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## INSIGHTS FROM A CROSS-CULTURAL STUDY

# ADOPTION OF ELECTRIC VEHICLE RENTALS IN TOURISM

This study examines generational and cross-cultural attitudes toward electric vehicle (EV) rental among young consumers across five major markets. Drawing from a comprehensive survey of 6,605 Gen Z and Millennial respondents in France, Germany, the United Kingdom, China, and India, our research investigates travel patterns, car rental preferences, and factors influencing EV adoption in the tourism sector. We conclude that to successfully promote EV rentals, companies must shift from risk mitigation strategies to start emphasizing positive experiential aspects that align with the ideal contemporary vacation: hassle-free, comfortable travel. These insights provide valuable guidance for car rental companies seeking to expand sustainable fleet options while addressing generation-specific concerns and motivations.

CAR RENTAL//ELECTRIC VEHICLE (EV)//SUSTAINABLE MOBILITY//TOURISM//GENERATION Z

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The car rental industry is moving to the forefront of contemporary mobility systems, steadily expanding over the past decade. As part of a "shared real economy," this industry helps consumers share vehicles instead of owning them, which in turn reduces the total number of cars on the road and achieves efficient use of social resources. Beyond its traditional role in corporate and leisure travel, rental services are progressively being viewed as an occasional alternative to private car ownership, a trend expected to gain ground in the coming years. Customers particularly appreciate the autonomy these services provide, which means they can design their own itineraries, travel at their own pace, and avoid relying on public transportation or ride-sharing systems.

At the global level, the market is booming, with a valuation of $149.87 billion in 2024 and projected growth to $278.03 billion by 2030, corresponding to a compound annual growth rate (CAGR) of 10.5% from 2025 to 2030. This rapid expansion reflects the resurgence of both business and leisure travel worldwide, with the United States accounting for 45% of global sales in 2022. Survey data from 2024 reinforce this trajectory: Approximately 48 million U.S. residents reported renting a car in 2023, representing a 19.4% bounce from the previous year. On average, respondents rented two vehicles annually, with 74% citing vacation travel and leisure as their primary motivation. While the US continues to dominate the market, emerging and developing economies are steadily incrementing their share. Research by Statista highlights that the number of car renters in Europe fell sharply in 2020 due to the pandemic but has since seen a solid rebound, surpassing pre-pandemic levels by 2023. Projections suggest a steady upswing, reaching about 75 million users by 2030, reflecting rising demand for flexible mobility solutions.

Alongside this robust demand, new trends are reshaping the sector. For example, leisure travel is seeing a surge in popularity, particularly among younger professionals who are seeking versatile, accessible mobility solutions more than ever before. As a component of mobility, car rental is also affected by sustainability concerns and more stringent regulatory frameworks that promote low-emission transportation, which is why car rental providers are expanding their fleets to incorporate environmentally friendly alternatives. This shift not only reflects changing consumer values but also positions the industry as a key player in the broader transition toward sustainable mobility.

This article explores how contemporary mobility trends from young generations are affecting preferences towards EVs in car rentals, from the point of view of consumers. The discussion is informed by findings from the 2024-2025 quantitative study conducted by the Mobius Lab at SDA Bocconi School of Management, which surveyed 6,605 residents across five key mobility markets – France, Germany, and the United Kingdom in Europe, alongside China and India in Asia. As part of a broader research initiative launched in 2023, the Mobius Lab continues to employ mixed methods to investigate how Gen Z and Millennials perceive, navigate, and reimagine urban mobility, especially in relation to the transition from vehicle ownership toward service-based access models.

## TRAVEL PATTERNS AND PREFERENCES IN GETAWAYS

Getaways, which include short-term leisure trips involving at least one overnight stay, are a regular feature in the travel behavior of younger generations. Gen Z and Millennials from different countries have varying preferences in how often and when they take these quick trips. In India and Germany, more than 70% of both generations reported taking at least one getaway in the past year. This shows that these countries have a deeply embedded culture of short leisure travel. The high participation may also be influenced by easier access to transportation and the ability to afford short trips. France had a lower share of getaways, with only about 55% of respondents from Gen Z and Millennials having taken these mini-vacations. In China, Millennials were more active in terms of getaways than Gen Z, suggesting a gap in financial independence or lifestyle habits between these two groups (Figure 1).

As far as the most popular days for travel, Germans mostly preferred weekends, probably because of fixed work or study schedules. In the UK, weekday getaways were more common. This may reflect a higher degree of flexibility in the workplace or a desire to avoid crowded weekends and higher travel prices. In China and India, responses were more evenly spread across weekdays and weekends, but Gen Z in India leaned slightly more towards weekend travel than Millennials. The travel time for these getaways was commonly between two and four hours across all countries. This reflects a shared sense of what is manageable for a short trip. In larger countries like India and China, some respondents accepted travel times of five or six hours, suggesting a higher tolerance for long-distance domestic travel (Figure 2).

