

Privacy Perceptions and Behaviors Towards Targeted Advertising on Social Media: A Cross-Country Study on the Effect of Culture and Religion

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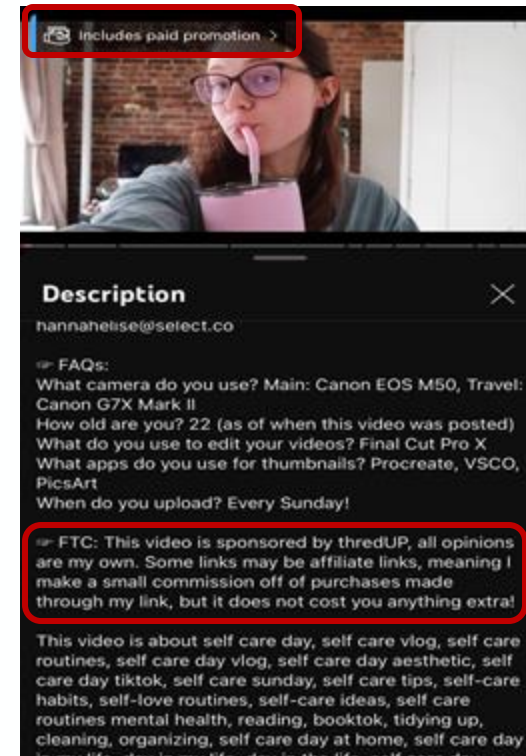
Examples of targeted ads on social media



Text/Image ads on newsfeed



Video ads



Influencer ads

Targeted ads reach specific audience based on an array of:

- Demographics (e.g., age, gender, income)
- Individuals' online activity (e.g., browsing history)
- Contextual factors (e.g., visitors of specific websites)

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Concerns, misconceptions, and needs from end-users

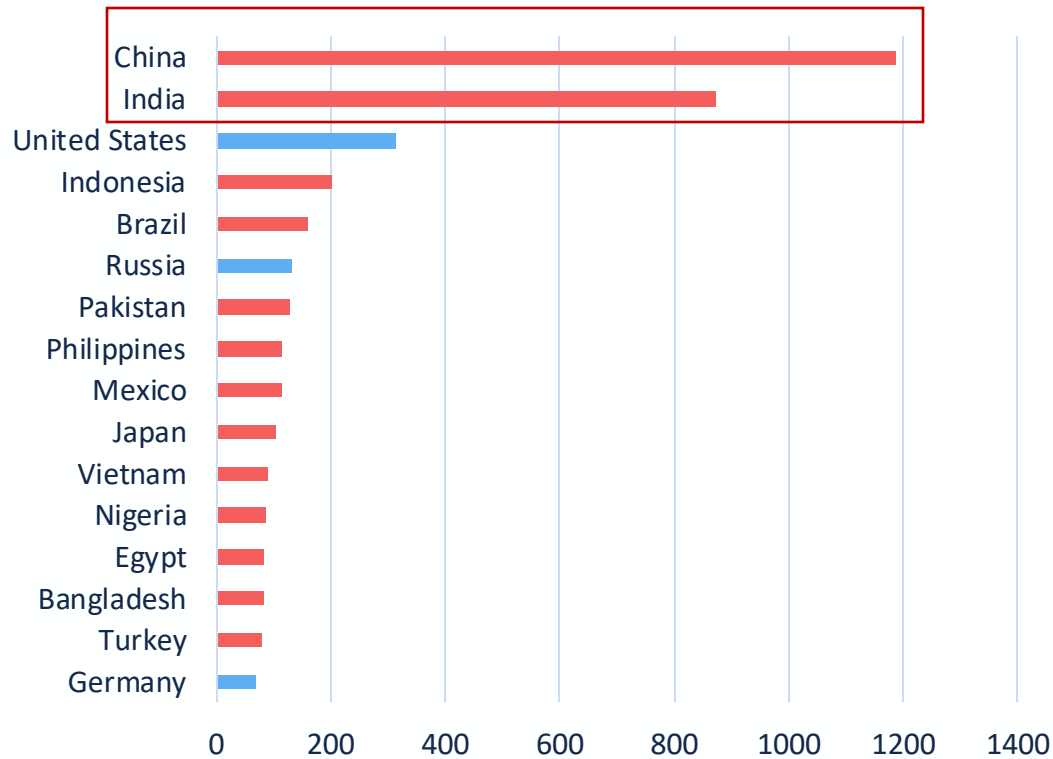
**Smart, Useful, Scary, Creepy:
Perceptions of Online Behavioral Advertising**

