALUE MARKET SHARE / 2018



SOURCE: EUROSTAT

## Main countries of origin of EU passenger car imports

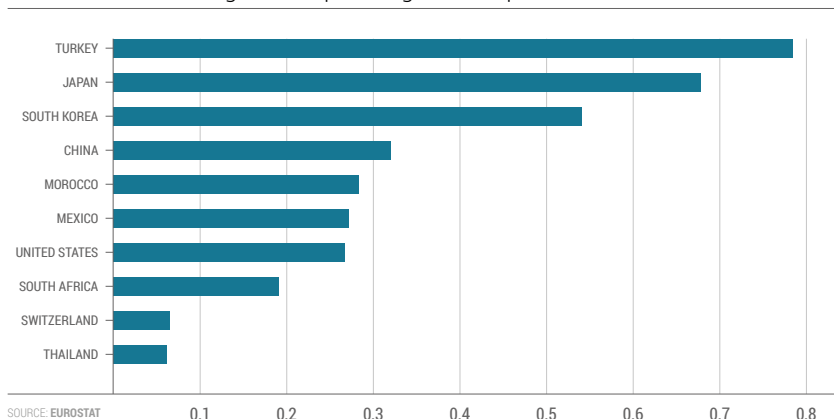
BY VALUE, IN MILLION € / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>23,785</b>	<b>26,216</b>	<b>32,530</b>	<b>38,168</b>	<b>44,834</b>	<b>45,976</b>	<b>2.5</b>	<b>100.0</b>
Japan	5,894	6,654	7,718	9,154	9,709	9,882	1.8	21.5
Turkey	3,523	4,374	5,056	6,416	8,579	8,794	2.5	19.1
South Korea	4,091	4,014	4,330	4,812	6,585	7,180	9.0	15.6
United States	4,300	4,911	6,964	7,233	6,420	5,541	-13.7	12.1
Mexico	1,605	1,068	1,642	2,211	4,723	5,247	11.1	11.4
South Africa	586	1,235	2,400	3,104	3,238	4,085	26.1	8.9
Morocco	763	1,225	1,369	1,548	1,907	2,257	18.3	4.9
Serbia	1,081	1,149	1,035	999	844	655	-22.4	1.4
China	259	112	104	136	373	460	23.3	1.0
Thailand	146	218	442	472	458	434	-5.2	0.9

SOURCE: EUROSTAT

## Main countries of origin of EU passenger car imports

IN MILLION UNITS / 2018



## Main countries of origin of EU passenger car imports

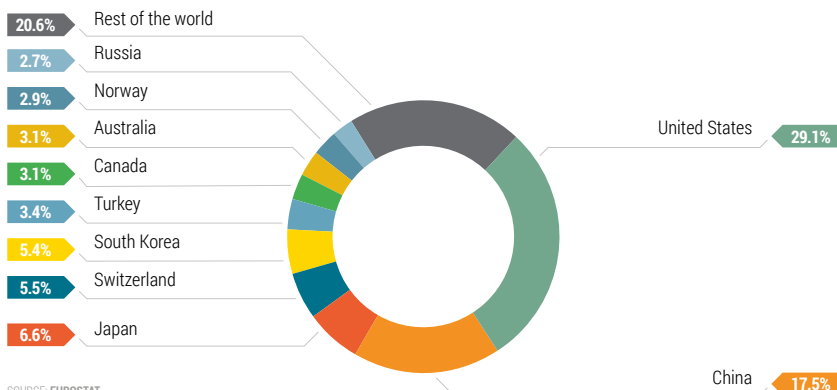
IN UNITS / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>2,064,637</b>	<b>2,223,157</b>	<b>2,463,562</b>	<b>2,859,642</b>	<b>3,341,407</b>	<b>3,650,975</b>	<b>9.3</b>	<b>100.0</b>
Turkey	363,006	474,005	526,500	646,244	789,502	784,768	-0.6	21.5
Japan	379,243	437,238	479,785	578,206	644,695	678,787	5.3	18.6
South Korea	405,184	348,260	374,765	402,947	519,136	540,815	4.2	14.8
China	112,676	117,886	86,480	71,206	131,859	320,779	143.3	8.8
Morocco	83,956	152,588	169,823	196,739	240,908	283,614	17.7	7.8
Mexico	107,154	75,539	121,075	137,206	235,533	271,881	15.4	7.4
United States	214,510	234,974	243,104	254,979	242,115	267,637	10.5	7.3
South Africa	42,483	69,223	122,143	161,797	154,025	191,139	24.1	5.2
Switzerland	30,536	35,620	42,315	61,053	64,150	65,907	2.7	1.8
Thailand	17,473	32,393	64,238	65,920	64,052	62,121	-3.0	1.7

SOURCE: EUROSTAT

## Destinations for EU passenger car exports

VALUE MARKET SHARE / 2018



## Main destinations for EU passenger car exports

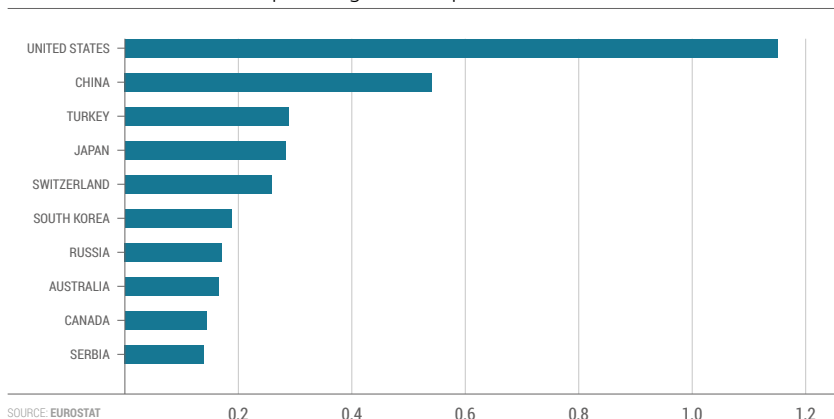
BY VALUE, IN MILLION € / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>111,592</b>	<b>115,117</b>	<b>129,049</b>	<b>124,850</b>	<b>131,612</b>	<b>127,572</b>	<b>-3.1</b>	<b>100.0</b>
United States	27,853	29,779	40,466	37,721	38,344	37,171	-3.1	29.1
China	19,672	23,492	17,948	19,741	22,337	22,341	0.02	17.5
Japan	6,404	5,999	6,465	7,340	8,172	8,416	3.0	6.6
Switzerland	6,193	6,393	7,619	7,332	7,432	7,046	-5.2	5.5
South Korea	3,127	4,694	6,910	5,791	6,314	6,923	9.6	5.4
Turkey	5,999	5,147	7,454	7,772	6,544	4,297	-34.3	3.4
Canada	2,849	3,014	3,640	3,904	4,317	4,017	-7.0	3.1
Australia	3,633	3,482	4,593	4,603	4,652	3,951	-15.1	3.1
Norway	3,214	3,183	3,375	3,325	3,745	3,724	-0.6	2.9
Russia	7,049	5,207	3,667	2,926	3,120	3,389	8.6	2.7

