

# When Does a Brand-Influencer Matching AI Backfire?

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## **Abstract**

We consider a social media platform that offers a matching service to match marketers with influencers through Artificial Intelligence (AI) technology. We find that, even if the implementation cost is negligible, it is not always in a platform's best interest to adopt such AI technology or to perfect its AI accuracy. The results arise from two countervailing effects on the participation incentives of influencers, which in turn affects the platform's profit. On the one hand, influencer marketing generates higher sales from a better influencer-marketer match, which benefits both influencers and the platform as they share a commission proportional to sales. On the other hand, if sales is high via an influencer's recommendation channel, more users may stop following the influencer if they bought a low-quality product. The former "sales effect" induces the influencer to participate in a marketing campaign, whereas the latter "quality concern effect" deters one from doing so. Furthermore, the proportional size of loyal followers moderates the trade-off between these two effects. We derive conditions under which adopting such AI technology is profitable for a platform. We also extend our baseline model to study when and how a platform should integrate its AI strategy with its communication strategy for product quality assurance.

**Subject Areas:** *Advertising, Pricing, Recommendation Systems*

**Track:** Digital Marketing & Social Media