Ur et al., SOUPS 2012

**When and Why Do People Want Ad Targeting Explanations? Evidence from a
Four-Week, Mixed-Methods Field Study**

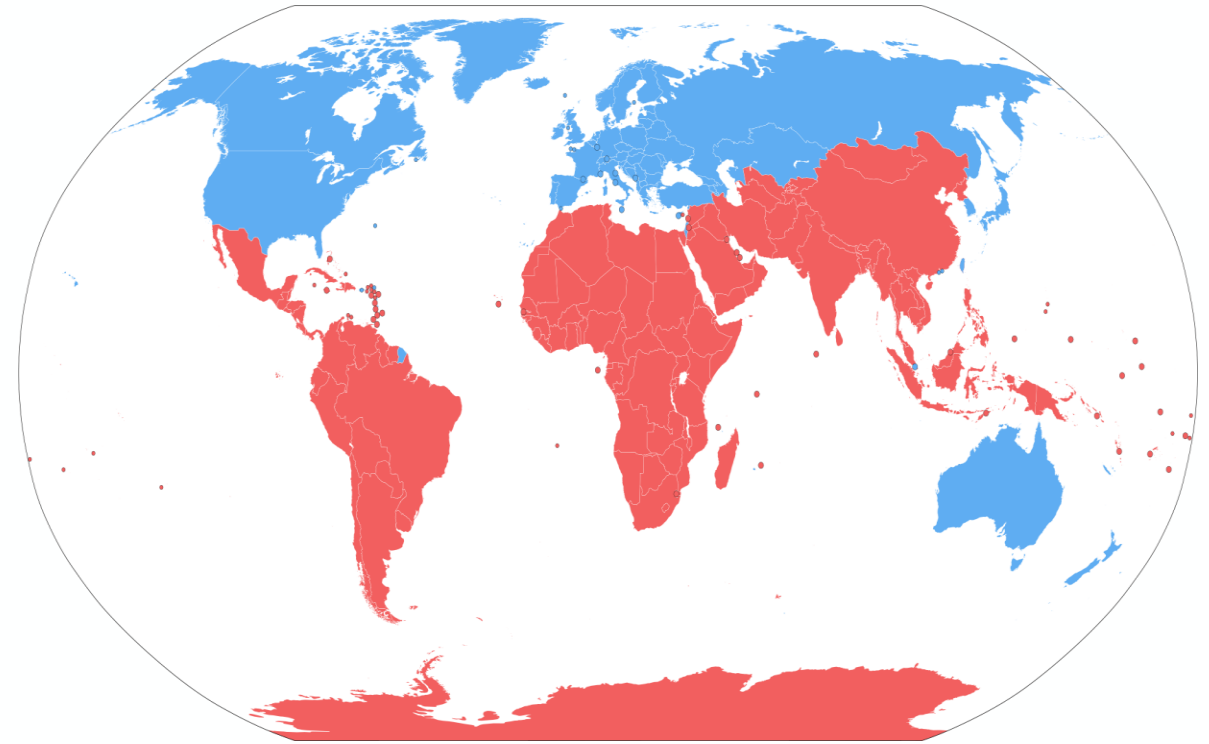
Lee et al., IEEE S&P 2023

There are more social media users in non-western countries



Number of social media users in 2025 (*in millions*)

Source: Statista



■ W.E.I.R.D countries
■ Non-western countries

Study Motivation



Using a **cross-country** survey, we compare three South Asian countries (understudied) with the US (well-represented)