SOURCE: EUROSTAT

## Main destinations for EU passenger car exports

IN MILLION UNITS / 2018



## Main destinations for EU passenger car exports

IN UNITS / 2018

	2013	2014	2015	2016	2017	2018	% change 18/17	% share 2018
<b>WORLD</b>	<b>5,970,395</b>	<b>5,530,256</b>	<b>5,562,996</b>	<b>5,427,788</b>	<b>5,491,782</b>	<b>5,393,499</b>	<b>-1.8</b>	<b>100.0</b>
United States	952,531	998,503	1,223,019	1,170,636	1,176,841	1,152,781	-2.0	21.4
China	592,053	608,912	469,761	531,336	575,286	544,356	-5.4	10.1
Turkey	488,138	374,603	531,720	534,170	466,574	290,957	-37.6	5.4
Japan	246,550	237,149	247,832	279,198	281,749	285,619	1.4	5.3
Switzerland	275,535	272,946	303,103	282,383	275,097	262,060	-4.7	4.9
South Korea	116,458	174,614	227,065	176,710	184,805	190,700	3.2	3.5
Russia	439,754	302,184	181,457	134,420	147,074	174,528	18.7	3.2
Australia	166,766	162,756	206,701	188,598	189,824	168,856	-11.0	3.1
Canada	106,098	123,210	131,183	145,364	152,734	145,902	-4.5	2.7
Serbia	105,595	71,021	88,487	115,587	117,505	142,357	21.1	2.6

SOURCE: EUROSTAT

**5.4 million cars were exported by the EU in 2018**

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# Vehicles in use



ACEA

European  
Automobile  
Manufacturers  
Association

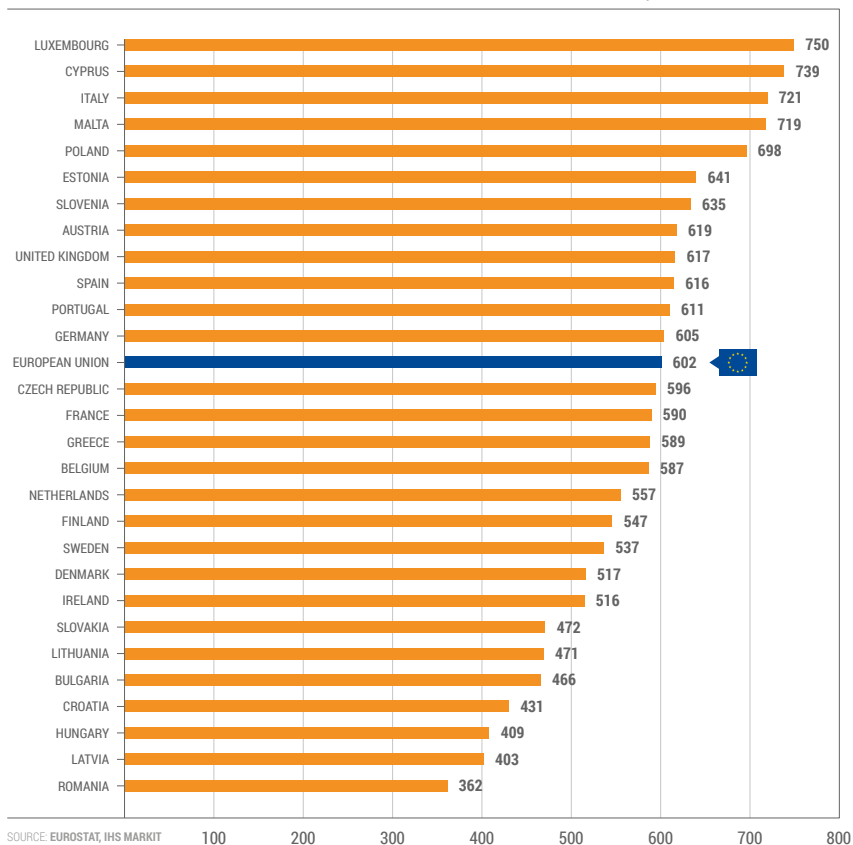
[WWW.ACEA.BE](http://WWW.ACEA.BE)





## Motorisation rates in the EU

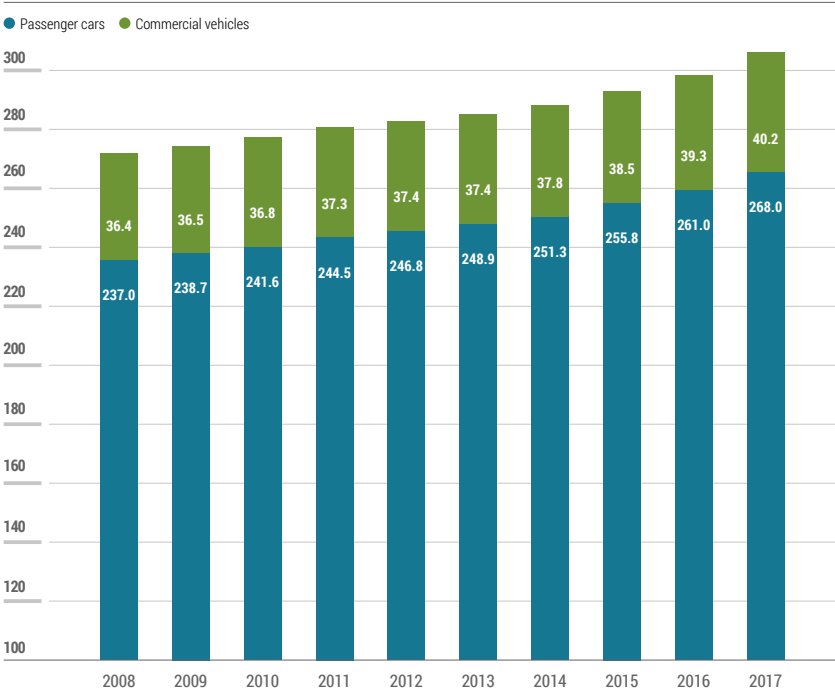
VEHICLES PER 1,000 INHABITANTS / 2017



**The EU counts 602 motor vehicles  
per 1,000 inhabitants**

EU vehicle fleet: size and distribution

IN MILLION UNITS / 2008 – 2017<sup>1</sup>



SOURCE: EUROSTAT, IHS MARKIT

1. Provisional figures

**Cars make up 87% of the EU vehicle fleet**

## Average age of the EU vehicle fleet

BY COUNTRY, IN YEARS / 2017<sup>1</sup>

● Passenger cars ● Light commercial vehicles ● Heavy commercial vehicles

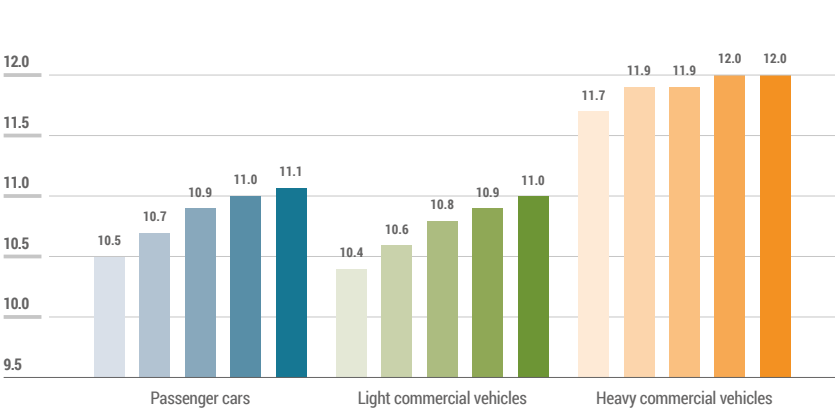


SOURCE: IHS MARKIT

<sup>1</sup> Provisional figures<sup>2</sup> Data for Bulgaria, Cyprus and Malta not available

