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Convenience or Impulse? Hedonic and Utilitarian Motivations Driving Purchase Intention and Basket Expansion in Q-Commerce

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Abstract:

Quick commerce (Q-commerce) has transformed urban retail by promising near-instant delivery, thereby reshaping consumers' motivational drivers and purchase behaviour compared with traditional e-commerce formats. Existing research highlights that hedonic and utilitarian shopping motives, platform convenience, and promotion intensity jointly stimulate impulsive decisions and larger shopping baskets in digital environments, yet evidence in ultra-fast delivery settings remains nascent. Grounded in the Stimulus–Organism–Response framework, this study examines how hedonic and utilitarian motivations, ease of ordering, and flash discounts (stimuli) shape impulse buying tendency and instant gratification (organismic states), which in turn influence purchase intention and basket expansion on Q-commerce platforms. Using a cross-sectional online survey of 518 active Q-commerce users from six Tier-2 Indian cities, the study employs partial least squares structural equation modelling (PLS-SEM) via SmartPLS to estimate a prediction-oriented model and test mediation and moderation links. The results show that both hedonic and utilitarian motivations, along with ease of ordering and flash discounts, significantly enhance impulse buying tendency and instant gratification, which subsequently elevate purchase intention and basket size; income level does not exhibit significant moderating effects on these relationships. The model demonstrates strong explanatory power for purchase intention and basket expansion, and exhibits satisfactory reliability, convergent and discriminant validity, and good model fit indices. Theoretically, the study extends S-O-R logic to the Q-commerce context by integrating motivational, platform, and impulsive mechanisms, while managerially it offers guidance for designing interface features and promotional tactics that responsibly leverage instant delivery and impulse triggers.

Keywords: Q-commerce, hedonic motivation, utilitarian motivation, impulse buying tendency, instant gratification, purchase intention, basket expansion, PLS-SEM.

1. Introduction

Quick commerce (Q-commerce) has emerged as a distinctive format within digital retail, offering delivery of groceries and everyday essentials within minutes rather than days or hours, thereby compressing the temporal distance between ordering and consumption in unprecedented ways (Ranjekar & Roy, 2023). In India, Q-commerce has rapidly expanded alongside rising smartphone penetration, digital payment adoption, and dense urban settlements, positioning itself as both a substitute and complement to traditional kirana stores and scheduled e-grocery services (Ranjekar & Roy, 2023). Early evidence from industry and academic reports suggests that Q-commerce is increasingly used for top-up purchases, forgotten items, and indulgent orders, blurring the boundary between routine shopping and spontaneous consumption episodes (Ranjekar & Roy, 2023; Kapoor & Joshi, 2024). This shift indicates that Q-commerce is not merely a logistical innovation but a transformation in how consumers construct convenience, urgency, and everyday gratification in their shopping practices (Kapoor & Joshi, 2024).

Digital channels have long been recognised as fertile ground for impulsive and unplanned purchases because online interfaces can bundle persuasive design, personalised recommendations, and time-bound promotions into a seamless purchase journey (Chan, Cheung, & Lee, 2017). Recent empirical work in online and social commerce confirms that external stimuli such as time pressure, quantity scarcity, and economic incentives significantly heighten arousal and pleasure, which in turn foster online impulse buying behaviour (Ngo et al., 2024; Hongsuchon, Chen, & Khan, 2025). Ngo et al. (2024) demonstrate on the Shopee video platform that time pressure, limited quantities, and financial benefits jointly influence arousal and pleasure, and that these emotional states mediate their effects on Generation Z consumers' online impulse buying. Similarly, Hongsuchon et al. (2025) show within social commerce settings that discounted prices, scarcity cues, and social interaction features shape positive affect, flow state, and emotional attachment, which jointly drive impulse buying responses in influencer-driven environments (Hongsuchon et al., 2025). These findings collectively underline that contemporary online retail environments are characterised by dense constellations of commercial and social stimuli that may amplify impulsive purchasing beyond what is typically observed in offline settings (Ngo et al., 2024; Hongsuchon et al., 2025).

Within this broader digital landscape, Q-commerce introduces an additional form of stimulus: the explicit promise of ultra-fast delivery that realises consumption almost immediately after the purchase decision. Instant fulfilment aligns closely with the notion of instant gratification, defined as a preference for immediate rewards over delayed but potentially larger benefits (Venawat, 2025). Conceptual and emerging empirical work on quick-delivery platforms indicates that when consumers expect products within minutes, the temporal barrier that normally allows for reconsideration is weakened, making it easier for fleeting desires to translate into completed orders and expanded baskets (Venawat, 2025; Ngo et al., 2024). In this sense, Q-commerce platforms can be viewed as technologically enabled infrastructures for instant gratification, particularly attractive to younger, digitally immersed segments who are already accustomed to on-demand media and services (Ngo et al., 2024; Hongsuchon et al., 2025).

Hedonic and utilitarian consumption values provide a foundational lens for understanding such behaviours across retail formats. Batra and Ahtola (1991) conceptualised consumer attitudes as a combination of utilitarian (functional, goal-oriented) and hedonic (experiential, pleasure-seeking) components, a distinction that has been widely applied in retail and service contexts. Babin, Darden, and Griffin (1994)

further operationalised hedonic and utilitarian value in shopping, showing that both dimensions coexist within a single shopping episode. Subsequent work has consistently demonstrated that utilitarian motives—such as efficiency, task completion, and value for money—shape deliberate purchase intentions, while hedonic motives—such as enjoyment, escapism, and novelty seeking—are strongly associated with browsing, experiential engagement, and impulse buying (Arnold & Reynolds, 2003; Babin et al., 1994; Batra & Ahtola, 1991). Recent studies extend these insights into online and mobile commerce, confirming that hedonic and utilitarian motives jointly predict online purchase intention and that hedonic motives in particular are closely linked to impulsive buying tendencies (Ngo et al., 2024; Ngo et al., 2024).

Impulse buying theory emphasises that many purchases are triggered by sudden, compelling urges that arise in response to environmental cues rather than from prior planning (Rook & Fisher, 1995; Beatty & Ferrell, 1998). Rook and Fisher (1995) introduced the construct of impulse buying tendency as a relatively stable trait that predisposes individuals to act on such urges, whereas Beatty and Ferrell (1998) highlighted the role of situational factors in activating this disposition. In parallel, research on consumption motives notes that hedonic motivations often co-occur with impulse buying, as consumers treat shopping as a source of fun, excitement, or emotional regulation rather than purely as a means to acquire necessities (Arnold & Reynolds, 2003; Babin et al., 1994). Ngo et al. (2024) provide contemporary evidence that external stimuli such as time and quantity pressure, combined with economic benefits, can induce arousal and pleasure that subsequently translate into online impulse buying, thereby updating classic impulse buying theory for video-based digital platforms (Ngo et al., 2024). These insights are directly relevant to Q-commerce, where hedonic impulses, service convenience, and intense promotional activity might jointly stimulate trait-like impulse tendencies and state-like instant gratification.

The Stimulus–Organism–Response (S-O-R) framework, originally proposed by Mehrabian and Russell (1974), offers a powerful integrative structure for organising these mechanisms. In the S-O-R model, environmental stimuli influence internal organismic states—such as affect, cognitions, or motivational orientations—which in turn shape behavioural responses. Recent consumer research has applied S-O-R to diverse digital contexts, showing that external and situational stimuli (for example, scarcity, time pressure, social presence) influence cognitive and affective motivations that then drive impulsive purchasing (Kapoor & Joshi, 2024; Hongsuchon et al., 2025). The Indian Journal of Marketing review on impulse buying, for instance, argues that external and situational cues feed into cognitive (utilitarian) and affective (hedonic) motivations which subsequently stimulate impulsive purchase behaviour within an S-O-R architecture (Sen, 2024). Hongsuchon et al. (2025) similarly demonstrate that commercial stimuli (discounts, scarcity), social stimuli (social presence, sense of belonging), and influencer-specific stimuli (entertainment, informativeness) jointly influence psychological states such as positive affect, flow, and emotional attachment, which then elicit impulse buying on social commerce platforms.

Despite these advances, systematic application of the S-O-R paradigm to Q-commerce remains limited. Existing studies on Q-commerce have largely concentrated on adoption factors, service quality perceptions, and general changes in shopping frequency or channel choice in India and other emerging markets (Ranjekar & Roy, 2023; Siwach, 2026). Many of these works treat impulsive behaviour and gratification effects as peripheral observations rather than central constructs in a formal structural model (Ranjekar & Roy, 2023). Furthermore, research has often focused on metropolitan consumers or single-platform case studies, overlooking Tier-2 city contexts where infrastructural constraints,

aspirational lifestyles, and evolving digital maturity may interact in unique ways (Ranjekar & Roy, 2023; Siwach, 2026). Consequently, the mechanisms through which Q-commerce stimuli shape organismic states such as impulse buying tendency and instant gratification—and, in turn, concrete outcomes like purchase intention and basket expansion—remain empirically underexplored.

