

QUANTITATIVE MARKETING RESEARCH: IMPACT OF PERSONALIZED ADVERTISING ON BRAND PERCEPTION & CONSUMER PURCHASE INTENT

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GROWTH OF RETAIL MEDIA

The global retail media market is estimated to total \$179.5 billion in 2025, representing robust year-over-year growth of 15.4%, accounts for around 20% of global marketing expenses even as a new channel.



Personalization is believed to be the key driver of the growth trend.

Consumer Preference for Personalization: 80% prefer brands with personalized experiences, spend 50% more with them

Revenue Impact: Companies that excel at personalization generate 40 percent more revenue from those activities than average players.

Marketing Budget Allocation: Retailers expect to allocate 59% of their marketing budget to personalization

PROBLEM ARISE: PRIVACY CONCERN & INTRUSIVENESS RESIST

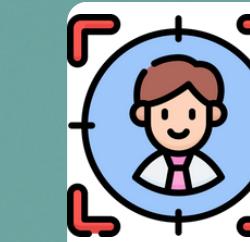
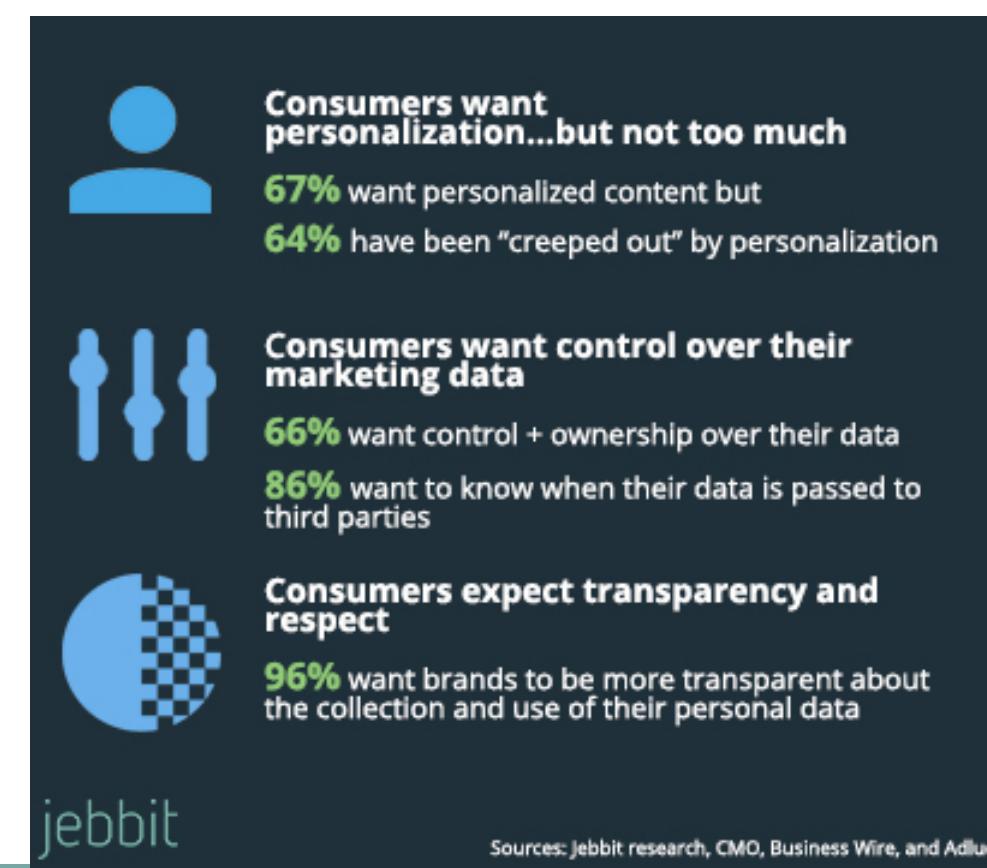
While there are more resources for companies to gain personal data and develop more tailored experience for consumers, privacy concerns arises and can hinder the effect of personalized ad.

