Analysis on the Commercial Competition Mode of Online Car Rental-Taking Didi and Uber as Examples

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Abstract. In recent years, ride-hailing has reshaped how people move through cities. With the help of mobile technology and algorithm-driven dispatch, platforms like Didi and Uber have grown into integral parts of urban mobility systems. However, their expansion also raises important questions about pricing, regulation, and long-term sustainability. This study takes a close look at Didi and Uber, examining how the structure of their operating markets and the rules they face influence their business choices and performance. Drawing from published research and selected operational indicators, this study compares their approaches across four areas: how they define their markets, the range of services they offer, how they generate revenue, and how they respond to regulatory demands. This study finds that Didi builds depth within a single domestic market, while Uber spreads risk across regions. These strategies lead to different outcomes when dealing with pricing pressure, driver behavior, and policy constraints. The study also shows how pricing tools like surge must be balanced with fairness, and how commission or incentive changes affect supply dynamics. Ultimately, the findings offer insights for both platform managers and regulators trying to navigate complex, fast-moving digital marketplaces.

Keywords: Ride-hailing, platform strategy, multi-homing, pricing design, regulation.

1. Introduction

In the past decade, mobile internet and location-based algorithms have promoted the global expansion of ride-hailing services, which in essence operate as two-sided markets where platforms match passengers with drivers. These platforms grow through cross-side network effects, as expansion on one side increases participation; meanwhile, since drivers and passengers often switch across multiple apps, multi-homing has become the norm, reshaping the competitive dynamics of subsidies, commissions, and retention strategies [1]. At the operational level, platforms use real-time matching across price, time, and space to absorb congestion externalities, with surge pricing during peak periods reallocating scarce driving capacity in the short term and thereby influencing waiting times, fulfillment rates, and service stability. From a public perspective, ride-hailing has become embedded in urban transport systems, where its pricing and matching mechanisms affect not only commuting efficiency but also passenger accessibility, driver income stability, and overall welfare; understanding the logic of competition and governance in this sector thus carries significant academic and practical importance [1, 2].

This paper focuses on a comparison between Didi and Uber as representative platforms, aiming to explain how, under different market structures and regulatory contexts, platforms make trade-offs among product design, pricing, and compliance. This study provides empirical context for classroom discussions of platform economics and operations management and offer actionable references for corporate decision-making and policy design [1-3].

Existing studies point to three themes. First, multi-homing on both sides weakens the impact of unilateral subsidies, so durable advantage rests more on city-level matching quality and stable supply than on simple price wars [1, 2]. Second, estimates of surge pricing and consumer surplus suggest surge can raise matching efficiency at peak times, but distributional effects are uneven and raise fairness concerns that cannot be ignored [3, 4]. Third, regulation and data governance—including labor classification, licensing, privacy, and cross-border data transfer—reshape cost structures, commission strategies, and safety-compliance modules, with trajectories that differ across jurisdictions [5-7]. However, most work studies a single company or a single region and lacks a cross-platform, cross-regulatory comparison based on comparable indicators. This paper addresses that gap by offering a structured and transferable comparative lens.

Methodologically, this study adopts a literature review combined with indicator-based comparison. It primarily draws on recent peer-reviewed articles, organizing convergent and divergent evidence around four dimensions: "market and positioning—service matrix—monetization and unit economics—regulation and safety." To ensure contextual and definitional consistency, only a limited number of official disclosures are introduced as contextual references where necessary, and the use of non-academic online sources is strictly controlled [8]. The paper is structured as follows: Section 2 defines the components of the business model and specifies the dimensions of comparison; Section 3 discusses competitive strategies (expansion paths, two-sided management, compliance, and risk control); Section 4 summarizes common challenges and platform-specific optimization directions; and Section 5 presents conclusions, limitations, and policy–management implications [9, 10].

2. Business Model Architecture

2.1. Target Markets and User Positioning

Portraits and comparison. Didi's core market is China. First-and second-tier cities form its base, and steady expansion into third-and fourth-tier cities and county areas has broadened coverage. By 2023, lower-tier markets accounted for more than 40% of orders, showing an ability to organize and dispatch supplies in more price-sensitive and fragmented settings. In terms of positioning, Didi serves the mass market with a wide price ladder, from low-cost Express to premium services, so offerings match different payment capacities and time-of-day needs. Uber is anchored in North America and Europe, and in many emerging markets such as parts of Southeast Asia it has relied on local partnerships for entry and growth. Its positioning shifted from early high-end services like Uber Black to mainstream options such as UberX to widen demand and deepen the driver pool [7, 10].

Because ride-hailing is a two-sided market and multi-homing is common on both sides, these indicators can amplify competitive effects. Higher density and shorter waits steady driver supply and lift passenger frequency; thin density or long waits raise cross-platform switching and churn [2].

