

A Study on Gen Z Students' Readiness to Adopt AI Shopping Agents in Indian Retail

Deepa Venkatesh^{1*}, Nagavarsha B N² and Vibha Pata³

¹Assistant Professor, Department of Commerce & Management, Transcend Degree College, Bangalore, Karnataka, India

²Student (III Year B.Com), Department of Commerce, Transcend Degree College, Bangalore, Karnataka, India

³Student (I Year B.Com), Department of Commerce, Transcend Degree College, Bangalore, Karnataka, India

*Corresponding Author Email: Deepa.v@transcendgroup.org

Abstract

Agentic Commerce in recent, is the contemporary and accelerating trend in e-shopping where AI agents autonomously, of course with prompts - browse, compare, suggest, shortlist, suggest and purchase products on behalf of users - without waiting for them to finalize the purchase. This rising technical phenomenon is already visible in 10 minutes delivery online platform like Blinkit, Zepto, Instamart, BigBasketNow and ONDC. However, negligible research has investigated- whether young Indian consumers are actually ready to use it. This research study examines the factors that influence Generation Z undergraduate students aged between 18 to 21 in adopting AI shopping agents in the Indian retail context. Using mixed methods research design - an online survey of 113 Gen Z and three focus group discussions with 96 students across three undergraduate commerce classes - five hypotheses embedded in UTAUT2 and Trust-Risk theoretical frameworks were tested for. The collected survey data was analyzed using descriptive statistics, Karl Pearson's Correlation & Cronbach's Alpha in MS Excel. Focus group data was analyzed using thematic analysis. Results showed that the primary drivers - like perceived usefulness, social influence and consumer trust prominently, optimistically influenced the AI agent's adoption. While the barriers - privacy risk and loss of control have contradictory scenarios expressed in the survey. The paper concludes with practical recommendations to people in the immediate technical environment.

Keywords: Agentic Commerce, AI Shopping Agents, Gen Z, Consumer Trust, India, Privacy Risk

1. Introduction

Shopping, in India has changed drastically over the past few years. From going store to store for the best price and quality- we have shifted our focus to apps like Amazon India, Flipkart, Meesho, Myntra, Ajio, Nykaa and many more. Then came these quick commerce apps like Blinkit, Zepto, Instamart, BigBasketNow and others- where groceries arrive instantly. The next big shift is now here. AI powered shopping agents which aid us to do all the shopping work, comparing, analysis and more- without any manual efforts from the consumer end.

This phenomenal concept is known as Agentic Commerce. An AI shopping agent gets to know one's preferences, compares prices across various e-platforms and purchases the goods/services autonomously for the benefit of the consumers. For example, a consumer can prompt, instructing "order my usual grocery list every month on 5th" and the agent does all the shopping. Companies like Amazon (through Rufus) and Perplexity Shopping have already come up with their early versions of such agents as mentioned. In India, the government's Open Network for Digital Commerce (ONDC) and the Unified Payments Interface (UPI) provide a readymade infrastructure for AI assisted commerce to scale rapidly (NASSCOM, 2024).

However, despite all these technologies and their readiness, a major barrier from the consumer side: trust factor. Delegating purchase decisions and providing access to one's financial data, that too, to an AI agent is a prominent and nonnegligible act of trust. Establishing trust in this emerging concept- an autonomous concept, is far from reliability and difficult to establish. This stands true majorly for the current young generation of Indian consumers who are digitally active and participative but also really cautious about their financial data and self-privacy concerns.

This study focuses on Generation Z college students aged from 18 to 21. Currently they are most digitally active and commercially relevant. India has the world's largest Gen Z population with almost over 375 million individuals (UNICEF, 2021). Understanding what makes this set of population go ahead or step back in adopting this new concept of agentic commerce is both academically and practically important, also being valuable for every business.

1.1 Research Objectives

This study has been designed on the basis of the following general objectives:

- * Identification of the prime factors that influence the Gen Z consumers' readiness to adopt AI shopping agents in Indian retail market.
- * Examination of the role of consumer trust and perceived risk in shaping adoption willingness.
- * Exploration of qualitative attitudes, concerns and the conditions under which Gen Z would consider adopting agentic commerce.
- * Offering practical recommendations for the retail businesses, AI developers and the policymakers based on the empirical findings.

2. Literature Review

2.1 From E-Commerce to Agentic Commerce

Online commerce in India began with platforms like Flipkart (2007) and Amazon India (2013), which gave consumers the convenience of shopping from home. However, the consumer remained in complete control — searching, selecting and paying manually. AI systems in this phase only suggested products based on past behaviour (Balasubramanian et al., 2020).