FIGURE 1. SHARE OF INDIVIDUALS WHO TOOK A GETAWAY IN THE PAST YEAR, BY COUNTRY AND GENERATION

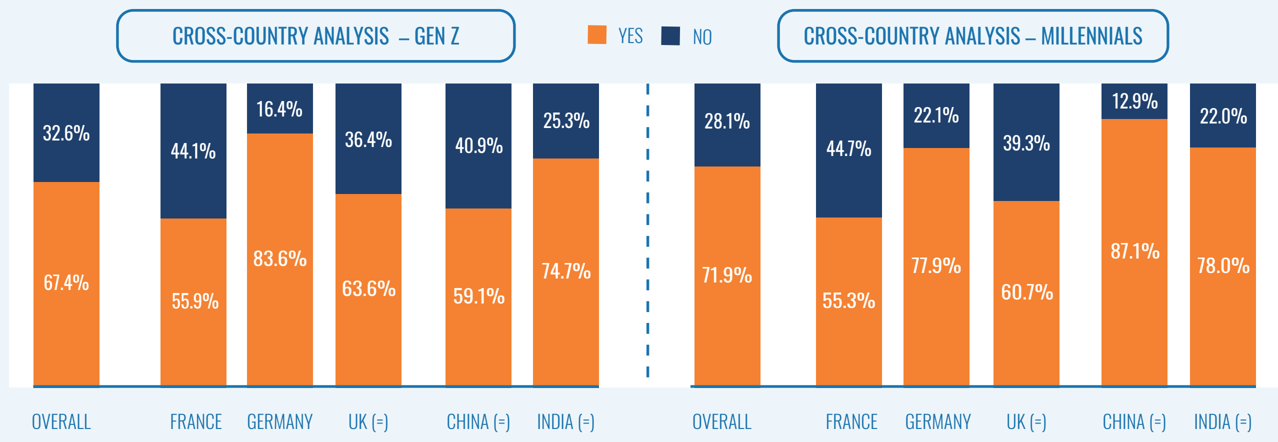
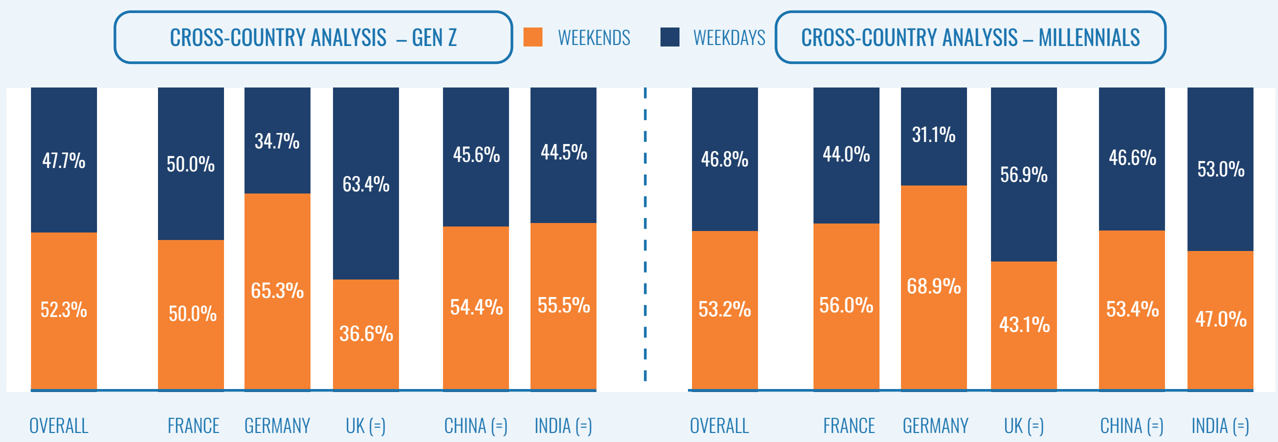