Religion and **culture** are known to impact privacy practices, but rarely studied quantitatively

We identified three takeaways

1

Perception & Behavior

- Most users are **concerned** about **fraudulent ads**
- Preferred to **ignore or hide ads** over using ad settings page

2

Variance in Country

- **South Asians** find ads more beneficial than US counterparts
- **US** users are more **concerned** about S&P implications of ads

3

Culture & Religion

- **Cultural** dimensions and **religious** backgrounds explain cross-country variances

Methods

Survey study

412

PARTICIPANTS

Bangladesh (103)
India (105)
Pakistan (103)
US (101)



RECRUITMENT

Done through
Qualtrics, a survey
panel provider

40

QUESTIONS

A mix of Likert, multiple-
choice, and open-ended
questions



QUANTITATIVE
ANALYSIS

Descriptive and
inferential statistics,
path modeling

Key variables in the survey

Four countries



- India
- Bangladesh
- Pakistan
- United States of America

Four religious groups



- Hindu
- Muslims
- Christians
- Minority (Jain, Buddhists)

Three cultural dimensions



- Individualism
- Collectivism
- Uncertainty avoidance

Demographic factors



- Age
- Income
- Technical background
- Gender

RQ1: Perceptions and behaviors about targeted ads



RQ1

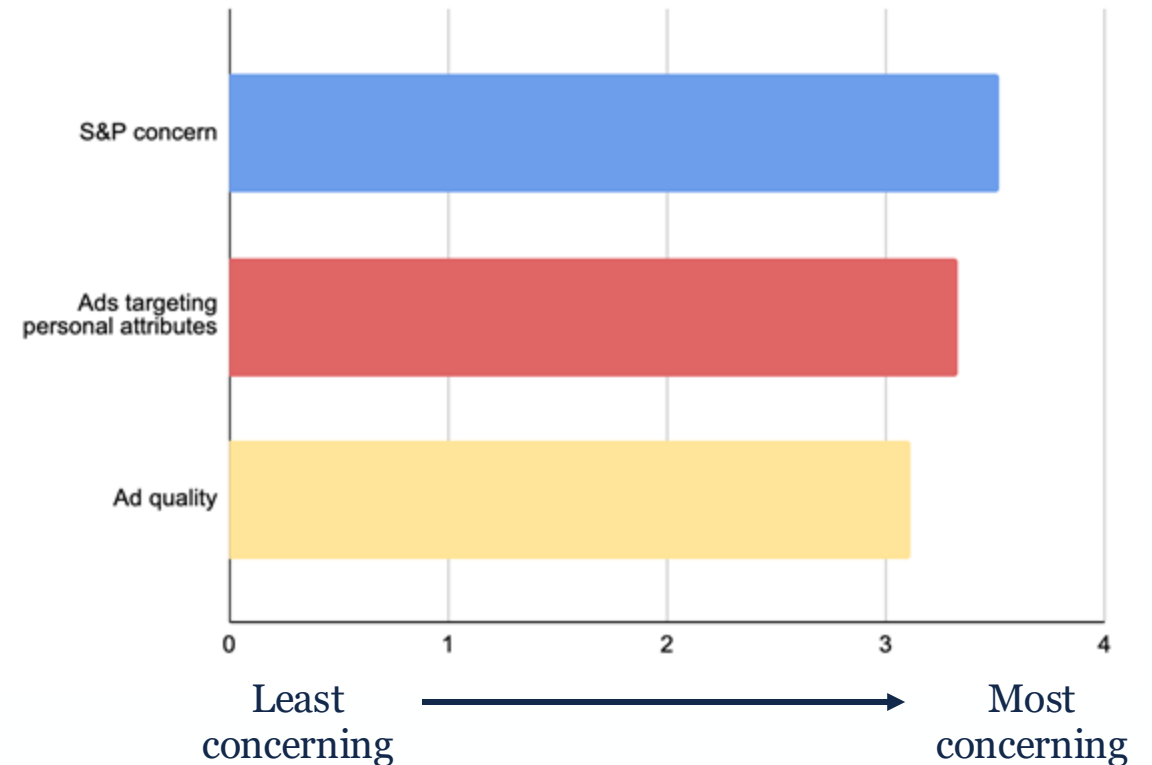
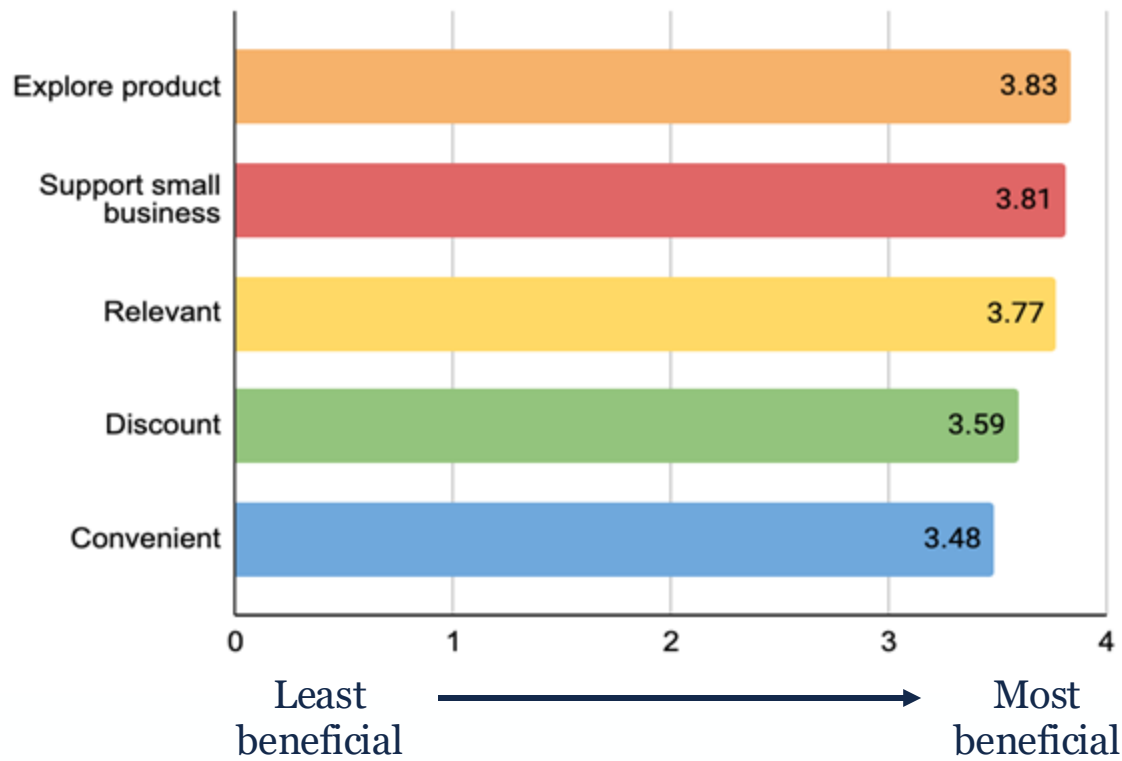
Ad Perceptions

What are participants' **perceptions** and **behaviors** related to ads on social media?

- Participants found ads beneficial but were most concerned about the security and privacy issues
- Preferred certain ad management behaviors over others.