Agentic commerce represents a qualitatively different stage. Here the AI does not suggest — it acts. It places orders, tracks deliveries and manages returns autonomously. Brynjolfsson and McAfee (2014) described this kind of intelligent automation as the ‘Second Machine Age,’ where machines take over cognitive and decision-making tasks, not just physical ones. In India, Shodhganga research on digital retail transformation confirms that Indian consumers are moving toward higher automation expectations in their shopping journeys (Sharma, 2022).

2.2 Consumer Trust in Online Platforms

Trust is the foundation of any commercial relationship. In online shopping, personal trust in a shopkeeper is replaced by trust in the platform, the technology and the brand. Pavlou (2003) demonstrated that consumer trust in an online vendor directly and significantly increases purchase intention, even for first-time users. McKnight and Chervany (2001) further identified three dimensions of trust: competence (can the system deliver?), benevolence (will it act in my interest?) and integrity (will it be honest?).

For AI agents, trust is more complex. An AI has no human accountability. If it makes a wrong purchase, who is responsible? Indian research by Sinha and Mukherjee (2021), published in *Vikalpa* — a SAGE journal indexed on Shodhganga — found that Indian consumers require significantly higher trust thresholds before adopting new financial technologies compared to Western markets. This is particularly relevant for agentic commerce where financial delegation is involved.

2.3 Technology Adoption — UTAUT2

The Technology Acceptance Model (Davis, 1989) proposed that perceived usefulness and ease of use are the primary drivers of technology adoption. This has been validated across many Indian contexts including mobile banking adoption (Sharma & Govindaluri, 2014) and UPI payments (RBI Annual Report, 2023). UTAUT2- Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2012) extended this model by adding social influence — the role of peers and family in adoption decisions — which is especially relevant for young Indian consumers who are strongly peer-influenced.

2.4 Perceived Risk and Privacy

Featherman and Pavlou (2003) identified privacy risk — the fear that personal data will be misused — as one of the strongest barriers to online service adoption. For agentic commerce, this risk is amplified because AI agents require access to payment credentials, purchase history and behavioural data. India's Digital Personal Data Protection Act (2023) reflects growing government concern about this issue. Shodhganga-indexed research by Gupta and Arora (2020) on Indian e-commerce consumers similarly found data security concerns to be a primary deterrent to adoption of newer digital retail technologies.

2.5 Research Gap

While substantial literature exists on e-commerce trust, mobile payment adoption and AI in retail- globally, no published study specifically examines agentic commerce adoption among Indian Gen Z consumers. Existing Indian research focuses on UPI, mobile banking and general e-commerce platforms — not on AI agents that act autonomously in commercial transactions. This study directly addresses this gap.

3. Theoretical Framework and Hypotheses

This study incorporates & blends two established theoretical frameworks: UTAUT2 (Venkatesh et al, 2012) which recognizes the growth catalysts of technology deployment & the Trust-Risk Framework (Pavlou, 2003) which recognizes the barriers. Together they provide a complete picture of Gen Z consumers factors that pulls them towards Agentic commerce and those that hold them back.

Table 1: Integrated Research Framework

UTAUT2 DRIVERS		Readiness to Adopt Agentic Commerce
Perceived Usefulness	(+)	
Social Influence	(+)	
TRUST-RISK BARRIERS		
Consumer Trust	(+)	
Privacy Risk	(-)	
Loss of Control	(-)	

On basis of the above framework, the following hypotheses are advocated:

H1: *Perceived usefulness of AI shopping agents is favorably associated with Gen Z consumers' readiness to adopt agentic commerce.*

H2: *Social influence is undoubtedly & supportively associated with Gen Z consumers' readiness to adopt agentic commerce.*

H3: *Consumer trust in AI agents is positively associated with Gen Z consumers' readiness to adopt agentic commerce.*

H4: *Perceived privacy risk is critically, pessimistically associated with Gen Z consumers' readiness to adopt agentic commerce.*

H5: *Perceived loss of control is adversely associated with Gen Z consumers' readiness to adopt agentic commerce.*

4. Research Methodology

4.1 Research Design

This study blends two methods of research design - combining together a quantitative online survey with qualitative research focus group discussions. This mix method designs are

most relevant for current research areas & studies because quantitative data reveals what respondents feel while qualitative data explain why they think so. Since agentic commerce is the newest concept especially in Indian scenario, this multi-duplex approach ensures both depth & breadth of understanding.