FIGURE 2. GETAWAY DAYS BY COUNTRY AND GENERATION



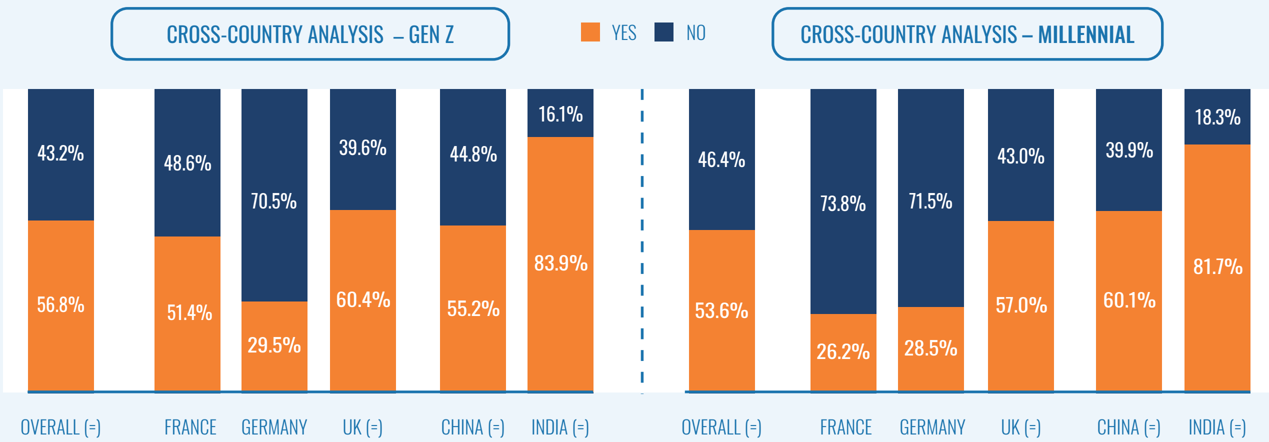

## CAR RENTAL PENETRATION AND MOTIVATIONS

The use of car rentals for getaways differs widely by country. In India, over 80% of both Gen Z and Millennials reported renting a car during their most recent short trip. This may be related to the common practice of travelling in large family groups. Car rentals offer flexibility, space for passengers and luggage, and are more practical for larger parties. In China and the UK, car rental usage was moderate, ranging between 55% and 60%. In contrast, it was less common in France and Germany, which could be due to a better public transport system or cultural preferences for trains over rental cars (Figure 3).

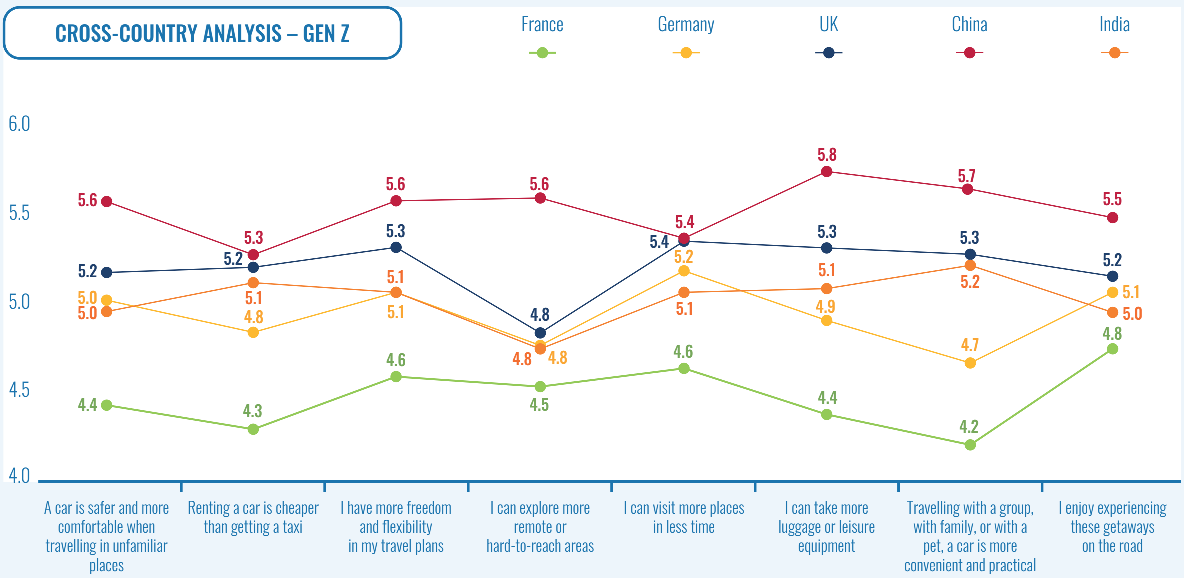
Across all five countries, the main reasons for renting a car were broadly similar. Respondents valued flexibility, convenience, and independence to organize their own itineraries. Renting a car also made it easier to transport luggage or leisure equipment, and respondents mentioned this option as especially practical for group or family travel. In addition, the freedom to explore destinations beyond the reach of public transport was a common motivation across regions.

When focusing on Gen Z, distinct patterns emerge. In China, Gen Z respondents were emphatic about safety, the ability to reach remote areas, and enjoying the driving, underscoring both practical and experiential motivations. In the UK, convenience and the chance to visit more destinations in less time were priorities, reflecting this generation's preference for efficient and flexible mobility. French and German Gen Z respondents stressed autonomy, often linking car rentals to avoiding the limitations of public transportation. By contrast, India's Gen Z respondents placed relatively less importance on transporting luggage or group convenience, though group travel with friends and family were still a culturally relevant factor. Overall, Gen Zers across countries view car rentals not only as a practical mobility solution but also as a way to enhance the travel experience thanks to freedom, safety, and personal enjoyment (Figure 4).

### FIGURE 3. SHARE OF INDIVIDUALS WHO RENTED A CAR, BY COUNTRY AND GENERATION




### FIGURE 4. MOTIVATIONS FOR RENTING A CAR BY COUNTRY, GENZ



Both Gen Z and Millennials value freedom and flexibility in travel plans and the convenience of carrying more luggage or leisure equipment, but they differ in the importance they assign to other factors. Gen Z puts the accent on safety and comfort when traveling in unfamiliar places, the enjoyment of experiencing getaways on the road, and the opportunity to explore more remote or hard-to-reach areas. Millennials, by contrast, focus more on the fact that renting a car is cheaper than using a taxi, on the chance to visit more places in less time, and the on convenience of travelling with a group, family, or a pet.