A second gap concerns the explicit role of platform-level stimuli in Q-commerce. Technology acceptance research, particularly the Technology Acceptance Model (TAM), has long established that perceived ease of use shapes attitudes and behavioural intention towards information systems (Davis, 1989). In online retail, constructs such as ease of navigation, perceived ease of ordering, and intuitive interface design are consistently associated with more favourable evaluations and stronger purchase intentions (Davis, 1989; Ngo et al., 2024). Yet, Q-commerce studies seldom model ease of ordering as a distinct stimulus, even though the promise of "few taps to checkout" is central to its value proposition. Similarly, promotional instruments like flash discounts and limited-time offers have been shown to raise arousal and perceived economic benefits, thereby increasing the likelihood of impulse purchases in digital settings (Lichtenstein et al., 1995; Ngo et al., 2024). In Q-commerce apps, such promotions are often integrated with countdowns and push notifications, potentially reinforcing both hedonic excitement and perceived savings, but their indirect pathways through impulsive and gratification processes are rarely quantified.

Socio-demographic moderators add further nuance to this picture. Prior research indicates that income and related resource constraints can moderate the influence of price promotions, convenience attributes, and hedonic motives on purchase behaviour, although findings are mixed and context-dependent (Babin et al., 1994; Batra & Ahtola, 1991). Some studies suggest that higher-income consumers attach greater value to time savings and experiential benefits, whereas lower-income consumers are more responsive to price incentives and more cautious about unplanned expenditures (Babin et al., 1994). In Q-commerce, one might therefore expect income level to shape the strength of relationships between hedonic and utilitarian motivations, impulsive mechanisms, and purchase outcomes; however, this has not been rigorously tested. Sen (2024) emphasises that both cognitive and affective motivations, and their antecedent stimuli, may operate differently across consumer segments, but does not empirically examine income as a formal moderator (Sen, 2024).

Against this backdrop, the present study focuses on active Q-commerce users in six Tier-2 Indian cities and proposes an S-O-R-based structural model that explicitly integrates motivational, platform, and impulsive mechanisms. In this model, hedonic motivation, utilitarian motivation, ease of ordering, and flash discounts are conceptualised as stimuli; impulse buying tendency and instant gratification are treated as organismic states; and purchase intention plus basket size/purchase frequency constitute behavioural responses (Mehrabian & Russell, 1974; Rook & Fisher, 1995; Venawat, 2025). The first objective is to examine the impact of hedonic and utilitarian motivations on consumers' purchase intention and basket expansion in Q-commerce platforms (Babin et al., 1994; Batra & Ahtola, 1991). The second objective is to investigate how ease of ordering and flash discounts influence impulse buying tendency and instant gratification as key psychological mechanisms (Davis, 1989; Lichtenstein et al., 1995; Ngo et al., 2024). The third objective is to analyse the mediating roles of impulse buying tendency and instant gratification in transmitting the effects of motivational and platform stimuli to purchase outcomes (Rook & Fisher, 1995; Ngo et al., 2024). The fourth objective is to assess the moderating role of income level in selected

relationships between motivations, mediators, and purchase intention, thereby capturing potential heterogeneity across income segments (Babin et al., 1994).

Methodologically, the study employs a cross-sectional survey of 518 Q-commerce users and analyses the data using partial least squares structural equation modelling (PLS-SEM) with SmartPLS, in line with contemporary recommendations for prediction-oriented, complex models in marketing and information systems research (Hair & Alamer, 2022; Sarstedt, Ringle, & Hair, 2021). PLS-SEM is particularly suited to models with multiple endogenous constructs, mediation chains, and interaction terms, and it performs well under non-normal data conditions that are typical in consumer surveys (Hair & Alamer, 2022). By integrating S-O-R logic, dual motivational structures, platform stimuli, and impulsive mechanisms in a single empirical model, the study aims to extend the theoretical understanding of impulse buying and instant gratification into the emergent Q-commerce domain while offering evidence-based guidance for the responsible design of ultra-fast retail platforms (Sen, 2024; Hongsuchon et al., 2025).

2. Literature Review

2.1 Q-commerce and digital consumption

Q-commerce represents a new generation of last-mile retail in which dark stores, algorithmic routing, and app-based interfaces enable near-instant delivery of groceries and daily necessities, typically within 10–30 minutes. In the Indian context, recent analyses document that Q-commerce firms are expanding rapidly beyond metropolitan centres into Tier-2 cities, driven by rising smartphone penetration, digital payment ecosystems, and changing lifestyle patterns. Studies focusing on Indian consumers indicate that Q-commerce is frequently used for top-up grocery purchases, forgotten items, and indulgent products, thereby complementing but also partially substituting planned supermarket and e-grocery trips (Senapati, 2025). This pattern suggests that Q-commerce caters simultaneously to utilitarian needs for convenience and time-saving, and to hedonic desires for spontaneity and immediate satisfaction (Kumar & Khan, 2025).

Emerging empirical work specifically links Q-commerce to more impulsive and gratification-driven purchasing dynamics. A recent investigation of instant gratification and impulse buying in quick commerce reports that the promise of rapid delivery heightens consumers' desire for immediate rewards, which increases unplanned purchases and basket expansion (Gupta, 2026). Another study on the consumer psychology of instant gratification in Q-commerce argues that ultra-fast delivery reduces the temporal gap between desire and consumption, weakening self-control and encouraging frequent, smaller but more impulsive orders (Venawat, 2025). Conceptual work on "the speed of desire" in Q-commerce further contends that when consumers internalise expectations of near-instant fulfilment, they may recalibrate shopping from a planned, stock-up activity to a series of impulsive, on-demand decisions. Collectively, these studies underscore that Q-commerce is not only a logistical innovation but also a behavioural regime in which convenience, speed, and hedonic triggers are tightly intertwined

2.2 Hedonic and utilitarian motivations in digital shopping

Hedonic and utilitarian consumption values remain central to explaining consumer behaviour across offline and online channels. Batra and Ahtola (1991) conceptualised attitudes toward consumption objects

as a combination of utilitarian (instrumental, goal-oriented) and hedonic (pleasure-oriented) components, emphasising that both dimensions contribute to overall evaluation. Babin, Darden, and Griffin (1994) operationalised hedonic and utilitarian value in the shopping context, demonstrating empirically that shoppers derive both functional value (achievement of shopping goals efficiently) and hedonic value (enjoyment, escapism, and experiential pleasure) from retail encounters. Arnold and Reynolds (2003) extended this work by differentiating several hedonic shopping motives such as adventure, gratification, role, value, social, and idea shopping.

In online shopping environments, recent studies confirm that hedonic and utilitarian motives continue to shape attitudes and behaviour, but their relative influence may vary by context. Research on hedonic shopping motivation and impulse buying finds that hedonic motives such as fun, enjoyment, and excitement significantly increase the likelihood of unplanned purchases in digital channels (Paramitha, Sulhaini, & Saufi, 2022). A related study examining hedonic shopping and utilitarian values in e-commerce shows that both value dimensions influence impulse buying, with hedonic value exerting a stronger direct effect on spontaneous purchases, while utilitarian value contributes more strongly to deliberate purchase intention and satisfaction (Paramitha, Sulhaini, & Saufi, 2022). Additional evidence indicates that utilitarian motives—such as efficiency, information availability, and convenience—are particularly salient in online grocery and necessity shopping, where task completion dominates, but hedonic elements can still play a role in exploratory browsing and add-on purchases (Dewi & Mahemba, 2024).

Cross-channel studies further corroborate that hedonic and utilitarian shopping motivations jointly shape online purchase intention and basket outcomes. For instance, research on hedonic and utilitarian motivations in online fashion retail shows that both motives significantly influence attitudes and continue to purchase online, with hedonic motives more closely linked to browsing intensity and impulse buying, and utilitarian motives more directly affecting repurchase intention and spending levels (Saygılı & Sütütemiz, 2020). Similar patterns are reported in broader digital commerce settings, where hedonic value enhances enjoyment and willingness to engage in promotional events, while utilitarian value strengthens perceived usefulness and intention to transact (Saygılı & Sütütemiz, 2020). These findings collectively suggest that in a Q-commerce environment, hedonic motivation is likely to energise exploratory use of the app and impulse-oriented purchases, whereas utilitarian motivation should underpin the use of Q-commerce as a time-saving, task-efficient channel for meeting routine needs.

2.3 Impulse buying tendency and instant gratification

Impulse buying has long been conceptualised as an unplanned purchase characterised by a sudden, compelling urge to buy, often accompanied by diminished cognitive deliberation (Rook & Fisher, 1995). Rook and Fisher (1995) introduced the construct of impulse buying tendency as an individual difference variable capturing a consumer's predisposition to act on such urges across situations. Beatty and Ferrell (1998) proposed a process model in which internal states (for example, mood, shopping enjoyment) and external cues (for example, promotions, store atmosphere) combine to generate urges that culminate in impulse purchases when self-control is relaxed. In digital environments, these processes are intensified by always-on access, algorithmic recommendations, and persuasive interface design.

