EXPLORATORY DATA ANALYSIS-I

(Assessment of Ride Fare Fluctuations for Rapido with respective to its competitor)

PPKM Extremes Analysis — What Lowest & Highest Prices Reveal About Platform Behavior

How Rapido's Distance Curves Shift Across Sessions vs Market Benchmarks?

Short-Distance Pricing Carries the Highest Intensity Risk

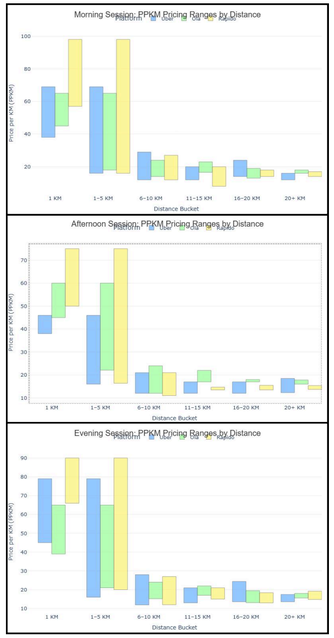
Across all platforms, the highest PPKM values appear at 1 km and 1–5 km buckets. This indicates that pricing intensity is structurally front-loaded due to base-fare dominance rather than demand alone. *Even small distance changes at short ranges produce large PPKM swings*, making this the most sensitive pricing zone.

Rapido - Widest Short-Distance PPKM Band

Rapido shows the largest gap between lowest and highest PPKM at short distances, significantly wider than Uber and Ola. This suggests that Rapido's short-distance pricing is the least constrained, exposing riders and drivers to higher variability compared to competitors.

PPKM Volatility Compresses Rapidly With Distance

Across sessions, the 2–4 km bucket shows the highest sensitivity to price changes. Small deviations here disproportionately impact cancellations and competitive switching.



Evening Sessions Allow the Highest PPKM Ceilings

Across distance buckets, evening sessions consistently show higher maximum PPKM values than morning and afternoon. This implies that platforms allow greater pricing headroom during peak demand periods, making evenings the primary window for monetization intensity.

Afternoon Pricing Shows Artificial Downward Pressure

The lowest observed PPKM values across distances occur predominantly in the afternoon. This suggests that pricing is actively suppressed during low-urgency periods, rather than naturally settling through market dynamics, increasing the risk of under-incentivizing supply.

Platform Differences Shrink at Long Distances

At 16–20 km and 20+ km, the highest and lowest PPKM values across Uber, Ola, and Rapido converge closely. This indicates that at scale, pricing intensity is governed more by cost economics than competitive positioning, reducing differentiation in long trips.

The lowest–highest PPKM data reveals that pricing risk is concentrated in short, peak-hour rides, while long-distance pricing is structurally stable and largely platform-agnostic.

Average PPKM Analysis — What Typical Pricing Intensity Reveals Across Platforms

Rapido Under-Indexes on Mid-Distance Monetization

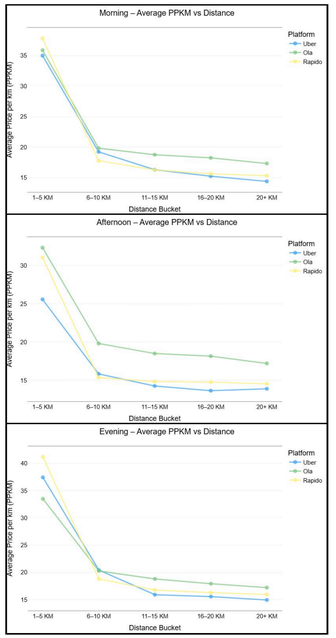
Across sessions, Rapido's average PPKM in the 6–10 km range sits below both Uber and Ola. This indicates a deliberate or structural under-monetization in one of the most common ride-length segments, potentially impacting driver preference and revenue efficiency.