These distinctions are shaped by the relative country context. In China, Gen Zers point to safety, comfort, and exploring remote locations, while Millennials stress luggage capacity and the convenience of group travel. In India, Gen Zers show relatively low engagement, whereas Millennials report the highest scores overall, especially for travelling with groups, family, or pets and convenience in transporting luggage. British Gen Zers prioritize visiting more places in less time, while Millennials also highlight flexibility and luggage capacity. In Germany, Gen Zers value freedom and flexibility, while Millennials are fans of efficiency and remote exploration. Finally, in France, both generations record lower scores overall, though Gen Z associates rentals more closely with independence and the enjoyment of getaways on the road. Overall, we find that Gen Z approaches car rentals as an experience-driven choice, while Millennials emphasize practical and functional benefits.

## ENGINE PREFERENCES AND ENVIRONMENTAL CONSCIOUSNESS

The study explored which types of engines people preferred in rental cars. This is salient because of growing global interest in reducing emissions and choosing environmentally friendly travel options. In India and China, EVs and plug-in hybrids were more

FIGURE 5. TYPE OF ENGINE PREFERRED IN CAR RENTALS, BY COUNTRY

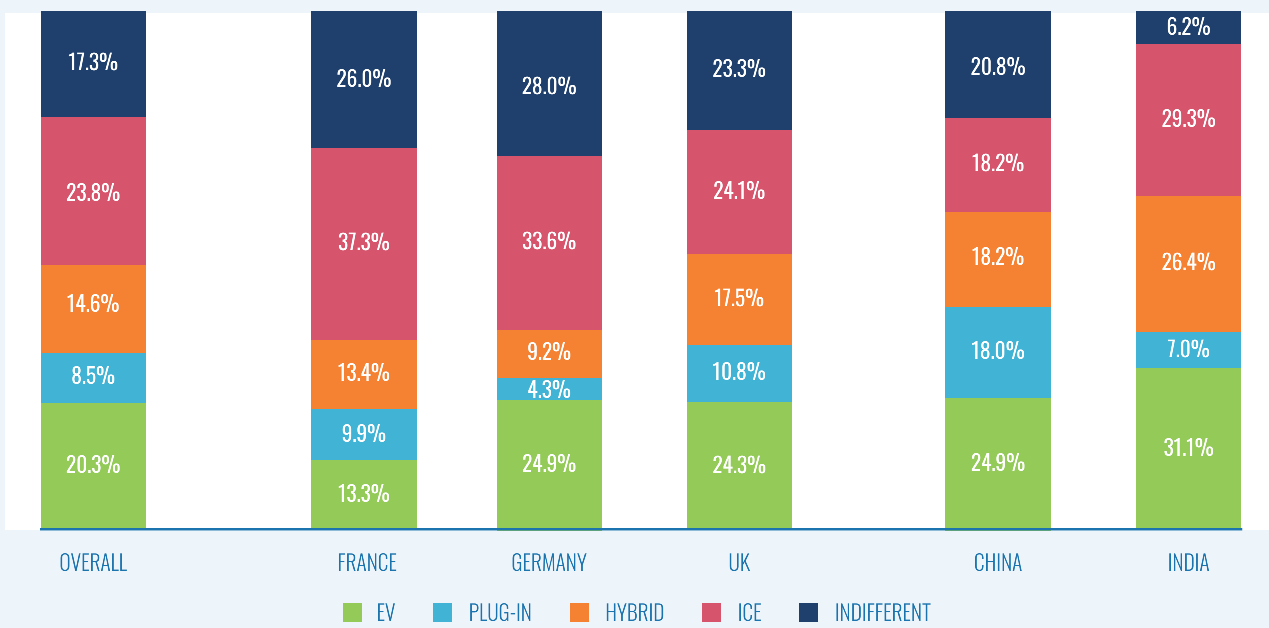
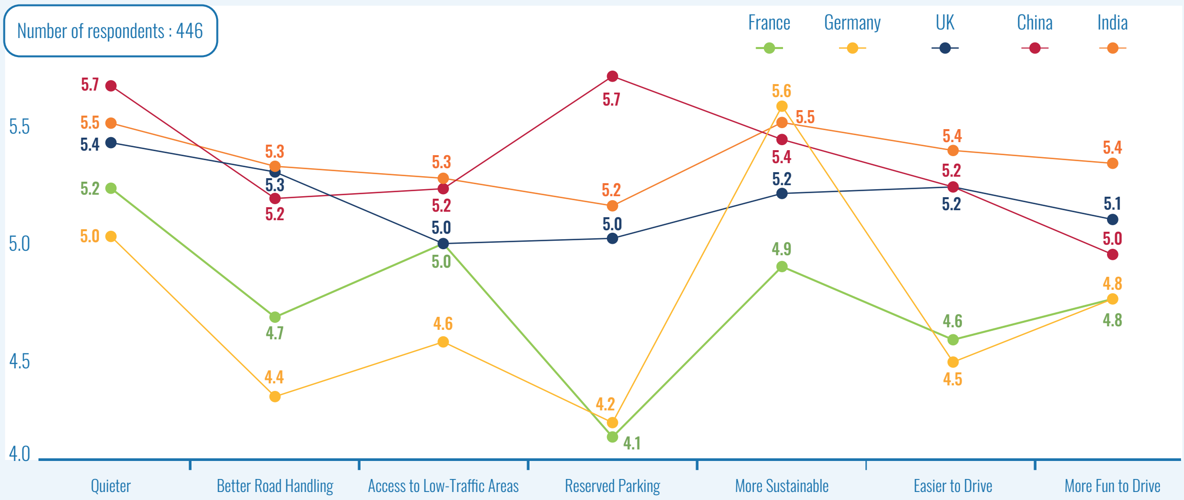