Strategic orientation. In broad strokes, Didi pursues "deepening within a single mega-market" plus "broad price bands," relying on density and localized dispatch to stabilize supply. Uber adopts a multi-regional portfolio strategy, combining geographic diversification with city-level customization. By forming local partnerships and adapting offerings to individual markets, it mitigates risks tied to any single jurisdiction [7]. This approach differs significantly from that of Didi, and the trade-offs—particularly in terms of expansion durability, supply consistency, and exposure to varying regulatory frameworks—will become more evident in the discussion of service design and economic performance [10].

2.2. Core Businesses and Service Matrix

Didi's primary advantage is its Express service, supported by Premium Rides, Hitch, and Taxi-hailing, which integrates traditional taxi fleets. Additional services include designated driving, bike-sharing, and freight, forming a portfolio that blends high-frequency essentials with scenario-specific extensions [7]. In price-sensitive regions, Hitch and Qingcai Carpool provide cost-efficient shared rides that extend market penetration and improve peak-time seat usage.

Uber's Mobility division includes UberX (standard), Black (premium), and Pool (shared rides). Its food delivery arm, Uber Eats, complements ride-hailing. In selected cities, Uber has also tested novel services like helicopters [10]. These verticals interact, stabilizing usage across seasons.

Pool lowers per-capita fares and improves seat utilization but must be calibrated to local congestion and fairness expectations to avoid service instability and reputational risk [3, 4].

2.3. Profit Models

Revenue composition and development stage. Both Didi and Uber primarily earn revenue through commissions (take rates) and related service fees. Based on available figures, Didi's Express service takes rate sits around 20%to 25%, with additional income from premium ride surcharges and platform advertising. In its earlier growth phase, Didi relied more heavily on subsidies, but after 2021, it began shifting toward lower subsidy levels and stricter cost controls to improve its profit-and-loss structure. Uber, in contrast, reports a global average take rate of around 25% for its Mobility segment, while Uber Eats ranges between 15%and 30%. In 2022, Uber achieved full-year profitability, thanks to stronger financial discipline and better integration across business units—highlighting how scale, cost control, and product portfolio design all contribute to financial performance [10].

Trade-offs in unit economics. Platform profitability can be assessed using several key metrics. Take rate captures the platform's share of total transaction value; the incentive ratio reflects how much subsidy is needed to maintain activity on both sides of the market; contribution margin, disclosed by companies, shows how much cash is generated from core operations; and user-side indicators like average revenue per user (ARPU)and average order value (AOV)help detect shifts in revenue structure [11]. Evidence suggests that in highly multi-homed markets, any unilateral move to increase commissions or cut incentives tends to drive users and drivers toward competitors, which disrupts matching efficiency [1]. For this reason, platforms must coordinate incentive strategies with surge pricing, temporal and geographic pricing, and supply management tools to maintain stable wait times, fulfillment rates, and overall service quality [3, 4].

Regulation and sustainability. Government rules—covering driver licensing, labor classification, tax obligations, and data governance—change the balance point among commissions, incentives, and compliance spending. These factors directly impact unit economics through compliance costs and risk reserves, often introducing disruption at different stages of growth [6, 8]. Platforms operating across multiple countries need to coordinate policy compliance and customize product menus. Those focused on a single, high-density market rely more on concentrated demand and localized services to remain steady [7]. In either case, long-term viability depends on how well a platform balances matching quality, price transparency, and compliance—within the limits set by regulation [10].

3. Comparison of Competitive Strategies: Didi vs. Uber

3.1. Market Expansion Strategies

Didi started in China's major cities and gradually expanded into smaller urban centers and rural counties Wider price bands and more intensive supply coverage allowed it to unlock demand in lower-tier markets and grow its driver base. The acquisition of Uber China in 2016 further completed its network, while head-to-head competition with local rivals helped Didi build a more stable domestic presence [7]. The core idea behind this model is depth—serving a single mega-market with dense demand and supply, which helps stabilize wait times and fulfillment [1].

Uber uses a mix of direct operations and partnerships. It manages operations independently in key markets like North America and Europe, while relying on local alliances and joint ventures in many emerging markets. Uber has withdrawn from certain markets, including China and Russia, in order to limit exposure to regulatory or competitive risks and to redirect its resources toward regions with stronger return potential [7]. This strategic flexibility enables the platform to shift between operating at a global scale and tailoring services for local markets, depending on evolving conditions [3].

Strategic contrast and metrics. Didi concentrates on deepening its presence within a single national market, emphasizing density and operational depth. In contrast, Uber pursues a globally distributed model, using local partnerships to manage geographic risks and extend reach [7]. To compare these strategies, several indicators may be considered—such as market entry and exit timelines, time to reach breakeven in different cities, and how price or subsidy intensity correlates with performance outcomes [1, 3].

