http://www.moderntechno.de/index.php/meit/article/view/meit40-04-037
DOI: 10.30890/2567-5273.2025-40-04-037

CAR AS A SERVICE: HOW VALUE-ADDED SERVICES INCREASE BUSINESS PROFITABILITY

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Abstract. *The article focuses on analyzing how value-added services in the car rental industry contribute to increasing business profitability by fostering customer loyalty and building a sustainable service ecosystem. The aim of the study is to identify the key factors that influence customer loyalty in the car rental sector and to explore how enhancing service value translates into improved economic performance. The study employed general scientific methods of cognition, including analysis, synthesis, induction, deduction, generalization, comparison, and a systems approach. The findings reveal that the modern car rental market is evolving under the influence of global mobility trends, where the concept of "car as a service" (CaaS) has become a core model within the broader paradigm of Mobility-as-a-Service (MaaS). It was found that customer loyalty in the context of CaaS is driven by multifunctional service solutions that provide added value around the core rental offer. The research shows that service personalization (customized service packages), functional add-ons (such as GPS, Wi-Fi, child seats, decorative car styling), and digital convenience (contactless access, push notifications) form a unified service ecosystem that reduces customer churn and strengthens emotional engagement with the brand. It is concluded that increased loyalty leads to better financial performance through more frequent service usage, upselling of add-ons, reduced marketing and customer retention costs, and a higher share of customer spending. Customer satisfaction, in turn, encourages repeat usage and reduces price sensitivity, generating stable economic returns. The practical significance of the study lies in offering evidence-based recommendations for implementing the CaaS model to boost profitability and enhance the competitiveness of companies in the mobility market.*
Keywords: *car rental, CaaS, loyalty, service value, digital technologies.*

Introduction

The car rental industry is undergoing a profound transformation driven by technological advancements and shifts in consumer behavior. Increasing urbanization, the rise of digital platforms, and growing demand for flexible, personalized mobility solutions have led to the emergence of new business models that focus not on vehicle ownership but on temporary access to vehicles as a service. In this context, what matters is not just the availability of the vehicle but also the full range of accompanying service solutions that create added value for the customer. A strategic focus on service quality, innovation, and personalization not only enhances the customer experience but also directly impacts the profitability and sustainable development of car rental companies. An increasing number of operators recognize the need to build long-term relationships with customers based on emotional engagement, service flexibility, and technological convenience. Therefore, there is a growing need for academic analysis of the non-monetary factors that drive user loyalty and the mechanisms by which they contribute to business profitability in a highly competitive mobility market.

Literature review

The role of the car as a service and the impact of value-added services on business profitability have been widely explored in international academic literature. Significant contributions to this field were made by E.W. Anderson, C. Fornell, and D.R. Lehmann [1], who in 1994 laid the empirical foundation for understanding the relationship between market share, customer satisfaction, and profitability. In later research, E.W. Anderson and R.T. Rust [2] differentiated the profitability patterns between product-based and service-based sectors, which is particularly relevant for analyzing the margins in service-oriented car rental models. R. Hallowell's work [5] also emphasizes the critical role of customer loyalty as a mediator between satisfaction and profit. N.F. Awara et al. [3] studied the impact of physical service attributes in Nigerian car rental companies, showing that factors like vehicle cleanliness, convenient locations, and service speed strongly influence customer satisfaction. A. Brendel et al. [4] focused on innovative approaches in car-sharing, particularly the benefits of self-relocation for optimizing fleet usage. Expert sources were also used in the study, including analytical publications from toprentapp.com [6], mordorintelligence.com [8], kpmg.com [9], cx-channel.com [10], and grandviewresearch.com [11], which provide insights into modern approaches to customer satisfaction, market trends in Mobility-as-a-Service (MaaS), and strategic changes in the automotive service industry.

Methodology and Methods

The study applied a general scientific methodology based on a systemic, integrated, and interdisciplinary approach to analyzing current developments in the car rental sector. Methods used include theoretical generalization, comparative analysis, deduction, and induction to identify patterns in service practices and their influence on consumer behavior. The empirical basis includes secondary data from public statistical sources, industry reports, academic publications, and analytics from key market players. Content analysis was used to systematize information on services offered by leading companies, while the logical-functional approach helped identify links between service elements and indicators of loyalty and profitability. Customer satisfaction levels were assessed using survey data presented in studies [3, 4, 10].

