

The mind-multichannel connection – Predicting psychological traits from multichannel customer data using machine learning

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Cite as:

Blömker Jan, Albrecht Carmen-Maria (2024), The mind-multichannel connection – Predicting psychological traits from multichannel customer data using machine learning. *Proceedings of the European Marketing Academy*, 53rd, (119550)

Paper from the 53rd Annual EMAC Conference, Bucharest, Romania, May 28-31, 2024



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Abstract

This study uses machine-learning methods to investigate the feasibility of using multichannel customer data to predict individual-level psychological traits. We surveyed 3,546 customers of a German fashion retailer. The customers' scores of the Big Five personality traits, Need for Interaction, Chronic Shopping Orientation, and the Need for Touch were linked to the customers' actual multichannel customer behavior records. We applied Logistic Regression, Random Forest, and XGBoost classifiers to calculate the models' performance in predicting the customers' psychological traits from their data records. Additionally, we compared the performance of our models with models trained on other customer data. The results suggest that predicting psychological traits from customer data remains challenging but progresses with higher specificity of the customer data records. Leveraging insights of the customers' traits retrieved from their data offers high potential for marketing personalization.

Subject Areas: *Channels, Consumer Behaviour, Retailing*

Track: Retailing & Omni-Channel Management