## асеа <br> DRIVING MOBILITY



POCKET GUIDE 2021/2022

## SUMMARY

| $\bigcirc$ | EMPLOYMENT $\rightarrow$ |
| :---: | :---: |
| (3) | PRODUCTION $\rightarrow 11$ |
| $\oplus$ | REGISTRATIONS $\rightarrow 2$ |
| $\rightleftharpoons$ | TRADE $\rightarrow$ |
| (1) | VEHICLES IN USE $\rightarrow$ |
| © | ROAD SAFETY $\rightarrow$ |
| $\bigcirc$ | ENVIRONMENT $\rightarrow$ |
| $\cdots$ | INNOVATION $\rightarrow$ |
| $€$ | TAXATION $\rightarrow 6$ |
| $\rightarrow$ | ABOUT ACEA $\rightarrow$ |

## FOREWORD

EVERY YEAR, the European Automobile Manufacturers' Association (ACEA) publishes this Pocket Guide in order to provide a clear and comprehensive overview of one of Europe's most strategic and innovative sectors: the auto industry.

Updated with the latest data on employment, vehicle production and sales, trade flows, the vehicle fleet, road safety, the environment, innovation and taxation, this is the reference guide for anyone interested in automotive issues and related EU policies.

You will surely notice that the 2021-2022 edition is rather special, as our landmark publication got a complete overhaul in line with ACEA's new visual identity.

On a less positive note, the facts and figures in this Pocket Guide also reveal the dramatic impact of COVID-19 on Europe's auto industry.

Almost 13 million motor vehicles were made in the EU in 2020, representing $16.7 \%$ of global production, but down 5 million units compared to 2019. Car output plummeted by $23.3 \%$ during the crisis year, while EU commercial vehicle production took a $21 \%$ hit. Exports of EU-built vehicles also decreased by nearly $15 \%$ in 2020, although still generating a $€ 76.3$ billion trade surplus for the European Union.

Despite this unprecedented downturn, these statistics also demonstrate the continued importance of the industry as an economic powerhouse that literally keeps Europe on the move, regardless of what happens.

## As we work towards a new era of mobility and a carbon-neutral Europe, innovation remains at the core of our sector's DNA

With some 3.5 million people directly and indirectly involved in the production of vehicles across the EU, the auto industry accounts for 11.6\% of all manufacturing jobs in the region. Looking at the entire automotive ecosystem, the sector provides work to 12.6 million Europeans, or $6.6 \%$ of the EU's total workforce.

Apart from ensuring that people and goods can continue to move freely throughout Europe, the 278 million vehicles on our roads are also a major source of government income, annually generating $€ 398.4$ billion in taxes for 14 major EU markets alone.

And as we work towards a new era of mobility and a carbon-neutral Europe, innovation remains at the core of our sector's DNA. Investing an impressive $€ 62$ billion per year, and responsible for a whopping $33 \%$ of total EU spending on innovation, the automotive sector has really solidified its position as Europe's number one investor in R\&D. More than ever, we are ready and committed to provide solutions for the challenges of tomorrow.