4.2 Quantitative Phase — Online Survey

An online survey was designed with the help of Google Forms- distributed through WhatsApp and other communication channels among the designated age groups. The survey aimed at reaching- generally the undergraduate students aged from 18 to 21 across various colleges in Bangalore. The survey began with a brief description of the concept of AI shopping agent for the thorough understanding of the respondents. It consisted of 18 questions across seven sections, measuring six constructs using a 5-point Likert scale (1 = Strongly Disagree to 5= Strongly Agree).

Survey measures were adapted from established and widely cited scales: Perceived Usefulness from Davis (1989), Social Influence from Venkatesh et al., (2012), Consumer Trust from McKnight & Chervany (2001), Privacy Risk from Featherman and Pavlou (2003), Loss of Control from Lee and See (2004) and Willingness to Adopt from Pavlou (2003). A total of 113 valid responses were collected. The data hence collected was analyzed using descriptive analysis, Karl Pearson's Correlation Analysis tools in Microsoft Excel. Also, Cronbach's Alpha tool in Python was used for reliability testing.

4.3 Qualitative Phase — Focus Group Discussions

Three focus group discussions were conducted on the college campus with undergraduate students from three classes: II Yr BBA (16 Students), I Yr BBA (23 Students) and I Yr B. Com (57 Students) for a total of 96 participants. Sessions lasted 45 to 60 minutes each and were moderated by a faculty member. Both written notes and audio recording were used. A structured discussion guide with 17 open-ended questions covering all five hypothesis themes was used. Responses were analyzed using thematic analysis to identify the prominent patterns across the three groups.

4.4 Sample Profile

The following table presents the demographic profile of the questionnaire survey respondents.

Table 2: Demographic Profile of Survey Respondents (n=113)

DEMOGRAPHIC VARIABLES	CATEGORY	FREQUENCY	PERCENTAGE
AGE	18 years	30	26.5%
	19 years	42	37.2%
	20 years	27	23.9%
	21 years	14	12.4%
GENDER	Female	60	53.1%
	Male	51	45.1%
	Prefer not to say	2	1.8%
ONLINE SHOPPING FREQUENCY	Daily	7	6.2%
	Weekly	25	22.1%
	Monthly	38	33.6%
	Rarely	43	38.1%

5. Findings and Results

5.1 Survey Findings — Descriptive Statistics and Reliability

The following table displays the mean scores, standard deviation and Cronbach's Alpha values for all constructs measured in the survey.

Table 3: Descriptive Statistics and Reliability Analysis

CONSTRUCT	HYPOTHESIS	MEAN	STANDARD DEVIATION	CRONBACH'S ALPHA	RELIABILITY
Perceived Usefulness	H1	3.43	0.93	0.756	Acceptable
Social Influence	H2	3.22	1.06	0.808	Good
Consumer Trust	H3	2.80	1.02	0.873	Good

Privacy Risk	H4	4.00	1.04	0.793	Acceptable
Loss of Control	H5	4.14	0.92	0.629	Borderline/ Questionable
Willingness to Adopt	Direct Variable	3.15	0.95	0.873	Good

To decipher, Loss of Control has the highest mean (4.14/5) followed by Privacy Risk (4.00/5) denoting these as the substantive concerns among Gen Z Students. Consumer Trust the lowest (2.80/5) validating that students generally do not trust AI agents with their finances. Readiness to adopt was slightly just above the midpoint (3.15/5) affirming their hesitance to adopt. However, all constructs showed acceptable reliability ($\alpha > 0.70$) except Loss of Control ($\alpha = 0.629$) which can be regarded as a limitation.

5.2 Survey Findings — Correlation Analysis & Hypothesis Testing

Karl Pearson's Correlation Analysis was utilized to test the five hypotheses. The following table shows the results:

Table 4: Karl Pearson's Correlation Results — Hypothesis Testing

HYPOTHESES	VARIABLE	CORRELATION (r)	DIRECTION	SUPPORTED?
H1	Perceived Usefulness	0.628	Positive	Yes
H2	Social Influence	0.669	Positive	Yes
H3	Consumer Trust	0.637	Positive	Yes
H4	Privacy Risk	0.095	Expected Negative	No
H5	Loss of Control	0.017	Expected Negative	No

H1, H2 and H3 are all evidently validated with correlation values above 0.60, indicating strong positive relationships with readiness to adopt. To flag are H4 & H5, privacy risk and loss of control - are not numerically & statistically supported in the survey despite being the most frequently mentioned concerns in focus groups.

