



## 2022 Global Automotive Consumer Study

Key findings: Global focus countries

January 2022



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Automotive Consumer Study, visit  
**[www.deloitte.com/autoconsumers](http://www.deloitte.com/autoconsumers)**

For over a decade, Deloitte has been exploring automotive consumer trends impacting a rapidly evolving global mobility ecosystem.

**Key insights from our Global Automotive Consumer Study over the years:**

The Global Automotive Consumer Study informs Deloitte’s point of view on the evolution of mobility, smart cities, connectivity, transportation, and other issues surrounding the movement of people and goods.

- 2010 Overall value ranked as the primary factor when evaluating brands
- 2011 “Cockpit technology” and the shopping experience-led differentiators
- 2012 Interest in hybrids driven by cost and convenience, while interest in connectivity centers on safety
- 2014 Shared mobility emerges as an alternative to owning a vehicle
- 2017 Interest in full autonomy grows, but consumers want a track record of safety
- 2018 Consumers in many global markets continue to move away from internal combustion engines (ICE)
- 2019 Consumers “pump the brakes” on interest in autonomous vehicles
- 2020 Questions remain regarding consumers’ willingness to pay for advanced technologies
- 2021 Online sales gaining traction, but majority of consumers still want in-person purchase experience

# 2022 Deloitte Global Automotive Consumer Study

From September through October 2021, Deloitte surveyed more than 26,000 consumers in 25 countries to explore opinions regarding a variety of critical issues impacting the automotive sector, including the development of advanced technologies. The overall goal of this annual study is to answer important questions that can help companies prioritize and better position their business strategies and investments.

## Willingness to pay for advanced tech remains limited

A majority of consumers are unwilling to pay more for advanced technologies in most global markets as they have been trained to expect new vehicle features as a cost of doing business for brands looking to differentiate themselves from their competitors.



## Interest in EVs driven by lower running costs and better experience

Consumer interest in electrified vehicles (EVs) centers on the perception of lower fuel costs, environmental consciousness, and a better driving experience. However, driving range and lack of available charging infrastructure remain barriers to adoption.



## In-person purchase experience still preferred by many

Most consumers would still prefer to purchase a vehicle at an authorized dealership. However, a perception of increased convenience and ease of use will likely support continued growth of virtual purchase processes.



## Personal vehicles continue as the preferred mode of transportation

Shared mobility services like ride-hailing and car sharing have been slow to return to their prepandemic pace of growth as people prefer using personal vehicles to satisfy their transportation requirements.



# Advanced technologies and vehicle connectivity

Consumer willingness to pay for advanced technologies, including alternative powertrains and vehicle connectivity, is limited in most global markets.

**Percentage of consumers that are unwilling to pay more than ~US\$500<sup>1</sup> for a vehicle with advanced technologies (including people that would not pay any more)**

| Advanced technology category  | US    | Germany | Japan   | Rep. of Korea | China  | India   | Southeast Asia <sup>†</sup>   |
|-------------------------------|-------|---------|---------|---------------|--------|---------|-------------------------------|
| Safety                        | 56%   | 70%     | 66%     | 58%           | 31%    | 48%     | 59%                           |
| Connectivity                  | 65%   | 77%     | 83%     | 72%           | 39%    | 48%     | 65%                           |
| Infotainment                  | 69%   | 82%     | 86%     | 78%           | 39%    | 57%     | 72%                           |
| Autonomy                      | 61%   | 69%     | 56%     | 42%           | 31%    | 37%     | 48%                           |
| Alternative engine solutions  | 53%   | 56%     | 57%     | 41%           | 31%    | 35%     | 46%                           |
| Unwilling to pay more than... | \$500 | €400    | ¥50,000 | ₩500,000      | ¥2,500 | ₹25,000 | Local currencies <sup>‡</sup> |

Note: Did not consider "don't know" responses.

<sup>†</sup> Southeast Asia region comprises Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam markets.

<sup>‡</sup> IDR 5 million/MYR 2,000/25,000 Php/SGD 500/15,000 Thai baht/10 million VND.

<sup>1</sup> Calculated for each country in local market currency (roughly equivalent to \$US500).

Q3. How much more would you be willing to pay for a vehicle that had each of the technologies listed below?

Sample size: China=1,016; Germany=1,401; India=989; Japan=880; Republic of Korea=961; Southeast Asia=5,070; US=960

Depending on the market, consumers will share personal data in exchange for less congested and safer routes, and vehicle health reporting/lower maintenance costs.

**Interest (somewhat/very interested) in a connected vehicle if it provides benefits related to...**

|  | US  | Germany | Japan | Rep. of Korea | China | India | Southeast Asia |
|--|-----|---------|-------|---------------|-------|-------|----------------|
| Updates regarding traffic congestion and suggested alternate routes                                  | 58% | 55%     | 70%   | 79%           | 81%   | 83%   | 78%            |
| Suggestions regarding safer routes (i.e., avoid unpaved roads)                                       | 58% | 41%     | 69%   | 69%           | 80%   | 82%   | 76%            |
| Updates to improve road safety and prevent potential collisions                                      | 56% | 51%     | 72%   | 76%           | 81%   | 83%   | 81%            |
| Customized/optimized vehicle insurance plan  | 48% | 38%     | 51%   | 59%           | 75%   | 82%   | 72%            |
| Maintenance updates and vehicle health reporting   | 59% | 54%     | 63%   | 69%           | 79%   | 84%   | 80%            |
| Maintenance cost forecasts based on your driving habits  | 51% | 44%     | 54%   | 61%           | 79%   | 81%   | 74%            |
| Customized suggestions regarding ways to minimize service expenses                                   | 51% | 45%     | 63%   | 76%           | 81%   | 82%   | 75%            |
| Over-the-air vehicle software updates  | 50% | 53%     | 51%   | 66%           | 73%   | 77%   | 65%            |
| Access to nearby parking (i.e., availability, booking, and payment)                                  | 47% | 46%     | 56%   | 64%           | 79%   | 80%   | 72%            |
| Special offers regarding non-automotive products and services related to your journey or destination | 40% | 29%     | 43%   | 55%           | 77%   | 75%   | 62%            |
| Receiving a discount for access to a Wi-Fi connection in your vehicle                                | 46% | 35%     | 55%   | 62%           | 75%   | 77%   | 69%            |

