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# AI In Dynamic Pricing: Strategy and Consumer Perception

GAURAV CHAUDHARY

Corresponding Author: GAURAV CHAUDHARY

Department of Business Administration, Galgotias University

**Abstract:**

Dynamic pricing has become a crucial difference for companies looking to increase client engagement and boost sales in the quickly changing e-commerce market. This study examines the use of artificial intelligence (AI) by AMAZON, one of the top e-commerce sites in India, to deploy dynamic pricing on a large scale .AI helps change how prices are set in digital commerce with immediate, flexible and customized pricing options. The study investigates how AI affects dynamic pricing with Amazon as an example. It looks at how machine learning and behavioural analytics are used to change prices according to demand, what is available and what customers are doing.

Surveys, interviews and reviewing literature are used by the research to understand consumer attitudes towards AI-driven pricing when it comes to trust, fairness and satisfaction. Even though people like the benefits they get from AI, their major worries are about hidden data usage and rising prices.

It is shown that following ethical rules in AI and clear discussions can boost consumer trust. It is found that for AI-enabled dynamic pricing to prosper, both the company's goals, ethical values and what consumers expect must be considered.


## 1. Introduction:

Artificial Intelligence (AI) is now a major force behind innovation in e-commerce. It particularly influences dynamic pricing which updates prices every moment based on demand, competitors, the stock available and customer actions.

Using AI and machine learning, Amazon optimizes how much to charge, who to target and how much revenue to generate. On the one hand, these advanced AI models are very efficient and offer a personalized experience, but on the other, they can affect consumer trust, alarming people about fairness and cause data ethics to be questioned. The study analyzes how AI affects modern pricing methods and looks at how consumers react to the algorithmic choices made by companies, with Amazon as a major example.

**2. Dynamic Pricing Strategies that use AI on Amazon.**

2.1 Adjusting prices in real time for each customer

AI tools such as deep learning and collaborative filtering are employed by Amazon to give product recommendations and also help set real-time prices. Looking at customers' history, searches and bought items, Amazon is able to find out the prices each person is willing to pay and changes the prices to match. Individualized pricing raises the percent of people converting and total revenue, making the prices seem appropriate for every user.

2.2 Using Dynamic Segmentation to price products.

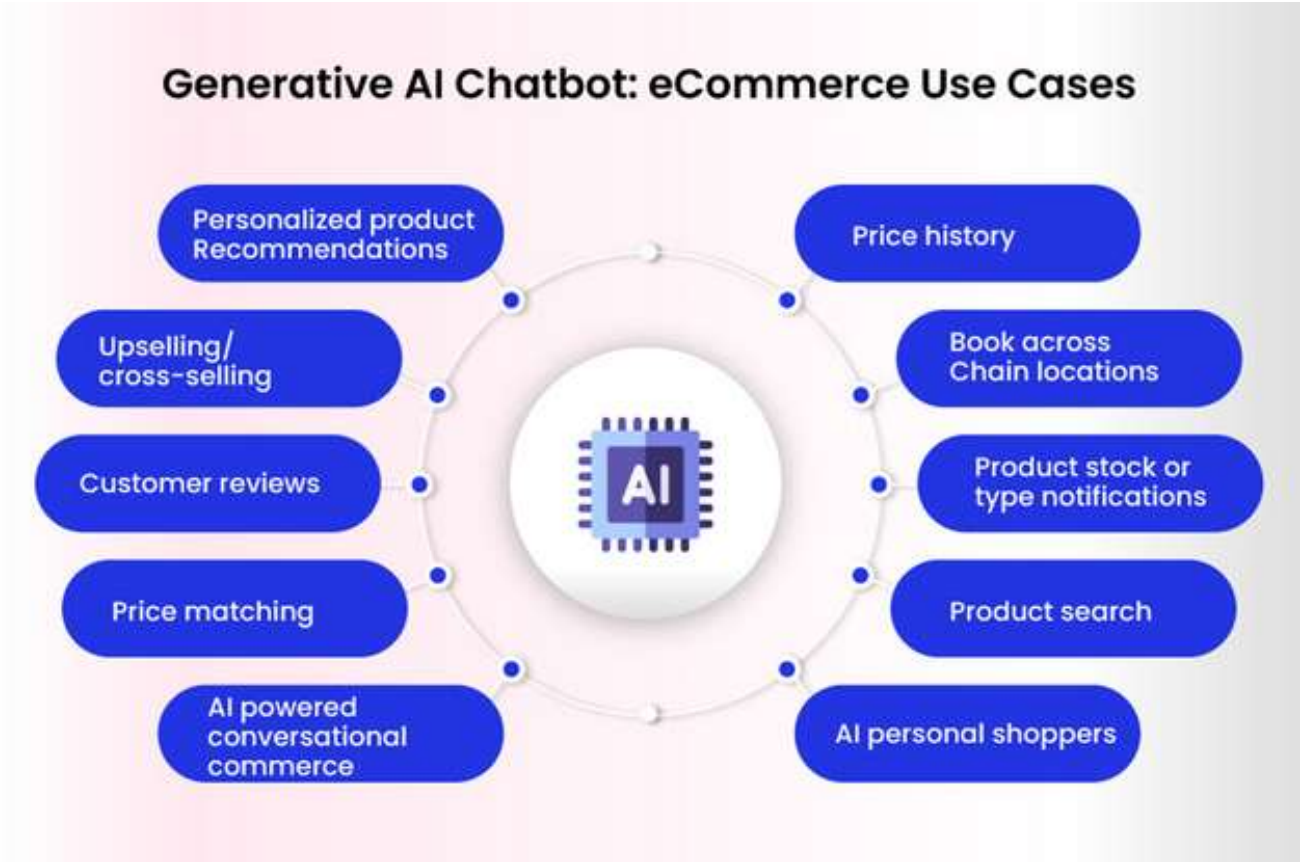
Because of AI, Amazon can divide its customers into groups such as browsers, lapsers, light users, heavy users and super-heavy users. Different sections in the market have their own levels of price sensitivity and the way they buy things. By segmenting its user base, Amazon sets prices differently such as discounts for lapsers and higher rates for those who shop very often.

