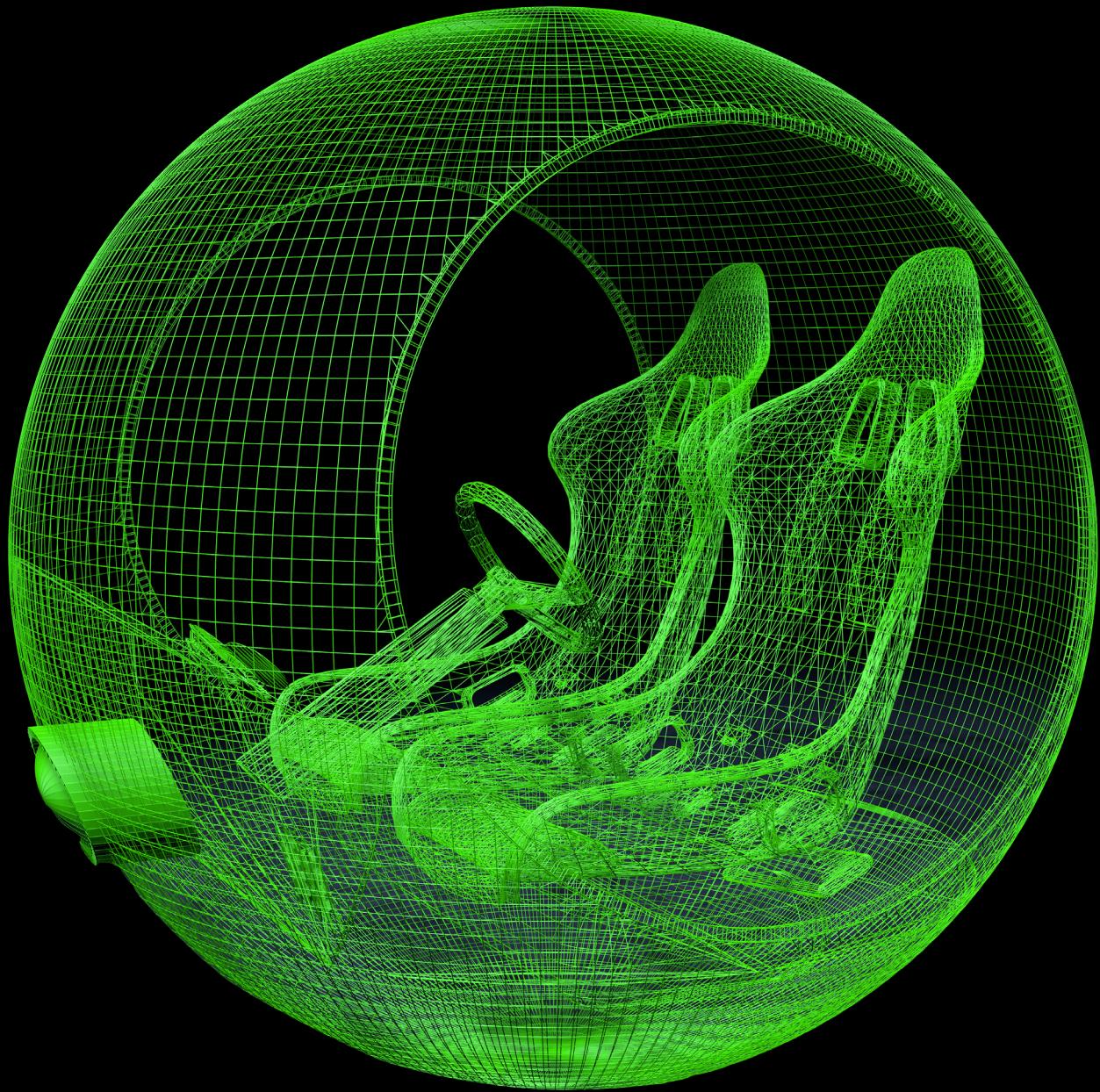


Deloitte.



Deloitte Automotive Consumer Study

Advanced vehicle technologies

2019

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Preface



Özkan Yıldırım

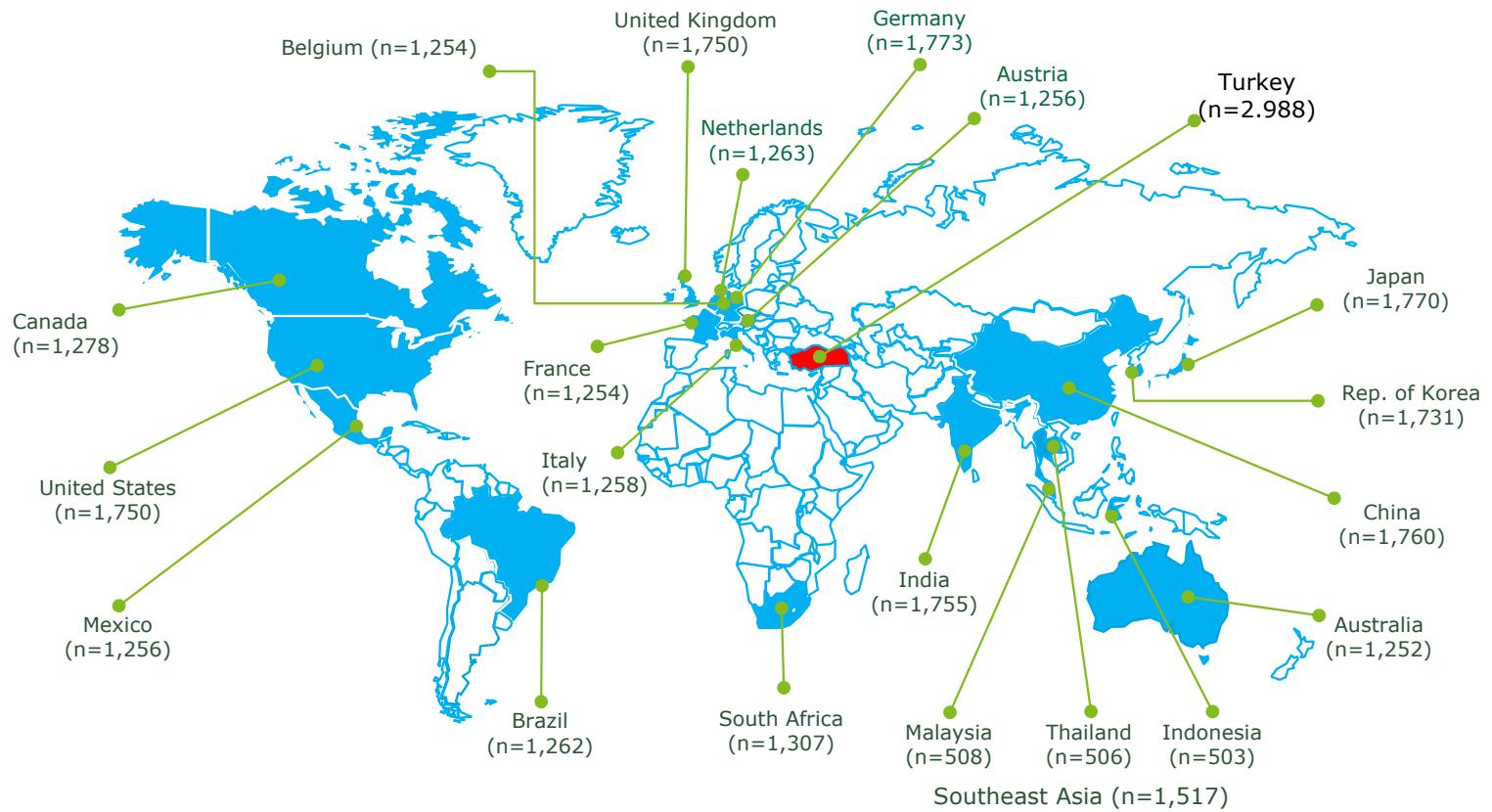
Deloitte Turkey
Consumer Industry and
Automotive Sector Leader

Deloitte has been researching the evolving needs and expectations of automotive consumers and transforming mobility ecosystems globally and locally for more than a decade. ODD and Deloitte Turkey jointly conducted "Automotive Consumer Survey" to shed light on the future of the automotive sector via consumer perspective. 2019 Automotive Consumer Survey research focuses on the predictions of the evolution of mobility, the impact of connected and autonomous vehicles, transport preferences and other changes on human mobility.

From March 2019 to June 2019, Deloitte surveyed nearly 3,000 consumers to explore opinions regarding a variety of critical issues impacting the automotive sector, including the development of advanced technologies in 2019 Automotive Consumer Study. 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. We could say that the study revealed four key insights. Firstly, mobility revolution faces significant headwinds. Consumers are still heavily rely on the usage of their personal vehicles. Secondly, consumers are still sceptical about the management of the data generated by connected vehicles. Consumer opinions are mixed while interest in time-saving features is high, but significant concerns over data security. Thirdly, Consumers' perception about safety of self-driving vehicles needs to be improved. They would like to see more track-record of self-driving cars being used on the streets safely. Finally and perhaps most importantly in short term we can say that hybrid and electric vehicles finally showing potential to scale.

Lastly, we plan to conduct the study in the coming years so that we can present useful insights for all stakeholders via revealing how trends have evolved and will evolve, how the mobility ecosystem has changed and where it is evolving to, and what are/has been the main factors affecting all these.

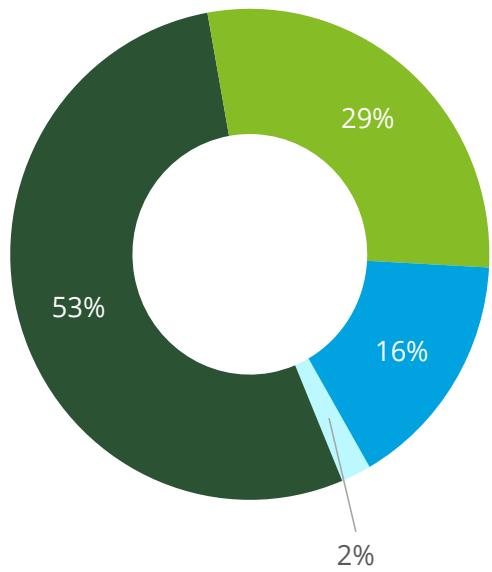
Methodology



The 2019 Global Automotive Consumer Survey was conducted in more than 20 countries with the participation of almost 25,000 people. The study conducted in Turkey is the largest one carried out in terms of attendees.