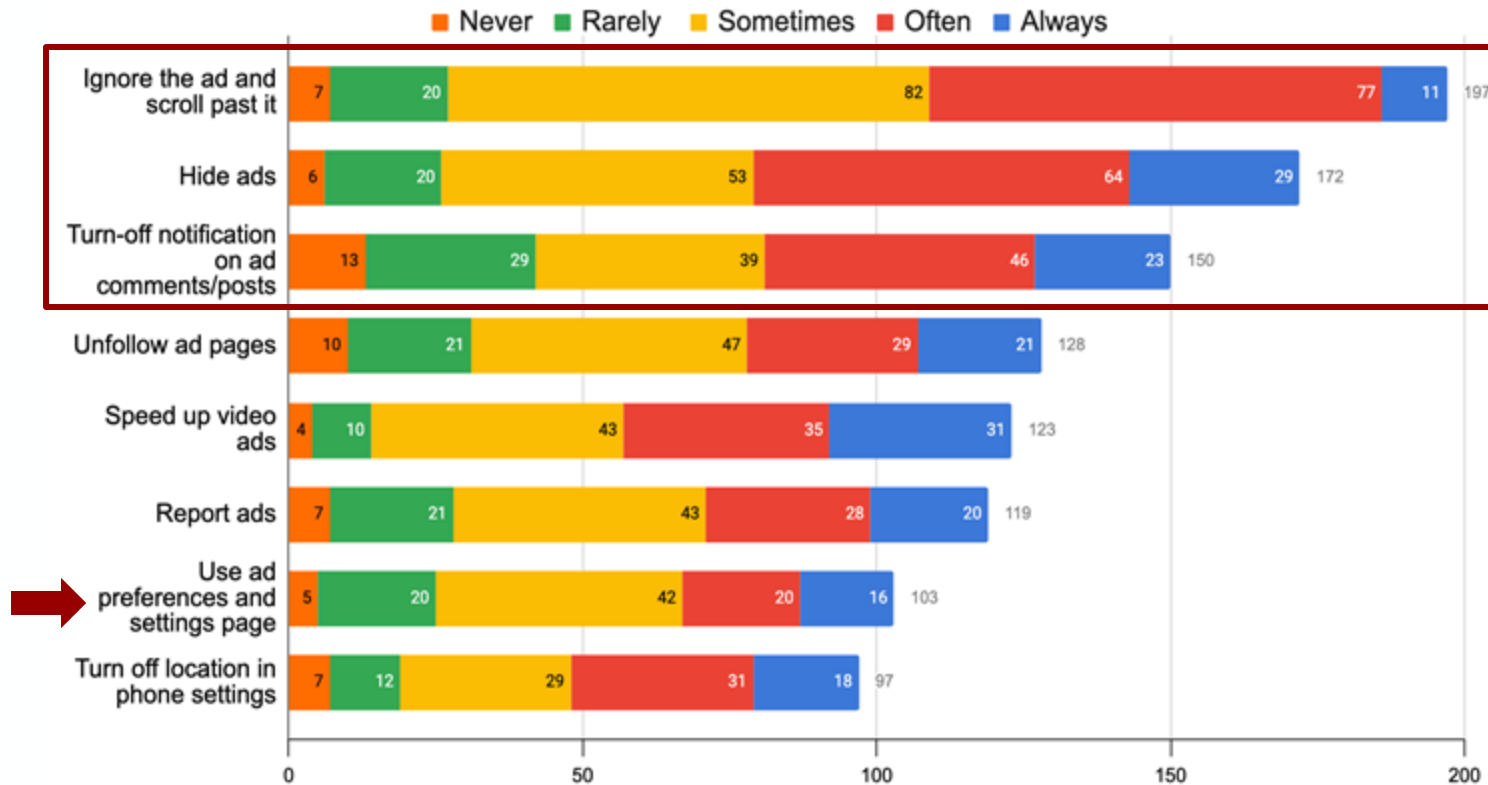
RQ1: Perceptions about targeted ads

Participants found ads **beneficial** to **explore products** and **support small businesses**. However, they were most **concerned** about **security and privacy** issues of ads.



RQ1: Ad management behavior related to targeted ads

Participants mostly ignored ads, hide them, or turned off the on the posts from ad page.