Platform Pricing Differences Narrow at Long Distances

Beyond 11 km, average PPKM values across Uber, Ola, and Rapido cluster tightly, with only marginal differences. This suggests that long-distance pricing is constrained more by cost economics than competitive positioning, limiting differentiation.

Afternoon Pricing Suppresses Average PPKM

Afternoon sessions consistently show the lowest average PPKM across all distances and platforms. This implies systematic pricing suppression during low-demand windows, which may protect rider affordability but risks weakening driver earnings and supply reliability.



Important caveats

1. **This graph is an aggregation**
The dataset contains many zeros, missing quotes, and partial competitor availability. Volatility is computed over available quotes, not uniform market coverage.

2. **Outliers heavily influence long-distance volatility**
A few extreme Rapido prices (15–25 km) disproportionately inflate volatility metrics. This is visible in multiple late-February entries.

3. **Volatility ≠ demand response**
The data shows price movement, not whether riders accepted, cancelled, or converted.

Average PPKM reveals that Rapido's pricing strength lies in short-distance monetization and evening demand, while its key opportunity is correcting mid-distance under-monetization without disturbing long-trip stability.

Distance × Session Stress Table

Stress is a derived signal that combines average price per km, price predictability, and distance-based expectation sensitivity. It's not a formula but a structured classification to identify where pricing is most likely to feel uncomfortable to riders.

Distance Bucket	Morning Stress	Afternoon Stress	Evening Stress	Rider-Perceived Pricing Issue
0–2 km	Medium	Medium	High	High PPKM for short trips feels expensive
2–4 km	High	High	Very High	Short-trip price exceeds rider expectations
4–6 km	Low	Low	Medium	Pricing aligns with mental fare expectations
6–10 km	Medium	Low–Medium	High	Surge makes price feel disproportionate
10+ km	Low	Low	Medium	High absolute fare but lower per-km pressure

Key Insights (Rider Perspective)

- Rider stress is highest on short trips, not long trips, because price-per-km is highest where riders expect affordability.
- 2–4 km is the most fragile zone: short enough to trigger price anchoring, long enough to feel expensive.
- 4–6 km is the pricing "trust zone", where rider expectations and prices are aligned.
- Evening stress is driven by price elevation, not distance alone.

Price-Only Cancellation Risk Mapping

Volatility = observed price dispersion across days
Cancellation Risk = inferred from volatility + rider psychology + competitive sensitivity

Distance Bucket	Avg PPKM Level	Price Volatility (Context)	Price-Driven Cancellation Risk	Primary Price Driver
0–2 km	Very High	Medium	Very High	Highest price per km
2–4 km	High	Medium	High	Elevated price per km
4–6 km	Medium	Medium	Medium	Moderating price per km
6–10 km	Low–Medium	High	Low–Medium	Lower price per km
10+ km	Low	Very High	Low	Lowest price per km

Highest price pressure is on short trips
Short distances have the highest average PPKM, so price-driven cancellations are front-loaded in 0–4 km rides.
Cancellation risk falls as distance increases
Average PPKM declines steadily with distance, implying lower per-km price burden and lower price-only risk on longer trips.
Long trips look safer on price alone
Despite higher total fares, long-distance rides have the lowest PPKM, making them least risky when only price is considered.

INSIGHTS & RECOMMENDATIONS

(Summarized EDA with Strategic Insights)

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Pricing Strategy & Competitive Positioning Insights

Dynamic Pricing Landscape (Rapido vs Uber vs Ola)

- Uber and Ola anchor **surge-based pricing**, with sharp fare escalations during peak hours (8–11 AM, 5–8 PM), especially beyond 6 km.
- Rapido follows a **flatter pricing curve** at mid-to-long distances, with lower average PPKM than Uber and Ola.
- At short distances (1–5 km), Rapido **shows higher per-km pricing intensity** and **wider variability**, driven by base-fare effects.
- This positions Rapido as a selective affordability player, rather than uniformly cheapest across all distances.