## KEY FIGURES

| EMPLOYMENT |  |  |
| :---: | :---: | :---: |
| Manufacture of motor vehicles (EU) | 2.6 million people $=8.6 \%$ of EU employment in manufacturing | 2018 |
| Total (EU manufacturing, services and construction) | 12.6 million people $=6.6 \%$ of total EU employment | 2018 |
| PRODUCTION |  |  |
| Motor vehicles (world) | 77.9 million units | 2020 |
| Motor vehicles (EU) | 13.0 million units $=16.7 \%$ of global motor vehicle production | 2020 |
| Passenger cars (world) | 61.4 million units | 2020 |
| Passenger cars (EU) | 10.8 million units $=17.6 \%$ of global passenger car production | 2020 |
| REGISTRATIONS |  |  |
| Motor vehicles (world) | 80.3 million units | 2020 |
| Motor vehicles (EU) | 11.7 million units $=14.5 \%$ of global motor vehicle registrations | 2020 |
| Passenger cars (world) | 63.4 million units | 2020 |
| Passenger cars (EU) | 9.9 million units $=15.7 \%$ of global passenger car registrations | 2020 |
| Petrol (EU) | 47.5\% market share | 2020 |
| Diesel (EU) | 28\% market share | 2020 |
| Electrically-chargeable cars (EU) | 10.5\% market share | 2020 |
| Electrically-chargeable vans (EU) | 2.0\% market share | 2020 |
| Electrically-chargeable trucks (EU) | 0.4\% market share | 2020 |
| Electrically-chargeable buses (EU) | 6.1\% market share | 2020 |
| trade |  |  |
| Motor vehicle exports (extra-EU) | $€ 134.1$ billion | 2020 |
| Motor vehicle imports (extra-EU) | $€ 57.7$ billion | 2020 |
| Trade balance (extra-EU) | €76.3 billion | 2020 |
| VEHICLES IN USE |  |  |
| Motor vehicles (EU) | 277.8 million units | 2019 |
| Passenger cars (EU) | 242.7 million units | 2019 |
| Motorisation rate (EU) | 628 vehicles per 1,000 inhabitants | 2019 |
| Average age of cars (EU) | 11.5 years | 2019 |
| Average age of vans (EU) | 11.6 years | 2019 |
| Average age of trucks (EU) | 13.0 years | 2019 |
| Average age of buses (EU) | 11.7 years | 2019 |
| ROAD SAFETY |  |  |
| Road fatalities per million inhabitants (EU) | 51 people | 2019 |
| ENVIRONMENT |  |  |
| Average CO2 emissions (EU) | 108.2g CO2/km | 2020 |
| INNOVATION |  |  |
| Automotive R\&D investment (EU) | €62.0 billion | 2019 |
| TAXATION |  |  |
| Fiscal income from motor vehicles (EU14) | €398.4 billion | 2020 |

## асеа



THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022

## EU AUTOMOTIVE SECTOR: DIRECT AND INDIRECT EMPLOYMENT

| DIRECT MANUFACTURING |
| :--- |
| Motor vehicles |
| Bodies (coachwork), trailers and semi-trailers |
| Parts and accessories |

The auto industry provides direct and indirect jobs for 12.6 million Europeans

EMPLOYMENT IN THE EU AUTOMOTIVE SECTOR
In million jobs / 2014-2018


The automotive sector
accounts for $6.6 \%$ of all EU jobs

MANUFACTURING JOBS IN THE EU AUTO SECTOR


> | Direct automotive |
| :--- |
| manufacturing employment |
| $\begin{array}{l}\text { Direct \& indirect automotive } \\ \text { manufacturing employment }\end{array}$ |

Total automotive employment
(manufacturing, services and construction)

EU employment in the manufacturing sector

EU total employment
2.6 million people
$=8.6 \%$ of EU employment in manufacturing