Personalization vs. Privacy Paradox



Beyond Privacy Concerns.....

- Perception of Manipulation
- Ethical and Legal Issues
- Over-Personalization Risks of being “creepy”



Personalization Benefits

vs.

Consumer Concerns



How to balance effectiveness with privacy for retail media personalized advertisement?

RESEARCH OBJECTIVES



Primary Goal 1

Identify driving factors that make personalized ads useful vs. frustrating for consumers.



Primary Goal 2

Investigate whether higher ad personalization leads to increased purchase intention or negative reactions.

Secondary Goal 1

Assess whether frustration is directed more toward the brand being advertised or the retailer platform.

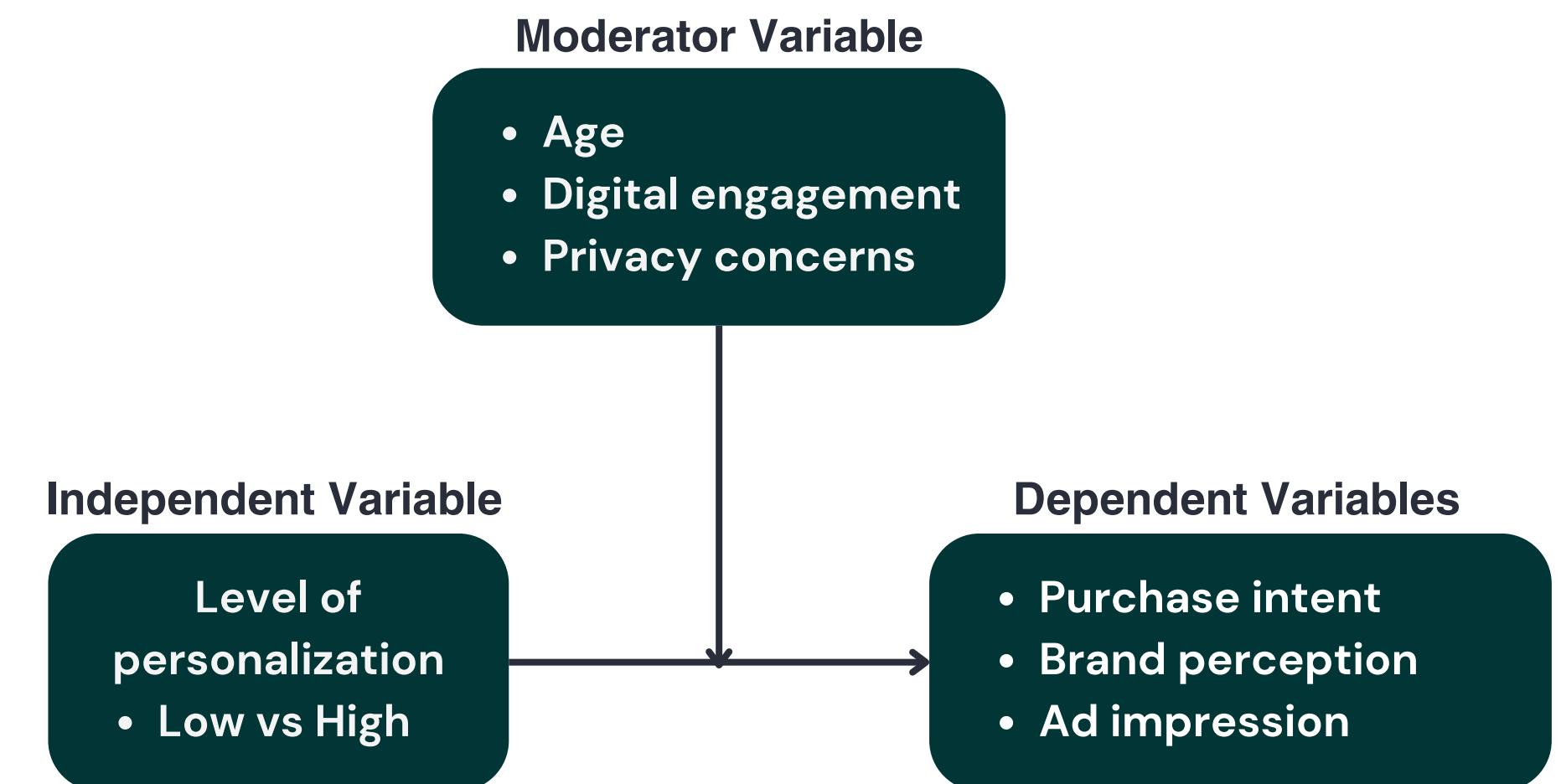
Secondary Goal 2

Analyze how factors like age, region, and other demographic attributes influence consumer responses to personalized ads.

HYPOTHESIS

- ◆ H1: High levels of personalization in advertising leads to greater purchase intent.
- ◆ H2: Extremely high levels of personalization in advertising leads to lower purchase intent.

CONCEPTUAL FRAMEWORK



EXPERIMENT DESIGN

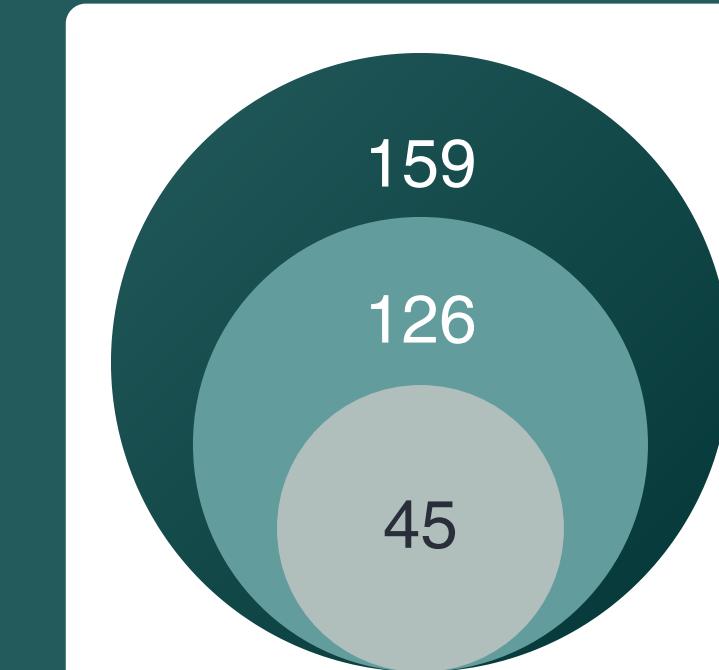


Low Personalisation

1st Degree: Coffee Lover vs Non Coffee Lover

High Personalisation

2nd Degree: Morning Person vs Night Owl



Respondents Ad variations

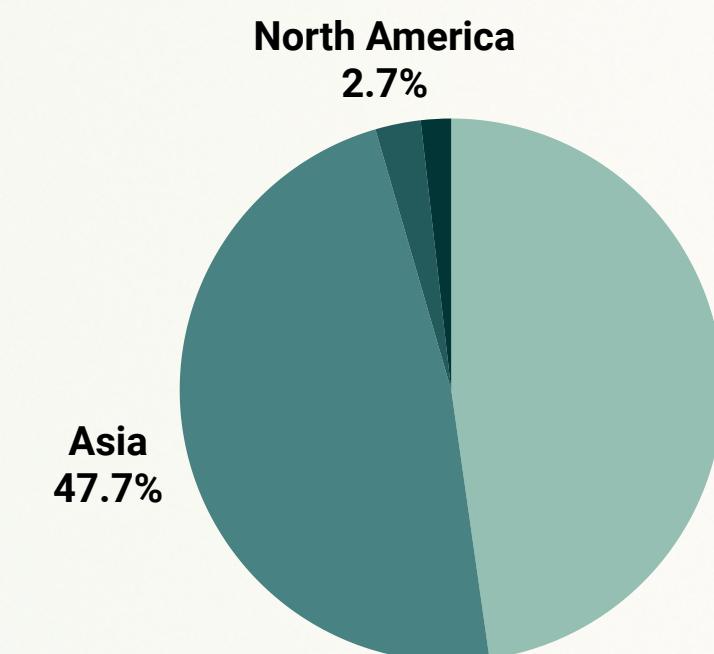
QUESTIONNAIRE & MEASURES

Questionnaire included:

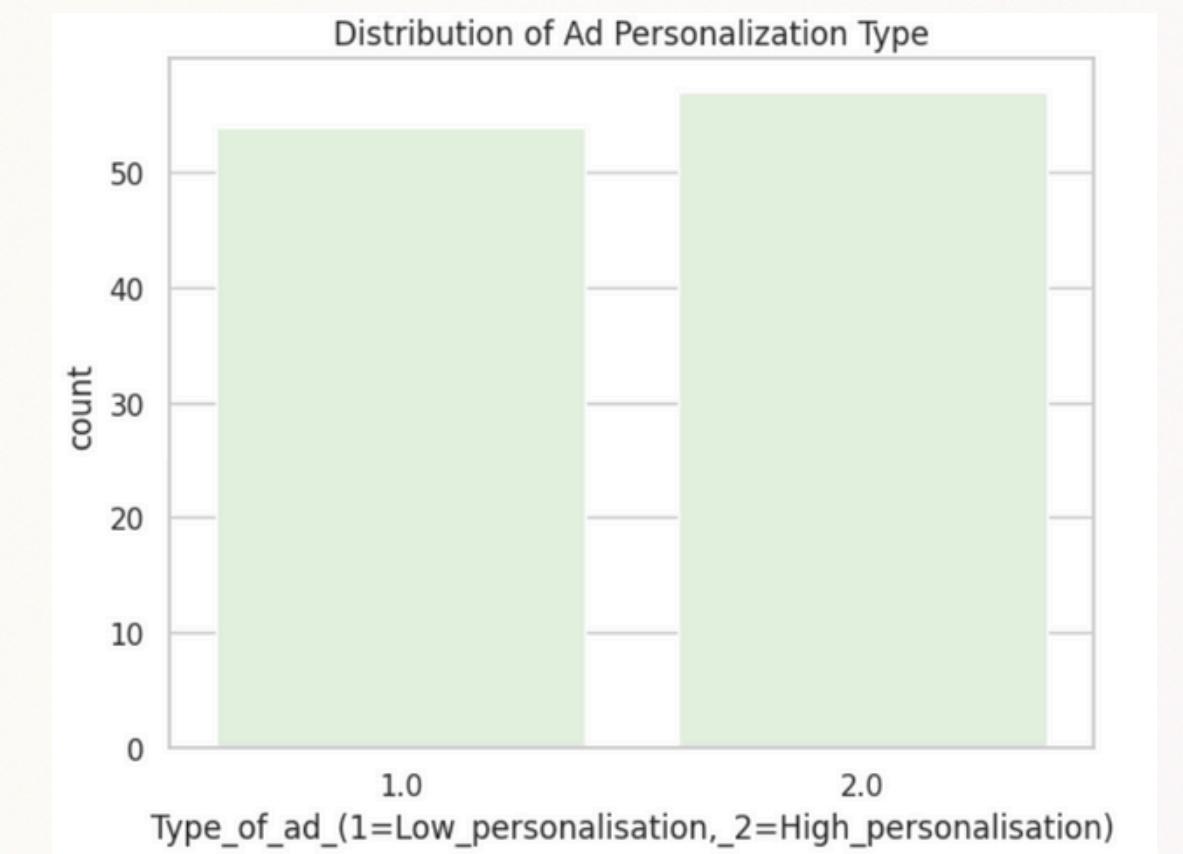
- Demographic details (age, gender, income level, digital engagement)
- Perceived relevance of personalized ads
- Trust in brands utilizing personalized strategies
- Purchase behavior in response to targeted marketing
- Perceived intrusiveness of personalized advertisements