Purpose of the article

The purpose of the article is to examine the key factors that shape customer loyalty in the car rental industry and determine how enhanced service value contributes to the economic efficiency of companies. In order to achieve this aim, the following tasks will be completed during the study: describe the main trends in the development of the car rental market; identify the set of service elements that have the greatest impact on customer satisfaction and loyalty; and provide a rationale for the mechanisms through which customer loyalty is converted into profitability and improved business margins.

Research Results

In today's evolving transport infrastructure landscape, the concept of Car-as-a-Service (CaaS) has become a central component of the mobility market. In 2025, the global Mobility-as-a-Service (MaaS) market is valued at USD 328.98 billion and is projected to reach USD 633.97 billion by 2030, with a compound annual growth rate (CAGR) of 14.02% during the 2025–2030 period. This growth is driven by the integration of digital platforms, increasing demand for personalized mobility, and the expansion of transportation infrastructure based on eco-friendly technologies [8].

The modern car rental industry is actively adopting additional services and technological solutions to enhance value propositions and improve customer experience. One of the leading trends is the specialized preparation of vehicles for specific events – weddings, business meetings, anniversaries, or themed occasions. These services include professional cleaning and polishing, cabin scenting, decorative exterior styling, branding elements or ribbons, and customized lighting and interior settings. This approach not only tailors the vehicle to the event context but also positions it as a premium product capable of delivering a positive emotional experience.

Another major development vector is the integration of additional equipment that significantly expands the vehicle's functionality. Common add-ons include certified child seats of various categories (infant, toddler, booster), GPS navigators, mobile Wi-Fi routers, fuel cards, mobile charging adapters, and special mounts for luggage or sports equipment. Winter equipment (snow tires, anti-skid chains) or toll road access devices can also be installed. These features not only increase travel convenience but allow companies to offer added value within a single booking.

Renters increasingly have access to a range of optional services that form a comprehensive service ecosystem around the vehicle. These may include additional driver services, pre-fueling, full insurance coverage, access to multimedia services (like satellite radio), express return, or vehicle delivery at non-standard locations. Companies such as Alamo, Thrifty, Enterprise, Sixt, and Budget actively leverage these features to raise the average transaction value through value-added services positioned as integral to a comfortable and secure travel experience.

The overall trend toward personalization in car rentals is implemented through a modular packaging approach. Customers select services based on their specific needs—for example, a family trip requiring two child seats, internet access, and a GPS navigator, or a business trip with premium insurance and an additional driver. This flexibility in configuring rental offerings boosts customer loyalty, increases rental duration, and contributes to market expansion by raising both transaction volumes and individual booking values.

In 2024, the ride-hailing segment (vehicle with driver) held the largest market share by service type at 46.27%, while micromobility posted the fastest growth rate with a CAGR of 19.58% projected through 2030. Among service models, technology platforms dominated with a 38.14% share, but payment systems (payment & wallet) have strong growth potential at 21.36% CAGR. By transport type, private transportation led the market in 2024 with a 62.08% share, while public transport is gradually recovering at a 15.28% growth rate through 2030. Individual users accounted for 78.21% of end customers in 2024, although the corporate segment is growing at 17.68% annually, indicating a diversification of mobility consumption models [8].

In the United States, the car rental market also shows a positive trajectory. In 2024, it reached USD 37.88 billion, and it is forecasted to grow to USD 56.27 billion by 2030 at a CAGR of 7.5% [11]. This growth is largely driven by rising demand for tourism and business travel, especially in urban regions, tourist hubs, and business corridors. Both traditional rental models (via physical locations) and online platforms are widely used, offering convenience, personalization, and added profitability for providers. In a competitive environment, operators increasingly rely on enhanced services – subscriptions, premium packages, mobile app integrations – as a core strategy to boost business profitability [11].

A critical feature in service delivery is the availability of relocation apps that allow flexible use of car services. However, it is important that these apps also include booking, navigation, and payment options. A lack of integration hinders usability and reduces perceived convenience [11].

Most modern companies in the carsharing segment have developed their own mobile apps – this has become a standard feature for improving customer experience and automating service delivery. For instance, Zipcar offers a mobile app for searching, booking, unlocking vehicles via Bluetooth, and modifying reservations. Similarly, GetGo (Singapore) operates exclusively through Android and iOS apps, managing bookings, vehicle access, and payments automatically.