Age groups

The age distribution of surveyees:



■ 18-23 Z Generation

■ 24-42 Y Generation

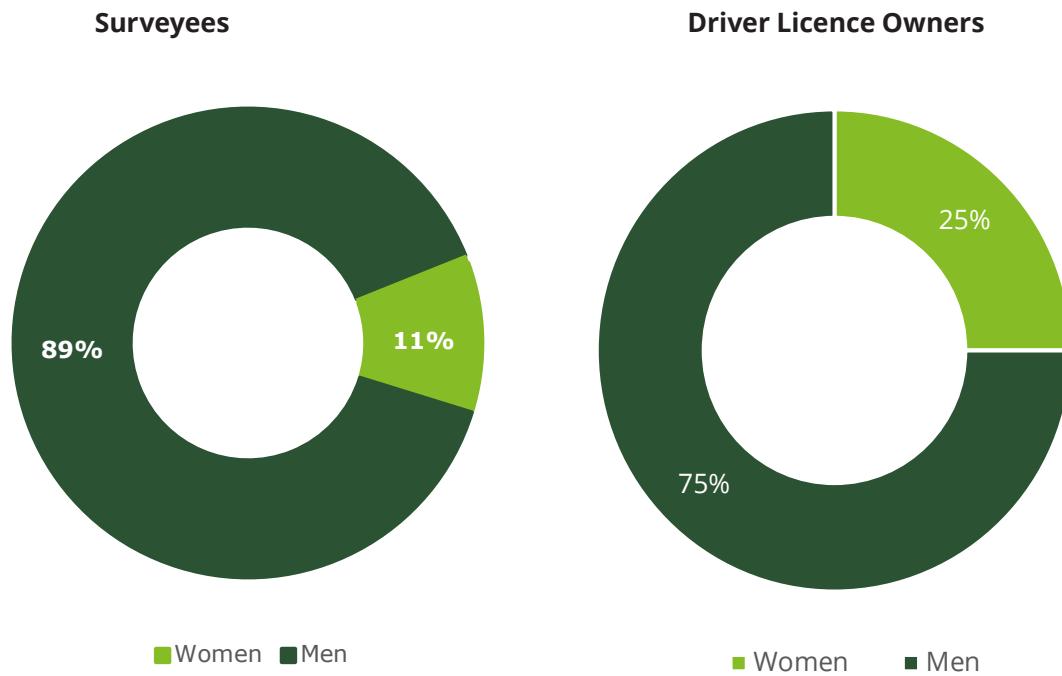
■ 43-54 X Generation

■ 55+ Baby Boomer

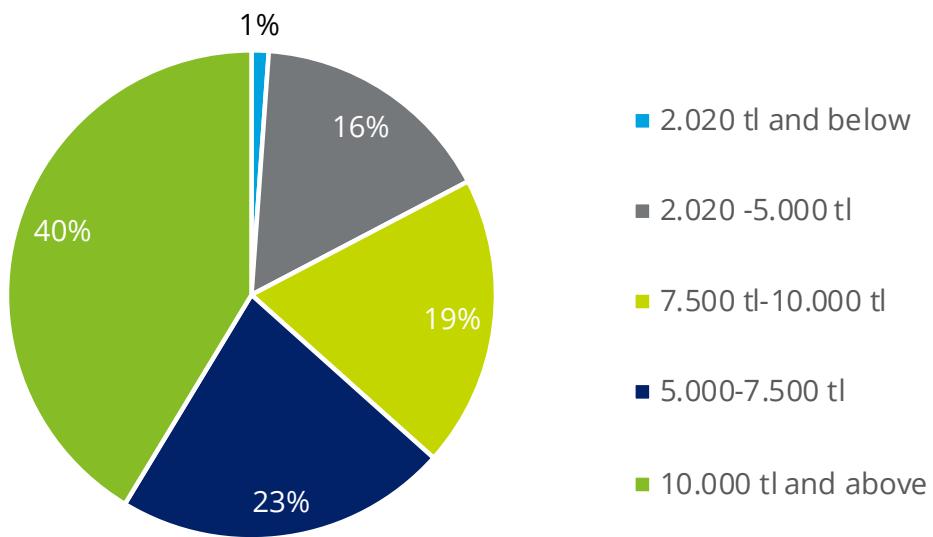


Gender

When the gender distribution of the survey participants is examined, it is observed that almost 90% of the respondents are male consumers.



Monthly household income





Michael Woodward
Deloitte South-North Europe
Automotive Leader

"Despite the challenging conditions of recent years, original equipment manufacturers and their partners continue to invest heavily, looking for ways to differentiate themselves from their competitors. While investments in connected, autonomous and electric technology are commonplace, the sales and aftersales processes have remained largely untouched for decades.

Consumers are increasingly turning online to make everyday purchases, but the question remains what this means for 'big ticket' items like cars and the automotive retail sales model itself. The test for manufacturers, national sales companies and dealer networks is in their ability to replicate the digital platforms and retail experiences consumers have come to expect.

The additional pressure of new entrants - unencumbered by legacy infrastructure - successfully applying consumer-focused retail models, is forcing traditional car manufacturers to begin competing on both product and business model; a challenge they have not faced before.

OEMs and their distribution partners are responding to this challenge at varying speeds and with varying success. Just to maintain their current position these organisations will need to re-examine their business models, refine their operations and identify strategies for future growth.

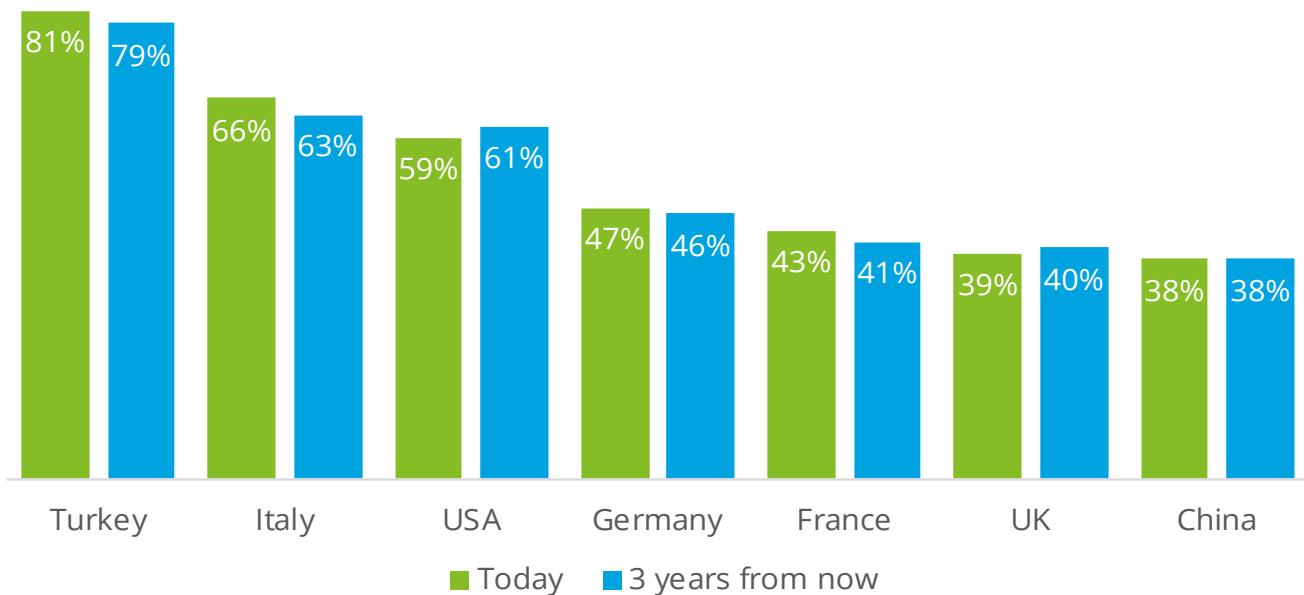
In order to succeed under these pressures, OEMs and their partners need to stay focused on the consumer – their needs, wants and expectations. This could mean amongst other things, enhancing their current business models with digital technology, developing new business models that may be direct B2C or a combination with existing processes."



Mobility revolution faces significant headwinds

When the daily use of personal vehicles is examined, the rate of Turkish consumers who use their personal vehicle every day is highest (81%) among examined countries. Again, the majority of Turkish consumers predict that they will use their vehicles every day in the next 3 years (79%). Turkey; is followed by Italy with rates of 66% and 63%, while China ranks last with (both present and 3 years scores). among the countries.

Daily usage of personal vehicle rates



Most important aspect of mobility

To understand why Turkish consumers are so insistent on the use of personal vehicles, it might be helpful to look at their ideas about the most important aspects of mobility. When asked about the most important aspect of mobility, the consumers give the following answers:



Speed
36%



Safety
21%



Comfort
15%



Cost
14%

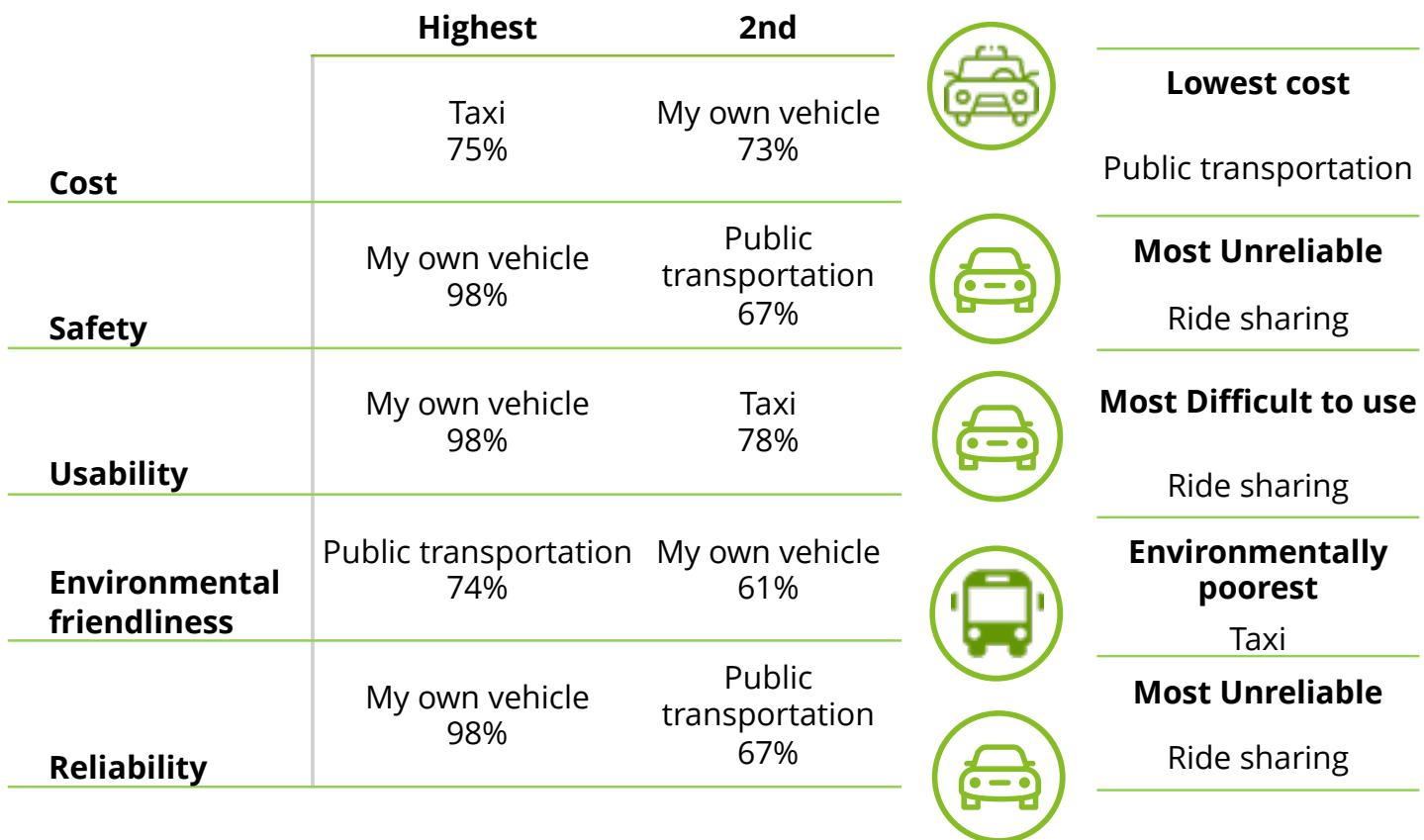


Other activities
10%

Getting to your destination as quickly as possible (36%), Your safety while traveling (%21), Your level of comfort while traveling (%15), Spending the least amount of money to get where you're going (%14) and Engaging in various activities during the journey (e.g., sending e-mails, studying) (%10).