 Top three interests

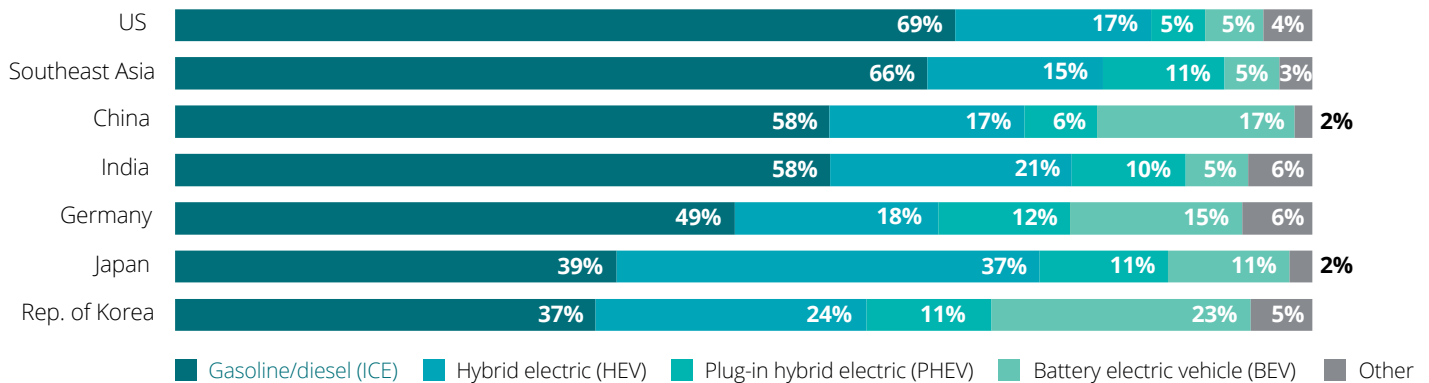
Q34. How interested are you in the following benefits of a connected vehicle if it meant sharing your own personal data and vehicle/operational data with the manufacturer or a third party?

Sample size: China=888; Germany=1,303; India=910; Japan=695; Republic of Korea=899; Southeast Asia=5,249; US=974

# Vehicle electrification

Consumer interest in BEVs is highest in South Korea, China, and Germany while Japanese consumers prefer HEVs. ICE still dominates future intentions in the US.

## Consumer powertrain preferences for their next vehicle



Note: "Other" includes engine types such as compressed natural gas, ethanol, and hydrogen fuel cells; did not consider "don't know" responses.

Q25. What type of engine would you prefer in your next vehicle?

Sample size: China=881; Germany=1,150; India=895; Japan=608; Republic of Korea=843; Southeast Asia=5,070; US=918

For the most part, people are drawn to an EV because of an expectation of lower fuel costs, or they are concerned about climate change and want to reduce emissions.

## Factors that impact the decision to acquire an electrified vehicle

| Factors   | US | Germany | Japan | Rep. of Korea | China | India | Southeast Asia |
|---|----|---------|-------|---------------|-------|-------|----------------|
| Concern about climate change/ reduced emissions                           | 2  | 1       | 2     | 2             | 1     | 1     | 2              |
| Concern about personal health   | 6  | 4       | 5     | 7             | 3     | 4     | 5              |
| Lower fuel costs  | 1  | 2       | 1     | 1             | 4     | 2     | 1              |
| Less maintenance  | 4  | 7       | 7     | 3             | 6     | 5     | 4              |
| Better driving experience   | 3  | 5       | 3     | 4             | 2     | 3     | 3              |
| Government incentives/ stimulus programs                                  | 5  | 3       | 4     | 5             | 7     | 6     | 6              |
| Potential for extra taxes/ levies applied to internal combustion vehicles | 7  | 6       | 6     | 6             | 5     | 7     | 7              |

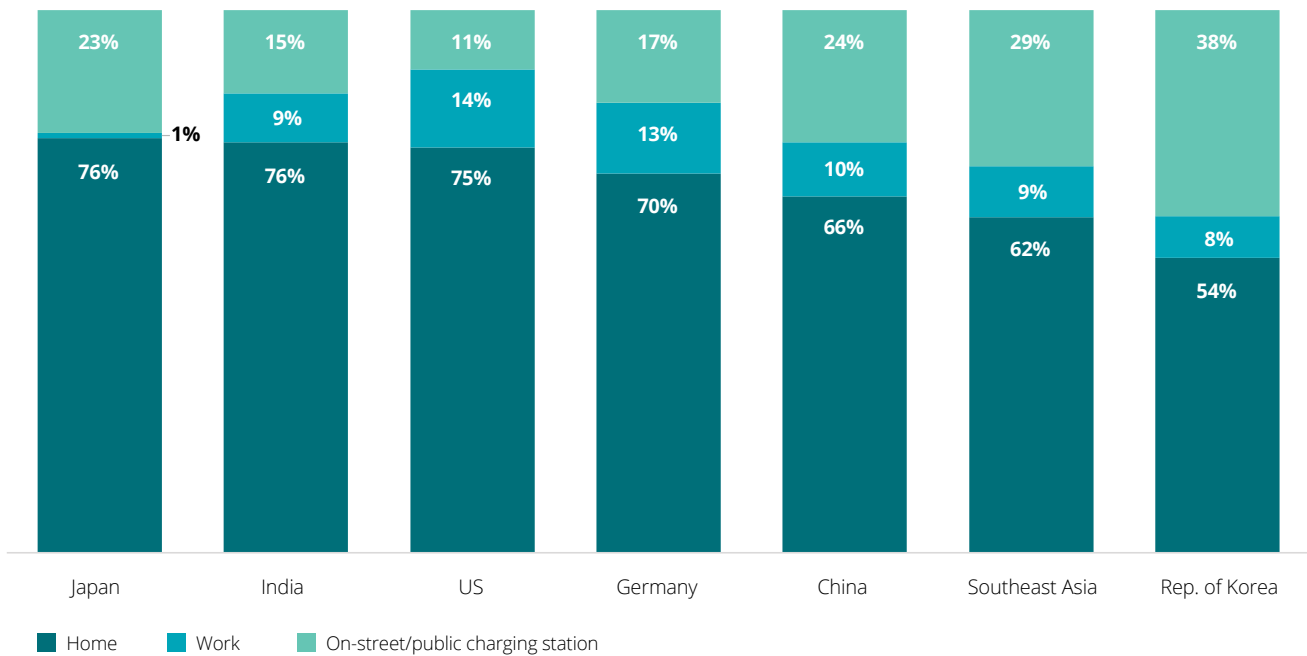
■ Top concern

Q26. Please rank the following factors in terms of their impact on your decision to acquire an electrified vehicle (highest to lowest).

Sample size: China=360; India=331; Germany=513; Japan=361; Republic of Korea=482; Southeast Asia=1,568; US=250

Most people in Japan, India, and the US plan to charge their PHEV/BEVs at home, while demand for public charging is high in South Korea and the SEA region.