## 3.5 million people

= 11.6\% of EU employment in manufacturing

## 12.6 million people

$=6.6 \%$ of total EU employment

## 29.9 million people

$=15.7 \%$ of total EU employment
190 million people

EU DIRECT AUTOMOTIVE EMPLOYMENT


The EU automotive sector directly employs 2.6 million people in manufacturing

## асеа



WORLD VEHICLE PRODUCTION


In thousand units / 2020


1. Includes Turkey and CIS countries
2. Includes Hong Kong and Taiwan

## World vehicle production dropped by almost 16\% in 2020

WORLD CAR PRODUCTION


WORLD COMMERCIAL VEHICLE PRODUCTION

\% share / 2020

VEHICLE PRODUCTION IN THE EU
By country / 2020

|  |  | Cars | Vans ${ }^{1}$ | Trucks ${ }^{2}$ | Buses ${ }^{3}$ | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Austria | 107,476 | - | 15,815 | 11 | 123,302 |
|  | Belgium | 237,261 | - | 26,166 | 500 | 263,927 |
|  | Czech Republic | 1,129,184 | - | 1,221 | 5,042 | 1,135,447 |
|  | Finland | 85,698 | - | 35 | 131 | 85,864 |
|  | France | 861,660 | 438,379 | 47,156 | 2,806 | 1,350,001 |
|  | Germany | 3,403,981 | 245,502 | 146,974 | 3,764 | 3,800,221 |
|  | Hungary | 432,603 | - | - | 464 | 433,067 |
|  | Italy | 476,288 | 271,730 | 48,534 | 324 | 796,876 |
|  | Lithuania | - | - | 79 | - | 79 |
|  | Netherlands | 125,651 | - | 66,284 | 638 | 192,573 |
|  | Poland | 220,855 | 203,287 | 20,720 | 5,672 | 450,534 |
|  | Portugal | 198,693 | 69,432 | 2,784 | 142 | 271,051 |
|  | Romania | 437,628 | - | - | - | 437,628 |
|  | Slovakia | 943,847 | - | - | 10 | 943,857 |
|  | Slovenia | 140,878 | - | - | 10 | 140,888 |
| 들 | Spain | 1,751,891 | 478,917 | 24,194 | 1,088 | 2,256,090 |
| $\sum_{0 n}^{2}$ | Sweden | 256,671 | - | 36,014 | 4,053 | 296,738 |
| 䓂 | EUROPEAN UNION | 10,810,265 | 1,707,247 | 435,976 | 24,655 | 12,978,143 |

1. Light commercial vehicles up to 3.5 t
2. Medium and heavy commercial vehicles over 3.5 t
3. Medium and heavy buses over 3.5 t

By type, \% share / 2020

Buses
0.2\%


13 million motor vehicles


EU car production plummeted by $23 \%$, or some five million units, in 2020

COMMERCIAL VEHICLE PRODUCTION IN THE EU


1. Light commercial vehicles up to $3.5 t$
2. Medium and heavy commercial vehicles over 3.5 t
3. Medium and heavy buses over 3.5 t

## Commercial vehicle production in the EU

 decreased by $20.8 \%$ to 2.2 million units in 2020

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

The EU auto industry produces an average of 7.4 vehicles per worker

## AUTOMOBILE ASSEMBLY AND ENGINE PRODUCTION PLANTS IN EUROPE



There are 185 automobile assembly and production plants in the EU

## асеа

## REGISTRATIONS

THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022

GLOBAL NEW VEHICLE REGISTRATIONS
In thousand units / 2020


GLOBAL NEW CAR REGISTRATIONS
In thousand units / 2020


NEW COMMERCIAL VEHICLE' REGISTRATIONS
In thousand units / 2020


## 16.9 million vans, trucks and buses

were registered globally in 2020

VEHICLE REGISTRATIONS IN THE EU
By country / 2020


1. Data for Malta not available 2. Light commercial vehicles up to $3.5 \mathrm{t} \quad 3$. Medium and heavy commercial vehicles over $3.5 \mathrm{t} \quad 4$. Buses and coaches over 3.5 t

## The EU represents a market of

11.7 million motor vehicles per year

NEW COMMERCIAL VEHICLE REGISTRATIONS AND GDP IN THE EU

- EU new commercial vehicle registrations ${ }^{1}$ (million units) EU GDP growth (annual \% change)


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


NEW CARS PER 1,000 INHABITANTS


22 new cars were registered per 1,000 inhabitants in the EU in 2020


1. Multi-purpose vehicles
2. Sport utility vehicles

NEW CARS IN THE EU BY FUEL TYPE
Market share / 2017-2020

4. Includes full and mild hybrids 5. Includes natural gas, LPG and ethanol vehicles

## NEW VANS' IN THE EU BY FUEL TYPE

Market share / 2018-2020

Diesel Petrol Electrically-chargeable Hybrid electric Alternative fuels Total alternatively-powered vehicles