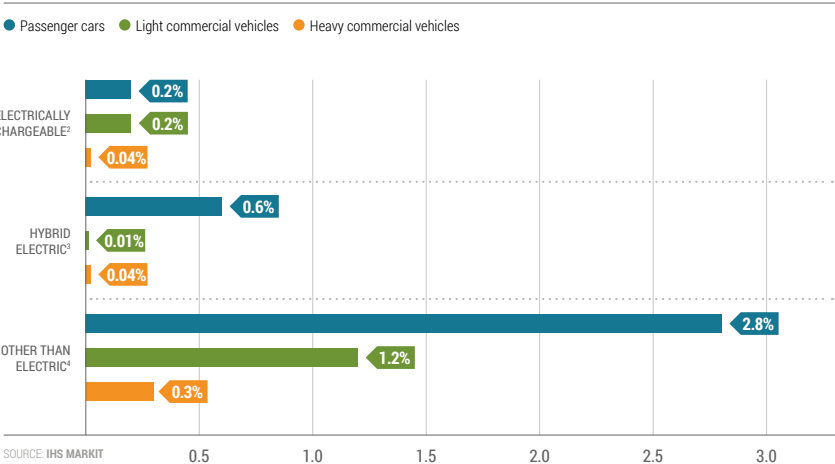
Average age of the EU fleet

BY VEHICLE TYPE, IN YEARS / 2013 – 2017<sup>1</sup>



Share of alternatively-powered vehicles in the EU fleet

BY SEGMENT, %SHARE / 2017<sup>1</sup>



1. Provisional figures

2. Includes battery electric vehicles, fuel-cell electric vehicles, extended-range and plug-in hybrid electric vehicles

3. Includes full and mild hybrids

4. Includes LPG, natural gas and ethanol vehicles

**0.04% of all trucks on EU roads  
are electrically-chargeable**

# Road safety



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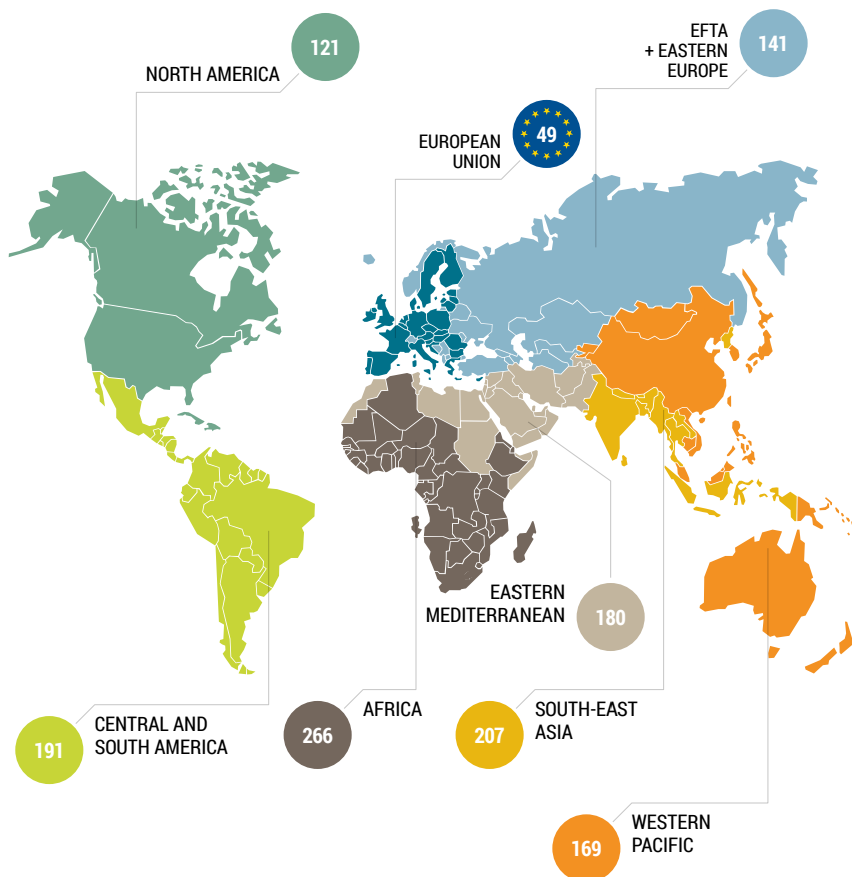
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## Road fatalities per million inhabitants

BY REGION <sup>1</sup> / 2016

WORLD

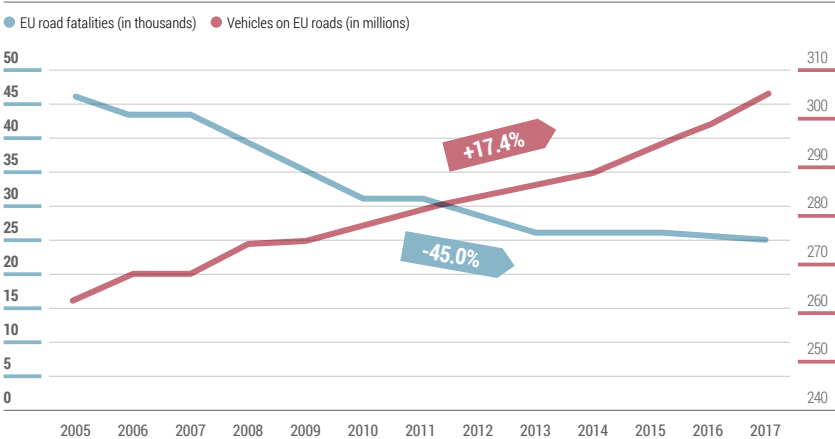
182 road fatalities per million inhabitants

SOURCE: CARE (EU ROAD ACCIDENTS DATABASE), WHO (WORLD HEALTH ORGANIZATION)

1. WHO regions

Number of motor vehicles and road fatalities in the EU

2005 – 2017



SOURCE: ACEA, CARE (EU ROAD ACCIDENTS DATABASE)