**Location people expect to charge their electrified vehicle most often**

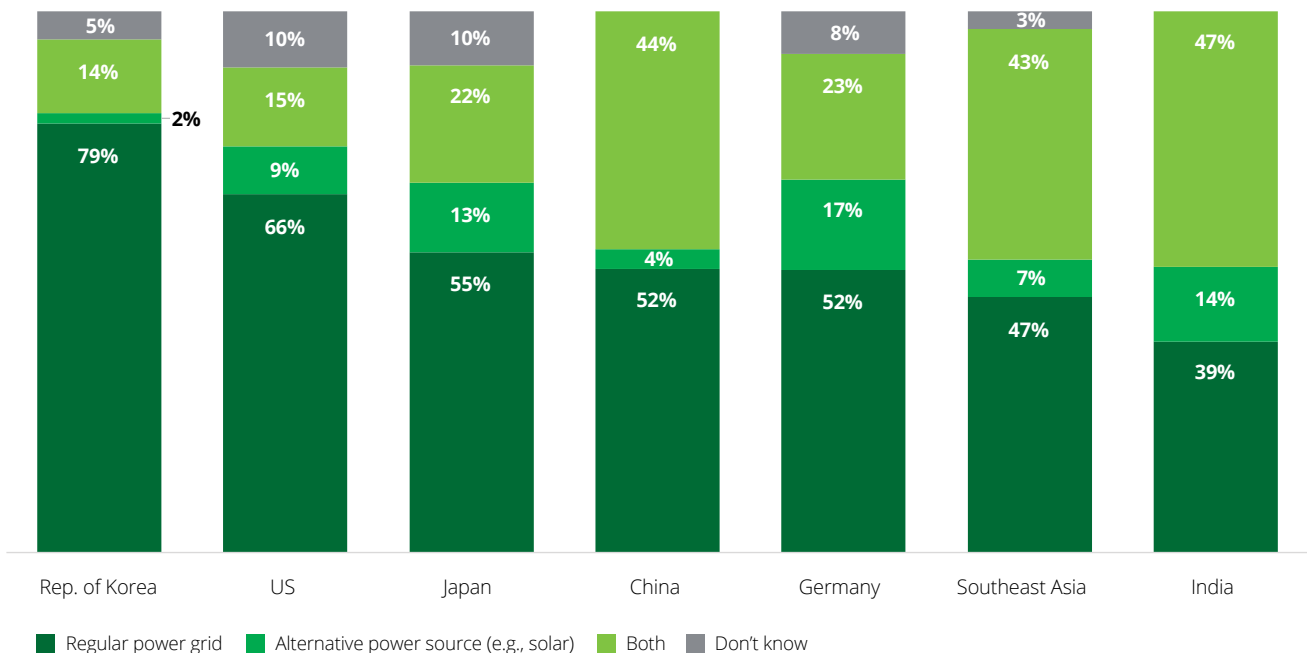


Q27. Where do you expect to charge your electrified vehicle most often?

Sample size: China=209; Germany=307; India=143; Japan=133; Republic of Korea=284; Southeast Asia=784; US=91

Among those who plan to charge their PHEV/BEV at home, consumers in India, China, and the SEA region plan to use both regular grid and renewable power.

**Source of power consumers intend to use to charge electric vehicles**



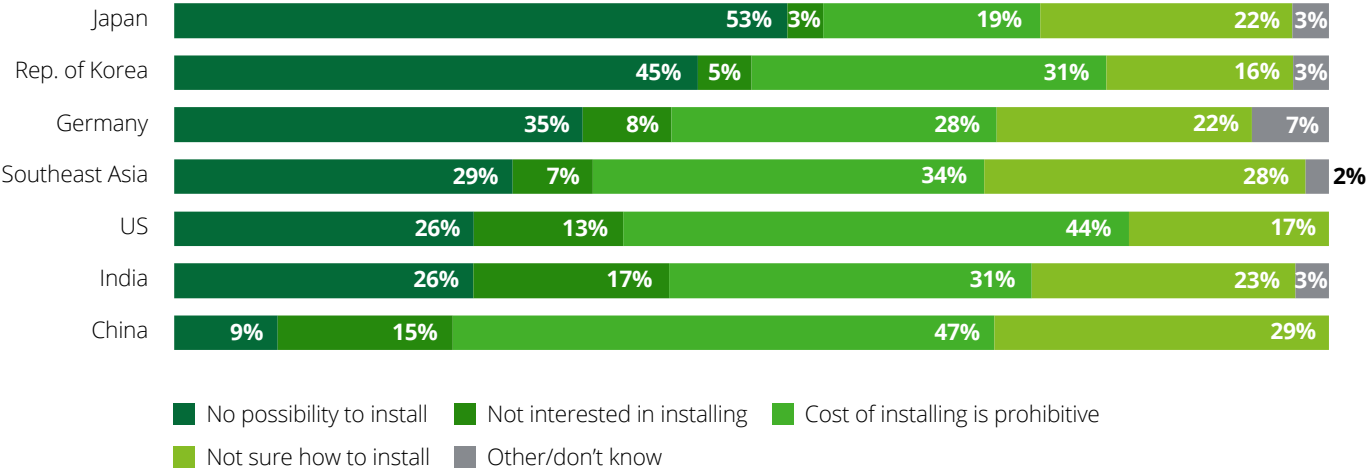
Q28. How do you intend to charge your electrified vehicle at home?

Sample size: China=137; Germany=216; India=108; Japan=101; Republic of Korea=154; Southeast Asia=482; US=68



Consumers not planning to charge a PHEV/BEV at home say they either can't install a charger or the cost of installing a charger is prohibitive.

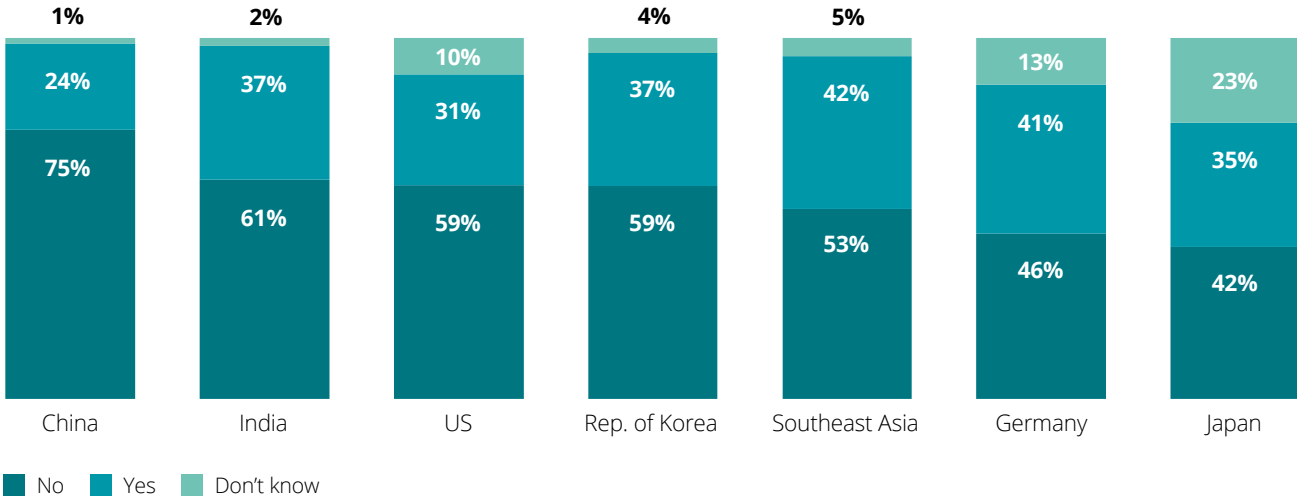
**Reasons for not charging the electrified vehicle at home**