2.3 Project Mira gives customers the choice of self-pricing their products.

Besides helping people find products, Amazon's AI chatbot is involved in providing instant deals on items. When users chat with Mira, she can figure out their goals, the amount of time they want to save or sensitivity to pricing and immediately send them relevant personal discounts, coupons or grouped products—transforming conversational commerce into a flexible way to promote higher cart values and user satisfaction.

2.4 AI helps by calculating regional prices using inputs from voice and images.

Using voice and visual searches in many Indian languages, Amazon changes its price strategies for different regions. Because user habits are not the same across cities, Amazon uses AI to look at demand, set regions and vary prices. In such cases, reducing the cost of the item may help it sell well, especially where people watch their spending and during local festivals, assisted by predictive pricing models..




**3. Impact of AI-DYNAMIC PRICING on**

**AMAZON's Performance**

3.1 Companies experience greater revenue and higher margins.

Amazon is able to change the prices of its products by the minute using dynamic pricing based on demand, rivals and customer reactions. Being nimble, Amazon is able to make the most of periods when goods are in high demand and to compete with others, both of which lead to better sales and profits. Amazon can be competitive in the market and make the most profit for each transaction by setting the right prices at the right time.

3.2 Getting More People to Take Action

Offering timely and proper pricing with dynamic pricing helps the business record more sales. For example, special offers that come up based on your cart make you want to buy soon. AI carefully looks at what the user is looking for and their willingness to spend, displaying prices that will encourage them to buy.

3.3 Streamlined Management of Inventory and Demand Forecasting

In this way, AI supports Amazon in adjusting prices according to how many products it actually has in stock. Things that are oversupplied might get price breaks and popular items are often sold at higher prices. Because of this, fewer goods are overstocked which helps reduce losses when items go on sale.4. Challenges and Considerations

**4. Issues and Things to Consider**

4.1 Including protective measures to ensure privacy and safety of data.

Worries about privacy come up when using consumer and transaction data for dynamic pricing. Amazon must keep customers' data protected by law (GDPR, CCPA) and always treat it responsibly to avoid losing people's trust.

4.2 There Are Allegations of Algorithmic Bias and Unfairness

With dynamic pricing, not all users might pay the same price for the same thing. Because of this, consumers may feel treated unfairly and the brand reputation can be harmed. Risks in the industry can be tackled by including more observation, transparency and fairness into the system.

4.3 Setting Up and the Total Expenditure

Processing data and using machine learning so quickly requires Amazon to have a strong infrastructure. Ensuring accuracy and preventing problems demands the company to invest in cloud computing, data engineering and algorithm upkeep.

**5. Future Outlook**

As AI technology improves Amazon plans to add more personalized prices, regional variations and instant deals. Moving ahead, AI may help with predictive pricing, checking what customers do across different devices and adding voice commerce functionality. Amazon can conduct responsible pricing with better transparency and uphold trust with customers by using explainable and fair model solutions**.**

**6**. Conclusion

Using dynamic pricing based on AI is now a main part of Amazon's online strategy. Amazon makes sure pricing is both productive for the company and suited to what customers expect by using real-time analytics, machine learning and big data. The result is an increase in revenue, better control over stock and more customers making a purchase. Even with difficulties like algorithmic bias and privacy, Amazon is still leading the way with new pricing ideas. As AI grows stronger, Amazon remains in a good position to sustain its competitive stance and influence how pricing evolves in e-commerce.

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