III Międzynarodowa Konferencja Naukowa
Instytutu Zarządzania UEP
ZRÓWNOWAŻONE ZARZĄDZANIE ORGANIZACJĄ
3rd International Scientific Conference
of the PUEB Institute of Management
SUSTAINABLE ORGANIZATION MANAGEMENT
21–22 października / October 2026

Augmented Reality Acceptance in E-Commerce: Cross-Cultural Evidence on Trust and Risk

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Introduction and research aim

Trust in AR technology may encourage consumers to use it in e-commerce, while various risks may weaken their willingness to do so.

RESEARCH AIM
To identify how trust in AR and the online store, along with perceived product and privacy risks, relate to the intention to use AR in online purchasing decisions.

CULTURAL PERSPECTIVE
Test uncertainty avoidance (UAI) at the individual level in Poland, the United States, and South Korea.

Research methods

CAWI survey following an AR eyewear try-on task. Participants tested different frames before completing the questionnaire.

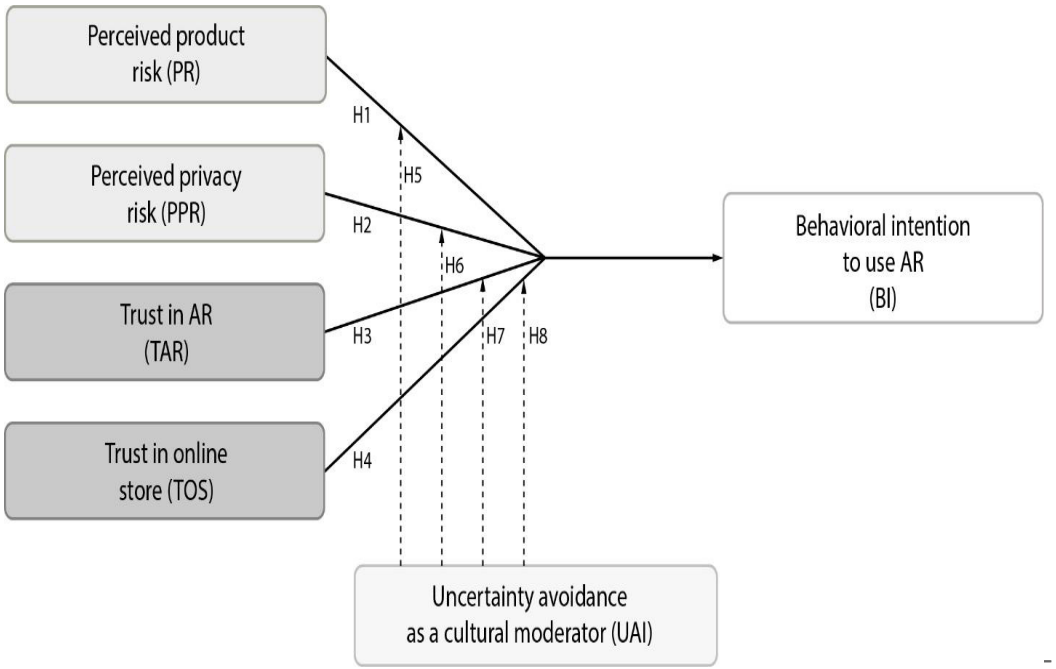
668 respondents recruited through partner universities:
Poland: 201
United States: 214
South Korea: 253

Data collection: January - April 2025.
Convenience sample of young consumers.

Data analysis: SEM (*Structural Equation Modeling*) with bootstrapping, conducted separately for each country. Multi-group analysis (MGA) compared respondents with low and high uncertainty avoidance.

This study was funded by the National Science Centre (Poland), grant no. 2022/47/B/HS4/00448, title "Determinants of young consumers' acceptance of the use of augmented reality in e-commerce - a cross-cultural perspective."

Research model



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Main results

- Trust in AR significantly predicts intention in all three countries (β = .25–.53).
- Store trust is significant in Poland (β = .36) and the US (β = .32).
- Product and privacy risks do not directly reduce consumers' intention to use AR. However, these risks are linked to lower trust in Poland and the United States.
- The analysis did not support UAI moderation of the four paths to intention.

Main conclusions

- Trust in AR is the most consistent predictor of acceptance.
- Retailers should ensure accurate AR visualizations, clear data handling and transparent purchase terms.
- Indirect risk effects through trust need further testing.