5.3 Focus Group Findings — Thematic Analysis

The pattern analysis of focus groups data across all the three classes revealed five overarching themes, which in turn are mapped to the research's hypotheses. The following table indicates the sentiments of the focus groups and their prominence for the study.

Table 5: Focus Group Thematic Findings - Barriers Vs Drivers

THEME	REVEALING PATTERNS	SIGNIFICANT FINDINGS
Perceived Usefulness (H1)	Mixed-Conditional	Useful for groceries, milk, fruits, vegetables and repeats only
Social Influence (H2)	Partial-Class dependent	Peer influence works; influencers rejected
Consumer Trust (H3)	Low-Conditional	Trust rises sharply with known brands and vice versa
Privacy Risk (H4)	Very high concern	Card details-firmly NO; Preferences-OK
Loss of Control (H5)	Very high concern	AI must always confirm before buying

Pattern 1 — Perceived Usefulness (H1): Conditional Support

The students of all the classes accepted AI shopping agents could be beneficial but only for less risky, day to day, regular categories of goods like groceries, fruits & vegetables, daily essentials, medicines and others. Paramount hesitation was expressed for fashion, clothing and textiles ('I need to touch and feel the fabric') and electronic goods ('Too risky- what if it buys the wrong model?'). 'Assist, don't replace' – is the ultimate conclusion that was revealed across all the class responses.

"I would use it for ordering my protein supplements every month — same brand, same flavour. But for clothes? Never." — I Yr BBA Student

Pattern 2 — Social Influence (H2): Partial Support

This hypothesis generated varied responses in different classes. Students in I & II Yr BBA were open to purchase of AI agents exclusively for their shopping, especially if close peers recommended them. But I Yr BCom - the largest class displayed strong autonomy, with greater number of students rejecting peer influence. Influencer Marketing on social platforms were in a whole, dismissed as paid promotion. Only two students across all the class groups agreed for influencer content, provided they are the most popular, relatable and reliable.

"Influencers do it for money. That doesn't tell me the app is actually trustworthy." —

II Yr BBA Student

Pattern 3 — Consumer Trust (H3): Low but Brand Dependent

The most debated theme of focus groups was - TRUST. Students initially and majorly said they would not trust AI handling their finances. Interestingly, trust improved drastically when the agent was promoted by an established brand. In the show of hands, 6 of 16 students in I Yr BBA, 13 of 23 students in II Yr BBA and 9 of 57 students in I Yr B. Com declared they would use an AI agent when launched by Amazon/Flipkart - a prominent increase from the initial response.

"If Amazon launches it, I might try. But some random new app? No way." —

I Yr BBA Student

Pattern 4 — Privacy Risk (H4): Strongly Felt

Privacy risk was pervasive response. The students had given themselves a constant boundary - they didn't mind their personal preferences being shared, UPI ID was somewhat acceptable but card details were not acceptable- especially the sharing of passwords & OTPs was absolute no. When enquired about their fear for hackers, scammers, cyber criminals, data breaches and identity theft - majority agreed with these multi layered security anxiety.

"Preferences are fine. But my card details? Absolutely not." — I Yr B. Com Student

Pattern 5 — Loss of Control (H5): Strongly Felt

Loss of Control was the most expressed concern across all the students of various classes. Almost everyone wanted their AI agent to seek approval before making a purchase on their behalf. In I Yr B. Com, 12 out of approximately 57 students voted to preserve the ultimate decision making for themselves. There was universal rejection for complete autonomous purchasing among all responses.

"What if my preferences have changed? What if I want something different that week? The AI doesn't know that." — I Yr BBA Student

Nevertheless, there was a notable predominant environment concern that was raised by a student of I Yr B. Com: questioning the sustainability of large-scale AI deployment- AI data centres consuming gallons of water and huge amounts of energy. This concern clearly reflects Gen Z's broader thinking towards sustainability driven approach to technology evaluation- beyond all kinds of personal risk.

6. Discussion

This research study paints a nuanced portrait of Gen Z's relationship and attitude with agentic commerce - curious yet cautious, value-convenience but fear-loss of control, open to experimentation but not commitment, trust oriented rather than being feature orientated.