1. Light commercial vehicles up to 3.5 t 2. Data for Bulgaria, Lithuania and Malta not available

A quarter of all new cars

NEW TRUCKS' IN THE EU BY FUEL TYPE


2018


2019


2020

$\begin{array}{ll}\text { 1. Commercial vehicles over 3.5t } & \text { 2. Data for Bulgaria, Lithuania and Malta not available }\end{array}$

## NEW BUSES ${ }^{1}$ IN THE EU BY FUEL TYPE ${ }^{〔}$



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THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022

## MAIN DESTINATIONS FOR EU VEHICLE EXPORTS



The automotive industry puts the EU firmly on the global map


1. Passenger cars
2. Commercial vehicles up to $5 t$
3. Commercial vehicles over 5 t, including buses and coaches

## The auto industry generates an annual trade surplus of $€ 76$ billion for the EU



By value, in million $€$ / 2020

|  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | $\begin{array}{r} \text { \% change } \\ 20 / 19 \end{array}$ | $\begin{array}{r} \text { \% share } \\ 2020 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States | 6,944 | 7,246 | 6,529 | 5,550 | 9,510 | 10,542 | +10.9 | 18.3 |
| United Kingdom | 15,534 | 16,780 | 16,097 | 15,127 | 14,134 | 9,864 | -30.2 | 17.1 |
| Turkey | 8,054 | 10,489 | 12,237 | 12,693 | 13,022 | 9,776 | -24.9 | 16.9 |
| Japan | 6,539 | 7,857 | 8,348 | 8,808 | 10,737 | 8,118 | -24.4 | 14.1 |
| South Korea | 3,084 | 3,452 | 5,200 | 5,804 | 6,576 | 5,518 | -16.1 | 9.6 |
| Mexico | 1,650 | 2,153 | 4,622 | 5,214 | 5,006 | 4,130 | -17.5 | 7.2 |
| South Africa | 2,582 | 3,332 | 3,586 | 4,422 | 5,669 | 3,465 | -38.9 | 6.0 |
| Morocco | 1,394 | 1,623 | 1,974 | 2,357 | 2,542 | 2,362 | -7.1 | 4.1 |
| China | 167 | 229 | 405 | 479 | 864 | 1,963 | +127.3 | 3.4 |
| Thailand | 674 | 858 | 863 | 711 | 783 | 443 | -43.4 | 0.8 |
| WORLD | 49,354 | 57,320 | 63,226 | 63,788 | 71,284 | 57,746 | -19.0 | 100.0 |

The EU imported almost € 58 billion

# MAIN COUNTRIES OF ORIGIN OF EU VEHICLE IMPORTS 



In units / 2020

|  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | \% change $20 / 19$ | $\begin{aligned} & \text { \% share } \\ & 2020 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United Kingdom | 966,380 | 1,225,657 | 952,151 | 917,531 | 957,690 | 872,146 | -8.9 | 23.5 |
| Turkey | 684,481 | 860,478 | 974,269 | 970,942 | 929,834 | 654,612 | -29.6 | 17.6 |
| Japan | 414,494 | 491,779 | 553,948 | 583,057 | 676,024 | 485,371 | -28.2 | 13.1 |
| United States | 245,303 | 258,883 | 248,460 | 265,827 | 355,767 | 393,728 | +10.7 | 10.6 |
| South Korea | 276,599 | 295,551 | 412,882 | 436,693 | 443,441 | 318,917 | -28.1 | 8.6 |
| Morocco | 170,794 | 201,189 | 246,664 | 293,959 | 306,518 | 258,393 | -15.7 | 7.0 |
| China | 81,152 | 73,661 | 113,658 | 157,428 | 154,400 | 196,833 | +27.5 | 5.3 |
| Mexico | 121,963 | 134,875 | 230,755 | 265,680 | 222,463 | 173,307 | -22.1 | 4.7 |
| South Africa | 134,056 | 174,743 | 172,252 | 210,845 | 267,755 | 172,632 | -35.5 | 4.7 |
| Switzerland | 48,388 | 67,714 | 71,508 | 73,085 | 65,099 | 54,168 | -16.8 | 1.5 |
| WORLD | 3,440,441 | 4,123,915 | 4,318,539 | 4,462,922 | 4,622,058 | 3,711,171 | -19.7 | 100.0 |