Prime Sessions – Time-Based Pricing Behaviour

- Evening peak (5–8 PM) remains the **most volatile pricing window** across platforms.
- Uber exhibits the **strongest surge sensitivity**, with visible price jumps even between adjacent distance buckets.
- Ola follows Uber with moderated surge amplitude.
- Rapido shows **controlled uplift** at mid-to-long distances, while short-distance pricing remains less stable.

Distance-Based Price Differentiation

- **Short trips (1–5 km):**
  Rapido is competitive on absolute fares but shows higher PPKM due to base-fare concentration.
- **Mid-distance trips (6–10 km):**
  Rapido undercuts Uber and Ola on average PPKM, supporting value-driven positioning.
- **Long trips (10+ km):**
  Price differences compress across platforms, with Rapido limiting upside relative to Uber and Ola.

Rapido Price Spikes vs Price Floors

Highest Rapido spikes occur during:
- Evening peak + short-to-mid distance combinations

Rapido rarely exceeds Uber's peak pricing, indicating implicit surge ceilings.

Lowest Rapido pricing is observed in:
- Mid-distance and long-distance trips
- Afternoon sessions, where average PPKM is lowest.

Competitive Positioning & Business Implication

Uber monetizes **urgency through aggressive surge logic**.
Ola balances surge monetization with moderate stabilization.
Rapido positions itself as a high-frequency, price-first platform, optimizing for:
- Mid-distance value
- Predictable long-trip pricing
- Price-sensitive users

This reflects a trade-off: lower peak ARPU in exchange for affordability and consistency in core distances.

ACTIONABLE PRICING STRATEGY

1

Controlled Surge Alignment (Uber-Linked, Ola-Bounded)

- Narrow the gap with Uber only on **6–10 km peak rides**, where driver substitution risk is highest.
- Introduce soft surge multipliers (e.g., 1.1–1.25×) during peak windows instead of flat pricing.
- Cap surges below Uber dynamically while maintaining affordability on short trips.

2

Distance-Sensitive Peak Pricing (4–8 km Focus)

- Apply stronger peak uplift only on mid-distance rides, where driver effort and time cost is highest and Uber monetizes most.
- Short trips remain protected to retain Rapido's affordability image, while drivers see better earnings on rides they prefer accepting during peak hours.

3

Peak Hour Earnings Assurance via Pricing Uplift

- Replace blanket low pricing with earnings-backed peak pricing, where slightly higher rider fares fund guaranteed driver earnings per active hour.
- This stabilizes supply during rush hours and improves rider ETAs and match rates even at marginally higher prices.

4

Dynamic Minimum Fare Floors During Peak

- Introduce session-based minimum effective fares, especially for <3 km trips during congestion-heavy windows.
- This prevents drivers from rejecting low-value trips while riders benefit from better availability and fewer forced rebooks.

5

Session Playbooks (Time × Distance Pricing Rules)

- Move from uniform pricing to session-aware logic:
  - Morning peak: mild uplift for commute reliability
  - Evening peak: stronger surge for supply protection
  - Afternoon: affordability-led pricing

  Drivers get predictable earning windows, and riders experience pricing that aligns with urgency and context.

6

Dynamic Competitive Pricing Index (Uber-Anchored)

- Adopt a **real-time pricing index** where Rapido adjusts fares based on Uber prices, demand intensity, and supply availability in mid-distance peak scenarios.
- Maintain a controlled gap below Uber to improve availability without triggering rider price shock.
- Key Metrics to Track
  - Ride Completion Rate
  - Driver Acceptance Rate
  - Increased Ride Booked WoW,MoM
  - Price Gap vs Uber (%)

7

Loyalty-Weighted Surge Protection

- Allow frequent riders limited **surge-shield benefits**, while *newer or infrequent users* see closer-to-Uber pricing.
- This preserves retention for core users while enabling **higher peak monetization** that improves overall driver earnings.