Comparison of mobility methods

When evaluated in terms of cost, safety, usability, environmental friendliness and reliability; personal vehicles reach the highest score predominantly in areas other than cost and environmental friendliness.



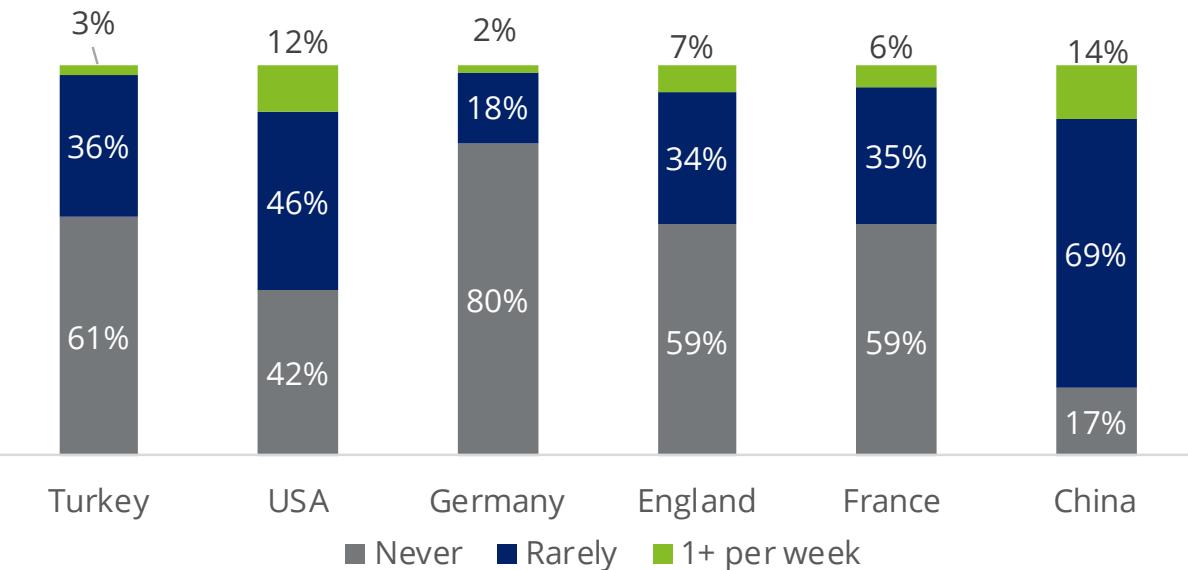
Use of Ride hailing services

Ride shairing is also facing significant obstacles in Turkey as well. Even though Uber seize to exist with its minivan type rides, they are still offering their taxi calling services similia to that of Bitaksi's. the future of mobility scenarios where car sharing and ride hailing services are the main source of mobility does not seem to be realized soon.

The current use of ride hailing services:



Global usage statistics of Ride hailing services are as follows:

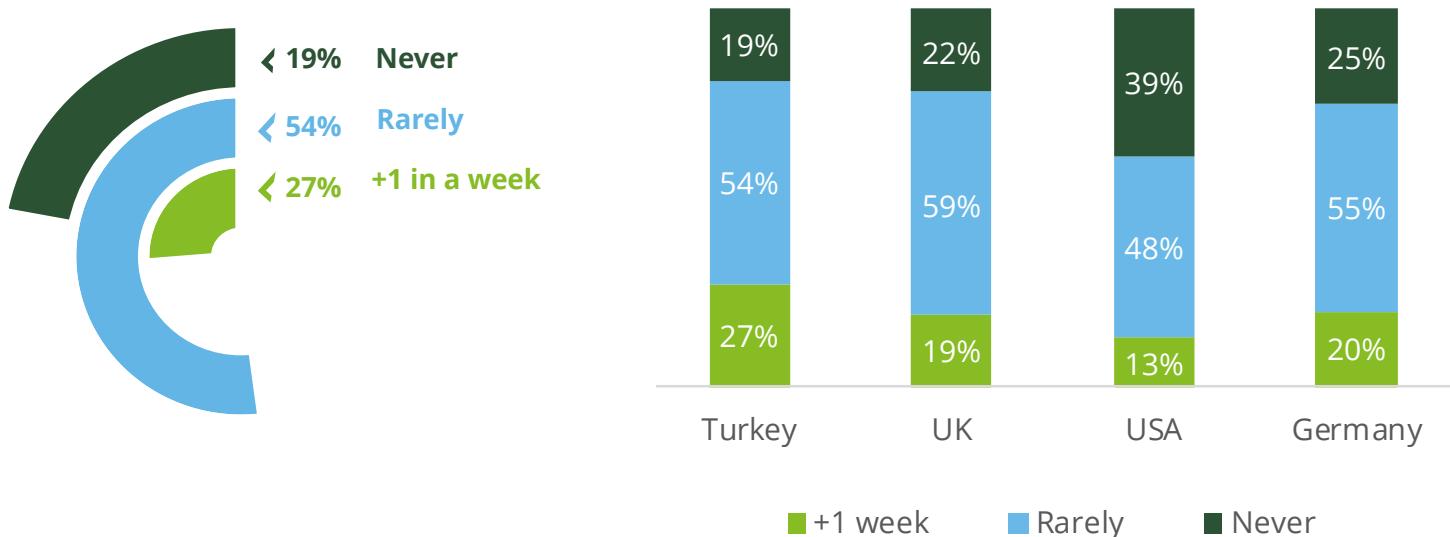


* Never = Never,
Rarely = Rarely + Monthly,
Regularly = Daily + Weekly

The different modes of mobility into one trip

The idea of combining different modes of mobility into one trip remains largely an occasional behaviour for most consumers. The proportion of using more than one method of transportation in Turkey (27%) is relatively higher in comparison to the other countries though.

Frequency of combining different modes of mobility into one trip Turkey:



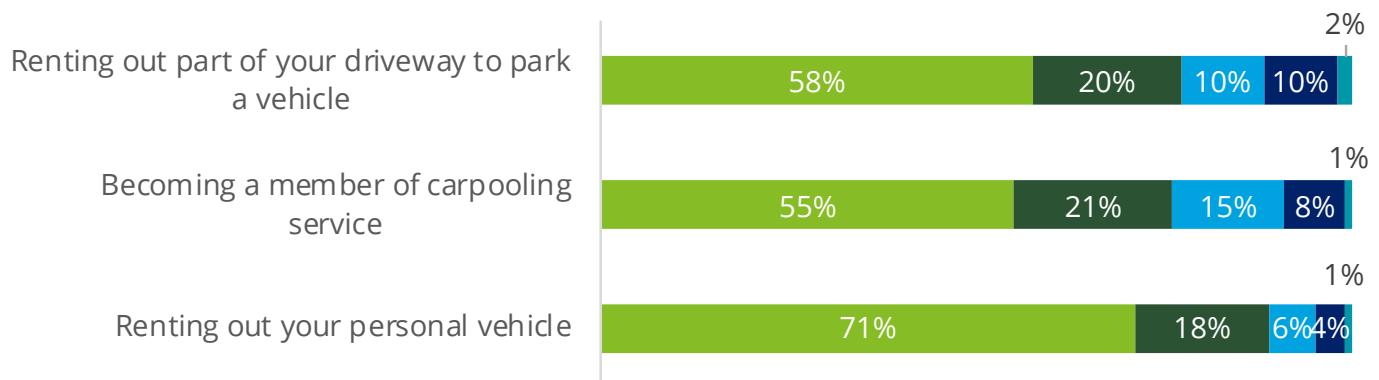
Comfort or Functionality?

Although it has not yet been realized, in a scenario where mobility options are abundant and the use of multiple model has become widespread, 50% of Turkish consumers say they can give up their personal vehicles. In this case, consumers prefer functionality (59%) over luxury (41%).



New income models with personal vehicle

Similar to new mobility models and new technologies, the participants are indifferent to the new subscription, rental and revenue models that the global sharing economy adds to our lives.



■ Not at all interested ■ Not very interested ■ Neutral ■ Somewhat interested ■ Very interested

With the report conducted first time in local context, the aim was to analyze the effects of the technologic developments in the global automotive industry over Turkish consumers.

The trends of the coming era will continue to be eco-friendly, autonomous and connected vehicles, digital business models and innovative ideas. We observe this in all automotive related platforms. Now the concept of big data, together with autonomous and connected tools, is important for our industry. Infrastructure preparations related to the aforementioned technological trends gained momentum in European countries.

Today, 5% of the turnover of the automotive sector in European countries is provided from Mobility and Connection Services, and it is expected that it will rise to be the 1/3 in 2030. The profit is only around 5% due to mobility and related services, while by 2030 it is estimated to reach 40-45%. The total sales of new electric vehicles in the EU in 2030 is expected to reach 10 million units.

With connected and autonomous vehicles, individual mobility will be accessible to groups such as the disabled, the youngsters and the elderly.

By 2030, the number of autonomous vehicles is expected to reach 10 million units in European Union, which is Turkey's number one export market. Since 2005, fatal accidents have fallen by over 40%; the goal is to reach zero accidents by 2050. Together with innovations based on autonomous vehicle technologies, drivers will be able to use 50% of their commute time more efficiently and for other purposes.

Turkey Automobile Sector is a leading sector that constitutes 5% of its GDP, performs 20% of the country's exports and employs about 500 thousand people. Also together with its sub sectors, it makes significant trade surplus is Hence it is one central sector for Turkish economy.

The new value chain that will be formed with the digital transformation processes stemming from new technologies will also create opportunities for the production of innovative value-added products and services for the automotive industry.

Finally, I wish that this valuable report prepared by Deloitte Turkey; will continue to put forth the developments, expectations and trends in the best way in the coming years.