The strong quantitative support for H1, H2, H3 with strong correlation of 0.628, 0.669 and 0.637 respectively confirms that these are the rewarding factors/ readiness of AI agent adoption. Among these, social influence was the strongest correlation - informing that peer adoption and word of mouth would pressurize & accelerate the adoption of agentic commerce for shopping among Gen Z in Bangalore. This goes hand in hand with UTAUT2's emphasis on social influence as a significant driver in self-urged adoption of technology (Venkatesh et al., 2012)

What interests, is the fact that findings of quantitative & qualitative outcomes for H4 and H5 are contradictory. In the study, privacy risk & loss of control showed close to zero correlation (0.095 & 0.017 respectively) with adoption readiness. However, in focus groups, these two were consistently and willingly discussed concern among the students of all the three classes. This may be due to the survey behaviour gap - which reflects students verbally expressed concerns but- their actual adoption intentions are driven more by perceived benefits & trust rather than the abstract risks involved.

In association with brand trust, the Gen Z willingness to adopt to agentic commerce by Amazon / Flipkart was considerably high and has significant practical implications. It infers that agentic commerce adoption in India will be driven by established dominant players rather

than new entrants, at least in the near future. This is in line with Sinha and Mukherjee's (2021) finding that Indian consumers require established institutional trust signals before adopting new financial technologies.

Apparently, a key finding- Gen Z's acceptance for AI autonomy for daily essentials but rejection for fashion and electronics - mirrors a natural adoption pathway - starting with low involvement, routine categories and gradually expansion as trust builds over time.

7. Recommendations and Suggestions

7.1 For Online & Offline Retailers

Retailers should act smart by launching AI shopping agents - initiating with daily essential categories where consumer resistance is absolutely low. Every purchase must be finalized explicitly by the user - confirmation before execution becomes compulsory. Fully autonomous shopping shall only discourage adoption. Instead of influencer marketing, trust building should happen on- complete reliance on brand reputation & demonstrated reliability. DPDP Act norms and policies must be adhered for keeping the customer data transparent, explicit and minimal.

7.2 For AI Developers

AI developers, while designing AI agents for Indian markets must prioritize transparency - explaining what the agent does at every step of shopping. The users should be to be enabled to configure their category restrictions and budget limits. The agent must never exceed the configured spending limits. A stable, clear and accessible mechanism with human dominance is the most essential tool for building sustainable confidence among consumers.

7.3 For the Government & Policymakers

India's Digital Personal Data Protection Act (2023) provides a foundational framework - especially for personal data processing. However, specific norms & policies for AI agents with commercial transactional authority are yet to be added. Regulatory clarity on who is liable when an AI agent makes a wrong purchase - is not yet to be included in accountable frameworks of the act. Consumer grievances redressal mechanisms in respect to agentic commerce is the primary need for the prosperity of AI agents.

7.4 For Educational Academies & Institutions

Business Schools and all Commerce Department across the globe should include AI Literacy and agentic commerce in their curriculum. Gen Z students who have learnt how agentic commerce functions - including their pros and cons - will be able to make informed adoption decisions and shall be well prepared for careers in AI - driven retail formats.

8. Limitations of the Study

This study, while insightful, has many limitations that should be considered when analyzing and interpreting the outcomes. Firstly, the questionnaire survey sample of 113 students from a single geographic area- Bangalore limits how far the findings can represent the broader Indian Gen Z population. Secondly, the focus group participants were drawn from the same educational institution, which may lead to shared institutional biases in responses. Thirdly, the study is cross-sectional — it captures attitudes at a single point in time and cannot show how trust and adoption intentions may change as agentic commerce becomes more familiar.

Fourth, the Cronbach's Alpha for Loss of Control ($\alpha = 0.629$) fell slightly below the standard of 0.70, suggesting that the two structured questions used to measure this construct may not have been fully consistent. Future studies should consider using more structured questions to capture this construct better. Further, this study used hypothetical contexts rather than actual AI agent experiences, which may lead to responses that differ from real-world behaviour when interacting with such agentic systems.

9. Conclusion

This study's objective was to understand how it is led, what holds back, Gen Z Students' readiness to adapt to agentic commerce in the Indian retail market. Using mixed-methods approach combining the data of an online survey of sample 113 students and three focus group discussions with 96 participants, five hypotheses embedded in the UTAUT2 and TrustRisk frameworks was tested for.

The research study findings have confirmed that perceived usefulness, social influence and consumer trust are the catalysts of agentic commerce adoption readiness. However, privacy risk and loss of control- which were deep and consistently felt in focus groups discussions did not fail to turn out as a statistically significant barrier in the quantitative survey.

The comprehensive conclusion is evident - Gen Z students in India want AI as a smart shopping assistant but not as an autonomous decision maker. They are receptive to AI that suggests, compares and reminds but not that AI which would buy without asking. Building trust - through transparency, accountability, brand credibility, user control and demonstrated reliability is the overarching challenge for agentic commerce in India.

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