Number of motor vehicles and road fatalities in the EU

2005 – 2017

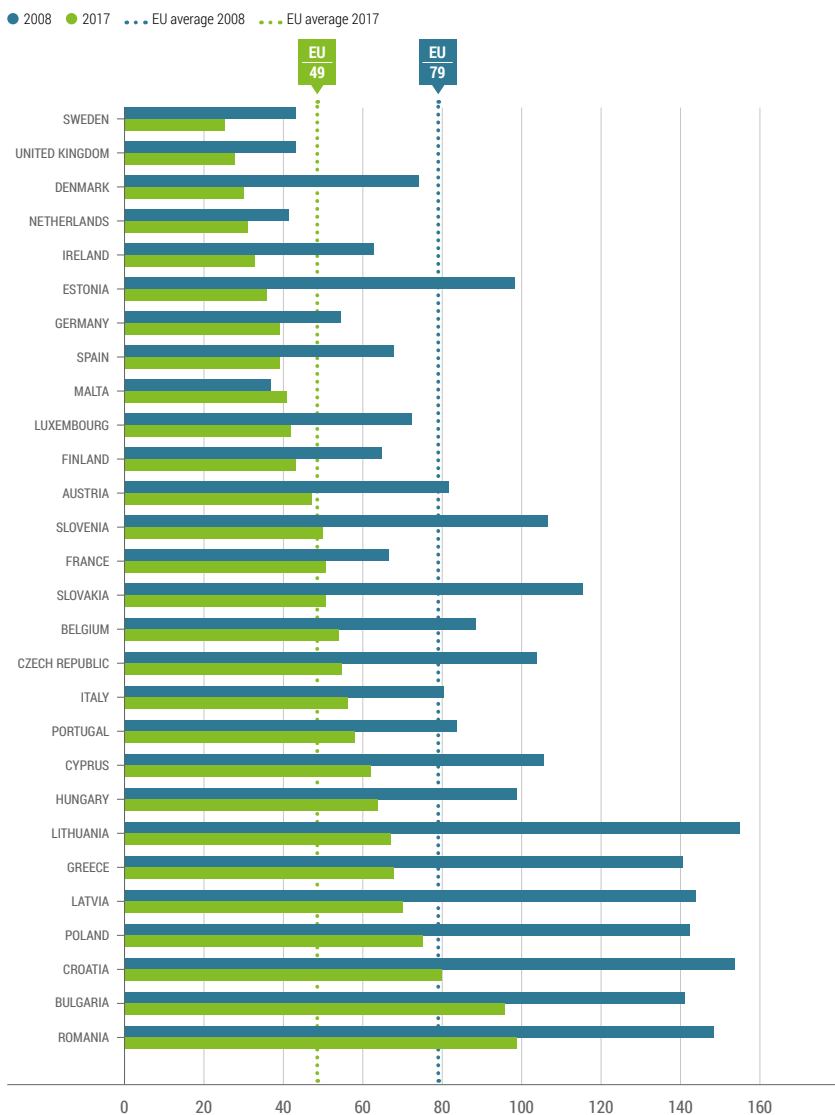
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU road fatalities (in thousands)	45.9	43.7	43.2	39.6	35.4	31.5	30.7	28.2	26.0	26.0	26.1	25.6	25.3
Vehicles on EU roads (in millions)	262.6	267.8	268.0	273.5	275.2	278.4	281.7	284.2	286.3	289.1	294.4	300.3	308.3

SOURCE: ACEA, CARE (EU ROAD ACCIDENTS DATABASE)

**While there are 46 million more vehicles on EU roads,  
fatalities have fallen by 45% since 2005**

## Road fatalities per million inhabitants

BY COUNTRY / 2008, 2017



SOURCE: CARE (EU ROAD ACCIDENTS DATABASE)

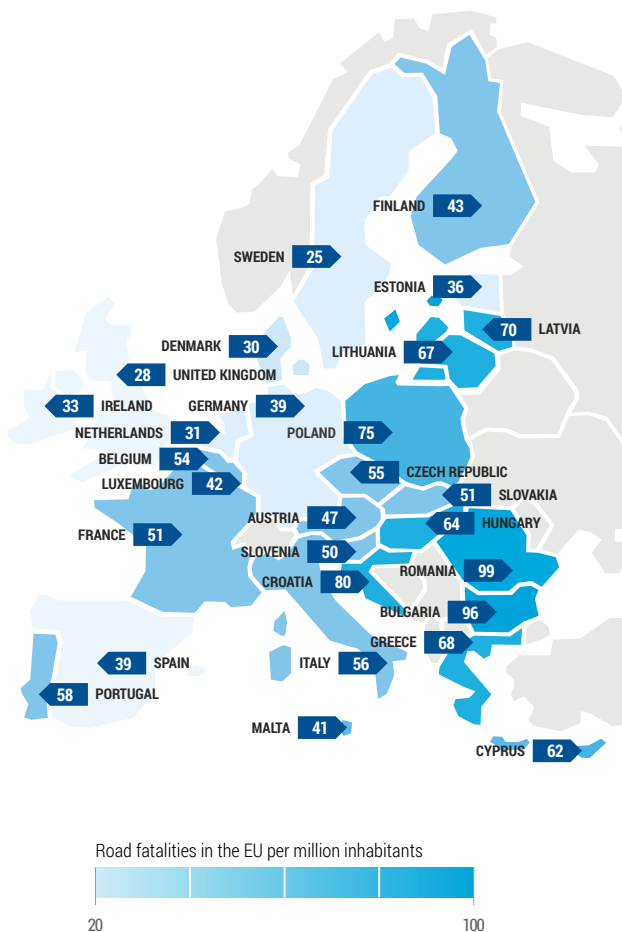
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## Road fatality statistics in the EU

BY COUNTRY / 2017

	2017 road fatalities	% change 17 / 16
Austria	414	-4.0
Belgium	615	-3.0
Bulgaria	682	-4.0
Croatia	331	8.0
Cyprus	53	15.0
Czech Republic	577	-6.0
Denmark	175	-17.0
Estonia	48	-32.0
Finland	230	-11.0
France	3,444	-1.0
Germany	3,180	-1.0
Greece	740	-10.0
Hungary	625	3.0
Ireland	159	-15.0
Italy	3,378	3.0
Latvia	136	-14.0
Lithuania	192	0.0
Luxembourg	25	-22.0
Malta	19	-17.0
Netherlands	535	0.0
Poland	2,831	-6.0
Portugal	602	7.0
Romania	1,951	2.0
Slovakia	276	0.0
Slovenia	104	-20.0
Spain	1,830	1.0
Sweden	253	-6.0
United Kingdom	1,856	0.0
<b>European Union</b>	<b>25,261</b>	<b>-1.5</b>

SOURCE: CARE (EU ROAD ACCIDENTS DATABASE)



## Road fatalities declined by 1.5% in the EU in 2017

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POCKET GUIDE 2019/2020

# Environment



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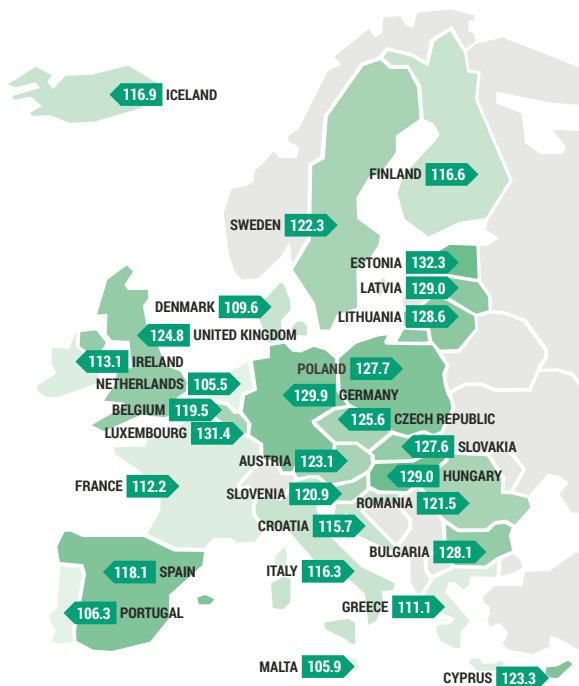


## Average CO2 emissions from new passenger cars, by country

IN G CO2/KM / 2018

	2018 average emissions	% change 18 / 17
Austria	123.1	2.0
Belgium	119.5	3.1
Bulgaria	128.1	1.5
Croatia	115.7	2.3
Cyprus	123.3	0.9
Czech Republic	125.6	1.0
Denmark	109.6	2.3
Estonia	132.3	-0.4
Finland	116.6	-1.4
France	112.2	1.6
Germany	129.9	2.2
Greece	111.1	2.1
Hungary	129.0	2.7
Ireland	113.1	1.3
Italy	116.3	2.6
Latvia	129.0	0.1
Lithuania	128.6	0.9
Luxembourg	131.4	3.5
Malta	105.9	-4.0
Netherlands	105.5	-2.6
Poland	127.7	0.01
Portugal	106.3	1.6
Romania	121.5	0.7
Slovakia	127.6	1.2
Slovenia	120.9	1.1
Spain	118.1	2.7
Sweden	122.3	-0.04
United Kingdom	124.8	3.0
<b>European Union</b>	<b>120.6</b>	<b>1.8</b>
Iceland	116.9	–
EU28 + Iceland	120.4	–

