Autonomous Vehicle Social Acceptance and Smart Mobility Integration: A Thematic Review of Public Trust, Shared Mobility, and Road Coexistence

Ercan Kayalıoğlu
Gazi University Institute of Natural Sciences
Ankara,Türkiye
25833001008@gazi.edu.tr

Seyfettin Vadi
Gazi University
Ankara,Türkiye
seyfettinvadi@gazi.edu.tr

Hafize Nurgül Durmuş Şenyapar
Gazi University
Ankara,Türkiye
nurguld@gazi.edu.tr

Ramazan Bayındır
Gazi University
Ankara,Türkiye
bayindir@gazi.edu.tr

Abstract

Autonomous vehicle acceptance is often examined through individual adoption intention, yet the public deployment of autonomous vehicles requires a broader understanding of social acceptance. This paper examines the factors associated with autonomous vehicle social acceptance through a focused thematic analysis of recent AV acceptance research. The study draws on a structured coding matrix based on Web of Science Core Collection publications indexed in SCI-EXPANDED and SSCI between 2023 and 2025. The initial search yielded 313 records, of which 247 studies were retained after title and abstract screening. For this paper, the analysis focused on studies and coded constructs related to social influence, shared mobility, trust, perceived risk, safety perception, and human–machine interaction. The findings indicate that trust and safety are commonly positioned as enabling conditions for social acceptance, while perceived risk and psychological vulnerability are framed as barrier-related factors in road coexistence contexts. Shared mobility appears as a service-based pathway through which AV acceptance is connected to public transport, robotaxis, autonomous shuttles, accessibility, and collective use. Human–machine interaction is positioned as an interactional condition for making AV behavior understandable to passengers and external road users. The paper concludes that AV social acceptance should be conceptualized through trust, safety, risk, shared mobility, and interaction transparency rather than reduced to individual willingness to use. These factors are also relevant to smart mobility and smart grid discussions because socially accepted shared electric AV services may support future grid-interactive transport applications.

Keywords: Autonomous Vehicle Social Acceptance; Public Trust; Shared Mobility; Road Coexistence; Perceived Risk; Safety Perception; Human–Machine Interaction; Interaction Transparency.

I. INTRODUCTION

Autonomous vehicles are increasingly discussed as transformative technologies for urban mobility, traffic safety, accessibility, and transport efficiency. Their diffusion, however, depends on more than technological readiness or system performance. Autonomous vehicles enter public roads, shared transport systems, and everyday mobility routines in ways that require social trust, perceived safety, and acceptance of coexistence with automated agents. For this reason, autonomous vehicle acceptance should be examined not only as an individual decision to use or purchase a technology, but also as a broader social process involving passengers, human drivers, pedestrians, cyclists, public transport users, service operators, and urban communities.

Much of the existing autonomous vehicle acceptance literature has been shaped by individual-level adoption models. Constructs such as perceived usefulness, perceived ease of use, performance expectancy, effort expectancy, and behavioral intention continue to provide a useful vocabulary for explaining whether individuals are willing to use autonomous vehicles [1]. These constructs remain relevant because users evaluate AVs through expected convenience, perceived utility, effort reduction, and personal mobility benefits. Yet the social acceptance of autonomous vehicles extends beyond the individual user's adoption intention. AVs operate in shared environments where their behavior affects other road users, where trust depends on system transparency and safety, and where acceptance may be shaped by whether automated mobility is perceived as socially reliable, accessible, and compatible with public road coexistence.

Recent studies indicate that AV acceptance is highly context-sensitive. Older users may evaluate autonomous technologies through affective and normative expectations, including enjoyment and social influence, rather than through safety and privacy concerns alone [2]. Family-oriented autonomous mobility may be evaluated through its effects on shared time, travel experience, and interpersonal interaction during travel [3]. For marginalized groups and persons with sensory impairments, willingness to use shared self-driving services may depend on accessibility, affordability, mobility needs, and dependence on transport alternatives [4]. Residents in small and rural towns may assess AVs through expectations of improved mobility access, reduced parking pressure, and affordability [5]. These findings suggest that

social acceptance is not a uniform attitude toward automation. It is shaped by social position, mobility context, perceived collective benefit, and the conditions under which AVs are encountered in everyday transport systems.

Trust is one of the most important determinants of AV social acceptance. Users and non-users must believe that autonomous vehicles can operate safely, predictably, and responsibly in mixed traffic environments. Trust may be formed through previous experience with automated systems, perceived system competence, operator credibility, or observable vehicle behavior. Research on initial trust formation in shared autonomous vehicles shows that trust can emerge through transfer-based, personality-based, and performance-based mechanisms before direct large-scale exposure to the technology occurs [6]. Studies on shared autonomous vehicle acceptance also indicate that trust is closely connected to perceived system reliability, service design, and willingness to delegate control in automated mobility contexts [7]. In this sense, trust is not only a psychological determinant of individual use intention; it is a social condition for allowing autonomous vehicles to circulate in shared public spaces.

Perceived risk and psychological vulnerability also shape the social acceptance of AVs. In road environments, acceptance is not limited to whether someone wants to ride in an autonomous vehicle. Human drivers, pedestrians, cyclists, and passengers may also ask whether they are safe around AVs. Research on mixed traffic shows that drivers may feel psychologically vulnerable when sharing roads with driverless vehicles, and that perceived risk can intensify this sense of vulnerability [8]. Studies on public responses to automated vehicle crashes further show that safety incidents can influence public concern and alter perceptions of AV reliability [9]. These findings highlight the importance of road coexistence as a specific dimension of social acceptance. A society may recognize the technological promise of AVs while still hesitating to accept them as legitimate and safe actors in public traffic.

Shared mobility represents another pathway through which AV social acceptance becomes visible. Autonomous shuttles, robotaxis, shared autonomous vehicles, and on-demand autonomous mobility services change the meaning of acceptance by shifting attention from private ownership to collective use. In shared service contexts, users evaluate not only the automated vehicle itself, but also service reliability, passenger experience, operator trust, affordability, accessibility, and willingness to share mobility spaces with others. Studies on automated bus and shuttle acceptance show that shared mobility contexts require attention to perceived usefulness, trust, safety, and service-related expectations [10]. Research on robotaxis and shared autonomous mobility further suggests that acceptance depends on service design and social use conditions rather than on vehicle automation alone [11]. For disadvantaged or mobility-constrained groups, shared autonomous mobility may also be evaluated as a potential tool for improving access to transport, provided that cost, usability, and perceived safety are addressed [4].