Q29. What is the main reason you do not intend to charge your electrified vehicle at home?  
 Sample size: China=72; Germany=91; India=35; Japan=32; Republic of Korea=130; Southeast Asia=302; US=23

Potential increases in the price of electricity may sway a significant number of consumers away from a PHEV/BEV purchase in most global markets.

**How many consumers would alter their decision to purchase an electrified vehicle if the electricity used for mobility was priced similar to current fossil fuels?**



Q30. Would your decision to purchase an electrified vehicle change if the electricity used for mobility was priced similar to current fossil fuels?  
 Sample size: China=209; Germany=307; India=143; Japan=133; Republic of Korea=284; Southeast Asia=784; US=91

Consumers who said they are not considering an EV as their next vehicle cited range anxiety and a lack of public charging infrastructure as their biggest concerns.

**Greatest concern regarding all battery-powered electric vehicles**

| Concern  | US  | Germany | Japan | Rep. of Korea | China | India | Southeast Asia |
|--|-----|---------|-------|---------------|-------|-------|----------------|
| Driving range  | 20% | 24%     | 15%   | 10%           | 22%   | 10%   | 13%            |
| Cost/price premium   | 13% | 12%     | 16%   | 9%            | 6%    | 12%   | 11%            |
| Uncertain resale value   | 2%  | 2%      | 2%    | 1%            | 4%    | 4%    | 3%             |
| Potential for extra taxes/levies associated with BEVs          | 4%  | 2%      | 1%    | 2%            | 6%    | 5%    | 4%             |
| Time required to charge  | 10% | 9%      | 8%    | 15%           | 11%   | 11%   | 11%            |
| Lack of public electric vehicle charging infrastructure        | 14% | 14%     | 19%   | 26%           | 12%   | 23%   | 28%            |
| Lack of charger at home  | 8%  | 10%     | 19%   | 7%            | 5%    | 4%    | 6%             |
| Lack of alternate power source (e.g., solar) at home           | 5%  | 4%      | 4%    | 3%            | 4%    | 6%    | 5%             |
| Safety concerns with battery technology                        | 9%  | 8%      | 6%    | 19%           | 16%   | 14%   | 11%            |
| Lack of sustainability (i.e., battery manufacturing/recycling) | 6%  | 10%     | 4%    | 4%            | 12%   | 8%    | 6%             |
| Lack of choice   | 3%  | 3%      | 1%    | 1%            | 3%    | 3%    | 2%             |

 Greatest concern

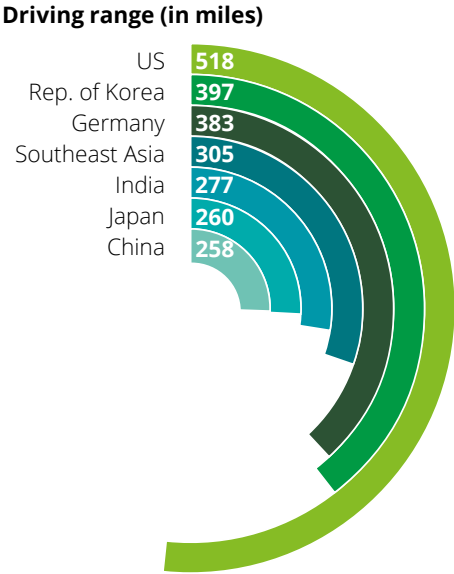
Note: Sum of “concerns” for a market may not add up to 100% as “Other” and “Don’t know” percentages are not shown.

Q31. What is your greatest concern regarding all battery-powered electric vehicles?

Sample size: China=888; Germany=1,303; India=910; Japan=695; Republic of Korea=899; Southeast Asia=5,249; US=974

US consumers expect fully charged BEV driving range to be north of 500 miles, while those in China, Japan, and India are content with a range of around 250 miles.

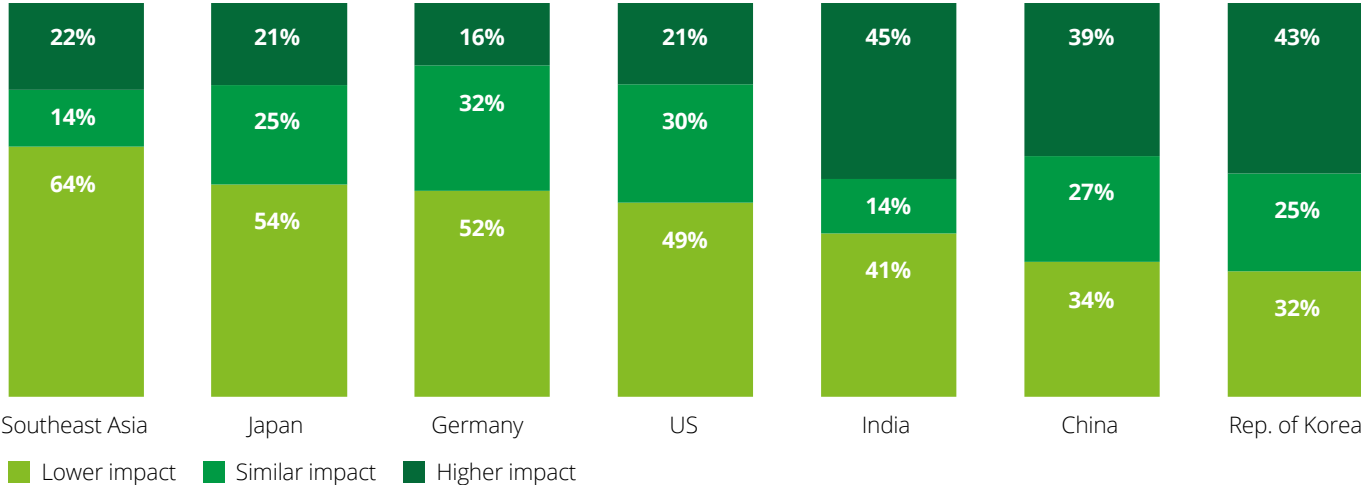
**Consumer expectation of driving range from a fully charged all-battery electric vehicle**



Q32. How much driving range would a fully charged all-battery electric vehicle need to have in order for you to consider acquiring one?  
 Sample size: China=735; Germany=1,129; India=861; Japan=630; Republic of Korea=709; Southeast Asia=5,004; US=927

Twice as many consumers in the SEA region see BEVs as having a lower environmental impact than ICE vehicles as compared to South Korea.