Uber complements its international expansion with branding efforts like sports sponsorships and referral campaigns, while also leveraging local partnerships and events to broaden access and reduce acquisition costs [1]. In multi-homing environments, such demand-side tactics must be matched by consistent pricing and reliable wait times; otherwise, usage tends to decline once subsidies are withdrawn [4].

On the supply side, Didi operates a driver development framework, aligning performance incentives and commissions with driver activity, and offering vehicle-related services—such as leasing and fuel access—to reduce entry barriers and increase driver stability. Uber emphasizes simplified registration (online verification with fewer steps) and its Uber Pro reward system, which encourages high ratings and stable supply, while also offering vehicle and energy support to reduce business uncertainty [10]. Evidence indicates that many drivers split their working hours across multiple apps, which pushes platforms to compete on predictable earnings and reliable waiting times [2].

Key operational indicators include how often drivers are active or online, the average number of trips completed per hour, monthly turnover among drivers, rates of trip acceptance and cancellation, and user retention after 30 and 90 days. In multi-homing environments, even small changes in pricing, incentive structures, or queue settings can ripple through the system. They quickly affect matching efficiency and earnings stability, which in turn influence participation on both sides of the platform. During peak hours, surge pricing and queue management must be carefully adjusted to maintain performance without compromising perceived fairness [3, 4].

3.2. Strategies for Regulation and Risk Management

In China, where ride-hailing is subject to close regulatory oversight, Didi has gradually built up its compliance systems. It has invested in verifying driver's credentials and vehicle qualifications, and by recent estimates, over 90% of its operations meet official requirements. Following the 2018 incident involving its Hitch service, the company introduced new safety measures, including trip recording and emergency contact features. It also temporarily suspended late-night Hitch services, which were only reintroduced after the product was redesigned and more risk controls were put in place [6]. Data regulations and cybersecurity requirements—including those related to personal information and cross-border transfers—have also shaped the boundaries of Didi's product offerings and its internal data governance processes [8].

Multi-jurisdictional context in the West. Uber operates in a fragmented regulatory environment. In Europe, stricter frameworks on worker classification, social benefits, and Value Added Tax (VAT) obligations have required changes to how the company manages labor relations, disclose earnings, and structures algorithmic systems. In the United States and the United Kingdom, long-standing debates continue regarding whether drivers are contractors or employees, alongside growing expectations around data privacy compliance [6, 7]. These differences directly influence Uber's cost structure and its broader governance model.

Differences and how to measure them. The primary divergence stems from regulatory intensity and jurisdictional fragmentation. Didi, operating under one national system, prioritizes local consensus and steady compliance. Uber, by contrast, must coordinate across legal regimes, managing added complexity and cross-border compliance costs [7]. Indicators that can help evaluate this include licensing coverage, the share of compliant cities, safety complaints per million trips, and early legal signals—such as changes in commission or incentive ratios. These inputs, in turn, affect take rates, pricing decisions, and incentive spending through operational risk channels [6, 8].

4. Challenges and Optimization Paths

4.1. Common Challenges

One major challenge involves profitability and the controversy surrounding commissions. Increasing the take rate may trigger pushback from drivers, while reducing incentives risks weakening supply and fulfillment reliability—especially in multi-homing environments where drivers and passengers can switch platforms easily [11]. On the demand side, high price sensitivity means that once users become accustomed to subsidies, pulling them back often causes sharp declines in usage frequency [3]. At the same time, stricter rules around labor, data, and safety continue to raise both fixed and variable compliance costs [6, 8]. Local taxi operators and regional platforms also squeeze margins by limiting pricing flexibility and shrinking market share, putting added strain on service quality [9, 12, 13].

Indicators and evidence. A useful monitoring framework can be structured around three layers. At the structural level, tracking take rate trends and incentive adjustments helps reveal how platforms rebalance commissions. Operational indicators such as wait times, acceptance and cancellation rates, online driver utilization, and carpool share across cities and time windows highlight weak spots in matching. Risk-related measures include complaint rates and interaction patterns between taxis and platform vehicles, which can indicate congestion, empty mileage, and service degradation [4, 12]. Studies also suggest that competition and pooling reshape trip patterns and outcomes, so platforms must embed efficiency–equity considerations into routine decisions [13].

Structural implications. In highly price-sensitive and multi-homing markets, no single lever can sustain long-term improvement; platforms must simultaneously enhance matching quality and pricing transparency, while using verifiable safety and compliance indicators to anchor expectations, thereby reducing the“ offsetting effect” of churn and complaints on profitability gains [3, 13].