## 3.7 million vehicles were imported to the EU in 2020




In units / 2020

|  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | \% change $20 / 19$ | $\begin{array}{r} \text { \% share } \\ 2020 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United Kingdom | 2,409,801 | 2,606,695 | 2,304,480 | 2,156,781 | 2,165,213 | 1,491,160 | -31.1 | 25.7 |
| United States | 1,095,129 | 969,083 | 965,929 | 933,491 | 827,621 | 702,642 | -15.1 | 12.1 |
| China | 349,250 | 400,997 | 472,592 | 473,201 | 412,045 | 434,382 | +5.4 | 7.5 |
| Turkey | 540,415 | 541,079 | 486,403 | 282,166 | 199,699 | 408,676 | +104.6 | 7.0 |
| Switzerland | 322,072 | 304, 267 | 294,394 | 283,628 | 312,822 | 233,430 | -25.4 | 4.0 |
| Ukraine | 44,136 | 72,540 | 112,552 | 109,279 | 178,997 | 220,011 | +22.9 | 3.8 |
| South Korea | 207,884 | 160,014 | 169,021 | 169,828 | 162,494 | 193,439 | +19.0 | 3.3 |
| Japan | 224,450 | 217,963 | 240,441 | 241,704 | 227,843 | 171,258 | -24.8 | 3.0 |
| Serbia | 97,478 | 129,506 | 131,193 | 155,510 | 150,697 | 157,650 | +4.6 | 2.7 |
| Norway | 157,056 | 157,747 | 164,611 | 208,439 | 165,597 | 125,440 | -24.2 | 2.2 |
| WORLD | 7,748,866 | 7,639,058 | 7,448,598 | 7,241,268 | 6,982,254 | 5,803,090 | -16.9 | 100.0 |

## 25.7\% of EU vehicle exports go to the United Kingdom



By value, in million $€$ / 2020

|  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | \% change 20/19 | $\begin{array}{r} \text { \% share } \\ 2020 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States | 6,915 | 7,202 | 6,380 | 5,450 | 9,435 | 10,452 | +10.8 | 20.4 |
| United Kingdom | 14,890 | 15,885 | 15,214 | 14,205 | 13,291 | 9,182 | -30.9 | 17.9 |
| Japan | 6,520 | 7,817 | 8,319 | 8,786 | 10,715 | 8,094 | -24.5 | 15.8 |
| Turkey | 4,271 | 5,672 | 7,900 | 8,147 | 8,283 | 6,331 | -23.6 | 12.3 |
| South Korea | 3,067 | 3,439 | 5,186 | 5,789 | 6,549 | 5,510 | -15.9 | 10.7 |
| Mexico | 1,641 | 2,141 | 4,600 | 5,179 | 4,962 | 4,098 | -17.4 | 8.0 |
| South Africa | 2,233 | 2,808 | 2,930 | 3,631 | 4,556 | 2,366 | -48.1 | 4.6 |
| Morocco | 1,233 | 1,428 | 1,773 | 2,124 | 2,308 | 2,191 | $-5.1$ | 4.3 |
| China | 80 | 103 | 329 | 393 | 717 | 1,709 | +138.3 | 3.3 |
| Serbia | 1,035 | 999 | 844 | 655 | 440 | 306 | $-30.5$ | 0.6 |
| WORLD | 43,419 | 49,681 | 55,708 | 56,095 | 63,103 | 51,337 | -18.6 | 100.0 |

The United States accounts for the highest import value of cars, with a $20.4 \%$ share