FIGURE 6. MOTIVATIONS FOR RENTING EVS BY COUNTRY, GEN Z




popular than in Europe. In India, about 31.1% preferred EVs; in China, this figure was 24.9%. These preferences may be influenced by rising environmental awareness, government support, and the expanding availability of EV charging stations. In contrast, traditional internal combustion engine (ICE) vehicles were still more popular in France and Germany, with over 30% of respondents favoring them. This could reflect doubts about newer technologies or the ease of finding fuel and repairs for ICE cars (Figure 5).

In France and Germany, both Gen Z and Millennials prefer to rent cars with ICE engines. In the UK, there are no generational differences, and the preference for both Gen Z and Millennials is evenly divided between EVs and ICE. However, our findings paint a different picture for Gen Z and Millennials in the two Asian countries. In China, Gen Zers are much more inclined to rent plug-ins, while Millennials lean toward EVs as rentals. In India, Gen Zers opt to rent ICE cars, and Millennials turn to EVs. The reasons for a penchant for ICE or EV engines are different. Respondents liked plug-in hybrids for their extended driving range, and EVs for their quiet engines, lower emissions, and suitability for city areas with traffic restrictions. Gen Zers valued the environmental benefits and experience of EVs, while Millennials enjoyed the handling and ease of use.

Offsetting these preferences, there were also clear concerns about EVs. Limited driving range, long charging times, and a small number of charging stations were major issues. Gen Zers also mentioned that driving EVs was less fun than traditional cars because of the quiet engine and different feel. Millennials were more concerned about cost and uncertainty that charging options would be available during their trip.

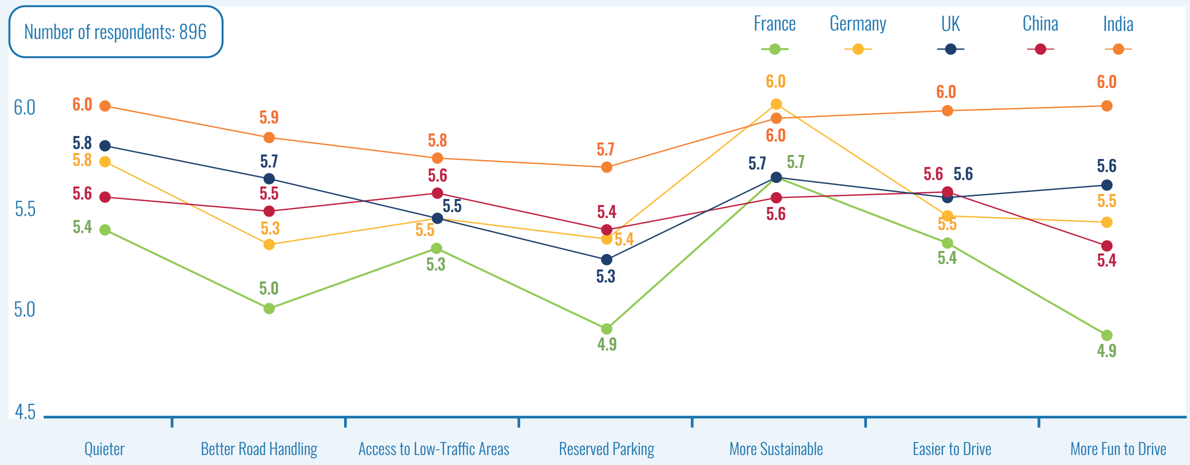
## REASONS FOR RENTING EVS

Reasons for renting an EV rather than an ICE or hybrid car are different from country to country and generation to generation. Figure 6 reports the answers[1] provided by Gen Zers who have rented EVs in the last year.

The chart reveals distinct cross-cultural patterns in reasons that Gen Zers rent EVs, with scores ranging from moderate to strong across all factors. Chinese Gen Zers

1 GenZ respondents who rented an EV in the last year numbered 446, out of 1,955 total GenZ car renters. Answers were given on a scale from 1=not important at all, to 7=definitely important. Numbers in the graph are averages.

FIGURE 7. MOTIVATIONS FOR RENTING EVS BY COUNTRY, MILLENNIALS




show the highest motivation for quietness and reserved parking access (both 5.7), suggesting that infrastructure-related benefits and noise reduction are particularly valued in China's urban environment. German Gen Zers prioritize sustainability above all else (5.6), while showing relatively less interest in functional benefits like parking access or traffic area privileges, indicating a more environmentally-driven approach to EV adoption.

French and British Gen Zers have more balanced motivation profiles, though with notable differences. French respondents show marked preferences for quietness and sustainability while rating other items more moderately, suggesting that environmental and comfort considerations dominate their decision-making. British Gen Zers have relatively similar responses across factors, with sustainability, road handling, and ease of driving emerging as key motivators. Indian Gen Zers present the most evenly distributed motivations, with sustainability, ease of driving, and access to low-traffic areas serving as particularly powerful drivers, reflecting the practical urban mobility challenges in Indian cities.