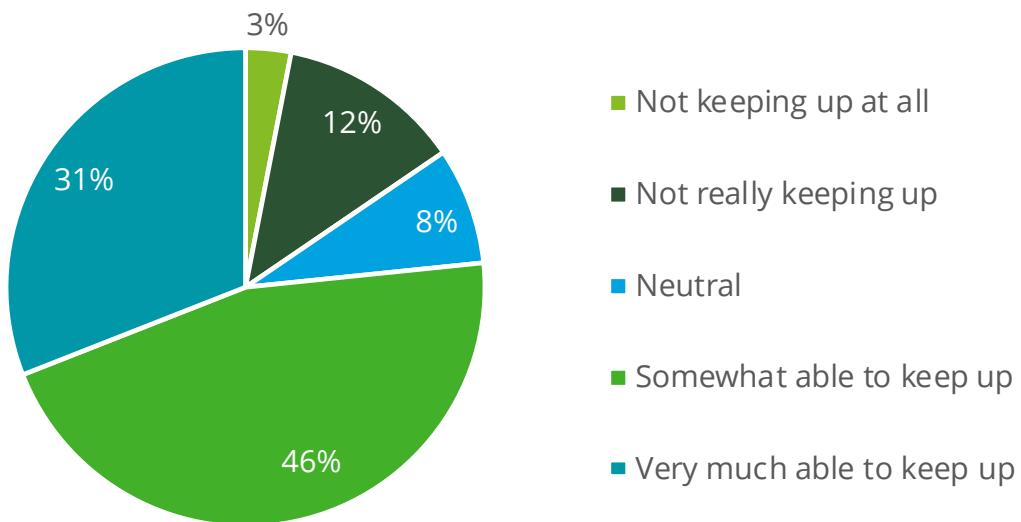


E. Ali Bilaloglu

Automotive Distributors
Association (ODD) Chairman

Mobile device and vehicle harmony

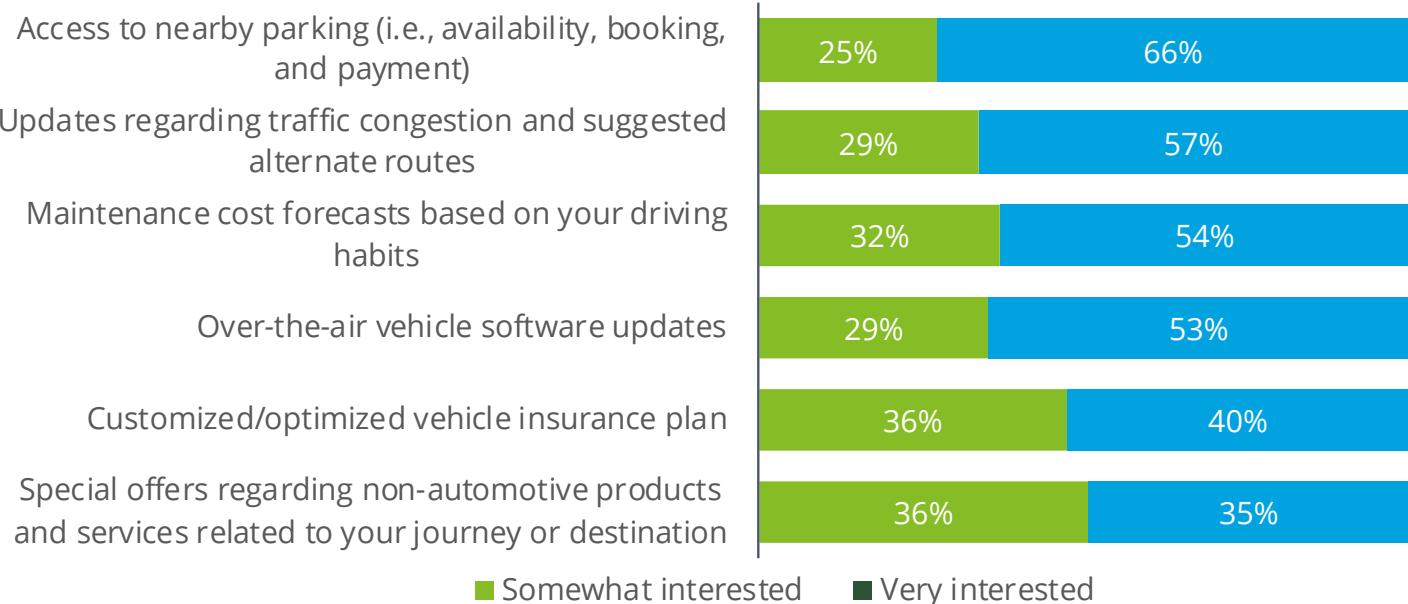
Another situation that emerges with the developing technology is the harmony of mobile device-vehicle technologies and the data produced by the vehicles which are becoming more and more connected with each passing day. In our country, where the average mobile phone replacement time is 3.7 years, 77% of consumers think that vehicle technologies keep pace with developing mobile technologies.



What do consumers want from connected vehicles?

Save time and ensure their safety

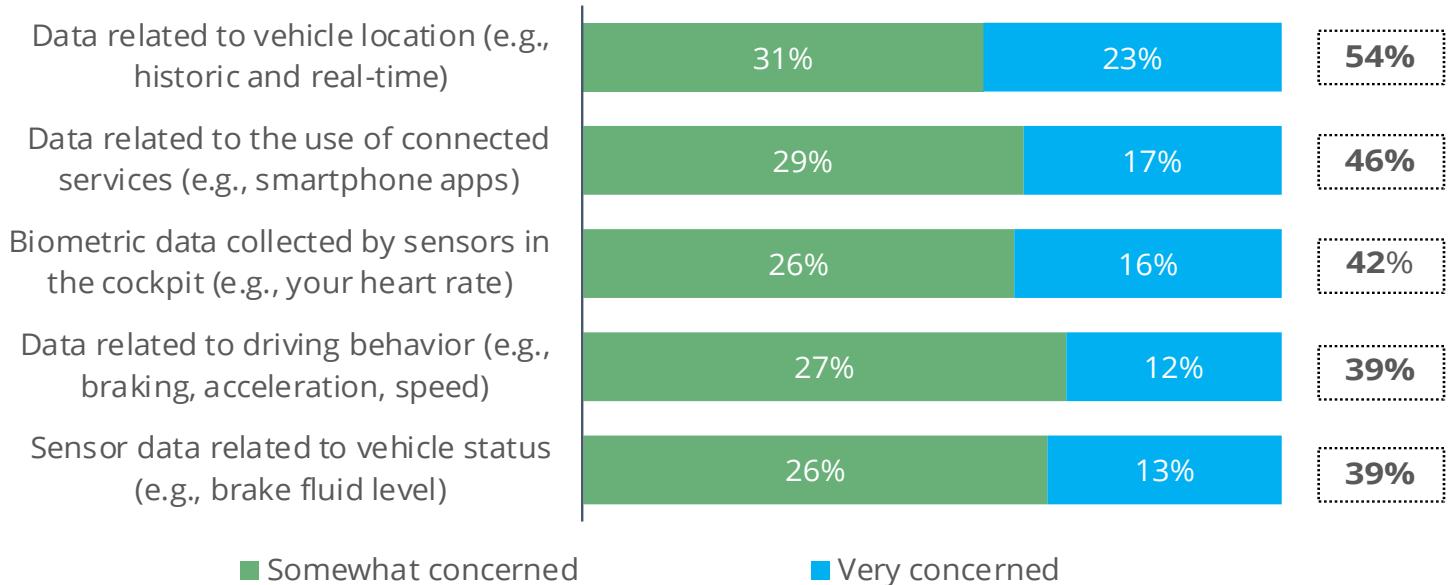
Participants showed the most interest to receiving information about Access to nearby parking (i.e., availability, booking, and payment (91%), this is followed by Updates regarding traffic congestion and suggested alternate routes (86%) and Maintenance cost forecasts based on your driving habits (86%). The consumers are less interested in receiving special offers regarding non automotive products and services related to their journey and destination (%71).





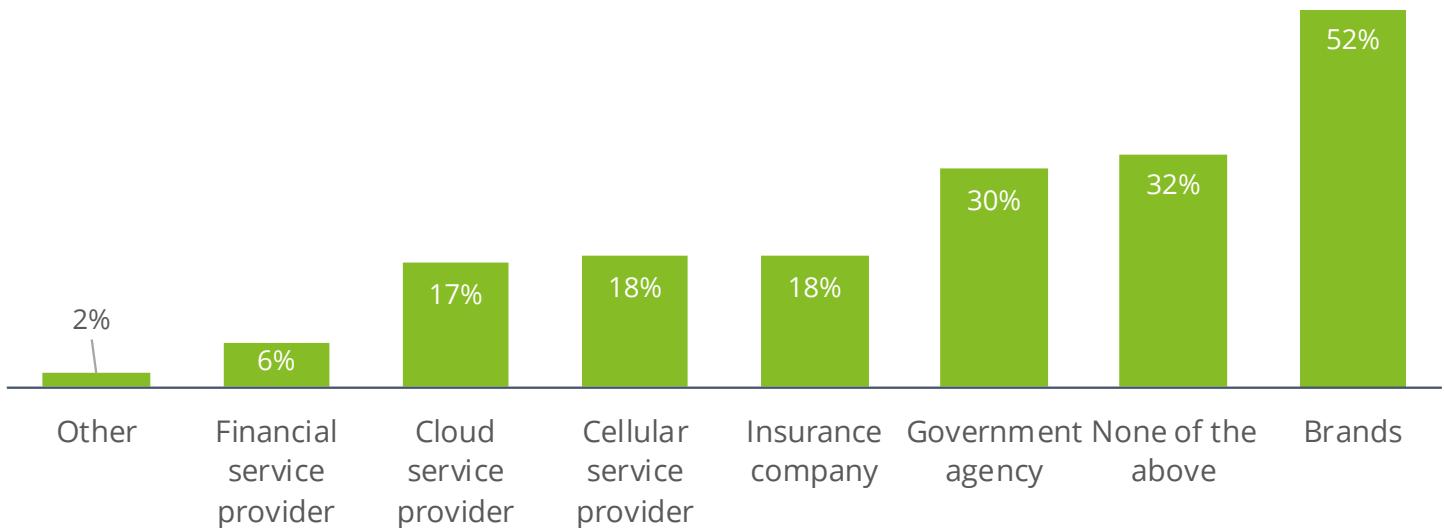
Consumers are still sceptical about the management of the data

When consumers are asked Which of their personal data they are most concerned if they were to be shared with third parties, they state the following answers: 54% of consumers are most concerned about sharing real and past-time vehicle location, while data related to the use of connected services (smartphone applications) comes in second with 46%