RQ2: Quantitative cross-country comparisons



RQ2

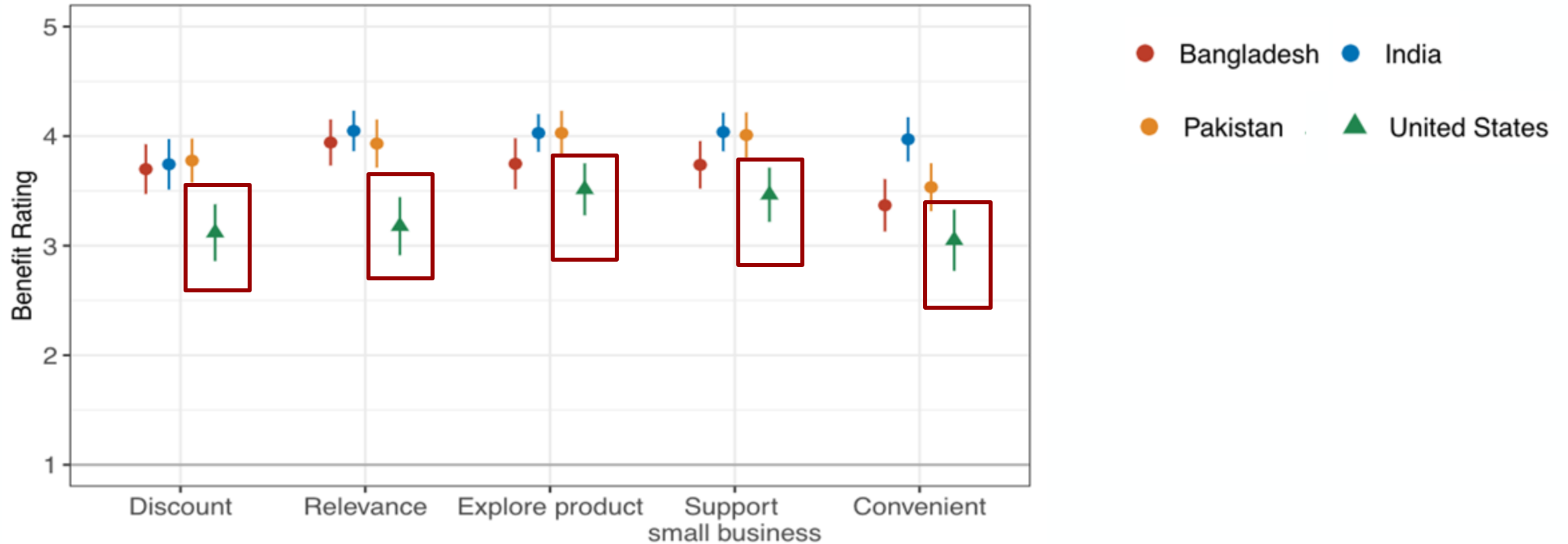
Variance in Country

How are participants' **perceptions** and **behaviors** related to ads on social media **differ** across **countries**?

- Cross-country differences exists for both perceived benefits and concerns around ads
- US participants found ads less beneficial and were more concerned about them

RQ2: Cross-country variances in perceived benefits

US participants found ads less beneficial than South Asian participants



RQ2: Cross-country variances in concerns

US participants were overall more concerned about ads than South Asian participants



RQ2: Cross-country variances in concerns

US participants were most **concerned** about **security & privacy of ads** on social media