Human–machine interaction is also central to social acceptance because AVs must communicate their intentions to users and surrounding road actors. The behavior of an autonomous vehicle must be interpretable, especially in safety-relevant situations. In-vehicle warnings, external communication interfaces, interaction cues, and system feedback can affect whether users perceive AVs as understandable and predictable. Simulator-based research shows that different warning modalities may influence recognition, reaction, and emotional response in automated driving contexts [12]. Studies on external HMI design also indicate that pedestrians' perceptions can be shaped by how automated vehicles communicate intent in traffic environments [13]. These findings suggest that social acceptance requires more than positive attitudes toward automation. It also requires interaction transparency, so that passengers and external road users can interpret AV behavior with sufficient confidence.

The present study addresses this issue by examining the determinants of autonomous vehicle social acceptance through a focused thematic analysis of recent AV acceptance research. Rather than comparing technology acceptance models or evaluating measurement architectures, the study concentrates on factors associated with social acceptance, particularly public trust, perceived safety, perceived risk, shared mobility, social influence, human–machine interaction, and public road coexistence. The analysis draws on a structured coding matrix of Web of Science-indexed AV acceptance studies published between 2023 and 2025. The broader search identified 313 records, of which 247 studies were retained in the analytical corpus after title and abstract screening.

The study is guided by three research questions:

- RQ1. Which factors are most frequently associated with the social acceptance of autonomous vehicles in recent AV acceptance research?
- RQ2. How do trust, perceived risk, safety, shared mobility, social influence, and human–machine interaction shape public acceptance of autonomous vehicles?
- RQ3. Does the literature frame AV acceptance mainly as individual adoption intention, or does it also address broader forms of public road coexistence and shared mobility acceptance?

By addressing these questions, the paper contributes to autonomous vehicle acceptance research by shifting attention from individual adoption intention to the broader social conditions of acceptance. It argues that AV social acceptance should be understood through the combined influence of trust, safety, risk perception, shared service context, and interaction transparency. This perspective is important because autonomous vehicles will be socially accepted only if they are perceived as trustworthy, safe, understandable, and compatible with the everyday realities of shared public mobility. This perspective is also relevant for smart grid-

oriented mobility research, because shared electric and autonomous mobility services can contribute to grid-interactive transport only when users and communities are willing to trust, use, and coexist with these systems.

II. METHOD

A. Research Design

This study was designed as a focused thematic review of factors associated with the social acceptance of autonomous vehicles. The analysis draws on a structured coding matrix developed from recent autonomous vehicle acceptance research, but the present paper narrows the focus to constructs and study contexts that are directly relevant to social acceptance. The purpose is not to compare technology acceptance models or to evaluate the predictive performance of individual adoption frameworks. Instead, the study examines how recent research addresses the social conditions under which autonomous vehicles may be accepted in public mobility environments.

Social acceptance was conceptualized as broader than individual willingness to use or purchase an autonomous vehicle. It was understood as a multidimensional acceptance condition shaped by trust, perceived safety, perceived risk, social influence, shared mobility, human–machine interaction, and road coexistence. This framing allowed the analysis to distinguish between individual adoption intention and broader public acceptance of AVs as actors in shared traffic systems, mobility services, and everyday transport environments.

B. Literature Search and Study Selection

The literature search was conducted in the Web of Science Core Collection on 24 February 2026. The search was limited to the Science Citation Index Expanded (SCI-EXPANDED) and Social Sciences Citation Index (SSCI). Only English-language publications were included, and the document types were restricted to Article, Early Access, and Review Article. The time frame covered publications from 2023, 2024, and 2025.

The search was conducted in the Topic field using a Boolean search string that combined autonomous vehicle terms with acceptance/adoption and measurement-oriented terms:

TS=(("autonomous car*" OR "automated car*" OR "autonomous vehicle*" OR "automated vehicle*") AND (acceptance OR adoption) AND (survey OR scale))

The initial search yielded 313 records. These records were screened at the title and abstract levels. Studies were retained if they addressed autonomous vehicle acceptance, adoption, user perception, behavioral intention, public attitudes, social influence, trust, perceived risk, safety perception, human–machine interaction, shared autonomous mobility, or road coexistence. Studies focused solely on vehicle hardware, sensor optimization, radar calibration, technical control architecture, algorithmic engineering, or autonomous vehicle performance without a user or social acceptance component were excluded.

After title and abstract screening, 66 records were excluded. The remaining 247 studies were assessed at the full-text level and formed the analytical corpus for the broader coding matrix. No additional studies were excluded after full-text assessment.

C. Focused Thematic Sub-Analysis

For this paper, a focused thematic sub-analysis was conducted using the 247-study coding matrix. The analysis concentrated on constructs and contexts associated with social acceptance. Six coding fields were used as the main entry points for identifying relevant patterns: social influence, shared mobility, trust, perceived risk, safety perception, and human–machine interaction.

These constructs were selected because they capture different dimensions of AV social acceptance. Social influence reflects normative expectations, peer influence, social approval, and perceived legitimacy. Shared mobility captures robotaxis, autonomous shuttles, shared autonomous vehicles, and on-demand autonomous transport services. Trust reflects confidence in vehicle automation, service providers, system performance, or institutional actors. Perceived risk captures physical, psychological, performance-related, and contextual concerns that may reduce willingness to coexist with AVs. Safety perception reflects beliefs about traffic safety, system reliability, crash avoidance, and perceived protection in mixed traffic. Human–machine interaction captures the ability of users and surrounding road actors to understand, interpret, and respond to AV behavior.

D. Data Extraction and Coding Procedure

A standardized data extraction matrix was used to record bibliographic, methodological, and construct-level information for each study. The coded fields included publication year, authors, article title, journal, theoretical or conceptual model, analysis method, and the presence of selected acceptance constructs.

For the present thematic analysis, the relevant construct fields were coded conservatively. A construct was treated as present only when it was explicitly measured, modeled, or operationalized in the study. Concepts mentioned only in the introduction, background, discussion, or implications were not treated as sufficient evidence of construct inclusion. This rule was applied to avoid conflating broad conceptual discussion with variables actually used in empirical or structured review analysis.

The coding matrix was then reviewed to identify studies that contributed to one or more of the social acceptance dimensions. Particular attention was given to studies addressing shared autonomous mobility, public road interaction, mixed traffic, psychological vulnerability, perceived safety, trust formation, user–system communication, and social influence. These studies were not analyzed as model families, but as evidence of factors shaping the social acceptance of autonomous vehicles.

E. Analytical Strategy

The analysis proceeded in three stages. First, studies coded for trust and safety were examined to identify how confidence, perceived reliability, system performance, and safety expectations shape the social acceptance of AVs. This stage focused on whether trust and safety were framed only as individual predictors of use intention or as broader conditions for accepting AVs in shared public environments.

Second, studies coded for perceived risk and related road coexistence concerns were analyzed. This stage focused on how psychological vulnerability, perceived crash risk, mixed traffic uncertainty, and fear of interaction with driverless vehicles may function as barriers to social acceptance. The aim was to identify whether risk was treated as a private user concern or as a wider barrier to public road coexistence.

