
Beyond Security and Price: Why the Payment Gateway Has Become the Foremost Driver of Consumer Satisfaction in Post-UPI Indian E-Commerce

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Abstract:

India's payment landscape changed almost overnight. In less than a decade the Unified Payments Interface (UPI) turned digital payment from a hesitant, card-bound act into a daily reflex performed with a single PIN. This paper asks what that shift means for online shopping satisfaction. Drawing on survey data from 303 Indian online shoppers and using PLS-SEM in SmartPLS 4, it tests the payment gateway against six established determinants of satisfaction. The result is striking. The payment gateway is not merely significant; it is the single strongest driver of consumer satisfaction ($\beta = 0.411$, $p < 0.001$), ahead of information availability, shipping, and time, while security and pricing — long treated as primary levers — show no significant direct effect. The model explains 55 per cent of the variance in satisfaction. We argue that in a market where payment has become effortless and ubiquitous, its reliability has moved to the centre of the consumer's evaluation, and that security and price, now uniform across platforms, have receded into baseline expectations. Implications for platforms, payment providers, and policy are discussed.

Keywords: payment gateway; UPI; digital payments; consumer satisfaction; PLS-SEM; Indian e-commerce.

Introduction:

Consider a small, ordinary moment. An Indian shopper reaches the end of an online purchase, glances at the total, opens a payment app, enters a PIN, and within two seconds sees a confirmation. No card number, no OTP wait, no redirect that fails halfway. That moment, repeated billions of times a month, is the quiet achievement of the Unified Payments Interface — and it has reset what Indian consumers expect from every checkout they encounter (Reserve Bank of India, 2024).

This paper argues that the moment matters more than the satisfaction literature has recognised. For years, research on online shopping satisfaction treated payment as infrastructure — a step that either worked or did not — and reserved the starring roles for security, price, and service quality

(Featherman & Pavlou, 2003; Vasic et al., 2019). That framing made sense in a card-based world where payment was risky and slow. It makes far less sense in post-UPI India, where payment is fast, familiar, and, crucially, variable in quality across platforms. Where an experience is both salient and variable, it becomes a differentiator. The question is whether the data bear this out.

We test it directly. Using PLS-SEM on data from 303 Indian shoppers, we model the payment gateway as a determinant of consumer satisfaction alongside six others, and we ask three things. Does the payment gateway drive satisfaction independently of security and service quality? How does its effect compare with the traditional determinants? And what does the pattern of results reveal about how a maturing digital market reallocates the sources of satisfaction? The answers, we suggest, call for a rethinking of where platforms should place their bets.

2. Theoretical Background

2.1 Payment as experience, not plumbing

The conceptual move at the heart of this paper is to treat the payment gateway as an experience the consumer evaluates, not a mechanism they merely use. Three arguments support it. First, position: payment is the terminal act of the purchase, and psychology tells us that the end of an episode weighs heavily in its remembered evaluation (Oliver, 1980). A purchase that ends badly is remembered badly. Second, texture: the payment experience is made of attributes — speed, interface clarity, confirmation, method choice, failure recovery — that general service-quality frameworks such as those descended from Parasuraman et al. (1985) do not fully capture. Third, and specific to India, variability: since UPI set a universal benchmark of instant success, the gap between a platform that meets it and one that does not has become both obvious and consequential (Reserve Bank of India, 2024).

Empirical support has been accumulating. Ardiansah et al. (2020) found payment gateway quality significant after controlling for service quality — evidence that it is not simply a proxy for something else. George and Sunny (2023) showed that trust in the payment platform outweighed both cashback and convenience in sustaining mobile-wallet use, and Kaur et al. (2020) reported that payment trust and performance drove not only use but active recommendation. Kar (2021), analysing user-generated content on mobile payments, found processing speed among the most heavily weighted satisfaction attributes. Each of these points the same way: the payment experience shapes how consumers feel, not just whether they can transact.

2.2 The convergence of security and price

If payment has risen, why should security and price have fallen? The answer is convergence. A determinant differentiates satisfaction only when platforms differ on it. Security once did: Featherman and Pavlou (2003) showed perceived risk suppressing adoption, and Shree et al. (2021)

documented the weight of security concerns in Indian digital payments. But regulator-mandated tokenisation and two-factor authentication have since become universal, lifting every serious platform to a similar standard and turning security into an assumed baseline (Reserve Bank of India, 2024). Price has followed a parallel path. Gupta et al. (2022) showed pricing operating through perceived value, yet in a market of relentless, instantly matched discounting, price advantages evaporate quickly and cease to distinguish satisfaction even as they still influence which platform a shopper chooses. Convergence, in short, demotes a determinant from differentiator to entry ticket.