RQ3: Culture and religion mediate cross-country variances



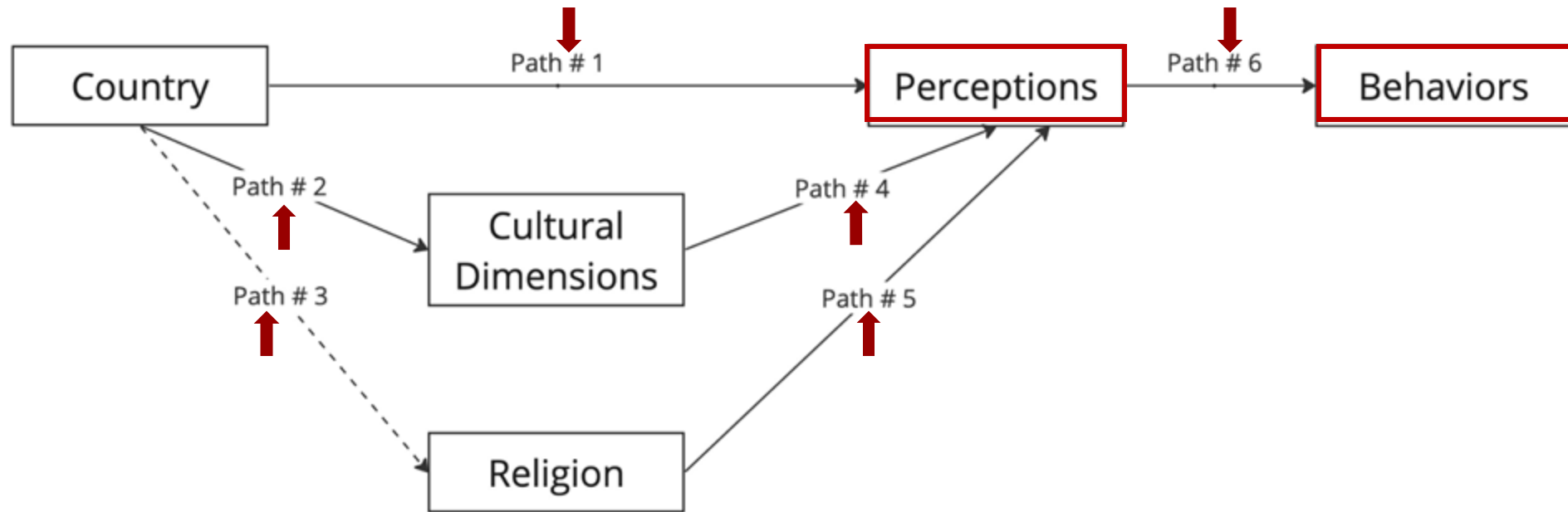
RQ3

Culture & Religion

To what extent do **culture**,
religion mediate
the cross-country variances
in perceptions and
behaviors?

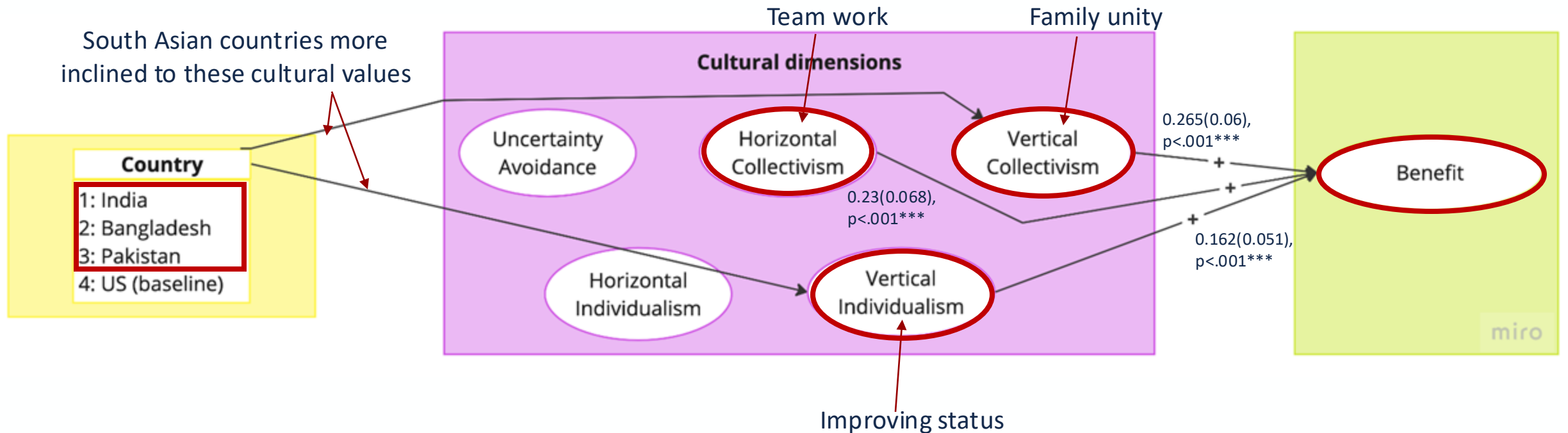
- Cross-country variances can be partially explained by culture and religion.
- Traditional clustering of culture (e.g., US – individualist, India – collectivist) needs to be updated.