**Comparison of all-battery electric vehicles with internal combustion vehicles from an environmental impact point of view**

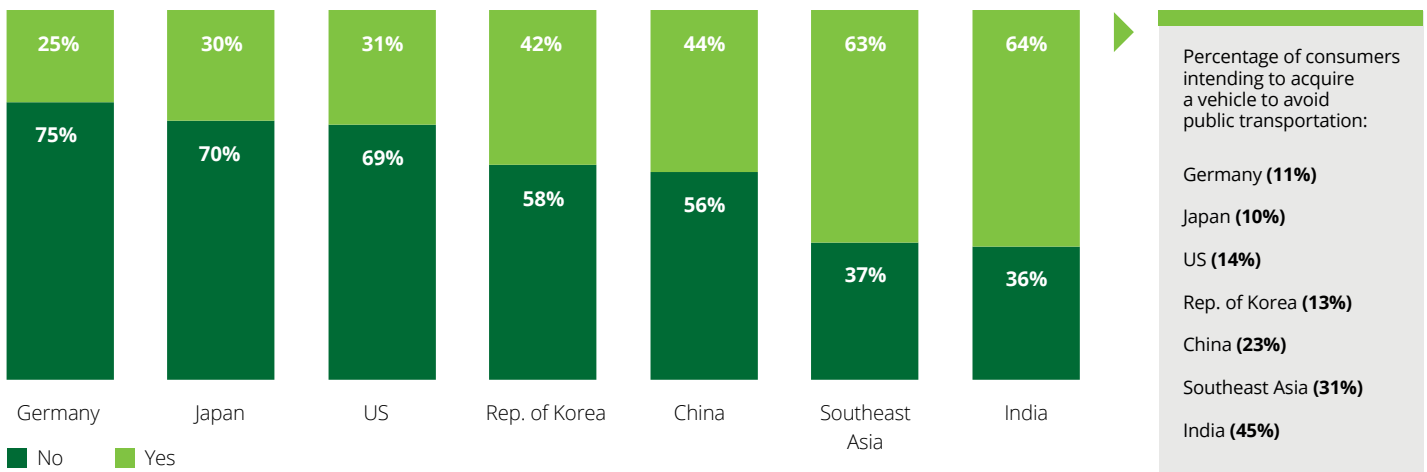


Note: Did not consider "Don't know" responses.  
 Q33. In your opinion, how do all-battery electric vehicles compare to internal combustion vehicles from an environmental impact point of view?  
 Sample size: China=878; Germany=1,194; India=894; Japan=605; Republic of Korea=838; Southeast Asia=4,952; US=831

# Future vehicle intentions

COVID-19 has had a relatively higher impact on Indian and SEA consumers. They plan to buy their next vehicle to avoid public transport.

## Impact of COVID-19 on next vehicle purchase

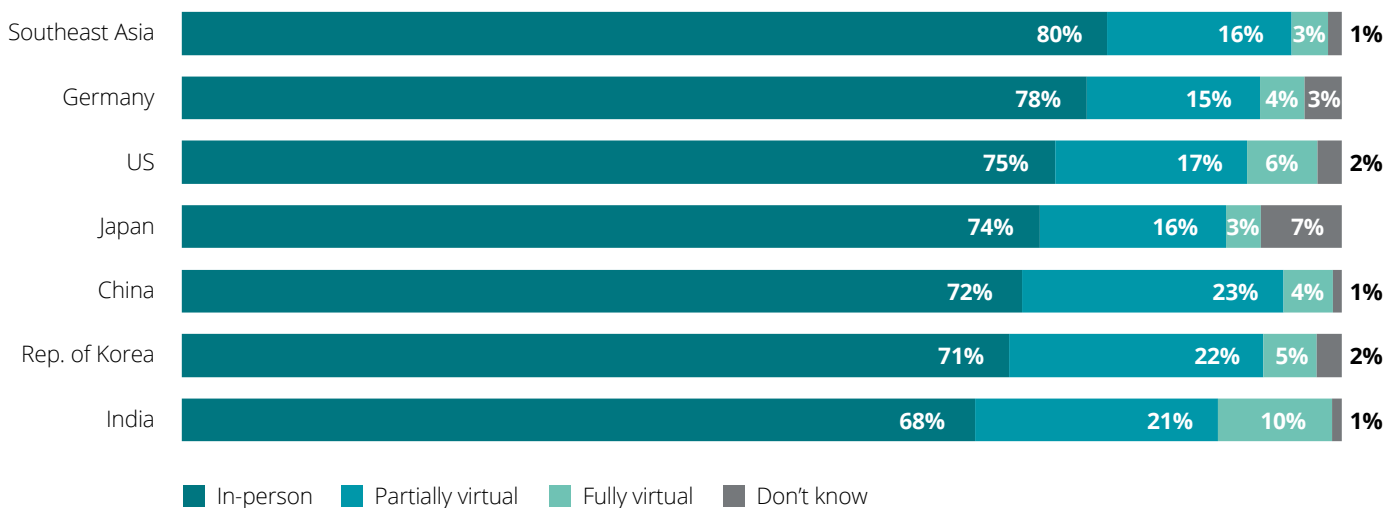


Q15. Has the global COVID-19 pandemic had an impact on your decision to purchase your next vehicle?

Sample size: China=1,022; Germany=1,507; India=1,006; Japan=1,000; Republic of Korea=1,012; Southeast Asia=6,049; US=1,031

Consumers would most prefer an in-person experience to purchase their next vehicle. Having said that, there is significant potential for virtual sales processes to grow.