Third, studies coded for shared mobility, social influence, and HMI were examined. Shared mobility studies were analyzed to understand how robotaxis, autonomous shuttles, and on-demand autonomous services create service-based forms of social acceptance. Social influence was interpreted as a normative and relational acceptance factor. HMI studies were analyzed to determine how interaction transparency, warning systems, communication cues, and user–vehicle interaction may affect acceptance among passengers, drivers, pedestrians, and other road users.

The findings are organized around four thematic dimensions: trust and safety as foundations of social acceptance; perceived risk and psychological vulnerability as barriers to road coexistence; shared mobility as a service-based pathway to social acceptance; and HMI and interaction transparency in public road coexistence. The methodological flow of the study is summarized in Fig. 1.

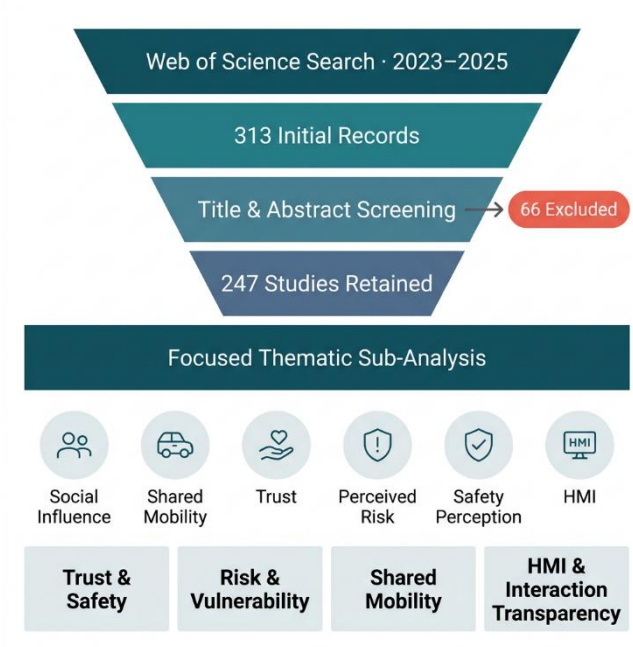

Fig. 1. Methodological flow of the focused thematic review.

F. Methodological Boundaries

This paper presents a focused thematic analysis of social acceptance-related factors within recent autonomous vehicle acceptance research. It does not provide a complete systematic review of all AV acceptance determinants, nor does it assess the statistical quality, effect sizes, or predictive validity of individual studies. The analysis is limited to studies indexed in Web of Science Core Collection, published in English between 2023 and 2025, and classified as Article, Early Access, or Review Article.

The findings should therefore be interpreted as a thematic synthesis of how social acceptance-related factors are represented in a recent indexed academic corpus. The study does not claim that social acceptance is exhausted by the six selected constructs. Rather, social influence, shared mobility, trust, perceived risk, safety, and HMI were selected as analytically relevant entry points because they connect individual attitudes with broader public, service-based, and road coexistence dimensions of autonomous mobility. The study also does not define a single geographical acceptance context. Instead, it maps how social acceptance-related constructs are represented across an international corpus of recent AV acceptance research. Since perceptions of autonomous vehicles may vary across countries, transport infrastructures, mobility cultures, regulatory environments, education levels, and prior exposure to automation, the findings should not be interpreted as evidence of a uniform global acceptance pattern. Because the purpose of this paper is thematic mapping rather than quantitative effect estimation, the analysis does not rank determinants or compare effect sizes across geographical settings. Future research can build on this mapping through country-specific or cross-country comparative designs that examine how social acceptance factors vary across cultural, infrastructural, regulatory, and mobility-service contexts.

III. Findings

A. Trust and Safety as Foundations of Social Acceptance

The thematic sub-analysis indicates that trust and safety are among the most visible factors through which recent autonomous vehicle acceptance research approaches social acceptance. In the coding matrix, these constructs were not interpreted as confirmed causal determinants of acceptance; rather, they were examined as factors explicitly measured, modeled, or operationalized in studies addressing AV use, shared mobility, public road interaction, or service-based autonomous transport. This distinction is important because the present paper does not synthesize the empirical findings of individual studies. It maps how social acceptance-related factors are positioned within the reviewed literature.

Trust was frequently operationalized as a construct linking individual perception with broader acceptance of autonomous mobility systems. In shared autonomous vehicle contexts, several studies included trust as part of the acceptance structure, suggesting that researchers often treat confidence in automation, vehicle performance, service reliability, or operator credibility as relevant to public acceptance. Farmer et al. included trust in a study focused on trust transfer and intention to use shared autonomous

vehicles, positioning it alongside perceived usefulness, perceived ease of use, safety, hedonic motivation, and shared mobility context [14]. Wu et al. incorporated trust into a UTAUT-based shared autonomous vehicle framework together with performance expectancy, effort expectancy, social influence, facilitating conditions, HMI quality, and shared mobility context [7]. These studies illustrate how trust is operationalized not only as an individual attitude but also as a construct relevant to shared service environments.

Safety perception was also commonly positioned as a social acceptance-related factor, particularly in studies addressing public transport, shuttles, buses, and shared autonomous mobility. Rahim et al. included perceived safety in a study of automated bus acceptance in Scotland, together with perceived usefulness, perceived ease of use, trust, and shared mobility context [10]. Liu et al. operationalized safety in a suburban autonomous shuttle acceptance study that also included trust, perceived risk, social influence, and shared mobility context [15]. These examples show that perceived safety is often treated as part of the acceptance structure when AVs are examined as shared or public mobility services rather than as private consumer technologies.

The combined inclusion of trust and safety is especially relevant for social acceptance because AVs operate in environments where passengers and other road users must rely on automated behavior. Several studies coded both constructs in contexts involving shared services, public transport, or specific user groups. Zeng et al. included trust and safety in a smart car acceptance study among middle-aged and elderly users, together with perceived usefulness, perceived ease of use, social influence, perceived risk, technology readiness, and hedonic motivation [2]. Ganga et al. included trust and safety in a study of public acceptance of autonomous electric buses in Brazil, together with perceived risk, social influence, HMI, and shared mobility context [16]. These studies position trust and safety within broader public or collective mobility contexts, making them relevant to social acceptance beyond individual adoption intention.

Trust and safety were also operationalized in studies addressing previous experience, user characteristics, and service familiarity. Sweet et al. examined potential adoption of private automated vehicles and automated shuttle buses, coding trust, perceived risk, safety, and shared mobility as relevant acceptance dimensions [17]. Classen et al. included trust, perceived risk, safety, HMI, and shared mobility in a study of autonomous vehicle technology acceptance among drivers from different age groups [18]. These examples indicate that the literature often locates trust and safety within user-group-specific or experience-sensitive acceptance contexts.