A comprehensive recent study on online impulse buying behaviour identifies multiple factors—including hedonic browsing motives, promotional cues, time pressure, and social influence—that jointly shape impulsive purchase decisions in e-commerce (Ngo et al., 2024). The analysis shows that arousal and pleasure mediate the effects of external stimuli on online impulse buying behaviour, in line with established psychological theories. Related research on impulse buying in live-stream commerce demonstrates that stimuli such as scarcity, time-limited offers, and social presence increase flow and perceived enjoyment, which subsequently heighten impulse buying tendency and unplanned purchases (Yi, Khan, Su, Tong, & Zhao, 2023). A recent conceptual article on "Impulse Buying in the Digital Age" synthesises such evidence and argues that the digital environment lowers psychological and procedural barriers to acting on impulses, resulting in more frequent and more financially consequential impulsive purchases compared with offline retail (Kaur & Sharma, 2024).

Instant gratification is closely intertwined with impulse buying but conceptually distinct. It refers to consumers' preference for immediate rather than delayed rewards, often linked to impatience and temporal discounting. Venawat (2025) identifies instant gratification as a crucial driver in the adoption and continued use of Q-commerce and related on-demand services, showing that consumers who strongly value immediate fulfilment are more likely to choose instant-delivery options and to make repeat purchases. In the Q-commerce domain, empirical research finds that perceived rapid delivery and immediate enjoyment of products increase gratification, which in turn fuels impulse buying and repeat use (Gupta, 2026). Another study on consumer psychology of instant gratification in quick commerce reports that the repeated experience of near-instant delivery conditions consumers to expect immediate outcomes, thereby lowering tolerance for delay and reinforcing a feedback loop between gratification expectations and impulsive orders (Venawat, 2025). Conceptual accounts of Q-commerce similarly argue that the combination of rapid delivery, push notifications, and in-app promotions creates a powerful "instant gratification infrastructure" that can reshape everyday consumption habits.

Against this backdrop, the present study treats impulse buying tendency as a relatively stable trait that predisposes consumers to respond strongly to Q-commerce stimuli, and instant gratification as a state-like organismic response that reflects situational feelings of satisfaction and impatience. In line with prior work, it is expected that hedonic and utilitarian motivations, as well as platform-level stimuli, will influence these organismic states, which in turn will shape purchase intention and basket expansion (Rook & Fisher, 1995; Beatty & Ferrell, 1998).

2.4 S-O-R framework, technology acceptance, and platform stimuli

The Stimulus–Organism–Response (S-O-R) framework by Mehrabian and Russell (1974) posits that environmental stimuli affect internal organismic states (for example, affective or cognitive reactions), which then drive approach or avoidance behaviours. This paradigm has been widely adopted in consumer and retail research, particularly in studies of atmospheric effects, store environment, and more recently in online and mobile commerce. A recent application of S-O-R to online shopping explores how information cues, merchandizing stimuli, and temporal pressures influence internal emotional states and ultimately impulsive purchasing behaviour (Hongsuchon et al., 2025). Similarly, Sen (2024) applied S-O-R to show that external and situational stimulus factors (for example, price promotions, store environment, social cues) affect cognitive and affective motivations, which then predict impulse buying in retail settings (Sen, 2024). These studies collectively support the view that hedonic and utilitarian motivations can be

conceptualised as organismic states through which external stimuli are translated into behavioural responses.

In digital contexts, platform-level design and marketing instruments constitute important stimuli. Technology acceptance research, most notably the Technology Acceptance Model (TAM), demonstrates that perceived ease of use and usefulness significantly influence attitudes toward technology and behavioural intention to use it (Davis, 1989). In online retail, perceived ease of ordering and navigation have been repeatedly linked to positive attitudes, perceived value, and purchase intentions because they reduce cognitive effort and transaction costs (Davis, 1989; Dewi & Mahemba, 2024). Price promotions and deal proneness, as conceptualised by Lichtenstein et al. (1995), have also been shown to trigger favourable affective responses and increase consumers' likelihood of acting on impulse when confronted with discounts or limited-time offers. Contemporary studies in online and social commerce demonstrate that flash sales, coupons, and limited-time deals raise arousal and perceived economic benefits, thereby increasing impulse purchases (Ngo et al., 2024; Kaur & Sharma, 2024).

Bringing these strands together, the present study positions hedonic motivation, utilitarian motivation, ease of ordering, and flash discounts as Q-commerce stimuli; impulse buying tendency and instant gratification as organismic responses; and purchase intention plus basket size/purchase frequency as behavioural outcomes within an S-O-R configuration. This integrated approach advances prior work by explicitly linking technology-related stimuli (ease of ordering), promotional stimuli (flash discounts), and motivational states to both impulsive mechanisms and concrete purchase outcomes in an ultra-fast delivery context.

2.5 Hypothesis development

2.5.1 Hedonic motivation and purchase outcomes

Prior research consistently shows that hedonic shopping motives—such as enjoyment, adventure, and gratification—encourage exploratory browsing and emotional arousal, which often culminate in impulse buying and increased spending (Arnold & Reynolds, 2003; Babin et al., 1994). Online studies indicate that hedonic value significantly enhances attitudes toward online shopping and is positively associated with online purchase intention and impulse buying tendencies (Saygılı & Sütütemiz, 2020; Widiyanto & Rachmawati, 2024). In a Q-commerce context, where app interfaces are visually rich and delivery are almost immediate, hedonic motivation is therefore expected to stimulate both the intention to purchase and the tendency to expand baskets beyond planned items.

Accordingly:

- **H1a:** Hedonic motivation positively influences consumers' purchase intention on Q-commerce platforms.
- **H1b:** Hedonic motivation positively influences basket size/purchase frequency on Q-commerce platforms.

2.5.2 Utilitarian motivation and purchase outcomes

Utilitarian motivation captures consumers' desire for task efficiency, functional value, and problem-solving in shopping (Batra & Ahtola, 1991; Babin et al., 1994). Empirical work shows that

utilitarian value is a strong predictor of online purchase intention, especially in categories such as groceries where reliability and convenience are salient (Dewi & Mahemba, 2024; Saygılı & Sütütemiz, 2020). Studies also find that utilitarian motives underpin higher purchase frequency and continued use of digital shopping channels, as consumers rely on them to streamline routine procurement tasks (Saygılı & Sütütemiz, 2020). In Q-commerce, utilitarian motivation is therefore expected to drive both stronger purchase intentions and more frequent or larger baskets as consumers leverage the channel to save time and effort.

Thus:

- **H2a:** Utilitarian motivation positively influences consumers' purchase intention on Q-commerce platforms.
- **H2b:** Utilitarian motivation positively influences basket size/purchase frequency on Q-commerce platforms.

2.5.3 Ease of ordering, flash discounts, and impulsive mechanisms

Perceived ease of ordering reflects the degree to which consumers find the Q-commerce app intuitive, user-friendly, and effortless to use (Davis, 1989). TAM-based studies show that ease of use enhances perceived enjoyment and reduces cognitive load, which can foster more spontaneous purchasing because consumers feel less burdened by the transaction process (Davis, 1989; Ngo et al., 2024). In Q-commerce, where ordering can be completed in a few taps, high ease of ordering is expected to strengthen impulse buying tendency by lowering friction and to increase instant gratification by making the acquisition process feel smooth and immediate.

Accordingly:

- **H3a:** Ease of ordering positively affects impulse buying tendency.
- **H3b:** Ease of ordering positively affects instant gratification.

Flash discounts and limited-time promotions are central promotional tools in digital commerce. Lichtenstein et al. (1995) demonstrate that price deals and promotions can generate excitement and perceived value, thereby encouraging impulsive buying among deal-prone consumers. Contemporary work in online and live-stream commerce finds that flash sales and countdown-based promotions increase arousal and urgency, which translate into higher impulse buying behaviour (Kaur & Sharma, 2024; Ngo et al., 2024). In Q-commerce apps, flash discounts are prominently displayed alongside rapid delivery claims, likely enhancing both the urge to buy impulsively and the anticipation of immediate gratification.

Thus:

- **H4a:** Flash discounts positively affect impulse buying tendency.
- **H4b:** Flash discounts positively affect instant gratification.

2.5.4 Mediating roles of impulse buying tendency and instant gratification

Impulse buying tendency has been shown to mediate the relationship between hedonic motives and actual buying behaviour, as hedonic shoppers are more likely to experience and act on purchase urges (Rook & Fisher, 1995; Beatty & Ferrell, 1998). Recent online studies confirm that hedonic value increases arousal

and desire, which in turn intensify online impulse buying and purchase intention (Paramitha, Sulhaini, & Saufi, 2022; Ngo et al., 2024). In Q-commerce, it is reasonable to expect that hedonic and utilitarian motivations heighten impulse buying tendency, which then leads to stronger purchase intention and larger baskets as consumers add more items than originally planned.

Therefore:

- **H5a:** Impulse buying tendency mediates the relationship between hedonic motivation and purchase intention.
- **H5b:** Impulse buying tendency mediates the relationship between hedonic motivation and basket size/purchase frequency.
- **H7a:** Impulse buying tendency mediates the relationship between utilitarian motivation and purchase intention.
- **H7b:** Impulse buying tendency mediates the relationship between utilitarian motivation and basket size/purchase frequency.