## Most preferred way to acquire next vehicle

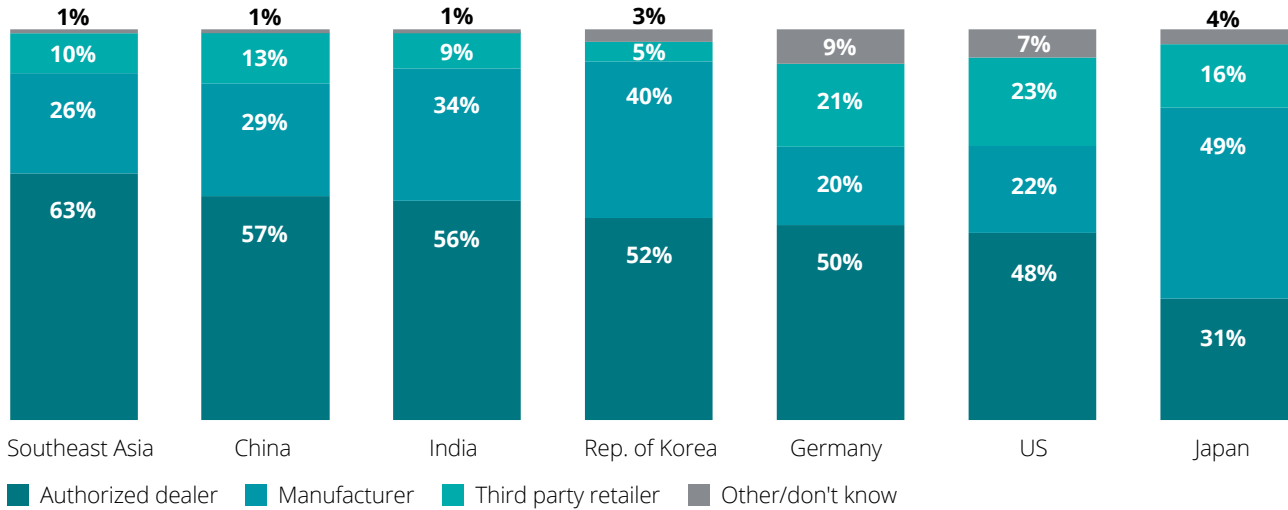


Q35. How would you most prefer to acquire your next vehicle?

Sample size: China=888; Germany=1,303; India=910; Japan=695; Republic of Korea=899; Southeast Asia=5,249; US=974

In most countries, consumers who plan to purchase virtually would prefer to buy from dealers (except Japan, where consumers would buy direct from the OEM).

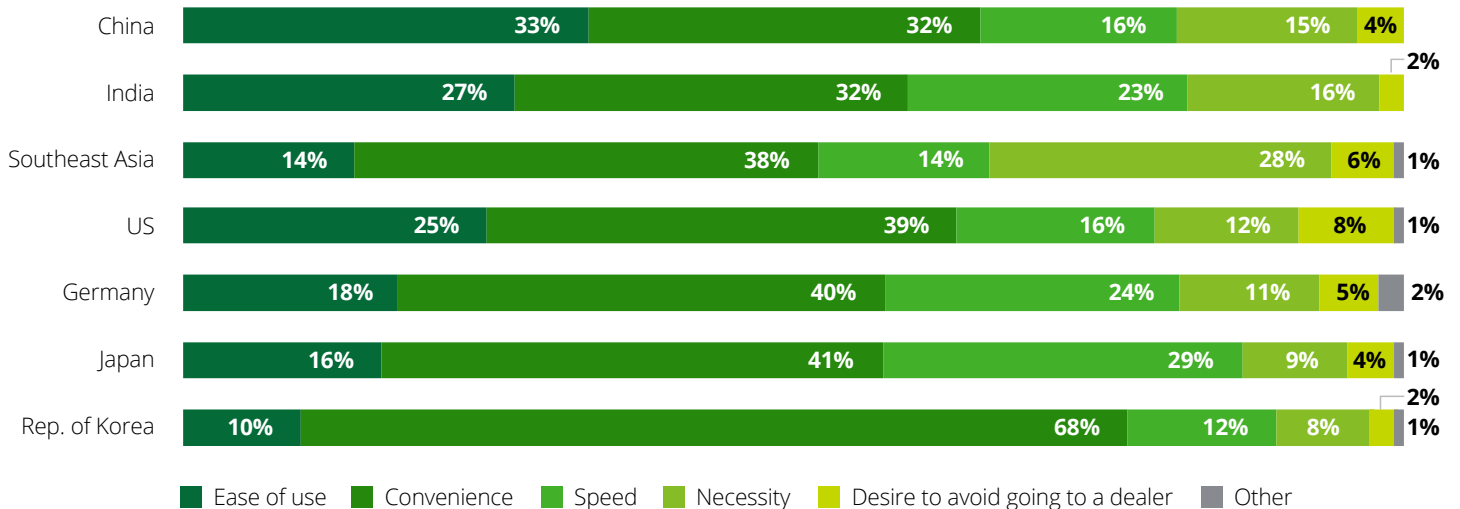
**Most preferred way to acquire next vehicle via a virtual process**



Q36. From whom would you most prefer to acquire your next vehicle via a virtual process?  
 Sample size: China=238; Germany=245; India=278; Japan=129; Republic of Korea=238; Southeast Asia=999; US=220

Convenience coupled with ease of use and speed are the main reasons for consumers to consider a virtual process for acquiring their next vehicle.