MAIN COUNTRIES OF ORIGIN OF EU CAR IMPORTS
In million units / 2020


|  | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | $\begin{array}{r} \% \text { change } \\ 20 / 19 \end{array}$ | \% share $2020$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United Kingdom | 934,643 | 1,170,174 | 901,298 | 840,140 | 700,546 | 503,282 | -28.2 | 16.5 |
| Turkey | 451,459 | 569,756 | 718,163 | 714,895 | 701,111 | 494,149 | -29.5 | 16.2 |
| Japan | 413,289 | 489,473 | 552,017 | 581,385 | 674,328 | 483,626 | -28.3 | 15.8 |
| United States | 241,598 | 253,205 | 239,786 | 256,411 | 349,091 | 386,877 | +10.8 | 12.7 |
| South Korea | 275,559 | 294,623 | 411,952 | 435,814 | 441,870 | 318,479 | -27.9 | 10.4 |
| Morocco | 152,247 | 179,959 | 222,965 | 266,276 | 280,731 | 240,479 | -14.3 | 7.9 |
| China | 73,346 | 60,954 | 99,854 | 133,280 | 133,465 | 170,244 | +27.6 | 5.6 |
| Mexico | 121,034 | 133,601 | 228,668 | 262,147 | 218,077 | 170,153 | -22.0 | 5.6 |
| South Africa | 114,974 | 148,521 | 140,966 | 172,410 | 213,198 | 124,335 | -41.7 | 4.1 |
| Switzerland | 42,232 | 60,965 | 64,113 | 65,877 | 58,514 | 48,059 | -17.9 | 1.6 |
| WORLD | 3,068,995 | 3,659,905 | 3,865,048 | 3,961,764 | 3,974,072 | 3,052,178 | -23.2 | 100.0 |




In units / 2020

5.2 million cars were exported by the EU in 2020

## асеа

## VEHICLES IN USE

THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022


The EU has 628 motor vehicles per 1,000 inhabitants

EU VEHICLE FLEET: SIZE AND DISTRIBUTION


The EU fleet counts almost 278 million motor vehicles

AVERAGE AGE OF THE EU VEHICLE FLEET


1. Light commercial vehicles up to 3.5 t
2. Medium and heavy commercial vehicles over 3.5 t
3. Buses and coaches over 3.5 t

AVERAGE AGE OF THE EU FLEET
By vehicle type, in years / 2017-2019


## 0.4\% of all passenger cars on EU roads are electrically-chargeable

## асеа

## ROAD SAFETY

THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022


# While there are 45 million more vehicles on EU roads, fatalities have fallen by -43.5\% since 2007 

ROAD FATALITIES PER MILLION INHABITANTS

- 2010 - 2019 . . EU average 2010 ... EU average 2019


Average road fatalities per million Europeans dropped by $25 \%$ since 2010

```
- Road fatalities - % change 19/18 + % change 19/18
```



EUROPEAN UNION
-3.0\%
22,653

## асеа



THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022

CO2 EMISSIONS OF NEW CARS BY COUNTRY


| EU27 + IS + NO + UK | $-11.9 \%$ | 107.8 |
| :---: | :---: | :---: |
| EU27 | $-11.3 \%$ | 108.2 |

[^1]NEW CARS BY EMISSIONS

- > $130 \mathrm{~g} \mathrm{CO2} / \mathrm{km}-96-130 \mathrm{~g} \mathrm{CO} 2 / \mathrm{km} \quad \leq 95 \mathrm{~g} \mathrm{CO2} / \mathrm{km}$

10


1. Provisional figures

## CO2 EMISSIONS OF NEW CARS IN THE EU



CO2 emissions from new cars

WATER USED IN CAR PRODUCTION
2005-2020


1. Excluding scrap metal and demolition waste

## Water consumption per car produced has been reduced by $53.8 \%$ since 2005

VOC' EMISSIONS FROM CAR PRODUCTION
2005-2020


1. Volatile organic compounds

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 manufactures have been able to reduce unit emissions by $43.2 \%$ over the last 15 years.