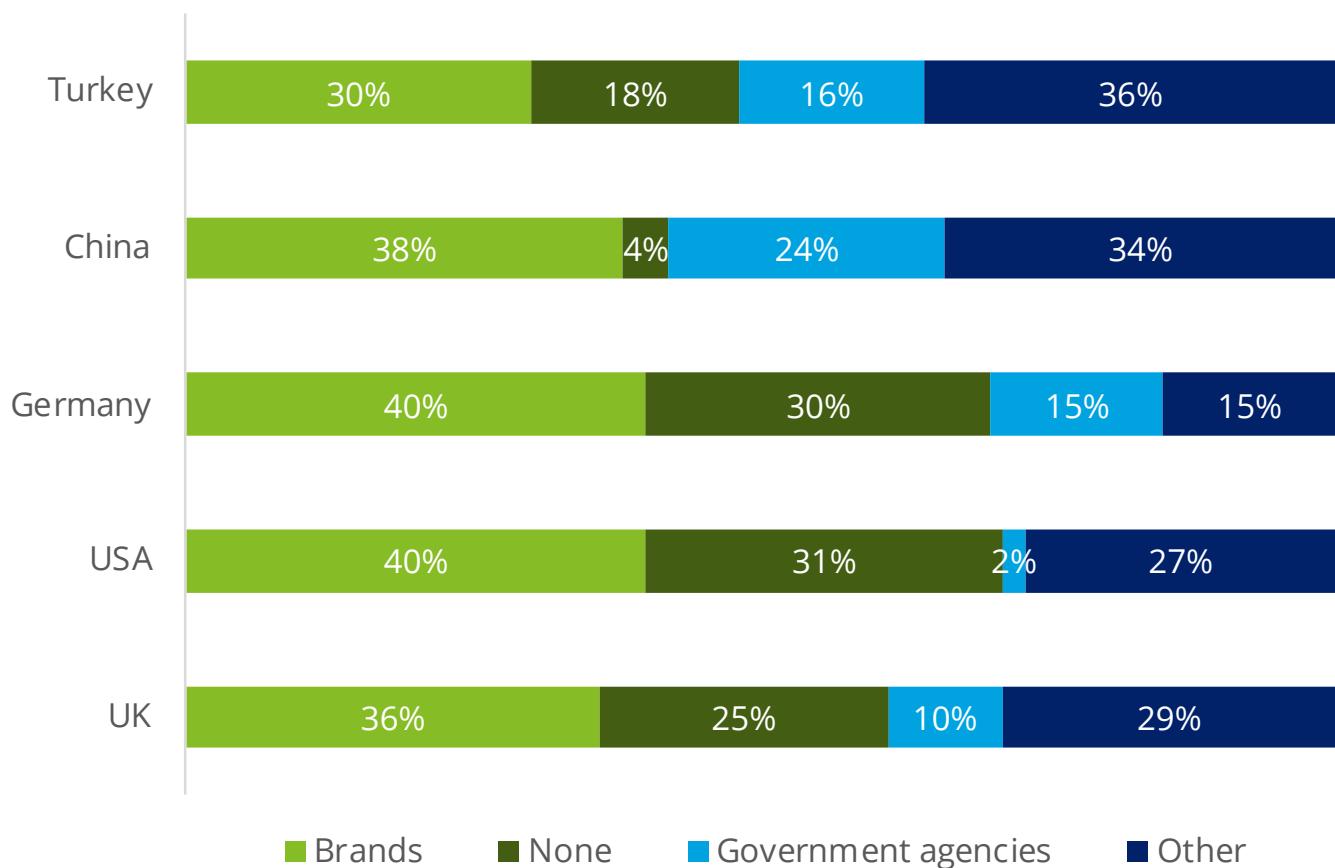


Consumer opinions on whom they trust the most to manage data generated/collected by their vehicle

While consumers rely mostly on vehicle manufacturers (43%) to manage / share data generated by connected vehicles, the proportion of those who are skeptical about sharing data is quite high (32%).

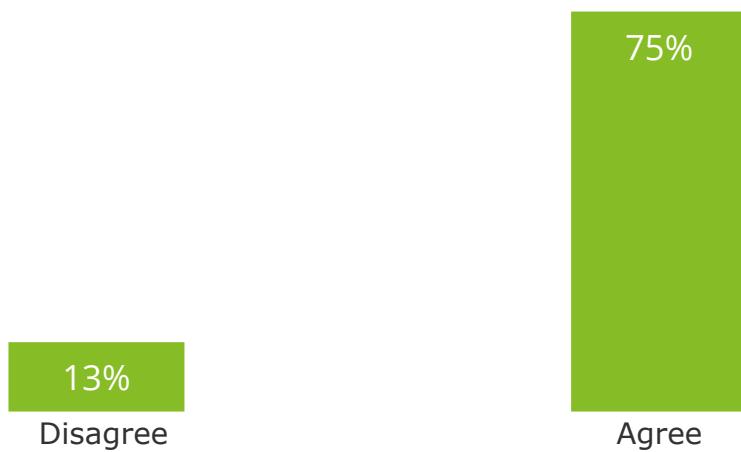


Concerns also extend to who would manage the data being generated and shared by the vehicle



Connected vehicles and computer hacking

The vast majority of consumers think that the more connected their vehicles are, the more benefits they will provide.

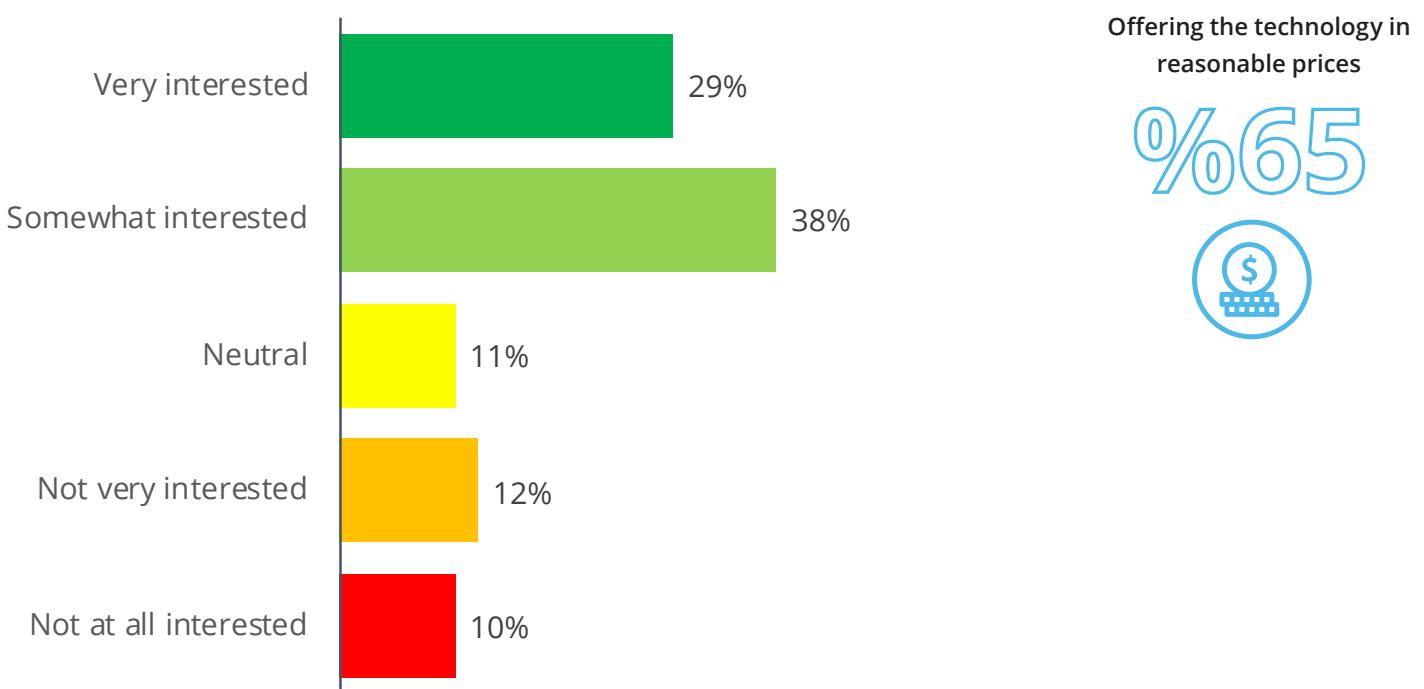


However, cyber security is a concern for consumers. 57% think that more connected that their vehicles are the more open to hacking the cars will be.



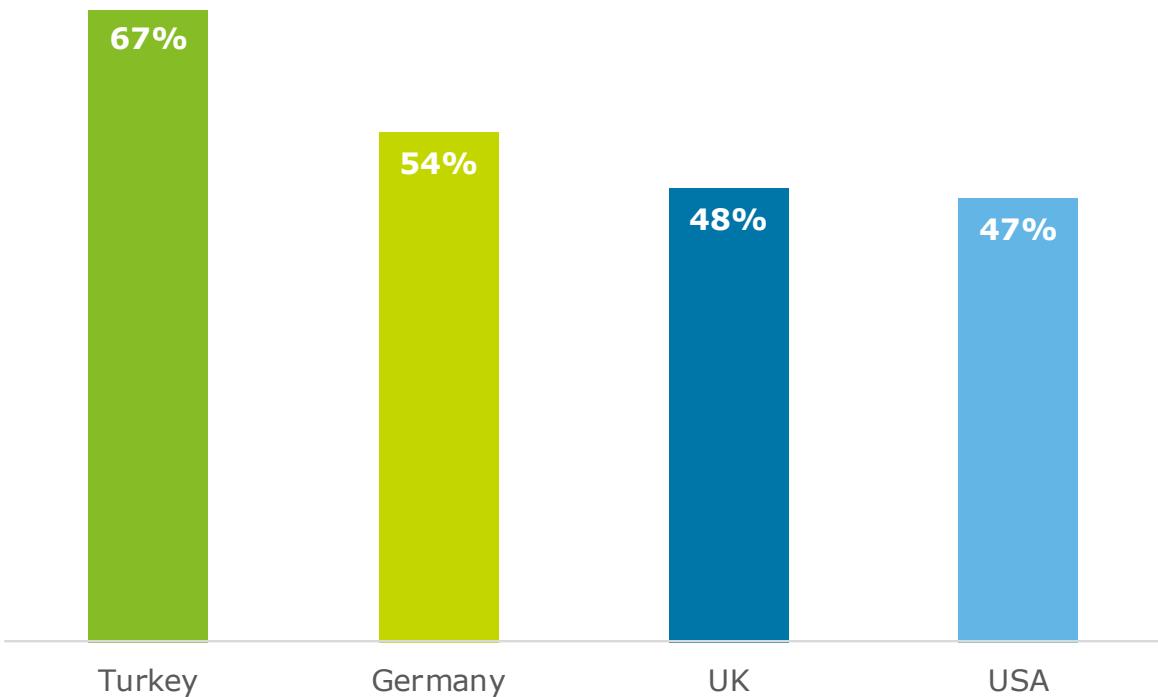
Percentage of consumers who are interested in riding in a fully autonomous vehicle

Although the driverless car revolution has not yet been fully achieved, consumers' interest in autonomous vehicles is quite intense. Only 22% of respondents stated that they were not interested in riding in a fully autonomous vehicle, while 67% said they were interested in to do so. However, one preliminary condition for consumers is that the technology must be relatively cheap. Again, 65% of the respondents say that offering the technology in reasonable prices could enable them to drive AVs.



Consumer interest in AVs

When examined globally, the most intense interest in autonomous vehicle is in Turkey with 67%. Turkey, is then respectively followed by , Germany (54%), the UK (48%) and the USA (47%).