**Main reason to acquire next vehicle via a virtual process**

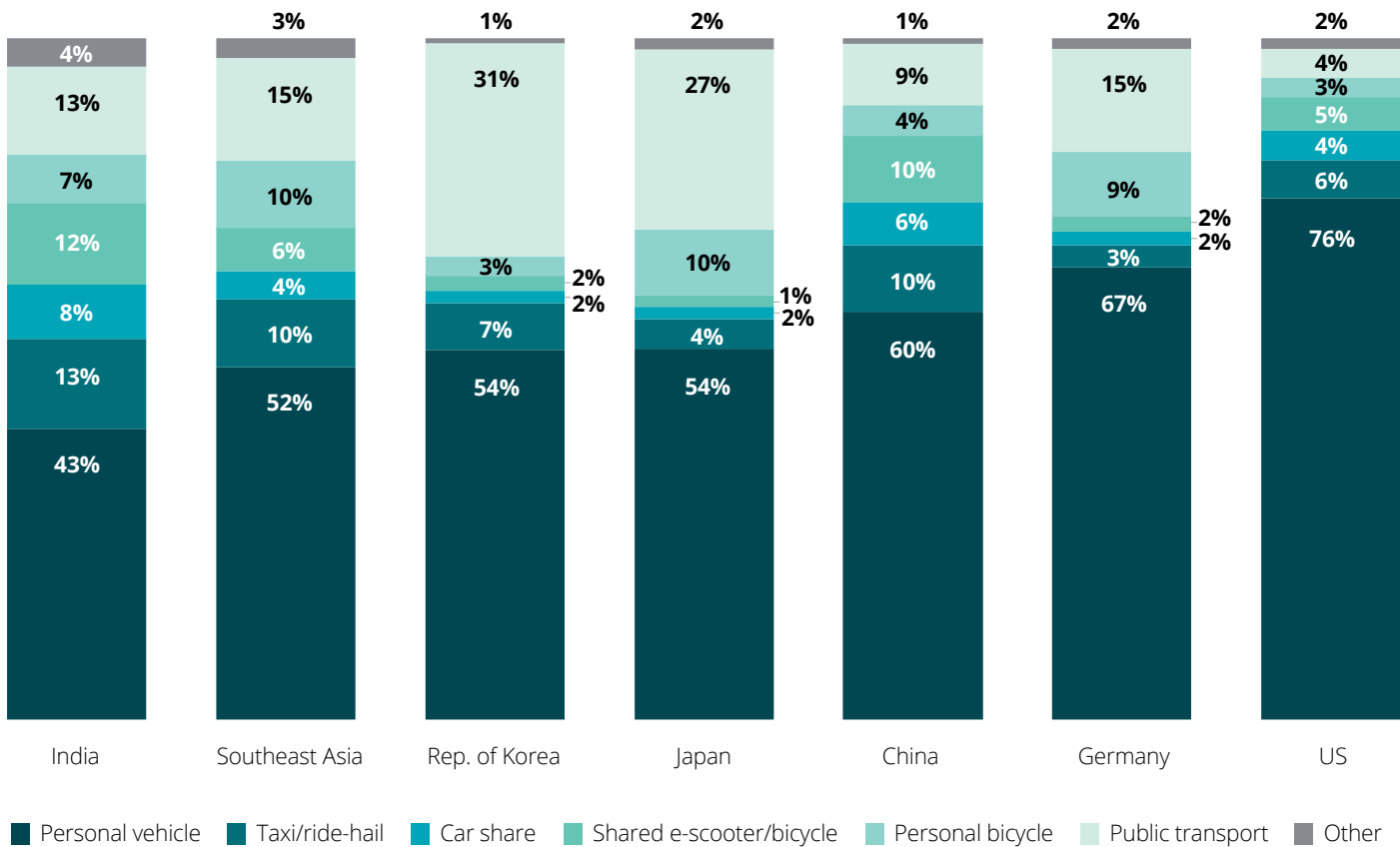


Q37. What is the main reason you would prefer to acquire your next vehicle via a virtual process?  
 Sample size: China=238; Germany=245; India=278; Japan=129; Republic of Korea=238; Southeast Asia=999; US=220

# Mobility services

Personal vehicles are the preferred mobility choice across markets, particularly in the US. Public transport is the second most preferred mode in South Korea and Japan.

## Mobility modes to meet transportation needs

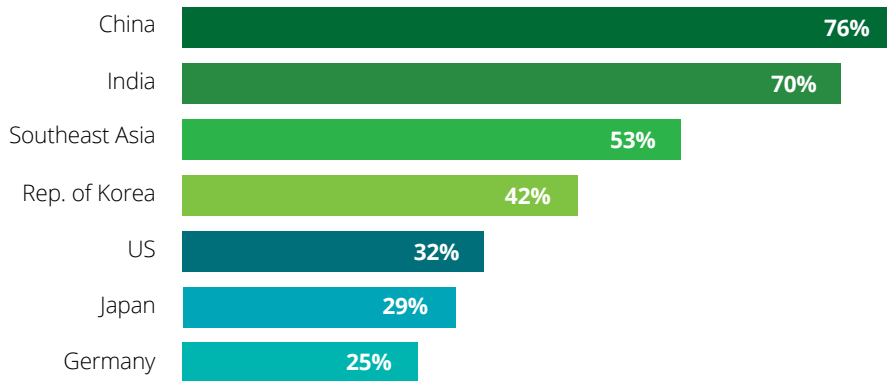


Q44. Going forward, what percentage of your mobility needs will be addressed by each of the following types of transportation?  
 Sample size: China=1,022; Germany=1,507; India=1,006; Japan=1,000; Republic of Korea=1,012; Southeast Asia=6,049; US=1,031

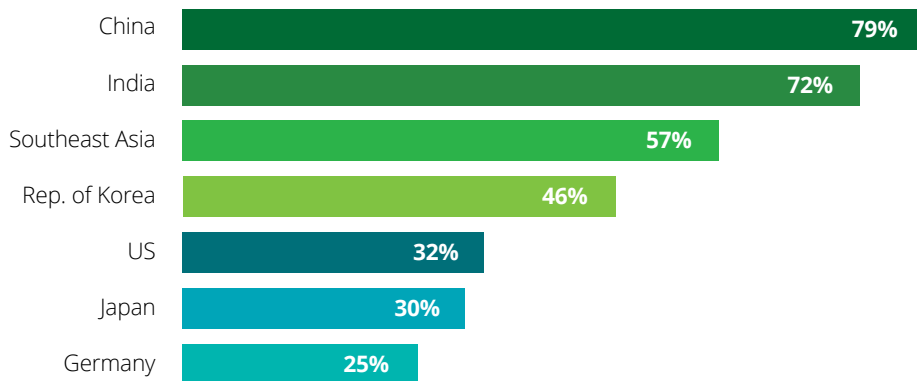
The idea of a vehicle subscription service is significantly more interesting to consumers in China and India as compared to other major global auto markets.

**Percentage of consumers who are somewhat/very interested in a subscription that allows access to...**

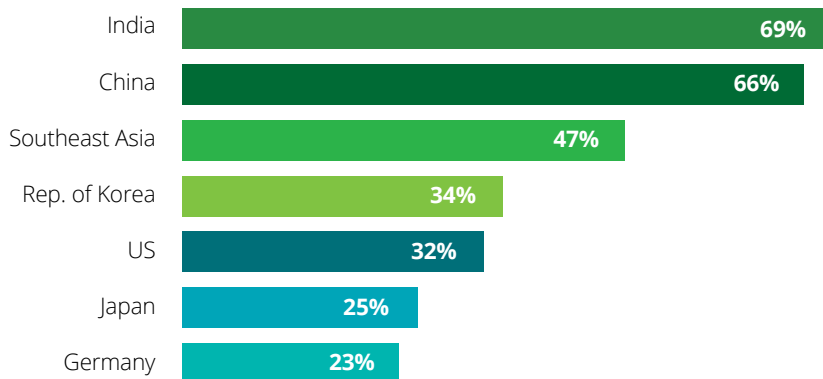
**Different models from same brand**



**Different brand of vehicles**



**Different pre-owned vehicles**



Q45. How interested are you in each of the following scenarios?

Sample size: China=1,022; Germany=1,507; India=1,006; Japan=1,000; Republic of Korea=1,012; Southeast Asia =6,049 ; US=1,031

Consumers would most prefer a subscription service that focuses on convenience, flexibility, and availability of vehicles.