RQ3: Path analysis reveals role of culture and religion in cross-country variances



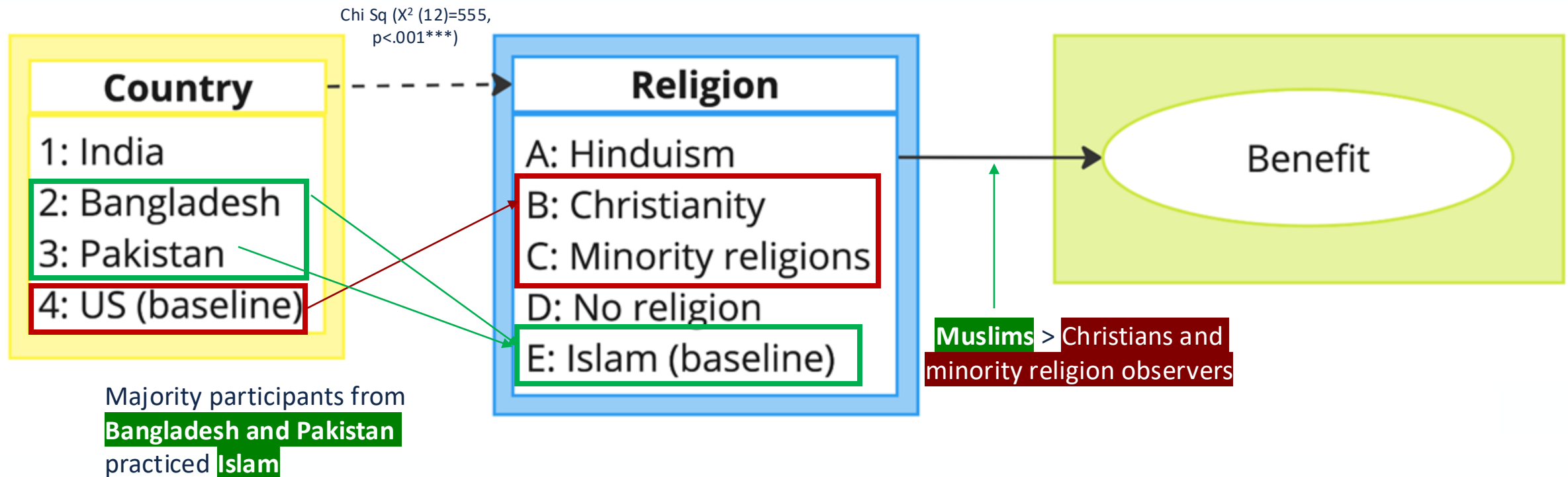
Culture and religion influence people's perceptions of targeted ads on social media.

RQ3: Culture partially mediates cross-country differences



- Cultural values influence South Asians' greater perceived ad benefit.
- Measure culture at both country and individual levels

RQ3: Religion partially influences cross-country differences



Muslim users from Bangladesh and Pakistan find ads more beneficial than Christians in US.

Key insights from the cross-cultural lens

Prior work using country as a proxy for culture – this is not enough

- Focusing on the **underlying constructs**, such as culture and religion, leads to unique insights
- Measure culture at both **country** and **individual** levels
- The same cultural dimensions¹ have a **different effect** on privacy constructs across countries → future work direction: recruiting multi-cultural participants

Design and policy implications



Participant suggestions for ad-controls:
Icons representing verified ads



Content moderation in reaction to fraudulent ads



South Asian users' lower concerns about S&P implications:
educational needs

Summary

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