Instant gratification is likewise expected to serve as a mediator. Evidence from Q-commerce suggests that consumers who place greater value on immediate delivery report stronger purchase intentions and more frequent ordering, indicating that gratification expectations channel the effects of underlying motivations into behavioural outcomes (Venawat, 2025; Gupta, 2026). Hedonic and utilitarian motives may both enhance instant gratification—hedonic by accentuating enjoyment of quick consumption, utilitarian by highlighting efficiency—thereby increasing purchase intention and basket expansion.

Thus:

- **H6a:** Instant gratification mediates the relationship between hedonic motivation and purchase intention.
- **H6b:** Instant gratification mediates the relationship between hedonic motivation and basket size/purchase frequency.
- **H8a:** Instant gratification mediates the relationship between utilitarian motivation and purchase intention.
- **H8b:** Instant gratification mediates the relationship between utilitarian motivation and basket size/purchase frequency.

2.5.5 Moderating role of income level

Socio-demographic factors such as income can moderate how consumers respond to hedonic and utilitarian motives, promotions, and convenience features. Classical work on shopping value suggests that income influences the trade-off between price sensitivity and time savings, with higher-income consumers often valuing convenience and experiential aspects more highly (Babin et al., 1994; Batra & Ahtola, 1991). In Q-commerce, higher-income consumers may be more responsive to hedonic and utilitarian motivations in forming purchase intentions because the service's premium pricing is less constraining, whereas lower-income consumers may be more cautious about acting on impulses despite similar motivational profiles (Sen, 2024). Income may also condition the impact of impulse buying tendency and instant gratification on purchase intention, as budget constraints moderate how strongly impulses and gratification translate into actual spending.

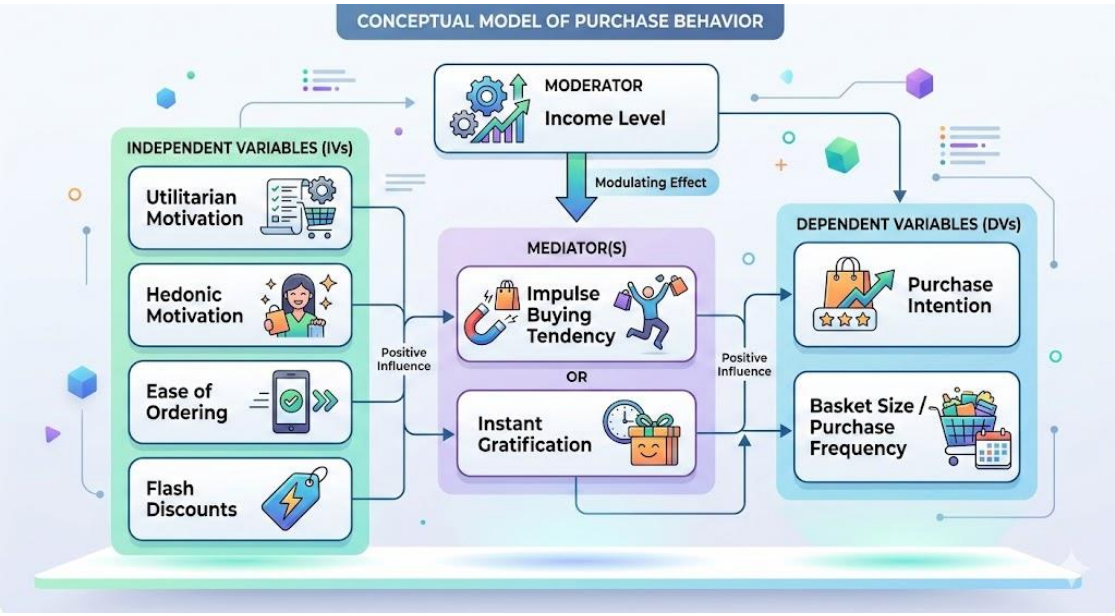
Accordingly:

- **H9a:** Income level moderates the relationship between hedonic motivation and purchase intention, such that the effect differs across income levels.
- **H9b:** Income level moderates the relationship between utilitarian motivation and purchase intention, such that the effect differs across income levels.
- **H9c:** Income level moderates the relationship between impulse buying tendency and purchase intention.
- **H9d:** Income level moderates the relationship between instant gratification and purchase intention.

3. Conceptual Framework Model

The study adopts the Stimulus–Organism–Response (S-O-R) paradigm as the overarching theoretical lens for explaining how Q-commerce stimuli translate into purchase intention and basket expansion through internal motivational and impulsive processes (Mehrabian & Russell, 1974). Within this framework, the exogenous constructs—hedonic motivation, utilitarian motivation, ease of ordering, and flash discounts—constitute the **stimuli** representing psychological and platform-level triggers in the Q-commerce environment. The **organism** layer comprises impulse buying tendency and instant gratification, which capture consumers' trait-like predispositions and state-like emotional responses to these stimuli (Rook & Fisher, 1995; Venawat, 2025). The **responses** are operationalised as purchase intention and basket size/purchase frequency, reflecting behavioural outcomes in terms of future purchase likelihood and the extent of actual or intended expenditure on Q-commerce platforms.

Figure 1: Conceptual Model



Hedonic and utilitarian motivations are theorised to exert direct effects on purchase intention and basket expansion because both experiential enjoyment and functional efficiency are known to drive online shopping behaviour (Babin et al., 1994; Batra & Ahtola, 1991). In Q-commerce, hedonic motivation is

expected to energise exploratory app usage and encourage adding indulgent or unplanned items, whereas utilitarian motivation should underpin the use of rapid delivery for task-oriented, goal-fulfilling purchases. At the same time, these motivations are posited to influence organismic states: hedonic motivation is likely to heighten impulse buying tendency and the desire for instant gratification by emphasising the fun and excitement of immediately receiving desired products, while utilitarian motivation may enhance these states by foregrounding time savings and situational convenience (Paramitha, Sulhaini, & Saufi, 2022; Dewi & Mahemba, 2024). Thus, hedonic and utilitarian motivations are modelled both as direct predictors of behavioural outcomes and as distal antecedents of impulsive mechanisms that mediate their effects.

Platform-related stimuli, namely ease of ordering and flash discounts, enter the framework as additional exogenous drivers. Drawing on TAM and online promotion literature, ease of ordering reflects perceived simplicity and intuitiveness of placing orders via the Q-commerce app (Davis, 1989), while flash discounts capture the perceived intensity of time-bound and quantity-bound promotional offers (Lichtenstein et al., 1995). Both constructs are hypothesised to affect impulse buying tendency and instant gratification rather than directly predicting purchase intention in the conceptual model. This specification reflects evidence that interface fluency and promotional cues primarily operate by stimulating affective and cognitive organismic states—such as arousal, urgency, and desire—which then drive impulsive and intentional behaviour (Ngo et al., 2024). Accordingly, higher ease of ordering is expected to reduce friction and cognitive effort, making it easier for consumers with strong impulses to act quickly, while flash discounts amplify the perceived attractiveness and urgency of purchasing, thereby intensifying both impulsive tendencies and gratification expectations.

Impulse buying tendency and instant gratification occupy central mediating positions in the conceptual framework. Consistent with impulse buying theory, individuals with a higher impulse buying tendency are more prone to experience sudden urges and to convert these urges into purchases, particularly when confronted with hedonic and promotional stimuli (Rook & Fisher, 1995; Beatty & Ferrell, 1998). In the Q-commerce setting, elevated impulse buying tendency is hypothesised to mediate the impact of hedonic and utilitarian motivations on both purchase intention and basket expansion by channelling motivational energy into concrete buying actions. Instant gratification, in turn, is conceptualised as a state-like response that captures consumers' desire to receive products immediately and their impatience with delay (Venawat, 2025). Empirical work in Q-commerce indicates that stronger gratification preferences are associated with higher purchase intention and more frequent ordering, suggesting that instant gratification mediates the relationship between underlying motivations and purchase outcomes (Venawat, 2025; Gupta, 2026). The model therefore posits that both impulse buying tendency and instant gratification jointly transmit the effects of hedonic, utilitarian, and platform stimuli to purchase intention and basket expansion.

Income level is integrated into the framework as a moderator that may condition the strength of selected stimulus–response relationships. Building on prior evidence that income shapes sensitivity to convenience, price promotions, and hedonic benefits (Babin et al., 1994), the model specifies moderation of the paths from hedonic motivation, utilitarian motivation, impulse buying tendency, and instant gratification to purchase intention. The expectation is that higher-income consumers may place greater weight on hedonic enjoyment and time-saving benefits, thereby exhibiting stronger links between these drivers and purchase intention, while lower-income consumers may attenuate or dampen these relationships due to budget constraints. To capture these effects, interaction terms between income level

and hedonic motivation, utilitarian motivation, and impulse buying tendency are included in the structural model, with paths leading to purchase intention and basket expansion as relevant outcomes.