Consumers' perception about benefits of autonomous vehicles

Consumers' perception about autonomous vehicles' benefits is consistent with their interests. 67% of automotive consumers think that autonomous vehicles will save time and help them focus on different tasks. The rate of those who believe that these vehicles will offer a positive experience in terms of travel is 68%.

A fully self-driving car will free up my time so I can focus on other activities

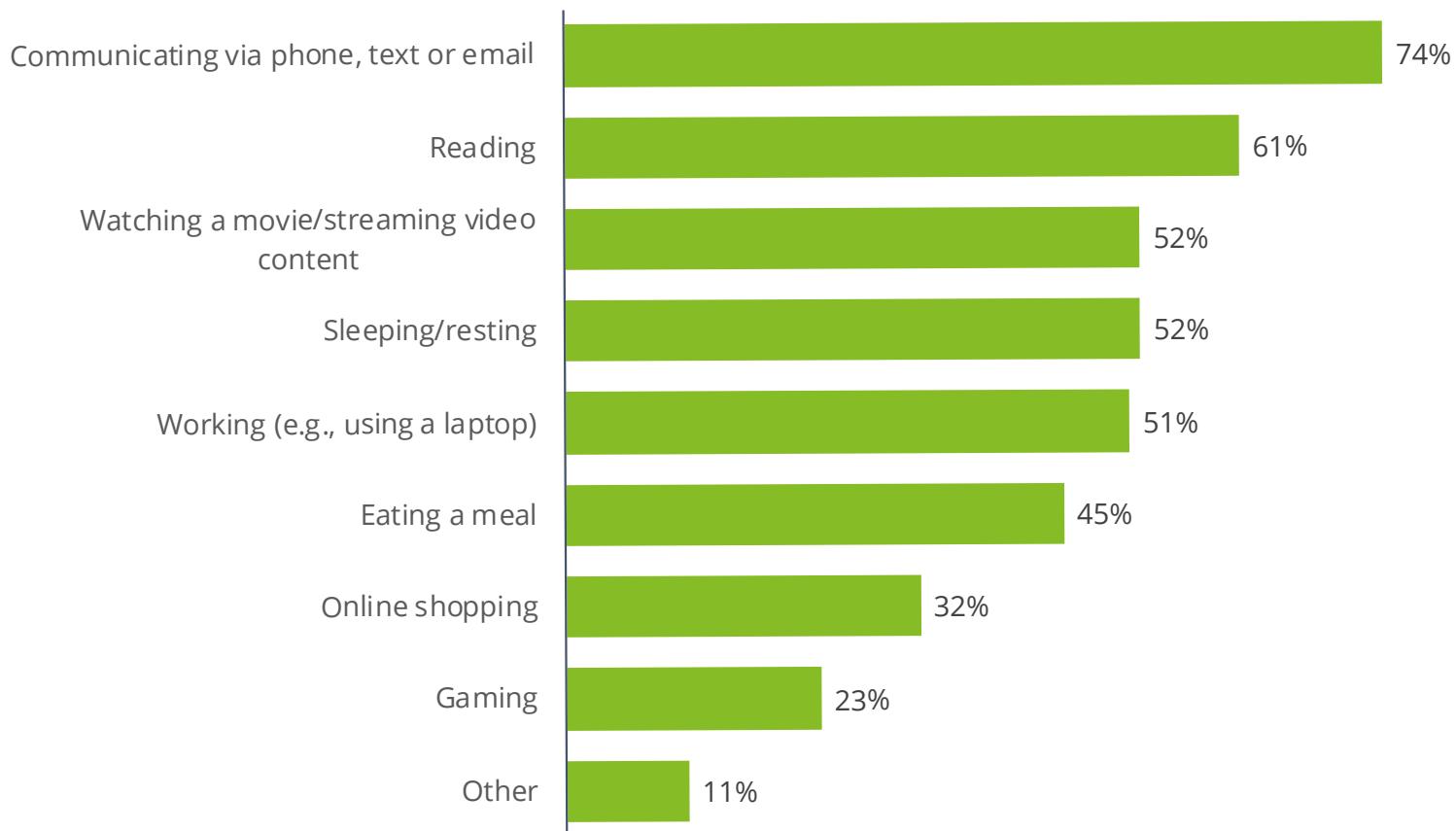
67%

Travelling in a fully self-driving car will be a positive experience

68%

Activities consumers would most likely engage in while riding in an autonomous vehicle

People would most prefer to communicate while riding in autonomous vehicles.

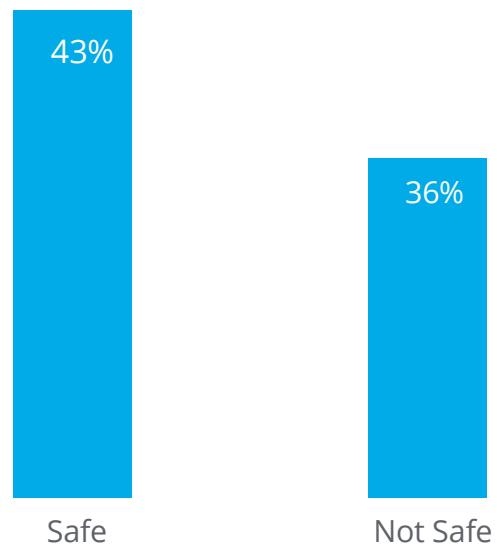




Consumers' perception about safety of self-driving vehicles

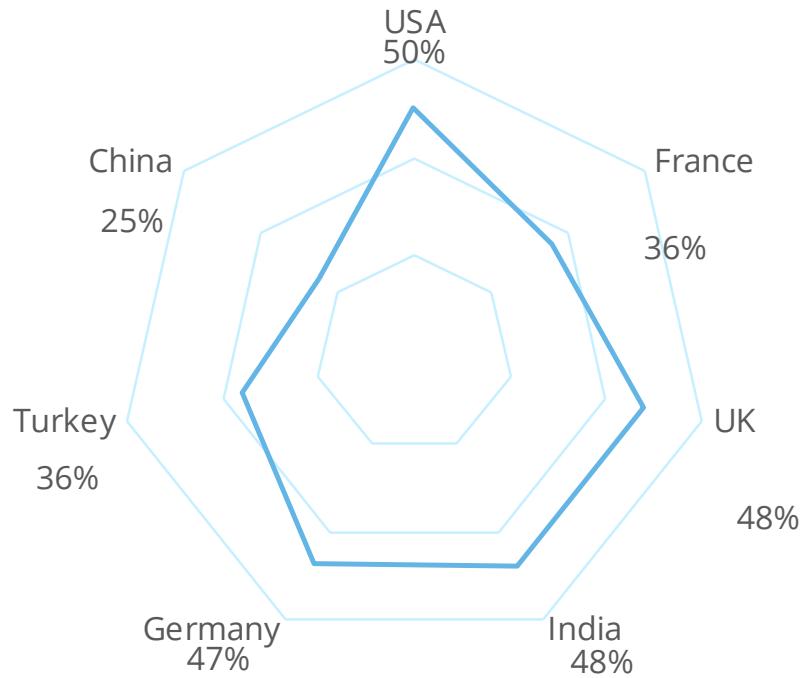
The question marks regarding the safety of consumers for autonomous vehicles, have not been completely resolved: While 43% of respondents believe that autonomous vehicles are safe, the proportion of those who are skeptical about safety is relatively high (36%).

Autonomous Vehicles & Security



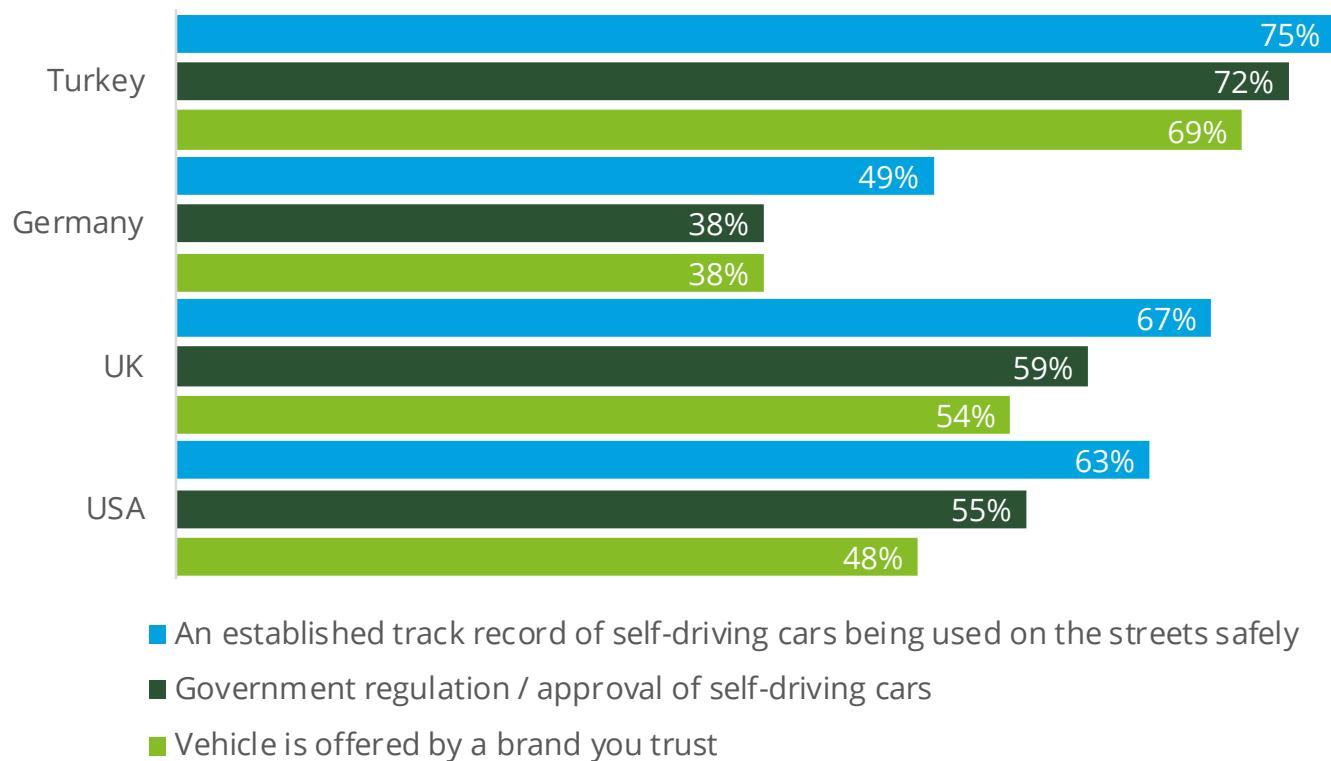
Skepticism over AVs' safety

Globally, the highest rate of skepticism towards AVs is in the United States with 50%, while China is the last country among the countries examined with 25%. In Turkey and France (%36), almost one out of every three automotive consumers think it would not be safe to ride in an autonomous vehicle.