The review also identified studies in which trust and safety were linked to information, education, or intervention-oriented contexts. Wang et al. included social influence, trust, perceived risk, safety, and shared mobility in a study examining automated vehicle education and public acceptance [19]. Deng et al. included trust, perceived risk, safety, and social influence in a study addressing public acceptance of autonomous vehicles in China through the lens of technical safety riskiness and behavioral intervention [20]. In the present analysis, these studies are not used to claim that education or intervention necessarily improves acceptance. Rather, they show that trust and safety are frequently positioned as modifiable or communicable factors within public acceptance contexts.

Taken together, the coding evidence suggests that trust and safety are foundational themes in the literature on AV social acceptance. The studies reviewed here operationalize these constructs across shared mobility, public transport, shuttle, user-group, and road-use contexts. This supports the interpretation that social acceptance is broader than individual willingness to use or purchase an AV. It includes whether autonomous vehicles are framed as reliable, safe, and acceptable actors in shared mobility systems and public traffic environments.

B. Perceived Risk and Psychological Vulnerability as Barriers to Road Coexistence

Perceived risk emerged in the thematic coding as one of the most important barrier-related constructs associated with autonomous vehicle social acceptance. In the present analysis, perceived risk was not treated as an empirically confirmed cause of rejection unless the original study findings were explicitly extracted. Instead, it was examined as a construct through which researchers operationalize hesitation, vulnerability, uncertainty, or discomfort toward autonomous vehicles in shared mobility and public road contexts. This conservative interpretation is necessary because the present paper maps how risk-related factors are represented in the literature, rather than synthesizing the statistical results of each study.

Risk was frequently positioned as a multidimensional construct rather than as a single general attitude. Some studies operationalized perceived risk in relation to shared autonomous vehicle use. Abbasi et al. included perceived risk in a study of shared autonomous vehicle acceptability, together with trust, safety, and shared mobility context [21]. Here, the study illustrates how risk is incorporated into shared mobility acceptance structures, rather than serving as evidence that a specific risk dimension has a confirmed effect on acceptance. Its relevance lies in the fact that risk is operationalized within a social and service-based AV context.

Psychological vulnerability represents a more road-coexistence-oriented form of risk. Studies addressing mixed traffic conditions shift the focus from private adoption intention to the emotional and cognitive conditions under which human drivers may share roads with driverless vehicles. Wang and Zhao examined psychological vulnerability in the context of sharing roads with driverless vehicles and included perceived risk, trust, attitude toward autonomous technology, and related acceptance constructs [8]. This study is particularly relevant to the present review because it frames acceptance as a matter of coexistence in mixed traffic rather than only as an individual decision to use an AV. It therefore helps position psychological vulnerability as a barrier-related theme in AV social acceptance research.

Public concern after automated vehicle incidents is another way in which perceived risk enters the social acceptance literature. Jing et al. examined public concerns following automated vehicle crashes and included constructs such as perceived severity, trust, perceived risk, and safety [22]. In this paper, the study does not claim a specific causal relationship between crash exposure and acceptance. Rather, it demonstrates that risk and safety concerns are operationalized in research contexts where AVs are evaluated as public-facing technologies whose incidents may shape collective perception. This is directly relevant to road coexistence because crash-related concerns affect how AVs are socially interpreted as traffic actors.

Risk-related constructs were also operationalized in studies addressing cybersecurity, data concern, and liability as part of the broader uncertainty surrounding autonomous mobility. Khan et al. included perceived cyber risks, liability, and data-related concerns in studies of automated vehicle adoption across different countries [23], [24]. These studies broaden the meaning of perceived risk beyond immediate physical safety. For the present social acceptance analysis, they show that risk may be framed not only as crash-related vulnerability, but also as uncertainty about the reliability, security, and accountability of automated mobility systems. However, these dimensions are treated here only as risk-related themes represented in the coded literature, not as empirically ranked determinants.

The risk theme also appears in studies where AV acceptance is examined among specific user groups or in shared mobility environments. Zeng et al. included perceived risk in a study of smart car acceptance among middle-aged and elderly users, together with usefulness, ease of use, social influence, trust, safety, technology readiness, and hedonic motivation [2]. Lee and Sener examined willingness to use and share self-driving on-demand services among marginalized populations, including shared mobility and social acceptance-related dimensions [4]. These studies indicate that risk-related constructs are often situated within specific demographic, accessibility, or service-use contexts. This matters because social acceptance is not distributed uniformly across user groups; it may be shaped by mobility need, perceived exposure, and the conditions under which AVs are encountered.

Risk was also linked with safety and trust in several studies, which suggests that the literature often treats road coexistence as a combined evaluation of threat, confidence, and perceived protection. Sweet et al. included trust, perceived risk, safety, and shared mobility in a study comparing private automated vehicles and automated shuttle buses [17]. Classen et al. included trust, risk, safety, HMI, and shared mobility in a study of autonomous vehicle technology acceptance among drivers from different age groups [18]. In the present analysis, these studies illustrate how risk is positioned alongside trust and safety in contexts where AVs are evaluated as part of a shared mobility or traffic environment.

The thematic pattern suggests that perceived risk and psychological vulnerability are important entry points for understanding barriers to road coexistence. The reviewed studies operationalize risk through different but related lenses: shared mobility risk, mixed-traffic vulnerability, crash-related public concern, user-group-specific uncertainty, cybersecurity or data-related concern, and safety-related hesitation. These patterns do not allow a direct claim about which risk dimension has the strongest empirical effect. They do, however, show that recent AV acceptance research frequently frames social acceptance as dependent on whether autonomous vehicles are perceived as safe enough, predictable enough, and acceptable enough to coexist with human users in public road environments.

C. Shared Mobility as a Service-Based Pathway to Social Acceptance

Shared mobility emerged in the coding matrix as one of the most visible contexts through which autonomous vehicle social acceptance is connected to service use, collective mobility, and public transport environments. In the present analysis, shared mobility was not interpreted as an empirical outcome or as evidence that shared autonomous services are necessarily more acceptable than private autonomous vehicles. Instead, it was treated as a service-based context in which social acceptance is operationalized through willingness to use autonomous shuttles, robotaxis, shared autonomous vehicles, automated buses, ride-pooling, or on-demand autonomous mobility services.

This distinction is important because shared autonomous mobility shifts the meaning of acceptance. In private vehicle adoption studies, acceptance is often framed around an individual's willingness to purchase or use an autonomous vehicle. In shared mobility contexts, acceptance involves additional service-related conditions, including trust in the operator, perceived service reliability, willingness to share mobility spaces, perceived safety in collective use, and the social legitimacy of automated transport in public environments. For this reason, shared mobility provides a pathway for examining social acceptance beyond individual ownership or private use intention.