2.3 Hypotheses

The study tests seven determinants of consumer satisfaction, framed positively, with particular attention to the payment gateway (H7):

H1: Security positively influences consumer satisfaction.

H2: Information availability positively influences consumer satisfaction.

H3: Shipping positively influences consumer satisfaction.

H4: Quality positively influences consumer satisfaction.

H5: Pricing positively influences consumer satisfaction.

H6: Time positively influences consumer satisfaction.

H7: The payment gateway positively influences consumer satisfaction.

The paper's central conjecture is that H7 will not only be supported but will carry the largest coefficient, while the convergence hypotheses predict that H1 (security) and H5 (pricing) will fail to reach significance.

3. Method

Data came from 303 Indian online shoppers via a structured online questionnaire, with all constructs measured on five-point Likert scales adapted from validated instruments (Vasic et al., 2019; Ardiansah et al., 2020). The sample was young and educated, matching the active heart of Indian e-commerce. Analysis proceeded in two stages: SPSS 23 for demographics, reliability, and common method bias, and SmartPLS 4 for the PLS-SEM estimation. PLS-SEM suited the study's non-normal Likert data and its exploratory, predictive aim (Hair et al., 2019). Harman's single-factor test returned 17 per cent first-factor variance, well clear of the 50 per cent threshold, and the KMO measure was 0.796. Path significance rested on 5,000 bootstrap resamples.

4. Results

After the standard PLS-SEM purification (Hair et al., 2019), 24 items were retained. Convergent validity held throughout — every construct reached AVE of at least 0.50 with acceptable composite reliability — and discriminant validity was confirmed by the Fornell-Larcker criterion and HTMT ratios below 0.85 (Henseler et al., 2015). Table 1 reports the structural results.

Table 1. Structural model results (5,000 bootstrap resamples)

Hypothesis	Path	β	t	p	f ²	Result
H7	Payment Gateway → CS	0.411***	5.750	<0.001	0.275	Supported
H2	Information Availability → CS	0.304***	6.005	<0.001	0.157	Supported
H3	Shipping → CS	0.145**	3.152	0.002	0.039	Supported
H6	Time → CS	0.119*	2.120	0.035	0.023	Supported
H5	Pricing → CS	0.098ns	1.726	0.085	0.021	Not supported
H1	Security → CS	0.054ns	1.155	0.249	0.006	Not supported
H4	Quality → CS	0.005ns	0.112	0.911	0.000	Not supported

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. $R^2 = 0.550$; SRMR = 0.077. CS = consumer satisfaction.

The central conjecture is borne out. The payment gateway is the strongest driver of consumer satisfaction ($\beta = 0.411$, $p < 0.001$), its coefficient a third larger than the next determinant, information availability ($\beta = 0.304$). Shipping ($\beta = 0.145$) and time ($\beta = 0.119$) are significant but smaller. And exactly as the convergence hypotheses predicted, security ($\beta = 0.054$, $p = 0.249$) and pricing ($\beta = 0.098$, $p = 0.085$) fail to reach significance, as does quality ($\beta = 0.005$). The effect-size column reinforces the picture: only the payment gateway ($f^2 = 0.275$) and information availability ($f^2 = 0.157$) reach substantive magnitudes. The model explains 55 per cent of the variance in satisfaction ($R^2 = 0.550$) with acceptable fit (SRMR = 0.077). Figure 1 presents the full path model.