Figure 7 reports motivations provided by Millennial respondents who rented an EV in the last year[2].

The data on Millennials reveal a striking pattern of higher motivation scores compared to Gen Z, with sustainability emerging as the dominant driver across most countries. Indian Millennials demonstrate the most elevated motivation levels, scoring 6.0 (the maximum) for quieter operation, easier driving, and driving enjoyment, while maintaining near-maximum scores for sustainability. German Millennials show the most intense environmental focus with a perfect 6.0 sustainability score, outpacing other motivational factors by far. UK Millennials display pronounced preferences for road handling and ease of driving (5.7 and 5.6 respectively), while maintaining high sustainability scores. Chinese and French Millennials report more moderate yet still substantial motivation levels, with Chinese respondents placing particular value on access to low-traffic areas and ease of driving.

Millennials consistently show higher motivation scores than Gen Z across virtually all factors and countries, suggesting greater enthusiasm for EV rental experiences. While Gen Zers displayed more fragmented motivational patterns with country-

2 Overall, Millennials who rented an EV in the last year numbered 896 out of 3,627 total Millennial car renters.

specific preferences (Chinese Gen Zers emphasizing quietness and parking, German Gen Zers focusing on sustainability), Millennials prove to have more universally strong motivations, with sustainability being the common denominator. The generation gap is particularly wide in India, where Millennials score at or near maximum levels compared to Gen Z's more moderate ratings. This pattern suggests that Millennials, having greater life experience and potentially more disposable income, exhibit greater conviction about EV benefits across multiple dimensions, while Gen Zers appear more selective and context-dependent in their motivations.

These patterns suggest that while sustainability remains a universal concern for young EV renters, local urban contexts and infrastructure realities go a long way to shape other motivational priorities.

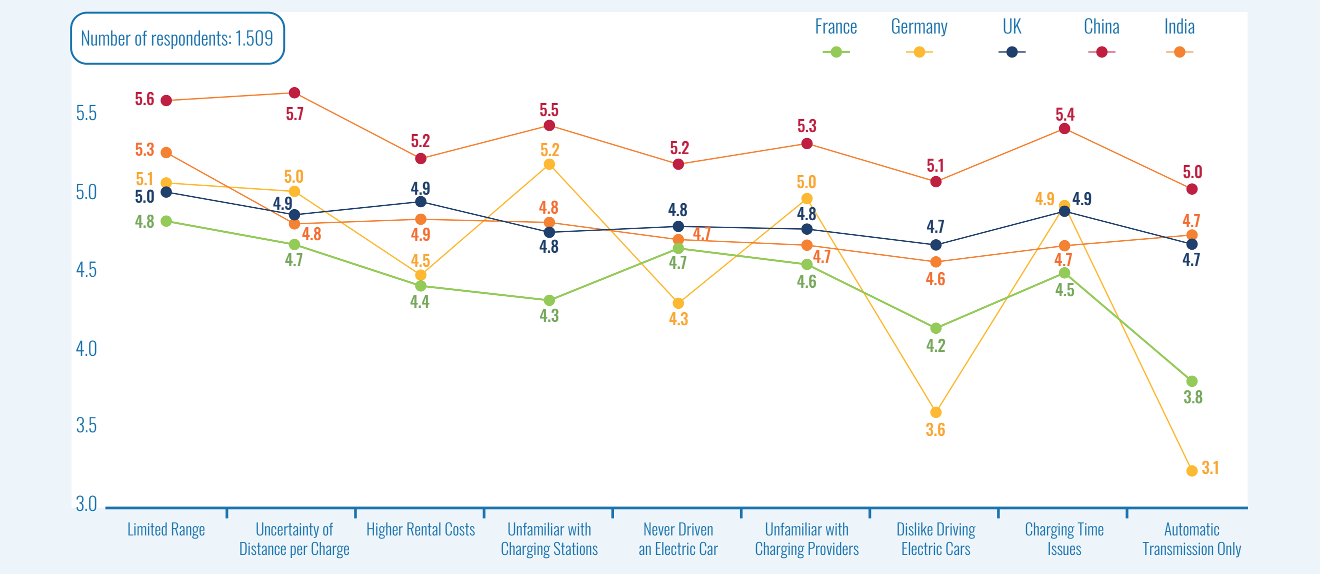
## REASON FOR NOT RENTING EVS

The research also investigated the reasons for opting not to rent an EV. Figure 8 reports answers from Gen Z[3], while Figure 9 shows answers from Millennials[4].

Figure 8 reveals that Gen Z's resistance to EV rentals centers on fundamental infrastructure and range anxieties rather than technological preferences. Range limitations and uncertainty around distance per charge emerge as the dominant concerns across all countries, with scores consistently above 5.0, indicating that these represent genuine barriers rather than minor inconveniences. Chinese Gen Z shows the most intense resistance, registering the highest scores for range limitations (5.6) and charging uncertainty (5.7), while also expressing serious concerns about unfamiliarity with charging infrastructure and higher costs. This suggests that despite China's advanced EV market, young consumers still harbor practical preoccupation about rental experiences.