Several studies in the matrix positioned shared mobility together with trust and service-related acceptance constructs. Wu et al. included shared mobility context in a UTAUT-based study of shared autonomous vehicle acceptance, together with performance expectancy, effort expectancy, social influence, trust, facilitating conditions, and HMI quality [7]. Farmer et al. included shared mobility in a TAM-based study focused on trust transfer and intention to use shared autonomous vehicles, together with perceived usefulness, perceived ease of use, trust, safety, and hedonic motivation [14]. These studies are relevant to the present review because they operationalize shared mobility as a context in which acceptance depends on more than the perceived utility of the vehicle itself.

Automated public transport and shuttle studies provide another important shared mobility cluster. Rahim et al. examined automated bus acceptance in Scotland and included shared mobility context together with perceived usefulness, perceived ease of use, trust, and safety [10]. Liu et al. operationalized shared mobility in a suburban autonomous

shuttle acceptance study that also included social influence, trust, perceived risk, and safety [15]. Sweet et al. compared private automated vehicles and automated shuttle buses, coding shared mobility together with trust, perceived risk, and safety [17]. These studies show that shared mobility is frequently used to situate AV acceptance within public or semi-public transport services rather than within private vehicle ownership.

Robotaxi and on-demand autonomous mobility studies further broaden the service-based framing of social acceptance. Wei et al. used a UTAUT2-based design in a robotaxi/shared autonomous mobility context, including performance expectancy, effort expectancy, social influence, hedonic motivation, and shared mobility context [11]. Hamiditehrani et al. addressed shared versus pooled automated vehicles and included social influence and shared mobility within a TPB-extension framework [25]. Abbasi et al. examined shared autonomous vehicles with dynamic ride sharing and coded perceived risk and shared mobility context within a choice-intention structure [26]. These studies position shared mobility as a setting where AV acceptance is linked to service format, co-use arrangements, and willingness to participate in automated transport systems with others.

The coding matrix also indicates that shared mobility is often connected with accessibility, inclusion, and user-group-specific mobility needs. Lee and Sener examined willingness to use and share self-driving on-demand services among marginalized populations, positioning shared mobility within a social access and mobility-service context [4]. Classen et al. included shared mobility, trust, perceived risk, safety, and HMI in a study of AV technology acceptance among drivers from different age groups [18]. Ganga et al. included shared mobility in a study of public acceptance of autonomous electric buses, together with social influence, trust, perceived risk, safety, and HMI [16]. These examples indicate that shared mobility is used in the literature to connect AV acceptance with collective transport, public service contexts, and differentiated user needs.

Some studies also operationalized shared mobility in relation to community-level or spatial mobility concerns. Yu et al. included shared mobility context in a study of attitudes toward shared autonomous vehicles, together with perceived usefulness, perceived ease of use, and perceived risk [27]. Zhang et al. examined residents' acceptance of shared autonomous vehicles and community parking demand, coding shared mobility together with perceived usefulness, perceived ease of use, social influence, trust, perceived risk, and safety [28]. Usman et al. examined perceptions of autonomous vehicles in small and rural towns, including shared mobility context together with trust [5]. These studies show that shared mobility can be positioned within spatial, community, and local transport contexts, which are relevant to social acceptance because they move the analysis beyond isolated individual intention.

Shared mobility was also coded in studies that combine social influence with service-based AV contexts. Liao et al. examined young people's intention to use shared autonomous vehicles through an extended TPB–TAM model including perceived usefulness, perceived ease of use, social influence, trust, perceived risk, and shared mobility context [29]. Liao et al. also used social media data mining and questionnaire data to examine public intention to use shared autonomous vehicles, coding usefulness, ease of use, social influence, trust, risk, safety, and shared mobility [29]. In the present analysis, these studies illustrate how shared mobility can be linked with normative and social influence constructs, rather than being treated only as a transport mode.

Taken together, the thematic coding suggests that shared mobility functions as a service-based pathway to autonomous vehicle social acceptance. It allows the literature to address acceptance in contexts where users are passengers, service users, ride-sharers, public transport users, or members of a community affected by AV deployment. This does not mean that shared mobility is always treated as a fully developed social acceptance construct. In many studies, it appears as a context or scenario rather than as a distinct theoretical construct. Nevertheless, its repeated inclusion across shuttle, robotaxi, automated bus, ride-pooling, on-demand service, and community mobility studies indicates that social acceptance increasingly depends on how autonomous vehicles are embedded in shared transport systems.

This section, therefore, extends the discussion from trust, safety, and risk toward the service environment in which social acceptance may be formed. Shared autonomous mobility makes the social dimension of AV acceptance more visible because it requires users to evaluate automated transport not only as a technology, but as a shared service that must be safe, reliable, accessible, and socially usable.

D. HMI and Interaction Transparency in Public Road Coexistence

Human–machine interaction emerged in the thematic analysis as a key interface-related dimension of autonomous vehicle social acceptance. In this section, HMI is not interpreted as an empirically confirmed determinant of acceptance across all studies. Rather, it is examined as a construct through which recent AV acceptance research operationalizes interaction, communication, warning design, and the interpretability of automated vehicle behavior. This is particularly relevant to public road coexistence because AVs must be understood not only by passengers, but also by human drivers, pedestrians, cyclists, and other road users who interact with them in mixed traffic environments.

HMI-related studies shift the focus from individual attitudes toward the conditions under which autonomous vehicles become understandable and predictable in public mobility settings. Several studies in the coding matrix included HMI or interaction quality alongside trust, safety, perceived risk, or shared mobility. Wu et al. incorporated HMI quality into a UTAUT-based shared autonomous vehicle framework, together with performance expectancy, effort expectancy, social influence, trust, facilitating conditions, and shared mobility context [7]. In the present analysis, this study is used as an example of how interaction quality is positioned within a broader shared mobility acceptance structure. Its relevance lies in the fact that HMI is

not treated only as a technical design issue, but as part of the acceptance environment surrounding shared autonomous services.

Interaction transparency is especially important in studies that examine how automated systems communicate with users or surrounding road actors. Zou et al. examined in-vehicle reminder stimuli in an automated driving context and included HMI-related interaction elements relevant to recognition, response, and user interpretation of system warnings [12]. This study is not cited here to claim that a particular warning modality necessarily improves acceptance. Rather, it illustrates how warning systems and vehicle-to-user communication are operationalized as interaction-related components of AV acceptance. Such studies are important for social acceptance because passengers and drivers must be able to understand when, why, and how the system is communicating risk or required action.

External HMI studies further connect interaction transparency with road coexistence. Zheng et al. examined external HMI display location and vehicle type in relation to pedestrian perception of automated vehicles [13]. This study is important for the present review because it positions HMI as a road-user-facing construct. AV social acceptance is not limited to users inside the vehicle; it also concerns whether pedestrians and other external actors can interpret vehicle intent. External HMI, therefore, becomes a public coexistence issue because it mediates the relationship between automated vehicle behavior and human road-user expectations.