Peer-to-peer platforms such as Turo, Getaround, and SnappCar rely entirely on mobile interfaces for listing vehicles, booking, driver verification, and payments. Additionally, major automotive corporations with their own carsharing platforms, such as Free2Move, Car2Go, and DriveNow, have launched full-featured apps to manage vehicle rentals.

Market data shows that the carsharing-as-a-service segment, particularly B2C and P2P business models, is closely tied to mobile apps – features such as online booking, contactless service, digital keys, and vehicle tracking are essential. Without a dedicated app, the platform becomes non-functional.

Another important insight is that the frequency of user interaction with the system has a significant impact on customer loyalty. When relocation requests are infrequent, users are less motivated to keep the app or continue engagement. Consumers expect consistent or at least regular participation in service exchange, and a lack of interaction leads to declining interest [11].

Based on the findings from the study Synergistic CX | The Keys to Excellence – Driving Customer Satisfaction in Car Rental Service [10], several key factors have been identified as most influential in shaping customer satisfaction in the car rental sector:

1. Quality of interaction at all customer journey touchpoints. One of the critical satisfaction drivers is the consistency and seamlessness of the customer experience – from booking to vehicle return. Companies that streamline operations, reduce friction at each stage, and ensure fast and convenient service tend to achieve higher customer satisfaction. Flexible rental terms, personalized vehicle selection, and user-friendly digital booking platforms are crucial in this regard [10];

2. Response time to negative feedback (Critical Review Response Time, CRRT). CRRT measures how quickly a company addresses customer complaints. The research shows that nearly 50% of dissatisfied customers never receive a response, which seriously undermines trust. In contrast, companies that respond within 24–72 hours show significantly higher loyalty levels. Notably, the EMEA region performs better in this area compared to America and APAC [10];

3. Focus on quality communication and personalization (Engagement & Personalization). The analysis indicates that companies are more likely to respond to reviews with comments, highlighting the importance of feedback. Consumers expect empathetic and constructive dialogue, not just a generic reply. This approach helps transform negative experiences into positive ones, builds brand loyalty, and increases the likelihood of repeat business [10].

An analysis of expert literature [6] has also identified a number of additional non-monetary factors influencing satisfaction with modern car services, which are summarized in Table 1.

Still, all these non-monetary factors combined rank second in importance to consumers when compared to the primary driver – economic benefit.

The study by Brendel A., Lichtenberg S., and Prinz C. [4] showed that monetary incentives in the form of relocation discounts (averaging between €2.70 and €4.30) were positively received, especially given that the average rental price was around €15. This provided users with a discount of approximately 20%, which served as a strong motivator to participate. However, the study also revealed that financial rewards alone do not guarantee sustained engagement and satisfaction. In cases where no relocation requests were received, the app lost its perceived value, often leading to its deletion by users [4].

Table 1 – Factors influencing customer satisfaction in the car rental sector

№	Factor	Specific measures / service options
1	Seamless booking	mobile application; adaptive web interface; real-time booking; user profile saving; autofill for documents; Apple/Google Wallet integration
2	Fleet quality	regular technical inspections; fleet updates; availability of various vehicle classes (economy, premium, electric, minivans); verified cleanliness; smoke-free cabins; accessories available (mounts, cables, etc.)
3	Staff qualification	customer service training; technical expertise; prompt technical and emotional support; delegated decision-making authority on-site
4	Digital technologies	self-service via app; keyless access; digital contract signing; push notifications; AI assistance; chatbots; calendar/reminder integration
5	Loyalty program	discounts on repeat rentals; free hours/days; point accumulation; cross-programs with fuel stations, cafes, hotels; access to private deals; personalized offers
6	Feedback management	active post-trip surveys; vehicle and service rating system; responses to complaints within 24 hours; public FAQ section; customer involvement in new service development
7	Service flexibility	free cancellation within a certain period; flexible return time and location; hourly rentals; choice of insurance; rental extension via phone
8	Online presence	SEO-optimized website; social media activity (Instagram, TikTok, Facebook); YouTube car reviews; 24/7 online support; reputation management
9	Emotional engagement	personalized greetings; holiday/birthday gifts; free vehicle class upgrades; custom cabin notes; music or climate settings based on user preferences
10	Physical accessibility	wide network of pickup and return locations; intercity pickup/return options; vehicle delivery to user location; integration with public transport or taxis
11	Additional services	child seats, Wi-Fi modems, GPS, charging cables, roof racks, snow chains; event prep (decor, branding); on-demand cleaning; “picnic kit” or “mobile office” packages
12	Payment flexibility	installment payments; Google/Apple Pay integration; cryptocurrency support; automatic billing; reduced deposit amounts; cashless refunds for changes or complaints
13	Inclusivity	services for customers with special needs; vehicles with hand controls; multilingual interface support; adaptive fonts and contrast settings in the app
14	Social mechanics	“refer a friend” programs; review-for-reward options; public leaderboards; user involvement in service testing