Overall, the conceptual framework integrates motivational, technological, and promotional stimuli with impulsive and gratification-related organismic states to explain two key behavioural responses in Q-commerce: purchase intention and basket expansion. This configuration extends prior S-O-R applications by jointly modelling trait-like impulse buying tendency and state-like instant gratification as dual mediators within an ultra-fast delivery context, while allowing for socio-economic heterogeneity via income-level moderation. The subsequent sections describe the research design, measurement strategy, and PLS-SEM procedures employed to empirically test this framework.

4. Materials and Methods

4.1 Research design and context

The study employed a cross-sectional, quantitative survey design to examine relationships among motivational drivers, impulsive mechanisms, and purchase outcomes in Q-commerce at a single point in time. This design is appropriate for assessing structural relationships between multiple latent constructs in real-world settings where experimental manipulation is impractical and the primary objective is explanatory and predictive rather than causal in a strict sense (Hair & Alamer, 2022). The empirical context comprised active Q-commerce users in six Tier-2 Indian cities—Raipur, Bhilai-Durg, Nagpur, Gwalior, Indore, and Bhopal—which represent rapidly growing urban markets characterised by increasing digital adoption and evolving retail infrastructures.

4.2 Sampling design and data collection

Given the absence of a comprehensive sampling frame for Q-commerce users in these cities, a non-probability convenience–purposive sampling approach was adopted. Respondents were recruited through social media platforms, local community groups, and professional and student networks, with screening questions ensuring inclusion only of individuals who had used Q-commerce platforms for grocery or everyday purchases. This approach is common in exploratory digital consumer research where the target population is dispersed and difficult to reach through probability-based methods, albeit with recognised limitations regarding generalisability (Hair & Alamer, 2022).

Data were collected via an online self-administered questionnaire hosted on Google Forms, which allowed efficient distribution across geographically dispersed respondents and aligned with the digital profile of Q-commerce users. Participants were informed about the academic purpose of the study, anonymity of responses, and voluntary nature of participation, and they provided informed consent before proceeding to the survey. A total of 550 responses were initially gathered, of which 518 were retained after screening for completeness and response quality, yielding the final sample size used in the analysis.

The achieved sample size of 518 substantially exceeds commonly recommended minimum thresholds for PLS-SEM, which often suggest at least 100–150 observations or application of rules such as the “10-times rule” to ensure adequate statistical power (Hair et al., 2019; Hair & Alamer, 2022). Moreover, the sample

comfortably satisfies guidelines that emphasise sufficient power to detect medium-sized effects in complex models with multiple constructs and mediating paths.

4.3 Measurement instruments and scale format

All latent constructs were operationalised reflectively using multi-item Likert-type measures adapted from established scales and contextualised to the Q-commerce setting. Responses were captured on a 5-point agreement scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), a format widely used for attitudinal and intention measures in marketing and information systems research (Babin et al., 1994; Ajzen, 1991).

Hedonic motivation was measured using items adapted from Arnold and Reynolds (2003) and Babin et al. (1994), capturing the extent to which shopping on Q-commerce platforms is perceived as enjoyable, fun, and adventure-like. Utilitarian motivation was measured using items based on Babin et al. (1994) and Batra and Ahtola (1991), reflecting perceptions of shopping as task-oriented, efficient, and goal-driven. Ease of ordering drew on perceived ease-of-use items from the Technology Acceptance Model (Davis, 1989), adapted to assess the simplicity and user-friendliness of placing orders via Q-commerce apps. Flash discounts were operationalised using items inspired by Lichtenstein et al. (1995), focusing on the impact of limited-time offers and promotions on basket expansion and purchase likelihood.

Impulse buying tendency was measured with items adapted from Rook and Fisher (1995) and Beatty and Ferrell (1998), capturing trait-like predispositions to buy spontaneously and act on momentary urges. Instant gratification items were drawn from Venawat (2025) and tailored to assess preferences for immediate delivery, impatience with waiting, and excitement about rapid fulfilment in the Q-commerce context. Purchase intention was measured using items grounded in the Theory of Planned Behaviour (Ajzen, 1991) and adapted for Q-commerce, focusing on future purchase likelihood and continued use intentions (Tilahun et al., 2023). Basket size/purchase frequency was operationalised using items adapted from Mattila and Wirtz (2008) and Gupta and Chaudhary (2020), capturing tendencies to buy more items than planned, spend more than intended, and use Q-commerce frequently for purchases. Income level was measured via self-reported monthly income categories and used as a single-item moderator variable in the structural model.

4.4 Questionnaire development and pilot testing

The initial questionnaire was drafted in English, using simple and contextually relevant wording to ensure comprehension among urban respondents with varying educational backgrounds. The instrument underwent expert review by three academics with expertise in marketing and consumer behaviour, who assessed content validity, clarity, and relevance to the Q-commerce context. Based on their feedback, minor rewording was undertaken to avoid ambiguity, double-barrelled items, and overly technical expressions.

A pilot study was then conducted with approximately 30 Q-commerce users drawn from the target population to assess reliability and face validity. Preliminary analysis indicated that Cronbach's alpha values for all constructs exceeded the commonly accepted threshold of 0.70, suggesting satisfactory internal consistency for the revised scales (Hair & Alamer, 2022). Respondent feedback confirmed that

items were clear and that the typical completion time was reasonable, leading to only minor adjustments in item ordering and instructions before full-scale data collection.

4.5 Common method bias and procedural remedies

Given the cross-sectional, self-reported nature of the data, several procedural remedies were implemented to reduce the risk of common method bias (CMB). These included assuring respondents of anonymity and confidentiality, emphasising that there were no right or wrong answers, and separating predictor and criterion constructs into different sections of the questionnaire to introduce psychological separation. During analysis, collinearity diagnostics were used as a statistical check for CMB following the full collinearity VIF approach proposed by Kock (2015). All indicator-level and construct-level VIF values reported by SmartPLS were below the conservative threshold of 3.3 (for example, 2.20–3.08 across constructs), indicating that common method bias was unlikely to pose a serious threat to the validity of the results (Kock, 2015).

4.6 Data analysis and PLS-SEM rationale

Partial least squares structural equation modelling (PLS-SEM) using SmartPLS 4.0 was employed to estimate the measurement and structural models. PLS-SEM was chosen for several reasons. First, the study's primary goal is prediction-oriented, focusing on explaining variance in key endogenous constructs such as purchase intention, basket size/purchase frequency, impulse buying tendency, and instant gratification, which aligns with the strengths of PLS-SEM (Hair & Alamer, 2022). Second, the model includes multiple mediators and interaction terms, generating a relatively complex structure that PLS-SEM handles efficiently even with moderate sample sizes. Third, PLS-SEM makes minimal distributional assumptions and is robust to non-normal data, a valuable property for consumer survey data that often deviate from multivariate normality (Hair & Alamer, 2022).

The analysis followed standard two-step PLS-SEM procedures (measurement model assessment followed by structural model evaluation) in line with recent guidelines (Hair & Alamer, 2022; Sarstedt, Hair, Pick, Liengaard, Radomir, & Ringle, 2022). For the reflective measurement models, reliability and convergent validity were assessed using indicator loadings, composite reliability, and average variance extracted (AVE). Outer loadings above 0.70 indicate that indicators share substantial variance with their respective constructs, while composite reliability values above 0.70 and AVE values above 0.50 suggest adequate internal consistency and convergent validity (Hair et al., 2019). Discriminant validity was examined using the heterotrait–monotrait ratio of correlations (HTMT), following recommendations that HTMT values clearly below 1, and preferably below 0.85–0.90, indicate satisfactory discriminant validity between construct pairs (Henseler, Ringle, & Sarstedt, 2015; Ringle, Wende, & Becker, 2024).

For the structural model, collinearity among predictor constructs was assessed using inner VIF values, with thresholds below 3–5 indicating acceptable levels of multicollinearity (Hair & Alamer, 2022; Kock, 2015). The explanatory power of the model was evaluated using the coefficients of determination R^2 for endogenous constructs, with values around 0.25, 0.50, and 0.75 often interpreted as weak, moderate, and substantial, respectively, in consumer research contexts (Hair & Alamer, 2022). Out-of-sample predictive relevance was examined via the Stone–Geisser Q^2 statistic obtained through blindfolding, where positive Q^2 values indicate that the model has predictive relevance for a given endogenous construct (Hair & Alamer, 2022). Global model fit was assessed using the Standardised Root Mean Square Residual

(SRMR), with values below 0.08 generally considered indicative of good fit in PLS-SEM applications (Hair & Alamer, 2022).