SOURCE: EEA

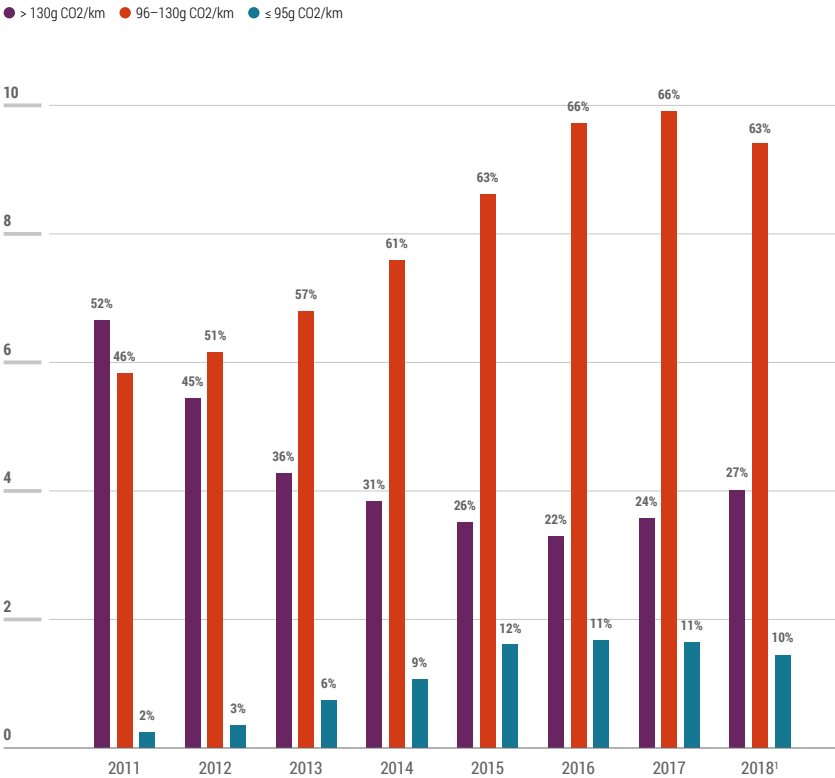


Average CO2 emissions from new passenger cars  
by country in g CO2/km in 2018



## New passenger cars in the EU by emissions classes

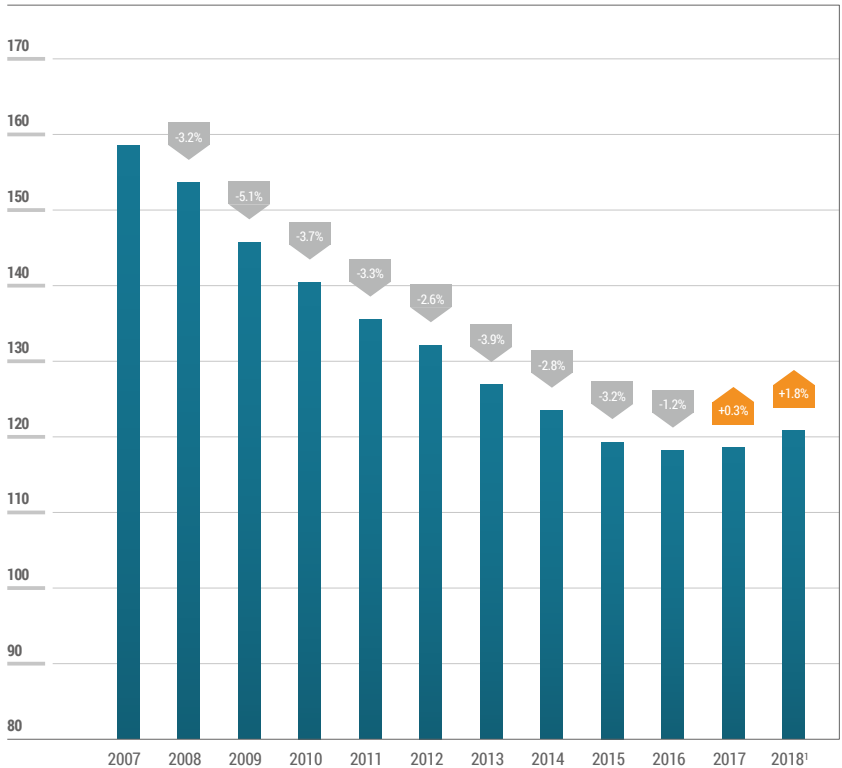
IN MILLION UNITS, % SHARE / 2011 – 2018





## Average CO<sub>2</sub> emissions from new passenger cars in the EU

IN G CO<sub>2</sub>/KM, % CHANGE / 2007 – 2018



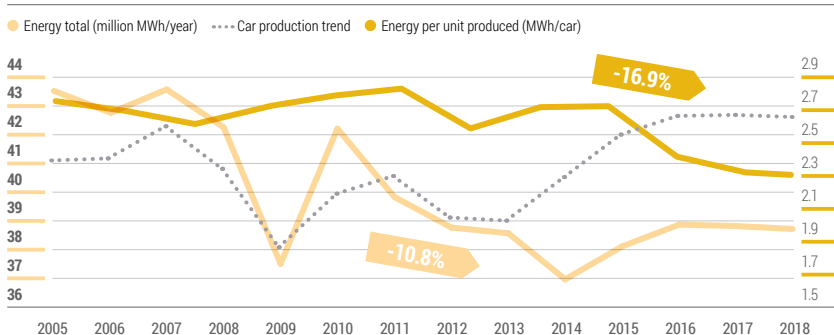
SOURCE: EEA

1. Provisional figures

**CO<sub>2</sub> emissions from new cars  
increased for the second year in 2018**

## Energy consumption during production

2005 – 2018



SOURCE: ACEA MEMBERS

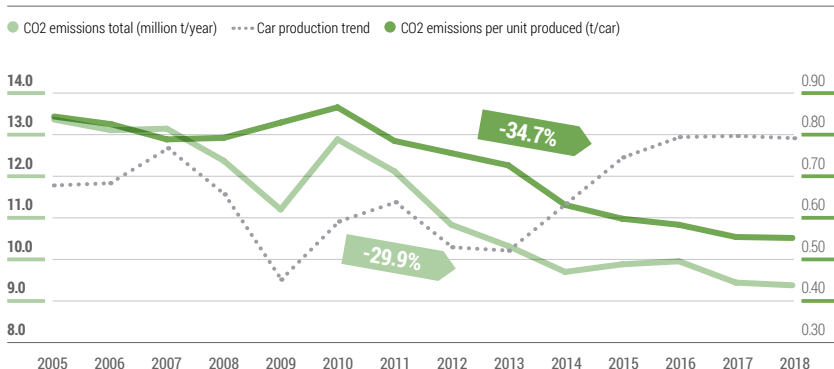
As cars have become equipped with ever more features to make them safer, cleaner and smarter, the complexity of vehicle production has increased. This increase in complexity affects energy demand.

Nevertheless, manufacturers have been working continuously to **improve the energy efficiency** of production.

As a result, energy consumption per car produced has been decreased by 16.9% since 2005.