HMI also appears in studies where autonomous vehicle acceptance is examined through broader trust, safety, and service-use structures. Zhang et al. included human–machine interaction in an enhanced TAM-based study together with perceived usefulness, perceived ease of use, trust, and safety [30]. Classen et al. included HMI together with trust, perceived risk, safety, and shared mobility in a study of AV technology acceptance among drivers from different age groups [18]. These studies position HMI within acceptance structures that include both individual and social-contextual factors. For the present paper, they indicate that HMI is often connected with the broader question of whether users can interpret and feel sufficiently oriented toward automated driving systems.

Public and shared transport contexts provide another important setting in which HMI is linked with social acceptance. Ganga et al. included HMI in a study of public acceptance of autonomous electric buses, together with social influence, trust, perceived risk, safety, and shared mobility context [16]. This type of study is relevant because autonomous buses and shuttles are not evaluated only as private technologies. They are public-facing mobility services that require passengers and communities to interpret automated service operation as safe, reliable, and socially usable. HMI becomes part of this service environment because users must understand the system's communication, limits, and expected behavior.

The coding also suggests that HMI is often associated with shared mobility rather than isolated private vehicle adoption. In shared autonomous mobility, interaction is distributed across multiple actors: the passenger, the automated system, the mobility service operator, and sometimes other passengers or road users. This makes HMI relevant to the social dimension of acceptance. A private AV user may evaluate interaction in terms of personal comfort or usability, while users of autonomous shuttles, robotaxis, or public AV services may evaluate interaction in relation to service clarity, perceived control, and situational confidence. Studies that combine HMI with shared mobility, trust, safety, or social influence therefore contribute to understanding AVs as socially embedded systems rather than as standalone vehicles.

Taken together, the reviewed studies position HMI and interaction transparency as important components of public road coexistence. HMI-related constructs are used to address how AVs communicate with users, how warnings are interpreted, how pedestrians perceive automated intent, and how shared services become understandable to passengers. The present analysis does not claim that HMI has a uniform effect across all studies. It shows that recent AV acceptance research increasingly treats interaction quality as relevant to social acceptance because autonomous vehicles must be legible to the people who use, encounter, or share public space with them.

This finding completes the thematic structure of the social acceptance analysis. Trust and safety are positioned as enabling conditions; perceived risk and psychological vulnerability are positioned as barrier-related factors; shared mobility is positioned as a service-based pathway; and HMI is positioned as the interactional condition through which AVs become interpretable in shared road environments. Together, these themes indicate that AV social acceptance cannot be reduced to individual adoption intention. It depends on whether autonomous vehicles are perceived as trustworthy, safe, socially usable, and interactionally understandable within public mobility systems.

IV. Discussion

The findings of this focused thematic review indicate that autonomous vehicle social acceptance should be understood as broader than individual adoption intention. Much of the autonomous vehicle acceptance literature still relies on individual-level indicators such as willingness to use, willingness to ride, behavioral intention, or purchase intention. These indicators remain important, but they do not fully capture the social conditions under which autonomous vehicles may become acceptable in public mobility environments. AVs are not used in isolation. They circulate on public roads, interact with human drivers and pedestrians, operate within shared transport systems, and require users and non-users to interpret automated behavior. For this reason, social acceptance requires attention to trust, perceived safety, perceived risk, shared mobility, social influence, and human–machine interaction as interconnected factors.

The first implication concerns the role of trust and safety. In the reviewed studies, trust and perceived safety were

frequently operationalized in contexts involving shared mobility, automated buses, autonomous shuttles, public transport services, and specific user groups. This suggests that the literature often treats trust and safety as more than private attitudes toward technology. They are positioned as acceptance-related conditions for allowing AVs to function in shared service environments and public traffic systems. Studies including trust and safety in shared AV or public transport contexts, such as those by [2] [7], [10],[14], [15], [16], illustrate how these constructs are used to connect individual confidence with broader service and public mobility settings. The analytical implication is that AV social acceptance depends on whether automated systems are framed as reliable and safe enough to be integrated into everyday transport environments.

The second implication concerns perceived risk and psychological vulnerability. The coding patterns show that risk is not limited to a narrow technical concern. It is operationalized through shared mobility risk, mixed-traffic vulnerability, crash-related public concern, service uncertainty, and broader hesitation toward interaction with driverless vehicles. Studies such as [8], [17], [18], [21], [22], [23] position perceived risk in relation to collective mobility, road sharing, public concern, or user-group-specific uncertainty. This matters because road coexistence is a distinct social acceptance issue. A person may not intend to use an AV directly but may still need to accept its presence as a road actor. Therefore, future AV acceptance research should distinguish between acceptance as personal adoption and acceptance as willingness to coexist with AVs in shared traffic environments.

The third implication concerns shared mobility. Shared autonomous vehicles, robotaxis, autonomous shuttles, automated buses, and on-demand autonomous services shift acceptance from private technology adoption to service-based social acceptance. In this context, acceptance involves service reliability, shared use, passenger experience, perceived safety, operator trust, and accessibility. Studies such as [4], [10], [11], [16], [25], [27], [28], [29] show that shared mobility is frequently used as a context in which AV acceptance is situated within collective transport systems. The important point is that shared mobility should not be treated only as a use scenario. It can also serve as an analytical pathway for understanding how AVs become socially usable, accessible, and publicly legitimate.

The fourth implication concerns human–machine interaction and interaction transparency. HMI-related studies position communication, warning systems, external displays, and interaction quality as relevant to the interpretability of AV behavior. This is critical for public road coexistence because AVs must be legible to those who use them and to those who encounter them externally. Studies such as [7], [12], [13], [16], [18], [30] operationalize HMI in relation to shared mobility, warning systems, pedestrian perception, safety, and trust. These studies indicate that social acceptance requires AVs to be understandable as well as technically functional. If human road users cannot interpret automated behavior, acceptance may remain fragile even where perceived usefulness or mobility benefits are acknowledged.

Table I summarizes how a structured thematic framework addresses the core barriers to autonomous vehicle acceptance across individual, public, and systemic dimensions.