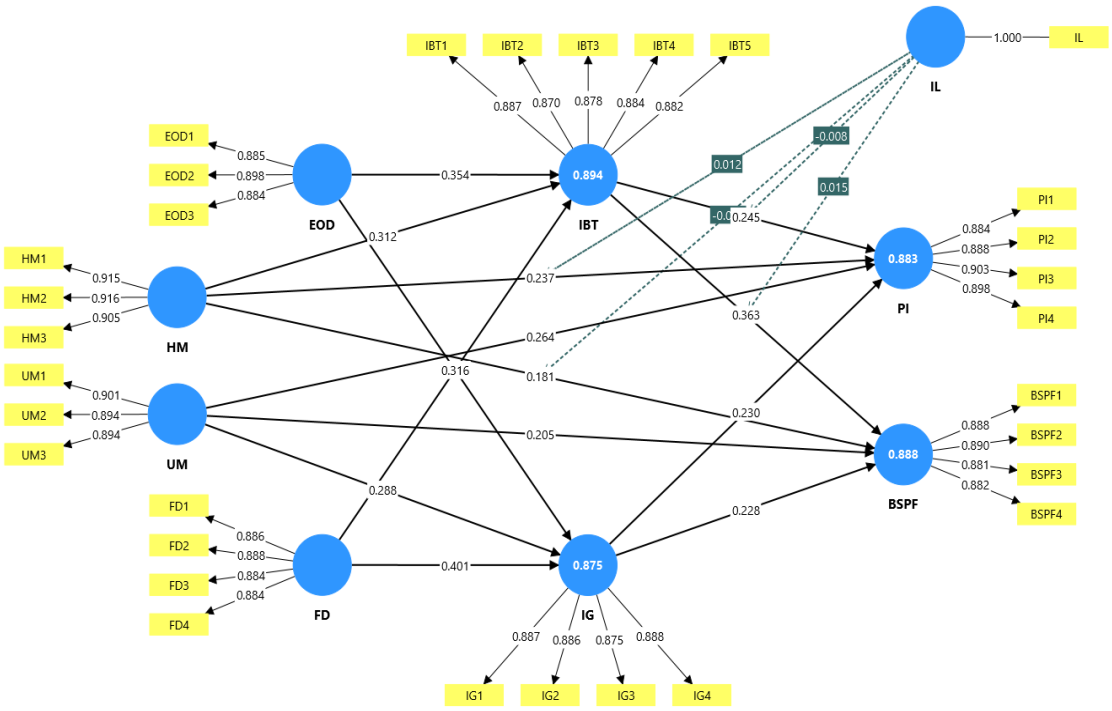
Path coefficients, indirect effects, and interaction effects were evaluated using bootstrapping procedures implemented in SmartPLS, which provide standard errors, t-statistics, and confidence intervals for hypothesis testing (Hair & Alamer, 2022). Two-tailed tests with a 5 per cent significance level were applied to determine the statistical significance of hypothesised relationships. This analytic strategy allows a rigorous assessment of the proposed S-O-R-based model linking motivational, platform, and impulsive constructs to purchase intention and basket expansion in the Q-commerce context.

5. Results, Discussion and Conclusion

5.1 Measurement model results

The reflective measurement model was first evaluated in SmartPLS 4.0. All standardized outer loadings for the indicators of hedonic motivation, utilitarian motivation, ease of ordering, flash discounts, impulse buying tendency, instant gratification, purchase intention and basket size/purchase frequency were high, ranging from 0.870 to 0.916 for the respective construct indicators, exceeding the recommended minimum of 0.70 for indicator reliability (Hair & Alamer, 2022). These results indicate that each item shares substantial variance with its underlying latent construct.

Figure 2: Path Analysis using PLS-SEM



Internal consistency reliability and convergent validity (Table 1) were also satisfactory. Cronbach's alpha values ranged from 0.868 (ease of ordering) to 0.927 (impulse buying tendency), while composite reliability (rho_c) values varied between 0.919 and 0.945, all comfortably above the 0.70 threshold for exploratory and confirmatory research (Hair & Alamer, 2022). Average variance extracted (AVE) values

for all constructs ranged from 0.775 to 0.832, surpassing the 0.50 benchmark and confirming adequate convergent validity.

Table 1: Construct Reliability & Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
BSPF	0.908	0.908	0.935	0.783
EOD	0.868	0.868	0.919	0.791
FD	0.908	0.908	0.936	0.785
HM	0.899	0.899	0.937	0.832
IBT	0.927	0.927	0.945	0.775
IG	0.907	0.907	0.934	0.781
PI	0.916	0.916	0.941	0.798
UM	0.878	0.878	0.925	0.804

Discriminant validity was examined using the Fornell–Larcker criterion and the heterotrait–monotrait ratio of correlations (HTMT). The square roots of AVE (reported on the diagonal of the Fornell–Larcker matrix) were all higher than the corresponding inter-construct correlations, satisfying the Fornell–Larcker criterion (Fornell & Larcker, 1981; Henseler, Ringle, & Sarstedt, 2015). HTMT values were close to 1 for conceptually related constructs such as hedonic motivation, utilitarian motivation, impulse buying tendency, instant gratification, purchase intention, and basket size/purchase frequency, reflecting their theoretical relatedness in the Q-commerce context. While these high HTMT values point to strong associations, they are consistent with the notion that hedonic and utilitarian motives, impulsive tendencies and gratification expectations are closely intertwined in ultra-fast digital shopping environments (Sen, 2024; Ngo et al., 2024).

Collinearity diagnostics based on variance inflation factors (VIF) indicated no problematic multicollinearity. Indicator-level VIFs ranged from 2.20 to 3.08 across constructs, and the interaction terms and the income moderator exhibited VIFs equal to 1.00, all below the conservative threshold of 3.3 suggested by Kock (2015) for ruling out severe common method bias and collinearity issues. Global model fit indices showed good model fit, with SRMR values of 0.026 for the saturated model and 0.029 for the estimated model, both well below the commonly suggested cut-off of 0.08 in PLS-SEM applications (Hair & Alamer, 2022). The NFI of 0.915 further indicates an acceptable level of model fit.

Overall, the measurement model results support the reliability and validity of the reflective constructs, justifying subsequent interpretation of the structural model estimates.

5.2 Structural model results

5.2.1 Explained variance

The structural model demonstrates substantial explanatory power for all endogenous constructs. The coefficient of determination R^2 for basket size/purchase frequency was 0.888 (adjusted $R^2 = 0.886$), indicating that the predictors—hedonic motivation, utilitarian motivation, impulse buying tendency,

instant gratification, and income level and related interactions—explain almost 89 per cent of the variance in basket expansion (Table 2). Impulse buying tendency exhibited an $R^2$of 0.894, and instant gratification an $R^2$of 0.875, reflecting that hedonic motivation, utilitarian motivation, ease of ordering and flash discounts jointly account for a very large share of the variance in these organismic states. Purchase intention showed an $R^2$of 0.883 (adjusted $R^2 = 0.881$), signifying that the model explains more than 88 per cent of the variance in consumers' intention to continue using Q-commerce platforms. These values can be considered substantial in the context of consumer behaviour research (Hair & Alamer, 2022).

Table 2: R-Square Values

	R-square	R-square adjusted
BSPF	0.888	0.886
IBT	0.894	0.894
IG	0.875	0.874
PI	0.883	0.881

5.2.2 Direct effects and hypothesis testing

Path coefficients and their significance levels were obtained through bootstrapping. All substantive paths from motivational and platform-related stimuli to organismic states and responses were positive and statistically significant, whereas moderation effects involving income level were non-significant (Table 3).

Table 3: Path Coefficients (PLS-SEM Output)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
EOD -> IBT	0.354	0.355	0.035	9.980	0.000
EOD -> IG	0.283	0.282	0.039	7.342	0.000
FD -> IBT	0.316	0.315	0.037	8.433	0.000
FD -> IG	0.401	0.401	0.040	10.103	0.000
HM -> BSPF	0.181	0.182	0.040	4.577	0.000
HM -> IBT	0.312	0.312	0.035	9.011	0.000
HM -> PI	0.237	0.237	0.038	6.259	0.000
IBT -> BSPF	0.363	0.362	0.044	8.306	0.000
IBT -> PI	0.245	0.245	0.051	4.826	0.000
IG -> BSPF	0.228	0.229	0.044	5.134	0.000
IG -> PI	0.230	0.231	0.040	5.724	0.000
IL -> BSPF	0.024	0.024	0.015	1.592	0.111
IL -> PI	-0.016	-0.017	0.015	1.092	0.275
IL x HM -> BSPF	-0.013	-0.014	0.034	0.388	0.698

IL x HM -> PI	0.012	0.011	0.036	0.321	0.748
IL x IBT -> BSPF	0.015	0.016	0.036	0.426	0.670
IL x IBT -> PI	-0.008	-0.007	0.037	0.215	0.830
UM -> BSPF	0.205	0.205	0.037	5.529	0.000
UM -> IG	0.288	0.288	0.037	7.673	0.000
UM -> PI	0.264	0.263	0.04	6.615	0.000

For the organismic constructs, ease of ordering and flash discounts both showed strong positive effects on impulse buying tendency and instant gratification. Ease of ordering significantly increased impulse buying tendency ($\beta = 0.354$, $t = 9.980$, $p < 0.001$) and instant gratification ($\beta = 0.283$, $t = 7.342$, $p < 0.001$), supporting H3a and H3b. Flash discounts similarly exhibited significant positive effects on impulse buying tendency ($\beta = 0.316$, $t = 8.433$, $p < 0.001$) and instant gratification ($\beta = 0.401$, $t = 10.103$, $p < 0.001$), confirming H4a and H4b. These findings align with prior evidence that easy-to-use interfaces and time-bound promotions intensify internal urges and gratification expectations in digital shopping (Davis, 1989; Lichtenstein et al., 1995; Ngo et al., 2024).