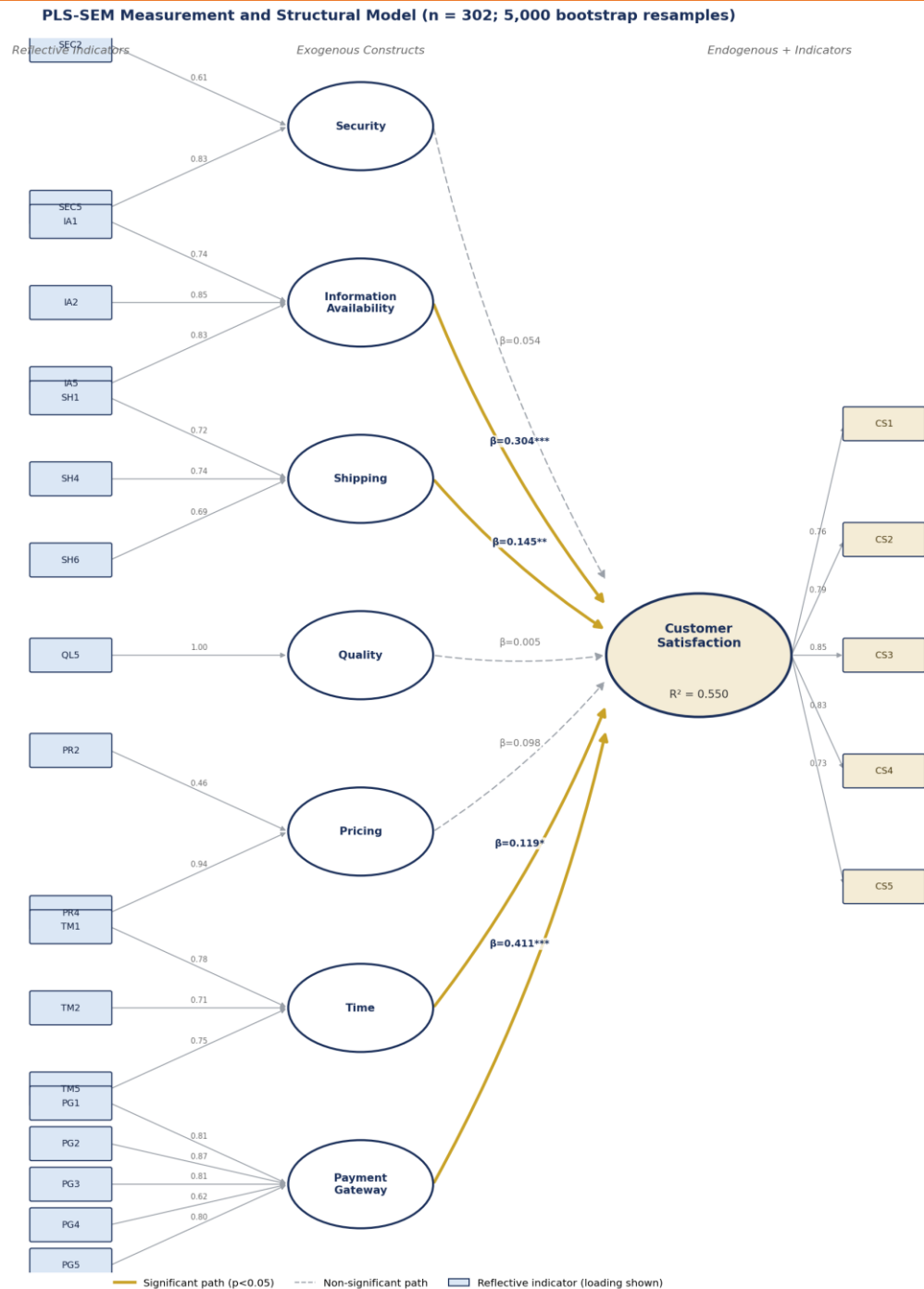


Figure 1. PLS-SEM measurement and structural model (n = 302)

Gold solid arrows = significant paths; grey dashed arrows = non-significant paths.

5. Discussion

The findings invert a long-standing hierarchy. For decades, security and price sat at the top of the satisfaction agenda; here they sit at the bottom, statistically silent, while the payment gateway — once dismissed as plumbing — sits at the very top. This is not a quirk of the sample; it is what a maturing digital market looks like. As platforms converge on security and discounting, those factors stop distinguishing one experience from another and settle into the background of assumed

competence. What rises in their place are the dimensions that still vary — and in post-UPI India, nothing varies more consequentially than the payment experience.

The result carries a theoretical lesson worth stating plainly: the determinants of satisfaction are not fixed properties of a market but moving targets that shift as the market matures. A determinant's absolute importance to a consumer can remain high even as its power to differentiate satisfaction collapses, and only a simultaneous, competitive test can tell the two apart. Studies that examine security or price in isolation will keep finding them important, and keep missing the fact that every competitor has already matched them.

For practice, the implications are direct. Platforms should treat the payment experience as a first-order strategic asset — investing in speed, reliability, method diversity, and above all in graceful failure recovery, since a failed transaction now inflicts disproportionate damage. Payment service providers should recognise that their product is no longer invisible infrastructure but a visible driver of the consumer's satisfaction with the entire purchase. And policymakers, in continuing to strengthen the UPI ecosystem, are shaping not only financial inclusion but the consumer welfare that flows from a dependable payment experience.

6. Conclusion

In post-UPI India, the payment gateway has become the foremost driver of consumer satisfaction in online shopping, outranking information availability, shipping, and time, while security and pricing have converged into baseline expectations that no longer differentiate. The message for a crowded, competitive market is unambiguous: the checkout is no longer the end of the sale but a decisive part of it. The study's limitations — a convenience sample and a cross-sectional design — point toward longitudinal and broader-based replication, and toward richer models that add trust and after-sales service. But the core finding is likely to prove durable, because the habit that produced it, the expectation of instant and reliable payment, is now woven into the fabric of how India shops.

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