**Top three most important characteristics of a vehicle subscription**

| Characteristics  | US | Germany | Japan | Rep. of Korea | China | India | Southeast Asia |
|--|----|---------|-------|---------------|-------|-------|----------------|
| Convenience (e.g., all relevant services included, except for fuel)  | 1  | 1       | 1     | 1             | 1     | 1     | 1              |
| Increased flexibility (e.g., shorter contract durations)   | 4  | 2       | 2     | 3             | 2     | 2     | 2              |
| Possibility to exchange vehicles   | 2  | 5       | 5     | 4             | 3     | 3     | 4              |
| Possibility to subscribe to a vehicle segment (e.g., SUVs) instead of a specific model                         | 7  | 9       | 10    | 10            | 5     | 5     | 7              |
| Possibility to subscribe to a specific model instead of a vehicle segment                                      | 9  | 10      | 11    | 13            | 8     | 9     | 12             |
| Availability of vehicles (e.g., short delivery times)  | 3  | 3       | 3     | 9             | 4     | 4     | 3              |
| Home delivery services (e.g., vehicle is dropped off and picked up at desired location)                        | 8  | 6       | 8     | 11            | 6     | 10    | 8              |
| Hassle-free online contract closing/full digital customer journey  | 12 | 8       | 6     | 6             | 10    | 12    | 11             |
| Full cost control due to transparent and predictable fixed monthly fees (e.g., no surprises via all-in offers) | 5  | 4       | 4     | 2             | 9     | 8     | 5              |
| Availability of complementary premium services (e.g., concierge services, valet parking)                       | 14 | 14      | 14    | 12            | 11    | 14    | 14             |
| Premium vehicles/brands offered  | 10 | 12      | 12    | 8             | 7     | 11    | 10             |
| Selection of only brand-new vehicles (for a comparable higher monthly rate)                                    | 13 | 13      | 13    | 14            | 12    | 13    | 13             |
| Selection of brand new as well as certified pre-owned vehicles (for a comparable lower monthly rate)           | 11 | 11      | 9     | 7             | 14    | 7     | 9              |
| Possibility to test new vehicles for a certain period without consequences                                     | 6  | 7       | 7     | 5             | 13    | 6     | 6              |

Q47. What are the top three most important characteristics of a vehicle subscription?

Sample size: China=1,022; Germany=1,507; India=1,006; Japan=1,000; Republic of Korea=1,012; Southeast Asia=6,049; US=1,031



# About the study

The 2022 study includes more than 26,000 consumer responses from 25 countries around the world.

| North America      | Sample | EMEA                | Sample | Asia Pacific           | Sample |
|--------------------|--------|---------------------|--------|------------------------|--------|
| Canada (CA)        | 1,005  | Austria (AT)        | 1,042  | Australia (AU)         | 1,027  |
| Mexico (MX)        | 1,003  | Belgium (BE)        | 1,046  | China (CN)             | 1,022  |
| United States (US) | 1,031  | Czech Republic (CZ) | 1,006  | India (IN)             | 1,006  |
|                    |        | France (FR)         | 1,005  | Indonesia (ID)         | 1,001  |
|                    |        | Germany (DE)        | 1,507  | Japan (JP)             | 1,000  |
|                    |        | Italy (IT)          | 1,003  | Malaysia (MY)          | 1,005  |
|                    |        | Poland (PL)         | 1,007  | Philippines (PH)       | 1,007  |
|                    |        | Romania (RO)        | 846    | Republic of Korea (KR) | 1,012  |
|                    |        | South Africa (ZA)   | 1,011  | Singapore (SG)         | 1,015  |
|                    |        | Spain (ES)          | 1,013  | Thailand (TH)          | 1,004  |
|                    |        | United Kingdom (GB) | 1,506  | Vietnam (VN)           | 1,017  |

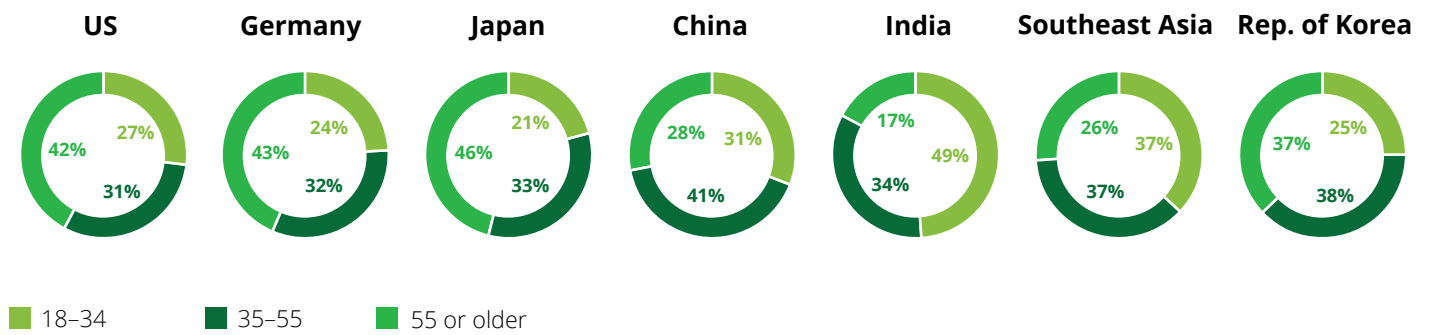
## Study methodology

The study is fielded using an online panel methodology where consumers of driving age are invited to complete the questionnaire (translated into local languages) via email.

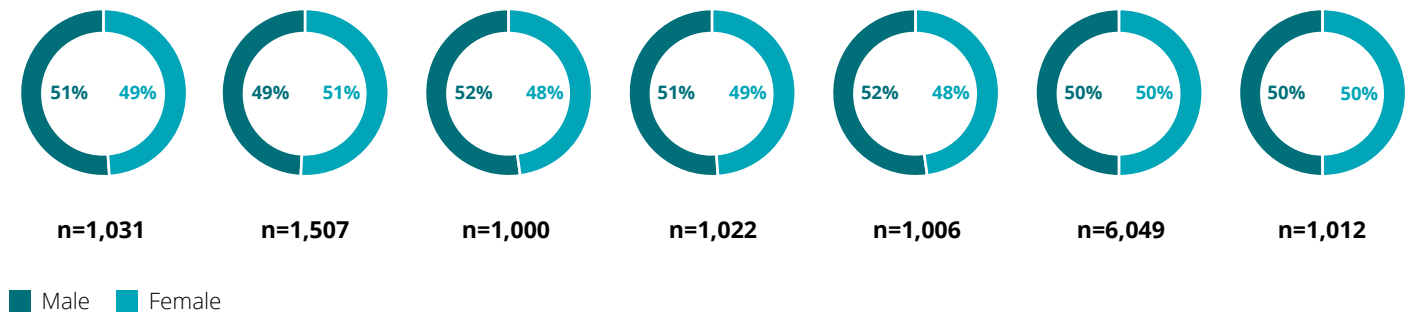
Note: "Sample" represents the number of survey respondents in each country.

## Study demographics

### Age group



### Gender



Note: Southeast Asia region comprises Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam markets.

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# Deloitte.

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