Hedonic and utilitarian motivations also significantly influenced both organismic and response variables. Hedonic motivation positively affected impulse buying tendency ($\beta = 0.312$, $t = 9.011$, $p < 0.001$) and purchase intention ($\beta = 0.237$, $t = 6.259$, $p < 0.001$), as well as basket size/purchase frequency ($\beta = 0.181$, $t = 4.577$, $p < 0.001$), supporting H1a and H1b. Utilitarian motivation significantly predicted basket size/purchase frequency ($\beta = 0.205$, $t = 5.529$, $p < 0.001$), instant gratification ($\beta = 0.288$, $t = 7.673$, $p < 0.001$), and purchase intention ($\beta = 0.264$, $t = 6.615$, $p < 0.001$), confirming H2a and H2b. These results indicate that both experiential and functional value motivations are important drivers of Q-commerce purchase outcomes, consistent with prior findings in online retail (Paramitha, Sulhaini, & Saufi, 2022; Dewi & Mahemba, 2024).

Regarding the response layer, impulse buying tendency and instant gratification each had positive and significant effects on both purchase intention and basket expansion. Impulse buying tendency increased basket size/purchase frequency ($\beta = 0.363$, $t = 8.306$, $p < 0.001$) and purchase intention ($\beta = 0.245$, $t = 4.826$, $p < 0.001$), in line with expectations that stronger impulsive predispositions translate into more frequent and larger Q-commerce purchases (Rook & Fisher, 1995; Beatty & Ferrell, 1998). Instant gratification also positively affected basket size/purchase frequency ($\beta = 0.228$, $t = 5.134$, $p < 0.001$) and purchase intention ($\beta = 0.230$, $t = 5.724$, $p < 0.001$), underscoring the role of gratification-seeking in shaping Q-commerce behaviour. Together, these findings support the mediating role of impulse buying tendency and instant gratification in the S-O-R framework.

Income level and its interaction terms showed no significant effects on the outcome variables. The direct paths from income to basket size/purchase frequency ($\beta = 0.024$, $t = 1.592$, $p = 0.111$) and purchase intention ($\beta = -0.016$, $t = 1.092$, $p = 0.275$) were non-significant. Likewise, the interaction terms income × hedonic motivation and income × impulse buying tendency did not significantly predict purchase intention or basket expansion (all $p > 0.05$), leading to the rejection of H9a–H9d. This suggests that, in the present sample of Tier-2 city Q-commerce users, the effects of hedonic and utilitarian motivations,

impulse buying tendency, and instant gratification on purchase intention are relatively stable across income groups.

5.3 Mediation analysis

Specific indirect effects were examined to assess the mediating roles of impulse buying tendency and instant gratification (Table 4). Several key double-step mediation paths from platform stimuli and motivations to purchase outcomes via organismic states were statistically significant. For example, the indirect effect of ease of ordering on purchase intention through instant gratification (EOD → IG → PI) was positive and significant ($\beta = 0.065$, $t = 4.306$, $p < 0.001$), indicating that part of the influence of ease of ordering on purchase intention operates through enhanced gratification expectations. Similarly, the indirect effect of ease of ordering on basket expansion via impulse buying tendency (EOD → IBT → BSPF) was significant ($\beta = 0.129$, $t = 6.212$, $p < 0.001$), supporting the view that user-friendly interfaces encourage spontaneous additions to the cart.

Table 4: Specific Indirect Effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
EOD -> IG -> PI	0.065	0.065	0.015	4.306	0.000
UM -> IG -> BSPF	0.066	0.066	0.015	4.521	0.000
EOD -> IBT -> PI	0.087	0.087	0.021	4.079	0.000
FD -> IG -> PI	0.092	0.093	0.019	4.845	0.000
FD -> IBT -> PI	0.077	0.077	0.018	4.333	0.000
HM -> IBT -> PI	0.077	0.076	0.018	4.371	0.000
UM -> IG -> PI	0.066	0.066	0.013	4.900	0.000
EOD -> IG -> BSPF	0.065	0.065	0.016	4.013	0.000
EOD -> IBT -> BSPF	0.129	0.129	0.021	6.212	0.000
FD -> IG -> BSPF	0.092	0.092	0.020	4.472	0.000
FD -> IBT -> BSPF	0.115	0.114	0.020	5.748	0.000
HM -> IBT -> BSPF	0.113	0.113	0.018	6.421	0.000

Flash discounts also exhibited significant mediated effects. The specific indirect effect of flash discounts on purchase intention via instant gratification (FD → IG → PI) was significant ($\beta = 0.092$, $t = 4.845$, $p < 0.001$), as was the indirect path via impulse buying tendency (FD → IBT → PI; $\beta = 0.077$, $t = 4.333$, $p < 0.001$). These findings suggest that flash discounts operate largely by heightening both gratification expectations and impulsive tendencies, which then translate into stronger purchase intentions and larger baskets, replicating mechanisms observed in other digital commerce settings (Ngo et al., 2024; Kaur & Sharma, 2024).

With respect to motivational drivers, hedonic motivation showed a significant indirect effect on purchase intention via impulse buying tendency (HM → IBT → PI; $\beta = 0.077$, $t = 4.371$, $p < 0.001$), supporting

H5a. Utilitarian motivation also exhibited significant indirect effects on purchase intention and basket expansion through instant gratification (UM → IG → PI; $\beta = 0.066$, $t = 4.900$, $p < 0.001$; UM → IG → BSPF; $\beta = 0.066$, $t = 4.521$, $p < 0.001$), confirming H8a and H8b. These patterns imply that both hedonic and utilitarian motives influence Q-commerce outcomes not only directly but also indirectly, through their impact on impulsive dispositions and gratification-seeking states, in line with S-O-R logic and contemporary impulse buying research (Sen, 2024; Ngo et al., 2024).

Taken together, the mediation results provide strong support for the proposed S-O-R configuration in which hedonic and utilitarian motivations, ease of ordering, and flash discounts (stimuli) shape impulse buying tendency and instant gratification (organism), which in turn drive purchase intention and basket size/purchase frequency (responses).

6. Discussion & Conclusion

6.1 Discussion of the outcomes

The findings reinforce and extend prior work on digital impulse buying, hedonic and utilitarian shopping motives, and instant gratification in three main ways. First, both hedonic and utilitarian motivations were found to significantly predict purchase intention and basket expansion in Q-commerce, while also feeding into organismic states such as impulse buying tendency and instant gratification. This dual influence echoes earlier studies in online and mobile commerce that show hedonic value increases enjoyment and propensity for impulse buying, whereas utilitarian value drives deliberate purchase intention and channel usage (Saygılı & Sütütemiz, 2021; Redda, 2020). The present results demonstrate that in ultra-fast delivery contexts, utilitarian motives—such as saving time and completing tasks efficiently—are no less important than hedonic motives in shaping both intention and basket expansion, underscoring the hybrid nature of Q-commerce as both a convenience and a gratification platform.

Second, the strong and significant paths from ease of ordering and flash discounts to impulse buying tendency and instant gratification highlight the central role of platform design and promotional architecture as stimuli in the S-O-R chain. These findings are consistent with prior evidence that easy-to-use interfaces reduce cognitive effort and increase spontaneous purchasing, while time-bound promotions heighten arousal and urgency, leading to more frequent impulsive purchases (Ngo et al., 2024; Kaur & Sharma, 2024). In the Q-commerce setting, where ordering can be completed in a few taps and flash discounts are often integrated with countdowns and push notifications, the results suggest that such features significantly amplify impulsive and gratification-seeking processes, which then manifest in stronger purchase intentions and larger baskets. This extends earlier studies on quick commerce that primarily focused on adoption and satisfaction by explicitly modelling the psychological mechanisms through which platform stimuli influence behaviour (Gupta, 2026; Venawat 2025).

Third, the mediating roles of impulse buying tendency and instant gratification confirm the relevance of treating these constructs as central organismic states in an S-O-R model of Q-commerce rather than as peripheral outcomes. In line with classical impulse buying theory and recent digital extensions, the results show that hedonic and utilitarian motivations, alongside platform-level stimuli, exert their effects on purchase intention and basket expansion partly by strengthening consumers' predisposition to act on

purchase urges and their desire for immediate fulfilment (Rook & Fisher, 1995; Beatty & Ferrell, 1998; Ngo et al., 2024) This supports calls in the literature to foreground impulsive and gratification-related mechanisms when analysing on-demand and instant-delivery services, which may systematically re-shape self-control and planning in everyday consumption (Gupta, 2026; Kaur & Sharma, 2024).