4.2. Platform-Specific Optimization Directions

Didi can continue to deepen its integrated mobility ecosystem and localized operations: advancing integration with bus/metro data and trip planning to provide more “transfer-friendly” pricing and routing to alleviate peak-time mismatches; implementing more granular localized pricing/matching (by district and time band) to improve waiting and fulfillment without increasing subsidy intensity; expanding new-energy vehicle fleets and energy-service coverage to lower unit distance costs and volatility, while making energy consumption and earnings visualization part of driver expectations; and strengthening the observability of safety and compliance (licensing, spot checks, risk-control records) to institutionalize“ compliance plus user experience” as a baseline for daily operations [12]. On data usage, it should align with local governance frameworks to ensure privacy and security boundaries [8].

Uber can leverage Mobility and Delivery cross-flows and joint memberships to use cross-vertical elasticity to smooth demand fluctuations and enhance retention across peak and off-peak seasons [10]. It can introduce explainable safeguards and peak-time“ earnings floors/compensation” into surge pricing to balance efficiency and fairness and reduce volatility in peak experiences;use dispatch and routing optimization to cut deadheading and detours, improving waiting and fill rates; and use its global scale to run large-scale experiments to fine-tune pricing and incentive parameters [12]. In the medium to long term, it can focus on cost-curve reductions and risk-sharing mechanisms linked to vehicle/energy services and autonomous driving [11].

Feasibility and dependencies. The feasibility of these optimization paths depends on policy boundaries and urban density: Didi prioritizes embedding compliance and user experience as a“ baseline configuration” within a single jurisdiction, to stabilize policy expectations and public trust [8]; Uber prioritizes orchestrating compliance across multiple jurisdictions while hedging volatility through cross-vertical synergies [10]. The common ground lies in building two-way trust with policymakers and users through transparent pricing and verifiable safety metrics, thereby creating room to optimize take-rate and incentive structures [1, 12].

5. Conclusion

Drawing on a literature review and an indicator-based comparison, this paper offers a structured comparison of Didi and Uber's competitive models, linking evidence across four dimensions: target markets and positioning, service matrix, monetization and unit economics, and regulation and safety. The findings show that Didi emphasizes deep penetration in a single large domestic market, using higher demand and supply density and a tiered product lineup to improve matching quality and fulfillment stability. Uber adopts a multi-regional expansion strategy, aiming to distribute operational risk across various geographic markets. By entering, exiting, or forming partnerships in specific regions, the company adjusts its exposure according to regulatory complexity and revenue potential. Research and market outcomes suggest that in platforms characterized by two-sided network effects and prevalent multi-homing, success depends less on pricing intensity or subsidies and more on the platform's ability to match supply and demand efficiently at the local level. Maintaining user and driver expectations becomes critical for platform stability. Accordingly, any modifications to commission rates or incentive structures must take into account supply responsiveness and the frequency with which participants shift between platforms.

Dynamic pricing mechanisms such as surge pricing can improve operational efficiency and meet demand surges, yet their benefits are not evenly distributed. Without appropriate safeguards, these tools may raise equity concerns. At the same time, regulatory policies governing labor classification, licensing, taxation, and data privacy continue to reshape platform governance and cost models. Firms operating within a single jurisdiction confront different challenges than those managing cross-border operations. Disclosures also indicate that integrating vertical operations and tightening cost controls can enhance financial performance as the platform scales. This study helps clarify how market structure influences platform choices, how those choices shape unit economics, and how all of it links to overall welfare. While different settings lead to different outcomes, the underlying mechanics remain consistent.

This study faces unavoidable comparability constraints due to data availability and differences in definitions. Cost, subsidy, and service-quality metrics are not fully standardized across cities and jurisdictions, so horizontal mapping requires care. Future research should leverage city-level microdata and causal designs such as regression discontinuity, difference-in-differences, instrumental variables, and structural models to estimate the marginal effects of regulatory tools, pricing rules, and incentive policies on waiting time, fulfillment, mileage, price, and welfare with greater precision.

For managerial practice, firms should develop city-specific playbooks. They should calibrate thresholds for take rates, incentives, and surge under varying density, congestion, and regulatory conditions; shift competition from headline subsidies toward income stability, queue reliability, and safety experience; and, where feasible, use cross-flows between Mobility and Delivery with joint memberships to smooth demand volatility. For policymakers, the aim is a workable balance between efficiency and fairness. Pricing transparency and algorithmic explainability should advance alongside protections for labor and data security, without undermining operational flexibility. Verifiable safety and compliance indicators should anchor expectations and reduce the impact of policy uncertainty on platform unit economics.

In sum, platforms and regulators should treat matching quality, income stability, and safety compliance as joint objectives and allocate resources and rules accordingly to improve overall welfare.

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