Table I. Social Acceptance Challenges and The Contribution of The Thematic Approach

Challenge	Thematic Response	Acceptance Implication
Individual adoption focus	Separates individual willingness to use from broader public acceptance, service acceptance, and road coexistence	Prevents social acceptance from being reduced to behavioural intention
Trust and safety concerns	Examines trust and perceived safety as enabling conditions in shared, public, and mixed-traffic contexts	Clarifies why technical readiness alone is insufficient for deployment
Risk and vulnerability	Treats perceived risk, psychological vulnerability, crash concern, and cybersecurity-related uncertainty as barrier-related themes	Shows how hesitation may arise among both users and non-users
Shared mobility context	Positions robotaxis, shuttles, automated buses, and on-demand AV services as service-based acceptance settings	Connects AV acceptance to collective use, accessibility, and public mobility
HMI and interaction transparency	Examines warnings, external communication, interaction quality, and interpretability of AV behaviour	Highlights the importance of making AV actions legible to passengers and external road users
Smart grid relevance	Links shared electric AV acceptance to coordinated charging, V2G readiness, and grid-interactive mobility	Shows why public acceptance may become a precondition for integrated mobility-energy systems

Taken together, the findings suggest that AV social acceptance is best approached as a multi-factor public mobility issue. The literature still contains a strong individual-intention orientation, but the social acceptance of AVs requires a broader framework. Trust, safety, risk, shared mobility, social influence, and HMI should not be examined as isolated variables. They represent different dimensions of the same public acceptance problem: whether autonomous vehicles can be trusted, safely encountered, socially shared, and interactionally understood in everyday mobility systems.

This interpretation has methodological implications for future reviews and empirical studies. First, researchers should specify whether they are studying individual adoption, service acceptance, or public road coexistence. Second, studies should avoid treating social acceptance as synonymous with behavioral intention. Third, future research should examine how trust, perceived safety, risk perception, shared mobility, and HMI interact across user groups and mobility contexts. Fourth, empirical designs should include road users who may not be direct AV users, such as pedestrians, cyclists, human drivers, public transport users, and residents of areas where AV services may be deployed.

The connection between AV social acceptance and smart grid applications should be understood through the likely convergence of autonomous mobility, shared electric fleets, and grid-interactive transport systems. If autonomous fleets increasingly operate as shared electric mobility services, their public acceptance will affect not only transport adoption but also the feasibility of smart-grid-related applications such as coordinated charging, vehicle-to-grid participation, demand response, and distributed storage. In this sense, trust, perceived safety, service reliability, and willingness to use shared autonomous electric mobility may become social preconditions for the effective integration of AVs into future energy and mobility infrastructures. The present review does not empirically test smart grid outcomes, but it clarifies the

acceptance-related conditions that may influence whether such integrated systems can be socially adopted.

V. Conclusion

This paper examined the social acceptance of autonomous vehicles through a focused thematic analysis of recent AV acceptance research. Rather than treating acceptance as a narrow individual intention to use or purchase an autonomous vehicle, the study approached social acceptance as a broader public mobility condition shaped by trust, perceived safety, perceived risk, shared mobility, social influence, and human–machine interaction. This perspective is necessary because autonomous vehicles will not operate as isolated consumer technologies. They will circulate in public roads, shared transport systems, and mixed traffic environments where their behavior must be accepted by passengers, human drivers, pedestrians, cyclists, public transport users, and wider communities.

The findings indicate that trust and safety are commonly positioned as enabling conditions for AV social acceptance. They are frequently operationalized in studies addressing shared autonomous vehicles, automated buses, shuttles, specific user groups, and public transport contexts. Perceived risk and psychological vulnerability, by contrast, are positioned as barrier-related factors, particularly in relation to mixed traffic, road coexistence, public concern after AV incidents, and uncertainty about automated systems. Shared mobility appears as a service-based pathway to social acceptance because it shifts attention from private ownership to collective use, accessibility, service reliability, and willingness to participate in automated mobility systems. Human–machine interaction adds an interactional dimension by emphasizing whether AV behavior can be understood by passengers and external road users.

The central conclusion is that AV social acceptance should be conceptualized through the combined lens of trust, safety, risk, shared mobility, and interaction transparency. These dimensions should not be treated as isolated variables or secondary extensions of individual adoption models. They represent the social conditions under which autonomous vehicles may become acceptable as public mobility actors. Future research should therefore distinguish more clearly between individual adoption, service acceptance, and public road coexistence. It should also include the perspectives of those who may not directly use AVs but will encounter them in shared traffic environments. A socially grounded understanding of AV acceptance requires attention to whether autonomous vehicles are perceived as trustworthy, safe, understandable, and compatible with the practical realities of everyday public mobility. This social acceptance perspective is also relevant for future smart grid applications, particularly where shared electric autonomous fleets are expected to interact with charging infrastructures, demand response systems, and vehicle-to-grid services.

References

[1] Q. Zhang, T. Zhang, and L. Ma, ‘Human acceptance of autonomous vehicles: Research status and prospects’, International Journal of Industrial Ergonomics, vol. 95, p. 103458, May 2023, doi: 10.1016/j.ergon.2023.103458.

[2] F. Zeng, M. Wang, L. Li, and S. Cai, ‘Survey on the acceptance of smart cars amongst middle-aged and elderly in China’, Technology in Society, vol. 73, p. 102234, May 2023, doi: 10.1016/j.techsoc.2023.102234.

[3] Y.-C. Wang, T. Kato, and Y. (Darcy) Lu, ‘Stronger family ties vs. less social contact: Use intention of autonomous vehicles in family tourism’, Journal of Destination Marketing & Management, vol. 32, p. 100894, Jun. 2024, doi: 10.1016/j.jdmm.2024.100894.

[4] K. Lee and I. N. Sener, ‘Willingness to share self-driving on-demand transportation services with a focus on marginalized populations in the U.S.’, Transportmetrica A: Transport Science, p. 2576091, Nov. 2025, doi: 10.1080/23249935.2025.2576091.

[5] M. Usman et al., ‘Small and rural towns’ perception of autonomous vehicles: insights from a survey in Texas’, Transportation Planning and Technology, vol. 47, no. 2, pp. 200–225, Feb. 2024, doi: 10.1080/03081060.2023.2259373.

[6] M. Wu and K. F. Yuen, ‘Initial trust formation on shared autonomous vehicles: Exploring the effects of personality-, transfer- and performance-based stimuli’, Transportation Research Part A: Policy and Practice, vol. 173, p. 103704, Jul. 2023, doi: 10.1016/j.tra.2023.103704.

[7] M. Wu, N. Wang, and K. F. Yuen, ‘Can autonomy level and anthropomorphic characteristics affect public acceptance and trust towards shared autonomous vehicles?’, Technological Forecasting and Social Change, vol. 189, p. 122384, Apr. 2023, doi: 10.1016/j.techfore.2023.122384.

[8] Y. Wang and X. Zhao, ‘Factors Influencing Driver’s Psychological Vulnerability Judgment When Sharing the Road With Driverless Vehicles’, IEEE Access, vol. 11, pp. 34880–34890, 2023, doi: 10.1109/ACCESS.2023.3264542.

[9] P. Jing et al., ‘Listen to social media users: Mining Chinese public perception of automated vehicles after crashes’, Transportation Research Part F: Traffic Psychology and Behaviour, vol. 93, pp. 248–265, Feb. 2023, doi: 10.1016/j.trf.2023.01.018.

