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Artificial Intelligence in Commerce: India's Path Towards Human-Centered Innovation

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Abstract:

This paper explores the role of Artificial Intelligence (AI) in commerce through primary data collected from 120 respondents (60 students, 40 consumers, and 20 managers) in India. The study highlights awareness, trust, usage, concerns, and preferences regarding AI in business, marketing, and finance. Findings suggest high awareness of AI, moderate trust in AI systems, and growing adoption of AI tools in commerce, though concerns about privacy, job loss, and bias remain significant. The study concludes that AI should complement natural intelligence to create ethical and inclusive commerce in India.

Introduction:

Artificial Intelligence (AI) has rapidly transformed global commerce, influencing consumer behavior, financial transactions, and business operations. In India, AI-driven e-commerce platforms, fintech applications, and business analytics have reshaped the way commerce functions. However, the extent of public awareness, trust, and acceptance of AI remains uncertain. This study investigates these aspects using primary survey data from students, consumers, and managers. It contributes to understanding how different stakeholder groups perceive AI in commerce and where ethical and practical challenges may arise.

Research Methodology:

This study is based on primary data collected through a structured questionnaire distributed among 120 respondents in India.

The survey instrument contained both closed-ended and Likert scale questions to capture awareness levels, trust perceptions, adoption patterns, and concerns regarding AI in commerce.

Sample Composition:

- 60 students (future workforce)
- 40 consumers (e-commerce and fintech users)
- 20 managers (business professionals)

Survey Dimensions:

- Awareness of AI in commerce (scale 1–5)
- Trust in AI vs human decision-making
- Usage of AI tools (low, medium, high)
- Concerns about AI (privacy, job loss, bias, none)
- Preference for AI, human, or hybrid decision-making

The data was analyzed using descriptive statistics. Results are displayed in tables and colorful charts for clarity.

Data Analysis and Findings:

Awareness of AI:

Table 1 Awareness Level

Group	Average Awareness (1–5)
Students	3.8
Consumers	4.0
Managers	4.3

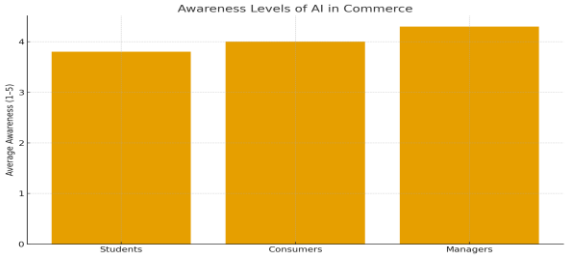

Figure 1 shows awareness levels among students, consumers, and managers.

Trust in AI vs Human:

Table 2: Trust in AI vs Human

Trust Type	Number of Respondents	%
AI	42	35%
Human	30	25%
Hybrid	48	40%

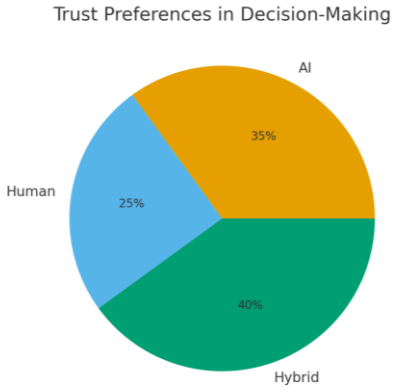

Figure 2 illustrates that most respondents preferred a hybrid approach combining AI and human judgment.

Usage of AI Tools:

Table 3 Usage of AI Tools

Usage Level	Number of Respondents	%
Low	24	20%
Medium	60	50%
High	36	30%

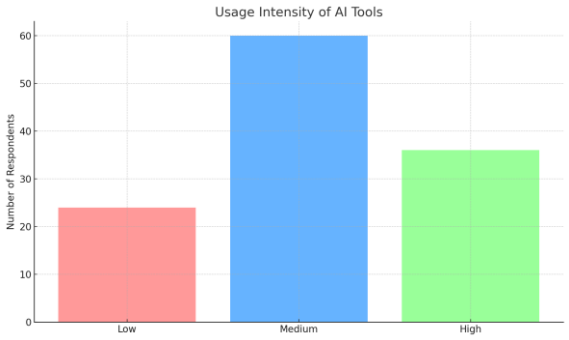

Figure 3 depicts adoption levels of AI tools, where medium usage dominates.

Concerns about AI:

Table 4 Concerns about AI

Concern	**Number of Respondents**	**%**
Privacy	42	35%
Job Loss	30	25%
Bias	30	25%
None	18	15%

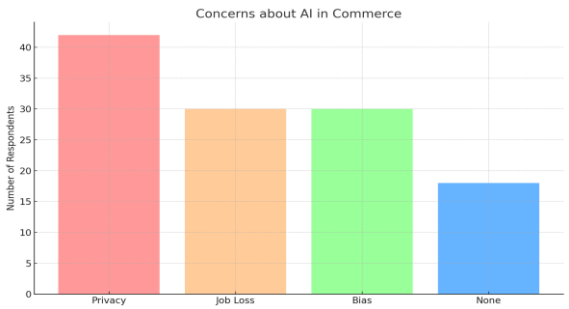

Figure 4 highlights that privacy was the most significant concern.

Preference for Decision-Making:

Table 5 Preference for Decision-Making

Preference	Number of Respondents	%
AI	36	30%
Human	30	25%
Hybrid	54	45%

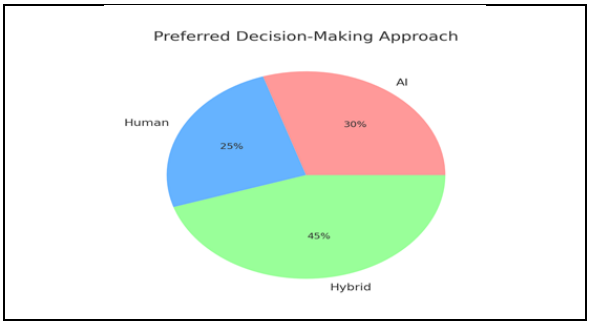

Figure 5 shows that hybrid decision-making was most favored by respondents.

Discussion:

The findings reveal high awareness of AI, particularly among managers, which reflects their closer engagement with business technologies. Students, while aware, still lag slightly behind, pointing to the need for AI education in curricula. The preference for hybrid decision-making demonstrates that respondents value both the speed and efficiency of AI and the ethical oversight and empathy of human intelligence

The moderate-to-high adoption of AI tools indicates that while AI is becoming integral to commerce in India, barriers such as cost, skills, and infrastructure limit full adoption. Privacy and job security remain central concerns, emphasizing the need for ethical AI frameworks and retraining initiatives. These findings echo prior studies (Kumar & Jain, 2022; Mehta, 2021; Rao, 2022) that underline the balance between innovation and responsibility in AI applications.

Challenges and Future Scope:

Challenges:

- Ethical issues and algorithmic bias.
- Privacy concerns in digital commerce.
- Job displacement in customer-facing roles.
- Unequal access due to the digital divide.

Future Scope for India:

- AI literacy and training programs.
- Ethical AI frameworks for commerce.
- Regional language AI tools.
- Hybrid decision-making systems.

Conclusion:

This primary data-based study demonstrates that while AI is increasingly accepted in Indian commerce, its success depends on balancing automation with natural intelligence. Ethical, cultural, and human-centered approaches are crucial to ensuring that AI-driven commerce is not only efficient but also fair and inclusive. The results suggest a hybrid future, where AI augments human judgment rather than replaces it.

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