## EU manufacturers have dramatically reduced the environmental impact of car production over the last 15 years

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R\&D SHARE OF SECTORS IN THE EU
Automobiles \& parts

- Automobiles \& parts ..... 62.0
- Pharmaceuticals \& biotechnology ..... 30.5
- Technology hardware \& equipment ..... 15.9
Electronic \& electrical equipment ..... 11.0
- Industrial engineering ..... 9.8
- Software \& computer services ..... 9.6
- Aerospace \& defence ..... 8.2
- Health care equipment \& services ..... 5.8
- Banks ..... 5.6
Chemicals ..... 5.5


## The automotive sector is the

 EU's number one investor in R\&D, responsible for $33 \%$ of total spendingR\&D INVESTMENT IN THE AUTOMOBILE SECTOR BY WORLD REGION


EU investment in automotive R\&D stands at €62 billion annually

PATENT APPLICATIONS RELATED TO SELF-DRIVING VEHICLES

Europe ${ }^{1}$ US Japan South Korea China Rest of the world

6,000


1. European Patent Convention (EPC)

## Europe leads the world in patents for self-driving vehicles

R\&D INVESTMENT
BY INDUSTRY AND WORLD REGION
In billion € / 2019

- EU Japan US China Rest of the world


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

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## TAXATION

THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022

ELECTRIC VEHICLES:
TAX BENEFITS AND PURCHASE INCENTIVES


## Purchase incentives for electric vehicles are available in 18 EU countries

CO2-BASED VEHICLE TAXATION


## FISCAL INCOME FROM VEHICLES IN MAJOR EUROPEAN MARKETS



Motor vehicles account for $€ 398.4$ billion
in taxes in major European markets


AVERAGE ANNUAL TAX REVENUE PER VEHICLE IN MAJOR EU MARKETS


1. Per country estimates based on total number of vehicles in the fleet

## Collecting € $€, 187$ per vehicle annually,

 Belgium has the highest tax revenueEXCISE DUTIES ON UNLEADED PETROL


EXCISE DUTIES ON DIESEL

- Diesel . . . EU minimum rates diesel


Hungary has the lowest excise duties on fuels - both petrol and diesel - in the EU

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## ABOUT ACEA

THE AUTOMOBILE INDUSTRY
POCKET GUIDE 2021/2022

## DRIVING MOBILITY FOR EUROPE

The European Automobile Manufacturers' Association, or ACEA, unites Europe's 15 major car, truck, van and bus makers.
BMW
GROUP
(3) 三 = $=$
DAIMLER
Ferrari


## FIOINDA <br> The Power of Dreams

GROUPE
RENAULT

## VOLKSWAGEN

aktiengesselischaft
(8) HYUחDAI

STELレNTIS


TOYOTA

We are the voice of the auto industry: a technological world leader and the backbone of the EU economy. Our members keep Europe on the move, providing diverse solutions for moving people and goods from A to B.

Together, we are progressing on the road to zero-emission and zero-fatality transport. We are addressing major technology shifts and the changing mobility needs of Europeans.

## DRIVING MOBILITY FOR EUROPE

ACEA is working towards a new era of mobility, where all Europeans can access affordable transport solutions that are:

- Green \& Clean
- Smart \& Efficient
- Safe \& Reliable

Our aim is to drive Europe's mobility transformation - while at the same time ensuring that the auto industry remains a strong Global \& Competitive player.

## What ACEA does

ACEA acts as one with common industry positions that also reflect the overarching interests of European citizens, transport users and operators, and auto industry workers.

We bring our collective expertise to policy makers, sharing a wealth of factual information to enable well-informed decisions.

We foster a societal debate around mobility, and are open to working with all interested parties to advance the common aim of clean, smart and safe mobility.

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DRIVING MOBILITY FOR EUROPE

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[^0]:    $\begin{array}{ll}\text { 1. Buses and coaches over } 3.5 t & \text { 2. Data for Bulgaria, Lithuania and Malta not available }\end{array}$

[^1]:    1. Provisional figures