## CO2 emissions from production

2005 – 2018



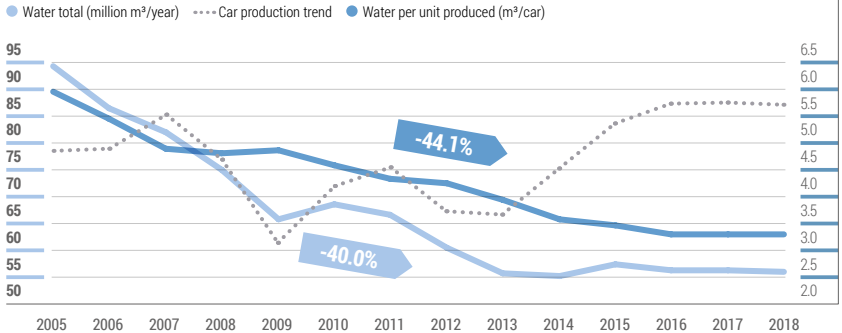
SOURCE: ACEA MEMBERS

The **CO2 emissions per car produced** dropped by 34.7% between 2005 and 2018, while the overall figure went down by 29.9% over the same period, reflecting the industry's efforts to reduce CO2 emissions from production. Even though car production has been on the rise again since 2013, manufacturers have been able to decouple CO2 emissions from production growth by increasingly sourcing energy from renewable and/or low-carbon sources. As the chart shows, total CO2 emissions have remained stable despite substantial increase in production volume.

**CO2 emissions per car produced  
have dropped by 35% since 2005**

## Water used in production

2005 – 2018

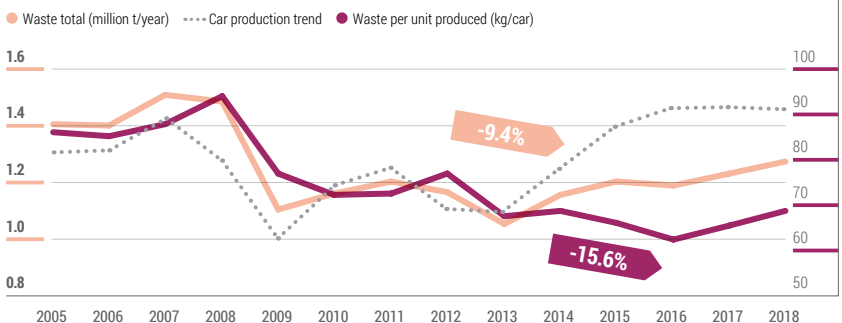


SOURCE: ACEA MEMBERS

Long-term strategies for **reducing water consumption** have made it possible to reduce water use per car produced by 44.1% between 2005 and 2018. This includes the increased application of recirculation technologies for the reuse of water.

## Waste from production<sup>1</sup>

2005 – 2018



SOURCE: ACEA MEMBERS

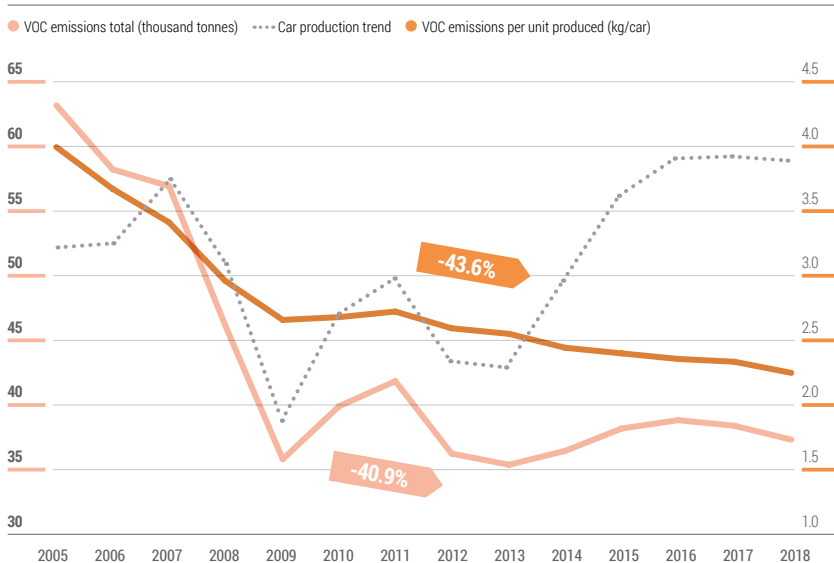
1. Excluding scrap metal and demolition waste

The **waste generated per unit produced** by the manufacturing of passenger cars went down by 15.6% since records began. Waste fluctuations, both in absolute and per unit terms can be explained by the occurrence of singular events, such as a fall in total production during the economic crisis.

**Water consumption per car produced  
has been reduced by 44% since 2005**

## VOC emissions from production

2005 – 2018



SOURCE: ACEA MEMBERS

**Volatile organic compounds (VOC)** are organic solvents mainly emitted from paint shops. The graph shows VOC emissions per car produced and the absolute emissions of all car manufacturers combined. With new technologies, such as the replacement of solvent-based paints with solvent-free, water-based equivalents manufacturers have been able to reduce unit emissions by 43.6% over the last 14 years.

**EU manufacturers have significantly reduced the environmental impact of car production since 2005**

# Innovation



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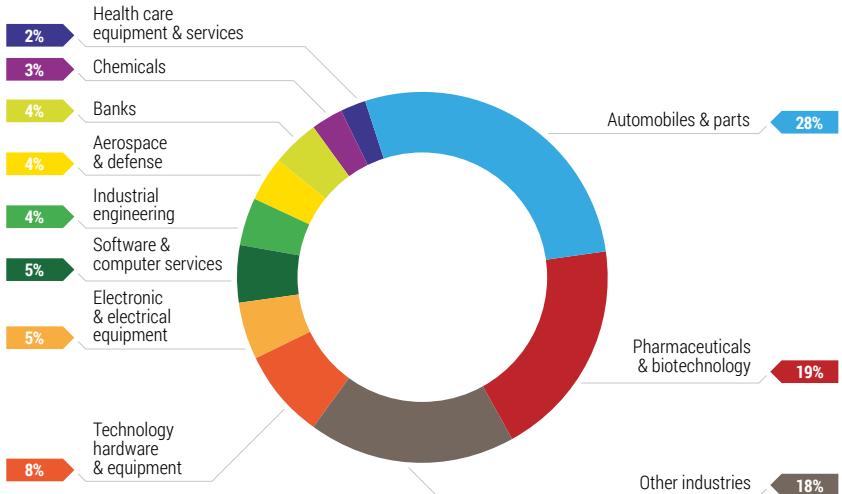
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## R&amp;D shares of sectors in the EU