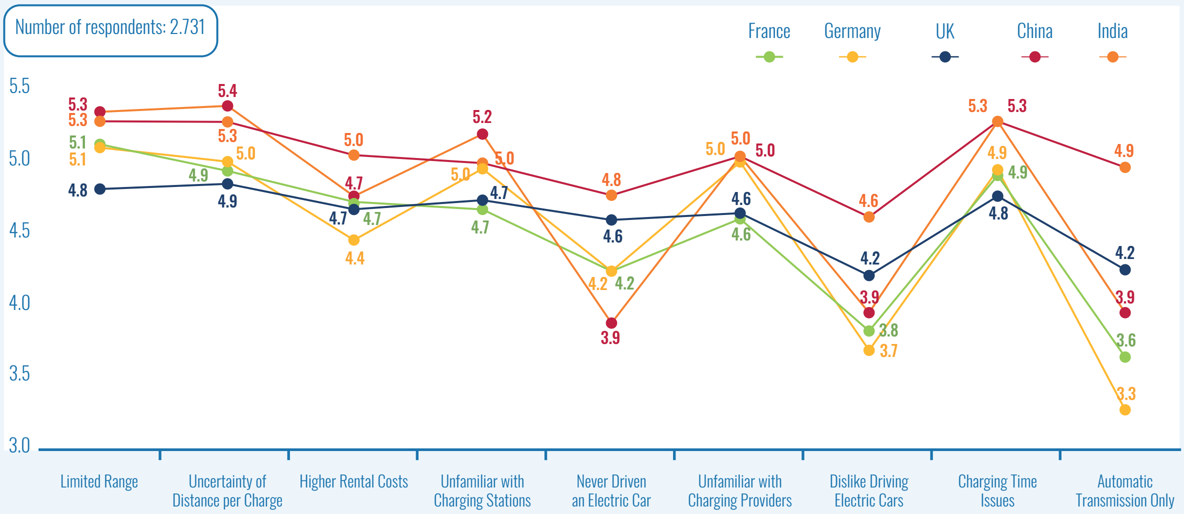
European markets display more nuanced resistance patterns. French Gen Z echoes range and charging concerns but shows relatively lower resistance to other factors, while German Gen Z manifest notable sensitivity to unfamiliarity with charging infrastructure. British Gen Z presents the most balanced resistance profile, with concerns distributed more evenly across factors, though range

FIGURE 8. MOTIVATIONS FOR NOT RENTING EVS BY COUNTRY, GEN Z




3 Out of 1,955 Gen Z car renters, 1,509 respondents decided to not rent an EV in the last year.
4 Out of 3,627 Millennials car renters, 2,731 respondents decided to not rent an EV in the last year.

**FIGURE 9. MOTIVATIONS FOR NOT RENTING EVS BY COUNTRY, MILLENNIALS**




and charging time issues still dominate. Notably, a preference for an automatic transmission scores lowest across all countries (3.1–3.8), indicating this traditional ICE vehicle feature poses a minimal barrier to EV adoption. The data suggest that addressing charging infrastructure accessibility and range anxiety with better information and intensive network development could sharply reduce Gen Z resistance to EV rentals, as these practical concerns far outweigh experiential or preference-based hesitations.

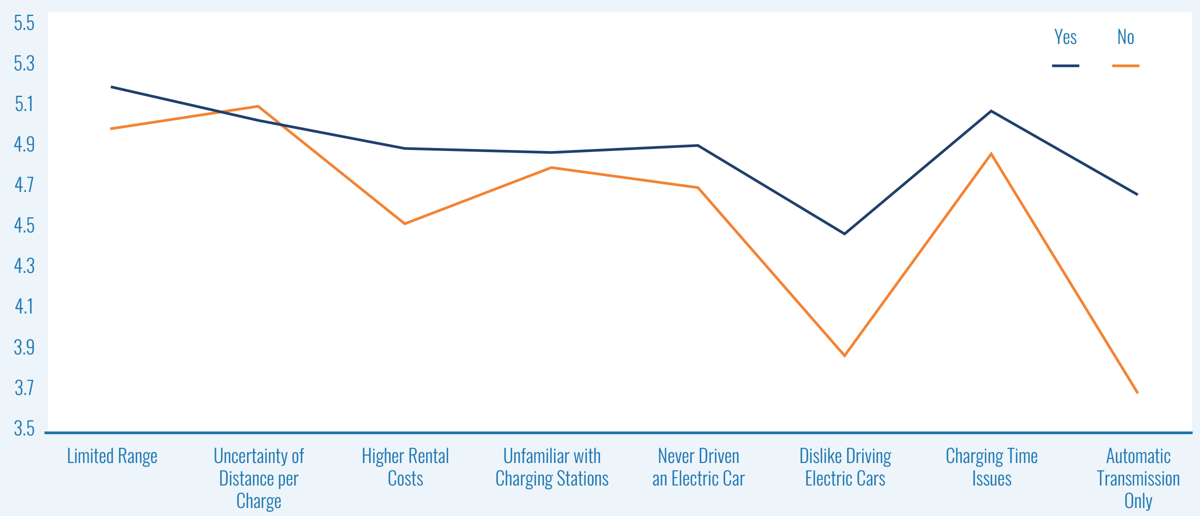
We find that Millennials have notably lower resistance to EV rentals compared to Gen Z, with most concern scores falling below 5.0, suggesting greater openness to electric vehicle adoption. French and German Millennials show the highest level of resistance, primarily focused on range limitations and charging uncertainty (both countries scoring 5.3–5.4), alongside infrastructure familiarity concerns. However, even these peak issues are lower than corresponding Gen Z scores. UK Millennials mirror this pattern with slightly less intensity across all factors, indicating that while core concerns remain consistent across European markets, the older cohort expresses less anxiety about EV rental experiences.