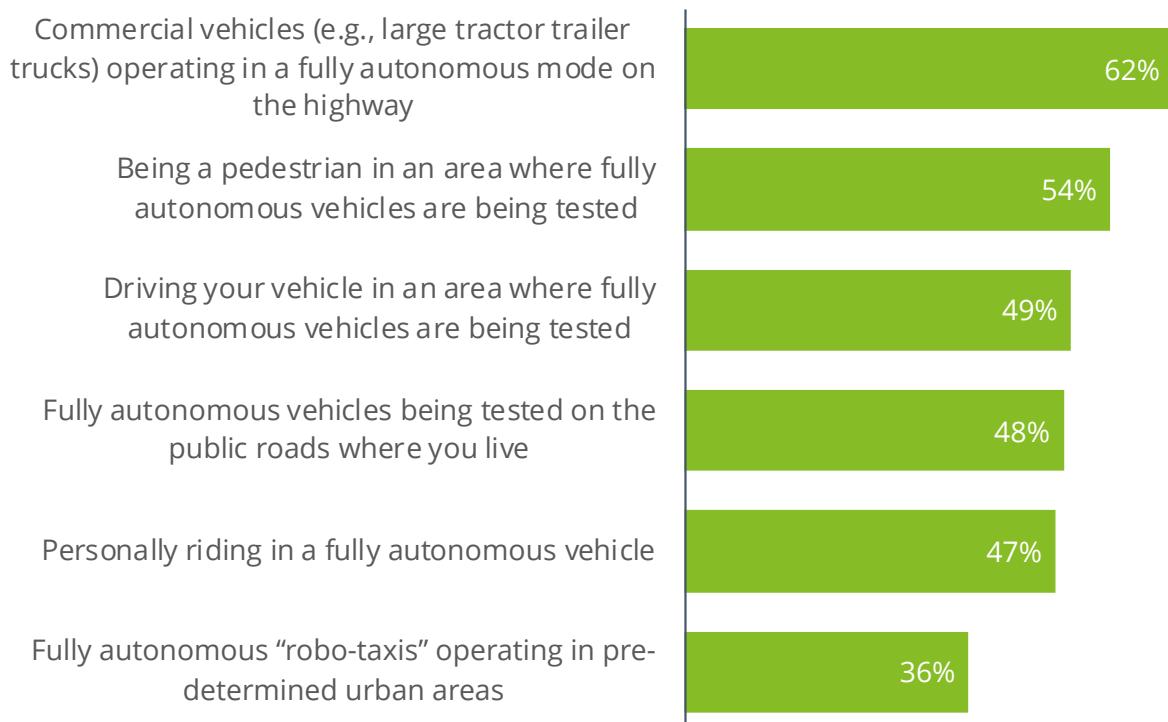
Top three factors making consumers feel better about riding in a fully self-driving vehicle

For the first three factors that could positively affect consumers' autonomous driving and help them overcome the problem of trust, the respondents gave the following answers:



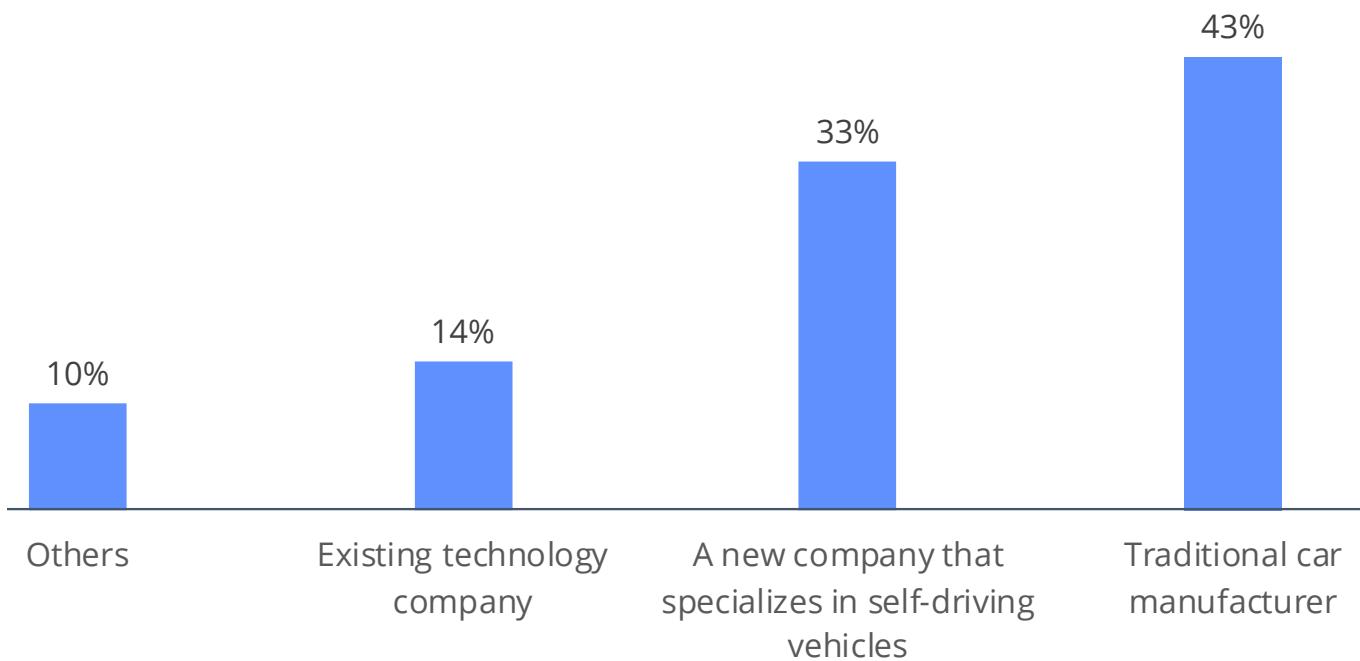
Percentage of consumers who are concerned about AVs

Majority of consumers are concerned to live, walk, or drive in an area where fully autonomous vehicles are in operation





Type of company consumers trust the most to bring fully self-driving technology to market



Type of company consumers trust the most to bring fully self-driving technology to market

Consumers are most likely to rely on traditional automotive manufacturers for autonomous vehicles globally too. The highest consumer confidence among the countries surveyed is in Turkey.



In cooperation with Deloitte, we have completed the Automotive Consumer Study which carries great importance for our country in terms of keeping its place in global automotive industry and defining new opportunities that will improve its current position during this transition and transformation period we are currently facing as Automotive Industry. The research realized with the support of our members, aimed to measure consumers' attitudes and preferences about new technologies and trends that will be seen in the automotive sector for coming years.

This study conducted for the first time in Turkey, and thanks to the support of ODD member firms, 3000 consumers participated. When evaluated on a global scale, a record number of participation was achieved for the Turkish version of the study.

The main topics of our 2019 survey are defined to be in parallel with the Deloitte's global report: Mobility ecosystem, Linked vehicles, Autonomous vehicles.

Within these main headings, We have reached invaluable insights and data namely: generational differences for the preference of automotive products, consumers' approach to transportation methods and mobility, their perspectives on ride hailing services, their expectations from connected vehicles, their opinions about sharing their data, the benefits they want from autonomous vehicles, who they trust the most for their future vehicle in the light of all these developments and changes and body type, fuel type expectations. We also had the opportunity to compare the results of this report with the global report.

This period, seen as a year of balancing in our country brings about uncertainties for automotive sector and thus the domestic automotive market is facing a significant contraction. Therefore, taking the right steps towards the future becomes even more important. Infrastructure preparations to host new technologies in the automotive sector and strategic direction and support of the public in this direction has utmost importance.

I would like to express my wish that this report will continue to be a projection that will guide the future in the coming years.

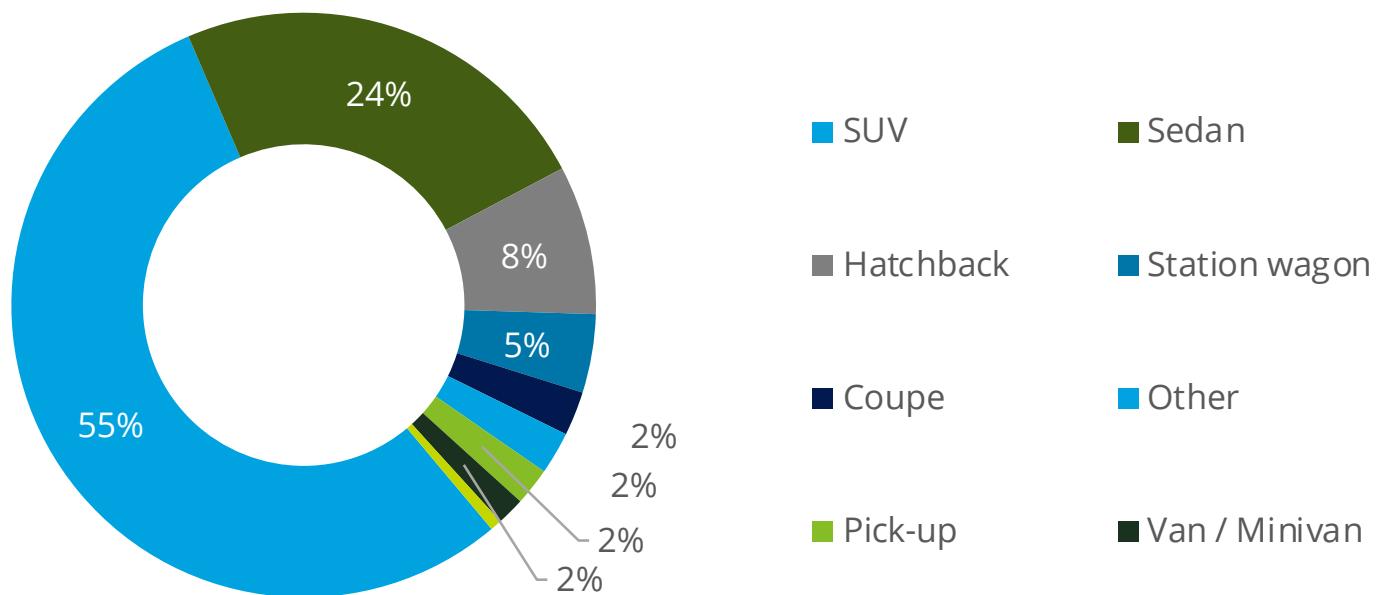


Dr. Hayri Erce
Automotive Distributors
Association (ODD) Executive
Coordinator

Vehicle types for next vehicle

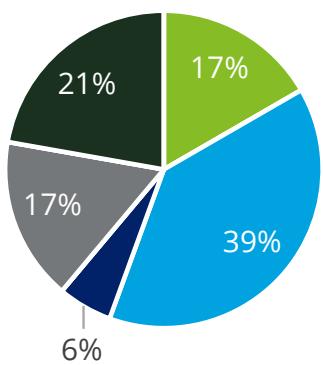
There's no doubt that more people are buying SUVs, but the demise of the passenger car may be a bit overstated.