%SHARE / 2017



SOURCE: THE 2018 EU INDUSTRIAL R&amp;D INVESTMENT SCOREBOARD, EUROPEAN COMMISSION

## EU R&amp;D investment in the top 10 industrial sectors

IN BILLION € / 2017

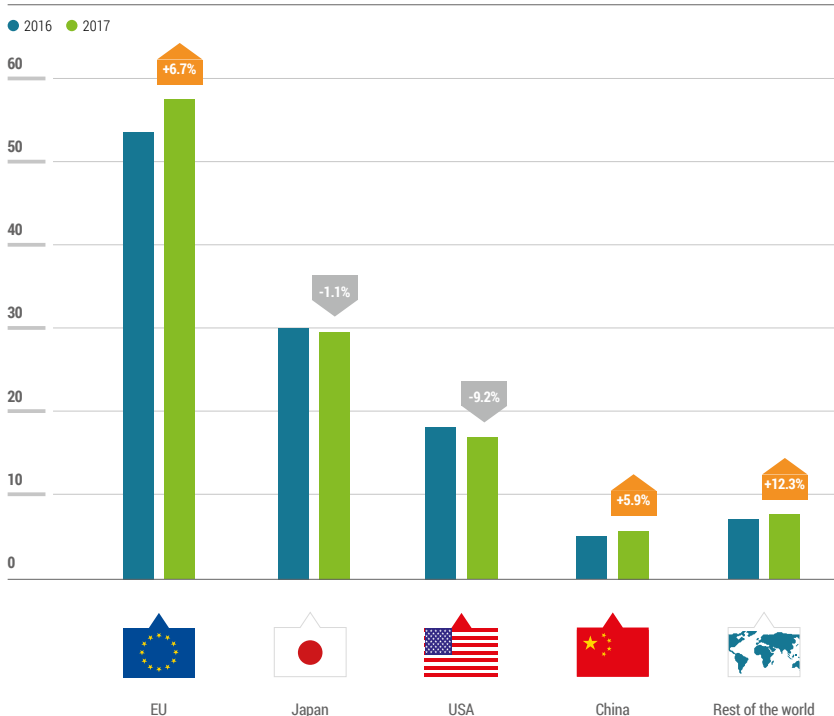
Automobiles & parts	57.4
Pharmaceuticals & biotechnology	39.7
Other industries	36.6
Technology hardware & equipment	15.8
Electronic & electrical equipment	10.3
Software & computer services	9.3
Industrial engineering	9.0
Aerospace & defense	8.9
Banks	8.0
Chemicals	5.4
Health care equipment & services	5.0

SOURCE: THE 2018 EU INDUSTRIAL R&amp;D INVESTMENT SCOREBOARD, EUROPEAN COMMISSION

**The automotive sector is the EU's number one investor in R&D, responsible for 28% of total spending**

## R&D investment in the automobile sector by world region

IN BILLION € / % CHANGE



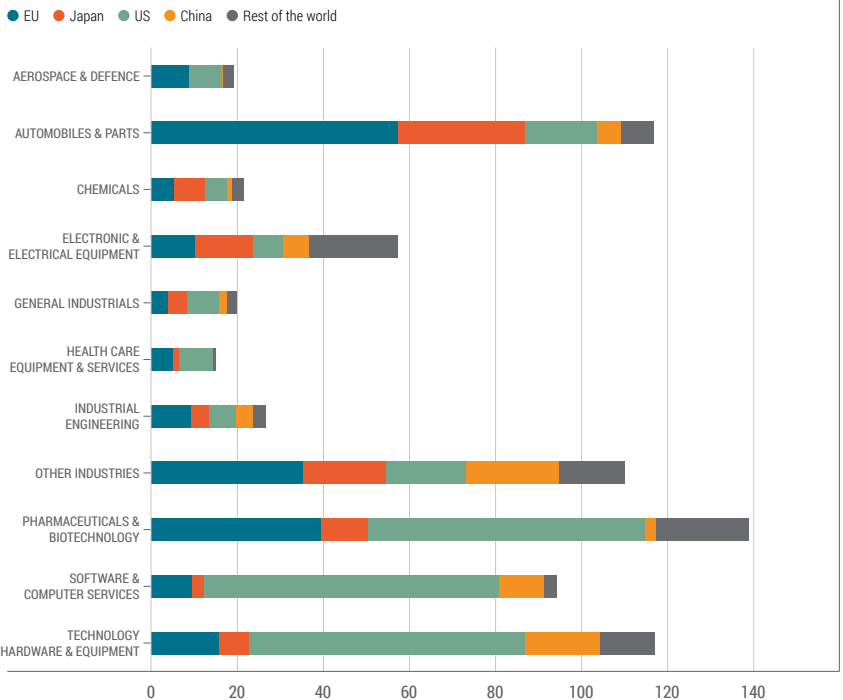
SOURCE: THE 2018 EU INDUSTRIAL R&D INVESTMENT SCOREBOARD, EUROPEAN COMMISSION

**EU automotive investment in R&D has  
increased by 6.7% to reach €57.4 billion annually**



## R&amp;D investment by industry and world region

IN BILLION € / 2017

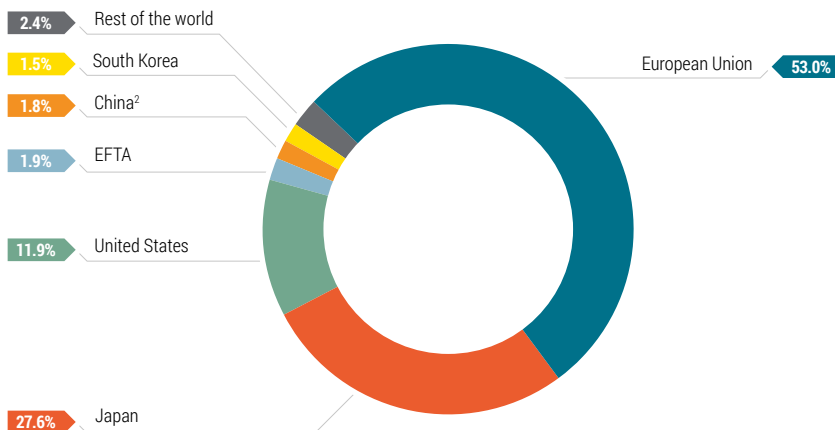


SOURCE: THE 2018 EU INDUSTRIAL R&amp;D INVESTMENT SCOREBOARD, EUROPEAN COMMISSION

**The EU is by far the world's largest investor in automotive R&D**

## Patents granted in the automotive sector, worldwide <sup>1</sup>

% SHARE / 2018



SOURCE: EPO (EUROPEAN PATENT OFFICE)

## Automotive patents

BY COUNTRY / 2018

Germany	2,988
France	980
Sweden	444
Italy	403
United Kingdom	340
Rest of the EU	693
<b>EU total</b>	<b>5,848</b>
Japan	3,047
United States	1,314
EFTA countries	205
China <sup>2</sup>	196
South Korea	169
Rest of the world	265
<b>Total</b>	<b>11,044</b>

SOURCE: EPO (EUROPEAN PATENT OFFICE)

1. Includes categories B60, B62, F02 and F16

B60: Vehicles in general

B62: Land vehicles for travelling otherwise than on rail

F02: Combustion engines; hot-gas or combustion-product engine plants

F16: Engineering elements or units; general measures for producing and maintaining effective functioning of machines or installations; thermal insulation in general

2. Includes Taipei

**Over half of all automotive patents  
were granted to the EU industry in 2018**

# Taxation



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







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## Electric vehicles: tax benefits and incentives in the EU

2019





























		TAX BENEFITS	ACQUISITION	OWNERSHIP	COMPANY CAR	INCENTIVES
	AUSTRIA	✓	✓	✓		✓
	BELGIUM	✓	✓	✓		✓
	BULGARIA	✗	✓	✗		✗
	CROATIA	✗	✗	✗		✗
	CYPRUS	✓	✓	✗		✗
	CZECH REPUBLIC	✓	✓	✗		✗
	DENMARK	✓	✓	✗		✗
	ESTONIA	✗	✗	✗		✗
	FINLAND	✓	✓	✗		✓
	FRANCE	✓	✗	✓		✓
	GERMANY	✗	✓	✓		✓
	GREECE	✓	✓	✗		✗
	HUNGARY	✓	✓	✓		✗
	IRELAND	✓	✓	✗		✓
	ITALY	✗	✓	✗		✓
	LATVIA	✗	✓	✓		✗
	LITHUANIA	✗	✗	✗		✗
	LUXEMBOURG	✓	✓	✓		✗
	MALTA	✓	✓	✗		✗
	NETHERLANDS	✓	✓	✓		✗
	POLAND	✗	✗	✗		✗
	PORTUGAL	✓	✗	✓		✗
	ROMANIA	✗	✓	✗		✓
	SLOVAKIA	✓	✓	✗		✗
	SLOVENIA	✓	✗	✗		✓
	SPAIN	✓	✓	✗		✓
	SWEDEN	✗	✗	✓		✓
	UNITED KINGDOM	✓	✓	✓		✓