Note: systematized by the author based on source [6]

Customer satisfaction in the carsharing sector directly affects business profitability through several interrelated channels: increased loyalty, higher share-of-wallet, and reduced customer retention costs.

First, according to research by E. W. Anderson, C. Fornell, and D. R. Lehmann [1], rising customer satisfaction levels are strongly linked to increased market share and profitability. The authors emphasize that organizations with high satisfaction levels show greater revenue stability and stronger financial performance in competitive markets. In the context of carsharing, this means that satisfied customers are more likely to return, reducing the company's dependence on costly user acquisition channels.

Second, in the work of E. W. Anderson, C. Fornell, and R. T. Rust [2], it was found that in the service sector (which includes carsharing), the impact of satisfaction on profitability is particularly strong, as the quality of interaction is a key driver of value creation. The authors argue that high satisfaction not only boosts revenue but also improves operational efficiency by enhancing staff and service productivity.

Third, R. Hallowell's research [5] empirically confirms that customer satisfaction fosters loyalty, which in turn leads to increased profitability. In carsharing, this translates into more frequent service use, longer rental durations, and reduced sensitivity to price competition. As a result, the average revenue per user (ARPU) increases, and service costs are optimized [5].

T. Keiningham, T. Perkins-Munn, L. Aksoy, and D. Estrin [7] point out that the key mechanism through which satisfaction translates into profitability is an increase in share-of-wallet. In carsharing systems, where users may have access to multiple providers, satisfaction levels directly correlate with how much of their total mobility spend a customer allocates to a particular service [7].

Therefore, in a carsharing business model, where profitability often depends on fleet usage frequency and resource utilization, investment in customer satisfaction brings direct and measurable economic returns.

To sustain a service-improvement strategy in this field, innovative approaches are essential. Analysis of research and forecasts by KPMG shows that the future of the car rental sector (Mobility-as-a-Service, MaaS) will be characterized by a rapid shift toward subscription models and digital platforms. Automakers are increasingly adopting flexible usage formats, including short-term subscriptions, monthly rentals, peer-to-peer microsharing, and corporate fleet solutions [9].

In parallel, digital platforms will continue to evolve, providing a seamless user experience – from registration to subscription management via mobile apps. A brand's competitive edge will depend on its ability to build a service ecosystem that includes insurance, maintenance, charging infrastructure, and real-time support. At the same time, OEMs will face the challenge of maintaining customer loyalty in a multi-option ownership model, which will require strategies focused on increasing customer lifetime value [9].

Conclusions

The car rental market is experiencing dynamic growth amid global transformations in the mobility sector. This growth is driven by the integration of the Car-as-a-Service (CaaS) concept into the broader Mobility-as-a-Service (MaaS) paradigm, which combines digital technologies, increasing demand for personalized mobility, and environmental considerations. The market is supported by three core factors: the development of digital infrastructure (mobile apps, booking platforms, payment systems); multi-format usage models (short-term rentals, subscriptions, P2P); and adaptation to the needs of diverse consumer segments – from individuals to corporations.

Customer loyalty in this field is fostered through multi-component service solutions that create a complete ecosystem around the rental offering. The most impactful elements include personalized services (packages tailored to individual user needs), functional options (child seats, Wi-Fi, GPS, vehicle decoration, etc.), and digital convenience (contactless access, push notifications, navigation). The combined effect of these factors significantly reduces customer churn and strengthens brand connection.

Growth in loyalty is transformed into higher business profitability through several channels: increased usage frequency, higher average transaction value (due to upselling of add-ons), reduced customer acquisition costs, and a greater share-of-wallet. Customer satisfaction promotes long-term engagement, lowers sensitivity to price fluctuations, and encourages repeat service usage.

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