The love for the bigger vehicle of the domestic consumer, which is frequently encountered in different studies, also manifests itself in this study too. Consumers stated that they would prefer SUV for their next car with a great rate of 55%, while the second choice is sedan with 24%.

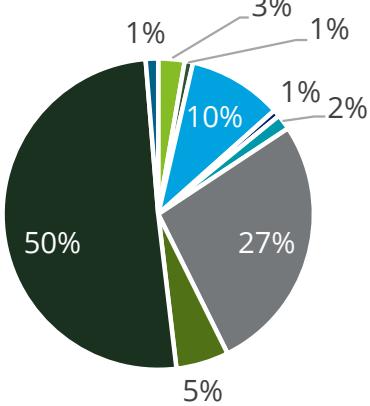


Generational preferences for next vehicle

Z Generation

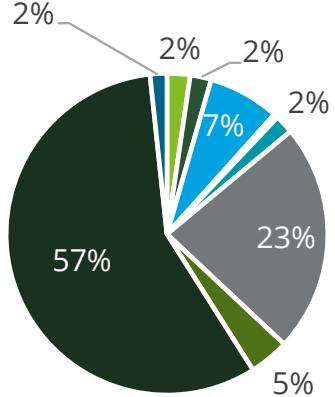


Y Generation

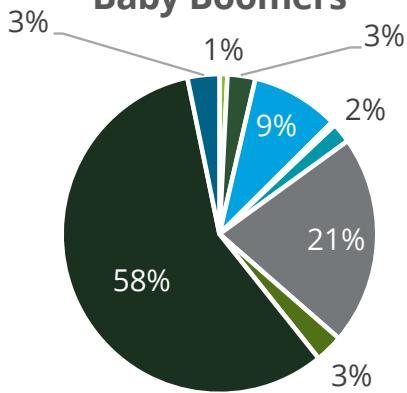


- Coupe
- Other
- Hatchback
- Motorcycle
- Pick-up
- Sedan
- Station wagon
- SUV
- Van/Minivan

X Generation



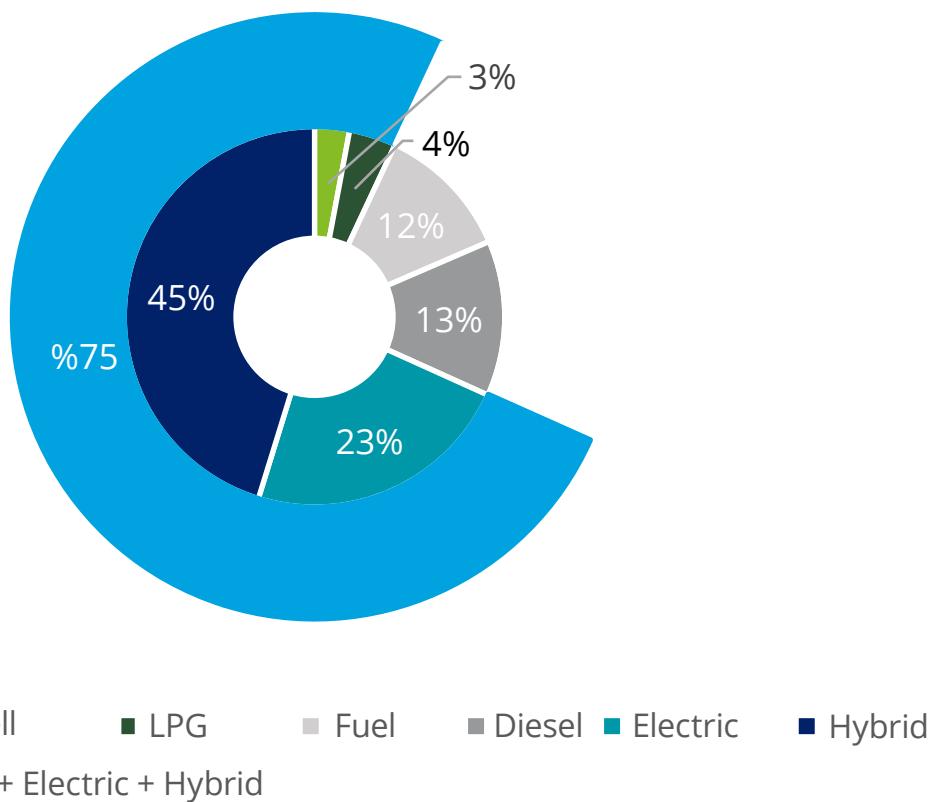
Baby Boomers





Electric and Hybrid vehicles finally showing potential to scale

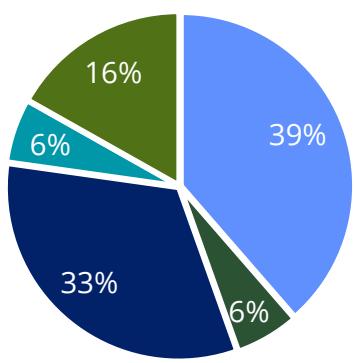
While the interest in hybrid, electric and other alternative fuel vehicles is very high, there is a 25% interest in vehicles with diesel and gasoline engines that are prohibited from entering or even banned from selling in many regions in Europe.



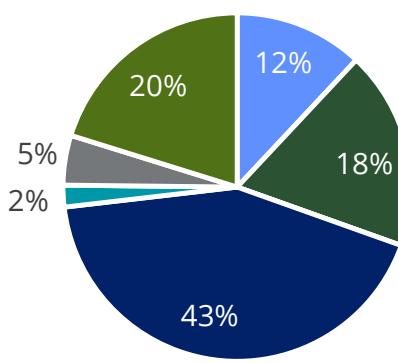
It can be said that the participants are giving up fossil fuel vehicles gradually due to increasing fuel prices and environmental effects. In detail, 75% stated that they would choose their next vehicle from Hybrid, electric and other alternative fuel cell vehicles, while 25% stated that they would choose vehicles with diesel and gasoline engines.

Interest in powertrains- generational preferences

Z Generation

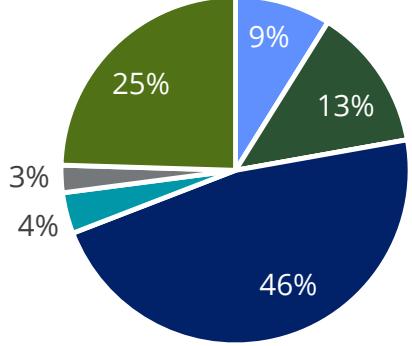


Y Generation

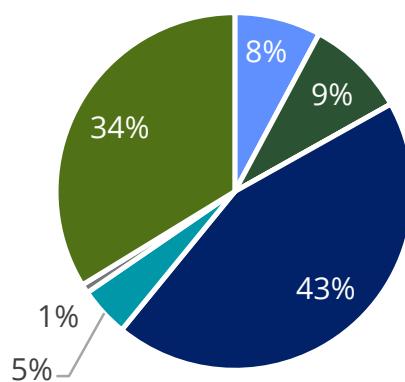


- Gas
- Diesel
- Hybrid electric (HEV)
- Hydrogen fueled cells
- LPG
- All battery-powered electric (BEV)

X Generation



Baby Boomer



"2019 Turkish Automotive Consumer Study" key insights



Mobility revolution faces significant headwinds

Overall consumer behavior is proving difficult to change. Consumers are still heavily relying on the usage of their personal vehicles for transportation.



Consumers are still sceptical about the management of the data generated by connected vehicles

Consumer opinions are mixed while interest in time-saving features is high, but significant concerns remain over privacy and data security..



Consumers' perception about safety of self driving vehicles needs to be improved

Consumers are most likely to rely on Original equipment manufacturers (OEMs) who also face an uphill battle getting people's trust about the safety of self driving cars



Hybrid and Electric vehicles finally showing potential to scale

Hybrid and Electric vehicle (EV) demand is growing in Turkey due to big-brand bets, and shifting consumer attitudes.

Contacts

Özkan Yıldırım

Consumer Industry and
Automotive Sector Leader
Deloitte Turkey
oyildirim@deloitte.com

Joseph Vitale Jr.

Global Automotive Leader
Deloitte Touche Tohmatsu Limited
jvitale@deloitte.com

Thomas Schiller

Automotive Leader –
Europe and Germany
Deloitte Germany
tschiller@deloitte.de

Ryan Robinson

Automotive Research Leader
Deloitte LLP
ryanrobinson@deloitte.ca

Steve Schmitt

Global Automotive
Marketing Leader
Deloitte Services LP
sschmitt@deloitte.com

Michael Woodward

Automotive Leader –
UK and NW Europe
Deloitte United Kingdom
mwoodward@deloitte.co.uk

Guillaume Crunelle

Automotive Leader – France
Deloitte France
gcrunelle@deloitte.fr

Eric Desomer

Automotive Leader – Belgium
Deloitte Belgium
edesomer@deloitte.com

Giorgio Barbieri

Automotive Leader – Italy
Deloitte Italy
gibarbieri@deloitte.it

Matthias Kunsch

Director
Deloitte Austria
mkunsch@deloitte.at

Slavko Savanovic

Director
Deloitte Netherlands
ssavanovic@deloitte.nl

Key Contributors:

İlker Döm, Coordinator, Analyzes and Content
Şahin Güler, Coordinator, Graphic Design

Extracts

The grid displays 12 Deloitte reports and logos, each representing a different industry or focus area:

- FoM Ecosystem
- Auto Retail
- Auto Finance
- Oil & Gas
- Telecom
- Freight
- Federal Government
- Mobility Operating System
- CES (International CES)
- World Economic Forum
- mit media lab
- Fraunhofer

Below the grid, the reports are categorized by sector:

- Ecosystem 2.0
- Insurance
- Auto Suppliers
- Consumer Behavior
- Cybersecurity
- Future of Work
- Media

The grid displays 10 Deloitte reports and logos, each representing a specific topic in automotive finance and insurance:

- Blockchain @Auto Finance
- Residual Value Management
- European Fleet Management
- N.A. Fleet Management
- Captive insurance opportunity
- Future of Captives
- Omnipresence of services & direct sales in auto finance
- AFS Vehicle Finance

At the bottom right, there is a logo for "AFS AUTO FINANCE INNOVATION SUMMIT 2018" and a photo of the Golden Gate Bridge.

Deloitte.

Deloitte Turkey

İstanbul Office
Deloitte Values House
Maslak No1
34398
İstanbul
+90 (212) 366 60 00

Ankara Office
Armada İş Merkezi
A Blok Kat:7 No:8
Söğütözü, Ankara
06510
+90 (312) 295 47 00

İzmir Office
Punta Plaza
1456 Sok.
No:10/1 Kat:12
Daire:14 - 15
Alsancak, İzmir
+90 (232) 464 70 64

Bursa Office
Zeno Center İş Merkezi
Odunluk Mah.
Kale Cad.
No:10 d
Nilüfer, Bursa
+90 (224) 324 25 00

Çukurova Office
Güneş Panorama İş Merkezi
Reşatbey Mah.
Türkkuşu Cad. Bina No:1
B Blok Kat:7
Seyhan, Adana
+90 (322) 237 11 00



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