[10] A. N. Rahim, A. Fonzone, G. Fountas, and L. Downey, ‘On the Attitudes Toward Automation in Determining the Intention to Use Automated Buses in Scotland’, Transportation Research Record: Journal of the Transportation Research Board, vol. 2677, no. 9, pp. 384–396, Sep. 2023, doi: 10.1177/03611981231159116.

[11] W. Wei et al., ‘Using the Extended Unified Theory of Acceptance and Use of Technology to explore how to increase users’ intention to take a robotaxi’, Humanit Soc Sci Commun, vol. 11, no. 1, p. 746, Jun. 2024, doi: 10.1057/s41599-024-03271-3.

[12] Z. Zou et al., ‘A preliminary simulator study on exploring responses of drivers to driving system reminders on four stimuli in vehicles’, Sci Rep, vol. 15, no. 1, p. 4009, Feb. 2025, doi: 10.1038/s41598-025-87571-x.

[13] N. Zheng, J. Li, Y. Zhang, and K. Tei, ‘Exploring the Impact of eHMI Display Location and Vehicle Type on Pedestrian Perceptions: A VR User Study’, IEEE Access, vol. 13, pp. 4947–4956, 2025, doi: 10.1109/ACCESS.2025.3526172.

[14] D. Farmer, H. Kim, and J. Lee, ‘The Relationship Between Exposure to and Trust in Automated Transport Technologies and Intention to Use a Shared Autonomous Vehicle’, International Journal of Human–Computer Interaction, vol. 40, no. 19, pp. 5897–5909, Oct. 2024, doi: 10.1080/10447318.2023.2247553.

[15] Y. Liu, K. Lu, Z.-R. Peng, and W. Zhai, 'Autonomous shuttle acceptance in an American suburban context: A revealed preference study in Lake Nona, Florida', Travel Behaviour and Society, vol. 37, p. 100865, Oct. 2024, doi: 10.1016/j.tbs.2024.100865.

[16] G. M. D. Ganga et al., 'Unpacking the public acceptance of autonomous electric buses: Insights from a medium-sized Brazilian city', Cities, vol. 160, p. 105817, May 2025, doi: 10.1016/j.cities.2025.105817.

[17] M. N. Sweet, D. M. Scott, and S. Hamiditehrani, 'Who will adopt private automated vehicles and automated shuttle buses? Testing the roles of past experience and performance expectancy', Transportation Planning and Technology, vol. 46, no. 1, pp. 45–70, Jan. 2023, doi: 10.1080/03081060.2022.2162518.

[18] S. Classen et al., 'Experience of drivers of all age groups in accepting autonomous vehicle technology', Journal of Intelligent Transportation Systems, vol. 28, no. 5, pp. 651–667, Sep. 2024, doi: 10.1080/15472450.2023.2197115.

[19] S. Wang, Z. Li, Y. Wang, and D. A. Wyatt, 'How effective is automated vehicle education? – A Kentucky case study revealing the dynamic nature of education effectiveness', Transport Policy, vol. 147, pp. 140–157, Mar. 2024, doi: 10.1016/j.tranpol.2023.12.022.

[20] M. Deng, Y. Guo, Y. Guo, and C. Wang, 'The Role of Technical Safety Riskiness and Behavioral Interventions in the Public Acceptance of Autonomous Vehicles in China', J. Transp. Eng., Part A: Systems, vol. 149, no. 1, p. 04022122, Jan. 2023, doi: 10.1061/JTEPBS.TEENG-7277.

[21] M. Abbasi, A. R. Mamdoohi, F. Ciari, and G. Sierpiński, 'An investigation of perceived risk dimensions in acceptability of shared autonomous vehicles, a mediation-moderation analysis', Sci Rep, vol. 14, no. 1, p. 23276, Oct. 2024, doi: 10.1038/s41598-024-74024-0.

[22] P. Jing et al., 'What is the public really concerned about the AV crash? Insights from a combined analysis of social media and questionnaire survey', Technological Forecasting and Social Change, vol. 189, p. 122371, Apr. 2023, doi: 10.1016/j.techfore.2023.122371.

[23] S. K. Khan, N. Shiwakoti, P. Stasinopoulos, and M. Warren, 'Driving a safer future: Exploring cross‐country perspectives in automated vehicle adoption by considering cyber risks, liability, and data concerns', IET Intelligent Trans Sys, vol. 18, no. 11, pp. 1999–2014, Nov. 2024, doi: 10.1049/itr2.12541.

[24] S. K. Khan, N. Shiwakoti, P. Stasinopoulos, Y. Chen, and M. Warren, 'The impact of perceived cyber-risks on automated vehicle acceptance: Insights from a survey of participants from the United States, the United Kingdom, New Zealand, and Australia', Transport Policy, vol. 152, pp. 87–101, Jun. 2024, doi: 10.1016/j.tranpol.2024.05.002.

[25] S. Hamiditehrani, D. M. Scott, and M. N. Sweet, 'Shared versus pooled automated vehicles: Understanding behavioral intentions towards adopting on-demand automated vehicles', Travel Behaviour and Society, vol. 36, p. 100774, Jul. 2024, doi: 10.1016/j.tbs.2024.100774.

[26] M. Abbasi, A. R. Mamdoohi, G. Sierpiński, and F. Ciari, 'Usage Intention of Shared Autonomous Vehicles with Dynamic Ride Sharing on Long-Distance Trips', Sustainability, vol. 15, no. 2, p. 1649, Jan. 2023, doi: 10.3390/su15021649.

[27] J. Yu, W. Li, Z. Song, S. Wang, J. Ma, and B. Wang, 'The role of attitudinal features on shared autonomous vehicles', Research in Transportation Business & Management, vol. 50, p. 101032, Oct. 2023, doi: 10.1016/j.rtbm.2023.101032.

[28] Y. Zhang, Y. Zhuang, R. Li, and J. Qi, 'Residents' Acceptance of Shared Autonomous Vehicles (SAVs) and Its Impact on Community Parking Demand Under Urban Regeneration: The Case of the Qintai Community in Wuhan, China', Buildings, vol. 15, no. 22, p. 4064, Nov. 2025, doi: 10.3390/buildings15224064.

[29] Y. Liao, H. Guo, and H. Shi, 'Research on the Public's Intention to Use Shared Autonomous Vehicles: Based on Social Media Data Mining and Questionnaire Survey', Sustainability, vol. 16, no. 11, p. 4462, May 2024, doi: 10.3390/su16114462.

[30] T. Zhang, W. Li, W. Huang, and L. Ma, 'Critical roles of explainability in shaping perception, trust, and acceptance of autonomous vehicles', International Journal of Industrial Ergonomics, vol. 100, p. 103568, Mar. 2024, doi: 10.1016/j.ergon.2024.103568.