That is (Data) Exploitation! – Consumer Responses to eXplainable AI for Personalised Dynamic Pricing Algorithms

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Accessible consumer data enables personalised dynamic pricing (PDP) – the estimation of willingness to pay based on consumer proxies (e.g., search history, age) (Hufnagel et al., 2022). While beneficial for companies, PDP can disparately impact (often marginalized) consumers. To address this, the EU's AI Act (2024) mandates algorithmic transparency, which eXplainable AI (XAI) facilitates by revealing the proxies used to set prices (Ramon et al., 2021). In five studies (N = 1675), we show that XAI (versus a simple disclaimer that AI is used to determine prices with no further explanation) leads to lower purchase intention (incentive-compatible), specifically due to the perception of data exploitation. We rule out alternative explanations, such as perceived discriminatory intent. Finally, we propose an intervention for first-mover firms to mitigate negative consumer responses while ensuring compliance.

Keywords: Personalised dynamic pricing, eXplainable AI, AI ethics

Track: Consumer Behaviour