The non-significant moderation effects of income level provide an interesting counterpoint to conventional expectations that higher-income consumers would be more responsive to convenience and hedonic benefits, while lower-income consumers might be more constrained in translating impulses into purchases. In this Tier-2 city sample, the motivational and organismic determinants of purchase intention and basket expansion appear to operate similarly across income segments, suggesting that once consumers are active Q-commerce users, their behavioural responses to hedonic, utilitarian, and platform stimuli may be relatively homogeneous with respect to income. This aligns with some recent Q-commerce analyses indicating that demand for speed and convenience is diffusing across socio-economic strata in urban India (Siwach, 2026).

6.2 Conclusion

This study developed and empirically tested an S-O-R-based structural model to explain how hedonic and utilitarian motivations, ease of ordering, and flash discounts influence impulse buying tendency, instant gratification, purchase intention, and basket expansion in Q-commerce among users in six Tier-2 Indian cities. Using PLS-SEM on data from 518 respondents, the findings reveal that both hedonic and utilitarian motivations are significant drivers of Q-commerce behaviour, that platform-level stimuli strongly shape impulsive and gratification-seeking states, and that impulse buying tendency and instant gratification serve as key mediators linking stimuli to purchase outcomes. Income level did not significantly moderate these relationships, suggesting that the psychological mechanisms underlying Q-commerce use are broadly similar across income groups in this context.

Theoretically, the research extends S-O-R applications to the ultra-fast delivery domain by integrating motivational drivers, technological convenience, promotional intensity, and impulsive mechanisms within a single coherent framework, and by jointly modelling trait-like impulse buying tendency and state-like instant gratification as organismic mediators. It enriches the emerging Q-commerce literature by moving beyond adoption and satisfaction perspectives to explicate the psychological processes through which Q-commerce stimuli translate into increased purchase intention and basket expansion (Gupta, 2026; Ngo et al., 2024). The next section builds on these findings to delineate managerial and academic implications, acknowledge study limitations, and outline directions for future research on Q-commerce and digitally mediated impulsive consumption.

7. Managerial and Academic Implications, Limitations and Future Scope

7.1 Managerial implications

The findings offer several actionable insights for Q-commerce managers and platform designers. First, the strong effects of both hedonic and utilitarian motivations on purchase intention and basket expansion suggest that effective Q-commerce strategies must simultaneously address functional efficiency and experiential appeal. Platforms should therefore invest in reliable assortment, on-time delivery and

transparent pricing to reinforce utilitarian value, while also curating engaging visuals, personalised recommendations and contextual narratives (for example, "movie-night combos" or "midnight cravings") that reinforce hedonic enjoyment. Aligning interface content and communication with both value logics can help convert routine users into higher-engagement customers.

Second, the significant influence of ease of ordering on impulse buying tendency and instant gratification underscores the importance of interface simplicity. Managers should minimise the number of steps from product selection to order confirmation, streamline login and payment processes (for example, one-tap checkout, stored addresses and wallets), and reduce cognitive overload by avoiding cluttered screens. However, given the strong indirect links to impulsive behaviour, platforms should also incorporate responsible design choices—such as clear order summaries and easy cancellation options—to mitigate post-purchase regret and potential over-consumption.

Third, the powerful effects of flash discounts on both impulsive mechanisms and purchase outcomes highlight promotions as a double-edged managerial tool. Time-bound offers and dynamic deals can be leveraged to drive basket expansion, clear perishable inventory, and stimulate off-peak demand, but overuse may encourage unhealthy spending patterns and commoditise consumer expectations around discounts. Managers could therefore adopt promotion strategies that are targeted and episodic rather than ubiquitous, and couple them with budgeting tools or soft safeguards (for example, reminders about recent spending) to foster more sustainable long-term relationships.

Fourth, the central mediating role of instant gratification indicates that the perceived reliability of ultra-fast delivery is itself a core value proposition. Operations and marketing teams should jointly ensure that promised delivery windows are realistic and consistently met; communication around delays should be proactive and transparent. Highlighting delivery performance metrics (for example, "95% of orders delivered in 20 minutes") within the app can further strengthen gratification-related beliefs and reinforce purchase intention, but only if operational capabilities consistently support such claims.

Finally, the non-significant moderating effect of income level suggests that, within the studied Tier-2 urban context, Q-commerce appeals across income segments through broadly similar psychological mechanisms. Managers can therefore prioritise behavioural and psychographic segmentation (for example, impulse-prone vs. planner, gratification-seekers vs. routine replenishment users) rather than relying solely on income brackets. Tailoring communication, promotion intensity, and assortment to these behavioural segments may be more effective than purely socio-demographic targeting.

7.2 Academic implications

The study contributes to academic discourse at the intersection of consumer behaviour, digital marketing, and retailing in several ways. It extends S-O-R applications into the under-explored domain of ultra-fast Q-commerce by explicitly modelling hedonic and utilitarian motivations, ease of ordering, and flash discounts as stimuli; impulse buying tendency and instant gratification as organismic states; and purchase intention and basket expansion as responses. Conceptualising impulse buying tendency (trait-like) and instant gratification (state-like) as dual mediators enriches the understanding of how enduring dispositions and situational states jointly shape digital consumption outcomes.

The integration of technology-related constructs (ease of ordering) and promotion-related constructs (flash discounts) within the same S-O-R architecture advances prior work that typically focuses either on interface usability or on promotional cues in isolation. By demonstrating strong indirect effects of these platform stimuli via impulsive and gratification mechanisms, the study suggests that future digital-commerce research should pay closer attention to the interplay between technology design, promotion intensity, and psychological outcomes rather than treating them as separate streams.

Methodologically, the use of PLS-SEM with a complex model that includes multiple mediators and interaction terms illustrates the value of prediction-oriented structural modelling in emerging digital contexts. The high R^2values for impulse buying tendency, instant gratification, purchase intention and basket expansion show that a relatively parsimonious set of motivational and platform variables can explain a substantial share of variance in Q-commerce behaviour. This provides a useful starting point for subsequent studies seeking to incorporate additional constructs (for example, perceived risk, habit, or social influence) into more elaborate prediction models.

7.3 Limitations

Several limitations should be acknowledged when interpreting the findings. First, the study relied on cross-sectional self-report data, which constrain causal inference and may be affected by common method variance despite procedural and statistical remedies. Longitudinal or experimental designs would be better suited to establishing temporal precedence and isolating the causal impact of specific stimuli, such as changes in discount frequency or interface redesigns.

Second, the sample was obtained through non-probability convenience–purposive sampling in six Tier-2 Indian cities, limiting the generalisability of the results beyond similar urban contexts. Consumers in metropolitan cities, rural areas, or other countries may differ in their motivations, impulsive tendencies, and access to Q-commerce services, which could alter the observed relationships. Future work should test the proposed model across diverse geographies and cultural settings.

Third, the study focused on a specific set of constructs and did not include potentially relevant variables such as perceived risk, trust in delivery personnel, environmental concerns about rapid delivery, or social influence from peers and family. These factors may moderate or mediate some of the relationships identified and could be integrated into future models for a more holistic understanding of Q-commerce behaviour.

Fourth, income was captured as a self-reported categorical variable, which may not fully capture the nuances of consumers' financial constraints, disposable income, or subjective perceptions of affordability. More granular measures, including expenditure diaries or objective income data (where ethically and practically feasible), could refine the analysis of socio-economic heterogeneity.

7.4 Future research directions

Building on these limitations, several avenues for future research emerge. First, longitudinal studies could track changes in impulse buying tendency, instant gratification, and Q-commerce usage over time, particularly as platforms adjust their delivery promises, promotion strategies, or regulatory environments evolve. Such designs would clarify whether repeated exposure to ultra-fast delivery strengthens, stabilises, or attenuates impulsive and gratification-seeking behaviours.

Second, cross-cultural and cross-market comparisons would be valuable in assessing whether the S-O-R mechanisms identified here generalise to other countries and retail contexts. Comparative studies between developed and emerging markets, or between markets with different regulatory constraints on dark stores and delivery riders, could reveal how institutional and infrastructural factors shape Q-commerce's psychological impact.

Third, experimental and quasi-experimental designs could be used to manipulate specific stimuli—such as countdown timers, presentation of discounts, or default basket suggestions—and observe their effects on impulse buying and gratification measures. Embedding such experiments within live platforms (for example, A/B tests) would provide ecologically valid evidence and help refine theories of digital choice architecture.

Fourth, future work could integrate additional theoretical perspectives, such as self-regulation theory, goal-systems theory, or habit formation models, to explore how consumers manage tensions between impulsive gratification and longer-term budgeting or health goals in Q-commerce environments. Investigating the role of self-control, financial literacy, and digital well-being interventions could yield insights into how platforms and policymakers might support more sustainable consumption patterns.

Finally, researchers could examine broader societal and ethical implications of Q-commerce, including its environmental footprint, labour conditions in delivery networks, and potential contributions to over-consumption and waste. Interdisciplinary studies that connect individual-level psychological mechanisms with meso-level organisational practices and macro-level societal outcomes would offer a richer understanding of Q-commerce as a complex socio-technical system rather than merely a transactional convenience channel.

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