The Asian markets reveal more nuanced generational differences. Chinese Millennials show substantially lower resistance than their Gen Z counterparts, with charging-related issues remaining the primary concern but at more moderate levels (around 5.2). Indian Millennials present the most interesting pattern, displaying relatively high and broadly distributed concerns across multiple factors: Charging time, rental costs, and EV inexperience all score above 4.6. This suggests that while Indian Gen Zers focus primarily on range anxiety, Millennials harbor more across-the-board hesitation about the entire EV rental ecosystem.

Millennials show lower resistance scores in all categories and countries, suggesting greater readiness for EV adoption despite having similar core concerns. While Gen Z resistance appeared more concentrated on fundamental infrastructure anxieties, Millennials express more measured skepticism, suggesting that having more life experience may translate into more realistic expectations about new technology adoption challenges rather than categorical rejection.

In looking at the reasons for not renting an EV, it is interesting to distinguish between people who have and haven't done so. The answers provided by

FIGURA 10. MOTIVATIONS FOR NOT RENTING AN EV AMONG PEOPLE WHO HAVE/HAVE NOT DONE SO IN THE PAST




the latter group represent prejudices against EVs, while people who have rented an EV voice critical issues. Figure 10 illustrates this split.

Figure 10 shows that the issue of travel distance per charge is a stronger prejudice rather than a real concern. What really prevents people from renting EVs is their unfamiliarity with charging infrastructures and with providers at the destination, and the time they would waste recharging the vehicle.

## CONCLUSIONS

The car rental market is a growing segment in the travel industry. Considering the size of fleets of car rental brands, they have a huge impact on the sustainability of mobility. Although some experiences with green fleets have been negative in previous years, our research reveals the interest and concern of young generations regarding renting EVs. Essentially, the reasons for not renting electric vehicles have to do with uncertainty around electric technology, which translates into difficulties in estimating driving range and charging times. These are two aspects that arise from limited familiarity with electric models and travelling to places which may be unfamiliar. These are also critical factors because they relate to time, which is the quintessential scarce resource in tourism. In fact, any setback during a vacation carries greater negative value than in everyday life, because it compromises an experience that would be difficult to repeat in the short term. Wasting time to charge the EV, not reaching a destination because the battery dies, being stranded along the road in an unfamiliar place: all these risks are daunting obstacles to overcome. Yet, people who rent EVs appreciate the more pleasant and comfortable driving experience. Another noteworthy advantage is gaining access to otherwise restricted areas, especially when visiting unfamiliar cities. Moreover, EVs are predominantly rented by people who already own an electric vehicle and use it in daily life.

This underscores the importance of mitigating the risk perception associated with electric vehicles. Providing specific services when needed (information and rapid assistance) can assuage fears of incidents that could compromise the vacation. Similarly, by offering EV models capable of ultra-fast charging and tools to easily familiarize customers with local charging infrastructures, rental companies can bolster consumer confidence when renting these vehicles.

But most important of all, according to our findings, is how the EV rental offer is framed. While mitigating risks may represent a tactic to reduce the perception of uncertainty, it's not the appropriate tool to promote electric mobility. Instead, the positive aspects of traveling by EV should be highlighted, in other words, the reasons why people should rent them. These include comfort and ease of driving, access to zones and parking spots that would otherwise be inaccessible or entail a fee, and finally, the soundless engine. All aspects consistent with what people are looking for in vacations today: relaxation and hassle-free experiences.

## REFERENCES


Euromonitor International (2023). *Car rental: top six industry trends.* Accessed on 2025-07-26 at: euromonitor.com.

Jónasdóttir, H., Müller, S.D. (2020). "Theorizing affordance actualization in digital innovation from a socio-technical perspective: The case of the video game industry." *Scandinavian Journal of Information Systems*, 32(1), 5.

Majchrzak, A., Markus, M.L. (2012). "Technology affordances and constraints in management information systems (MIS)." *Encyclopedia of Management Theory (Ed: E. Kessler), Sage Publications.*

Oliver Wyman Forum (2022). "How urban mobility will change by 2030 - value pool report." Technical Report. Accessed on 2025-07-25 at: oliverwymanforum.com.

Soppert, M., Oliveira, B.B., Angeles, R., Steinhardt, C. (2024). "On the benefit of combining car rental and car sharing." *Journal of Business Economics*, 94(9), 1261-1298.

Statista (2025). *Car rental worldwide.* Accessed on 2025-07-2025 at: statista.com.

Statista (2025). *Car rentals – Europe.* Accessed on 2025-07-2025 at: statista.com.