SOURCE: ACEA TAX GUIDE 2019

**Only 12 EU member states offer incentives for electric vehicles**

## Overview of CO<sub>2</sub>-based motor vehicle taxes in the EU

2019








		TAX MEASURES		
		ACQUISITION	OWNERSHIP	COMPANY CAR
	AUSTRIA	✓	✗	✓
	BELGIUM	✓	✓	✓
	BULGARIA	✗	✗	✗
	CROATIA	✓	✗	✗
	CYPRUS	✓	✓	✗
	CZECH REPUBLIC	✓	✗	✗
	DENMARK	✗	✗	✓
	ESTONIA	✗	✗	✗
	FINLAND	✓	✓	✗
	FRANCE	✓	✓	✓
	GERMANY	✗	✓	✓
	GREECE	✓	✓	✗
	HUNGARY	✗	✗	✗
	IRELAND	✓	✓	✗
	ITALY	✓	✗	✗
	LATVIA	✗	✓	✗
	LITHUANIA	✗	✗	✗
	LUXEMBOURG	✗	✓	✗
	MALTA	✓	✓	✗
	NETHERLANDS	✓	✓	✓
	POLAND	✗	✗	✗
	PORTUGAL	✓	✓	✗
	ROMANIA	✓	✗	✗
	SLOVAKIA	✗	✗	✗
	SLOVENIA	✓	✗	✗
	SPAIN	✓	✓	✗
	SWEDEN	✓	✓	✗
	UNITED KINGDOM	✓	✓	✓

SOURCE: ACEA TAX GUIDE 2019








**22 EU member states apply CO<sub>2</sub>-based taxation**

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Fiscal income from motor vehicles in the EU15<sup>1</sup>

	 AT	 BE	 DE	 DK	 ES	 FI	 FR
	€ bn 2016	€ bn 2017	€ bn 2017	DKK bn 2017	€ bn 2017	€ bn 2017	€ bn 2017
Purchase or transfer							
1. VAT on vehicle sales servicing, repair & parts	2.9	7.3	30.3	–	–	1.7	17.8
2. Sales & registration taxes	0.4	0.4	–	20.1	4.8	1.0	2.2
3. Annual ownership taxes	2.3	1.7	8.9	10.3	2.8	1.2	0.7
4. Fuels & lubricants	5.1	7.9	42.8	17.3	19.7	4.1	39.2
5. Others							
Driving license fees	–	0.02	0.2	–	0.1	–	–
Insurance taxes	0.3	1.0	4.5	1.5	–	0.4	4.8
Tolls	2.0	0.7	4.7	0.5	–	–	12.2
Customs duties	–	–	0.6	–	–	–	–
Other taxes	0.3	0.6	–	–	0.8	–	1.9
<b>TOTAL (national currencies)</b>	<b>13.3</b>	<b>19.6</b>	<b>92.0</b>	<b>49.8</b>	<b>28.1</b>	<b>8.3</b>	<b>79.0</b>
<b>TOTAL (EURO)<sup>3</sup></b>	<b>13.3</b>	<b>19.6</b>	<b>92.0</b>	<b>6.7</b>	<b>28.1</b>	<b>8.3</b>	<b>79.0</b>

	 GR	 IE	 IT	 NL	 PT	 SE	 UK
	€ bn 2017	€ bn 2015	€ bn 2017	€ bn 2017	€ bn 2018	SEK bn 2017	£ bn 2017/2018 <sup>2</sup>
Purchase or transfer							
1. VAT on vehicle sales servicing, repair & parts	–	0.6	18.3	1.3	4.2	25.0	12.5
2. Sales & registration taxes	0.3	0.7	1.8	2.0	0.8	–	–
3. Annual ownership taxes	1.2	1.1	6.8	4.1	0.6	14.2	6.0
4. Fuels & lubricants	4.2	3.0	35.9	9.8	3.2	45.0	28.1
5. Others							
Driving license fees	–	–	–	0.3	–	–	–
Insurance taxes	–	–	3.9	1.1	–	2.9	–
Tolls	–	–	2.1	–	1.1	2.7	–
Customs duties	–	–	–	–	–	–	–
Other taxes	0.1	–	5.7	1.8	–	–	1.5
<b>TOTAL (national currencies)</b>	<b>5.7</b>	<b>5.4</b>	<b>74.4</b>	<b>20.3</b>	<b>9.9</b>	<b>89.8</b>	<b>48.1</b>
<b>TOTAL (EURO)<sup>3</sup></b>	<b>5.7</b>	<b>5.4</b>	<b>74.4</b>	<b>20.3</b>	<b>9.9</b>	<b>8.6</b>	<b>56.3</b>

GRAND TOTAL = € 427.6 billion

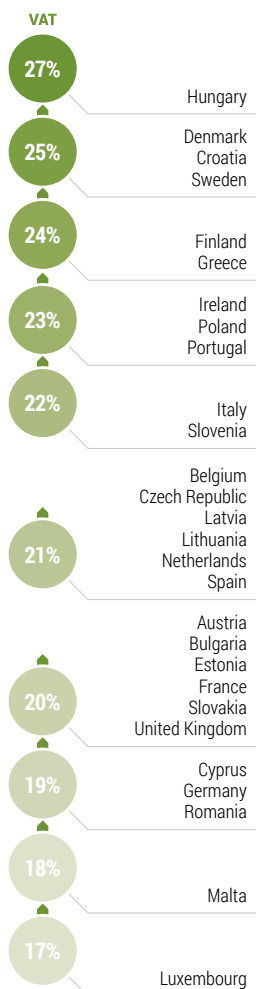
SOURCE: ACEA TAX GUIDE 2019

1. Latest available data; only country for which sourced data is available are listed

2. 2012 estimates for income from VAT and other taxes

3. Euro foreign exchange reference rates at 3 April 2019; source: ECB

## Share of VAT in net price of cars



SOURCE: ACEA TAX GUIDE 2019

## Excise duties on fuels in €/1,000 litres

	UNLEADED PETROL	DIESEL
Austria	482	397
Belgium	600	600
Bulgaria	363	330
Croatia	519	412
Cyprus	429	400
Czech Republic	498	425
Denmark	626	426
Estonia	563	493
Finland	703	530
France	683	594
Germany	655	470
Greece	700	410
Hungary	380	349
Ireland	588	479
Italy	728	617
Latvia	476	372
Lithuania	434	347
Luxembourg	465	338
Malta	549	472
Netherlands	778	496
Poland	391	343
Portugal	643	486
Romania	437	407
Slovakia	547	393
Slovenia	547	469
Spain	504	379
Sweden	649	457
United Kingdom	651	651
<b>EU minimum rates</b>	<b>359</b>	<b>330</b>

SOURCE: ACEA TAX GUIDE 2019

**Automobiles provide a vital source  
of government revenue**



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