Measures:

- A truly randomized experiment with equal probability of encountering a Low vs High Personalisation Ad
- Attention Check
- Conditional Progression in the survey
- Feedback regarding purpose of the study

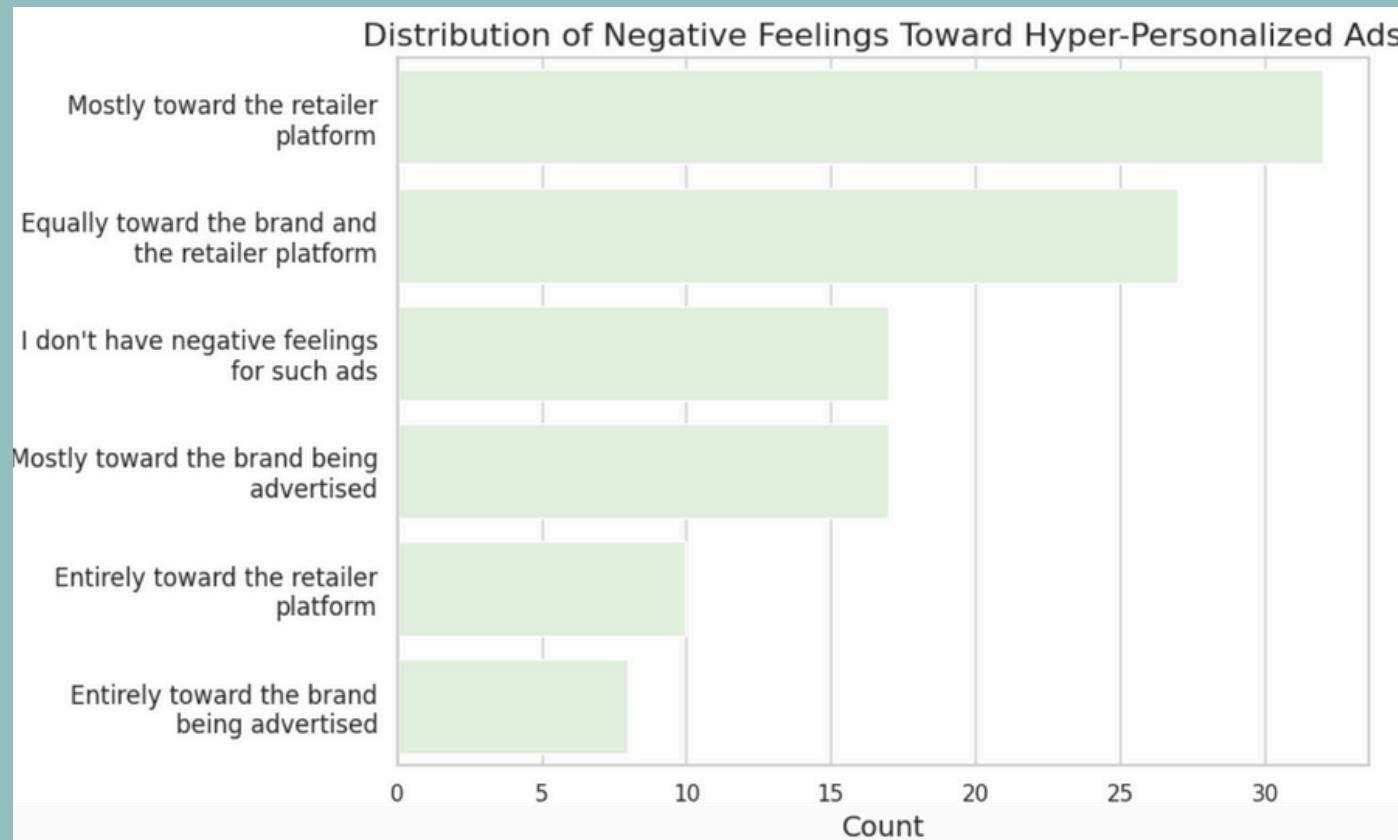
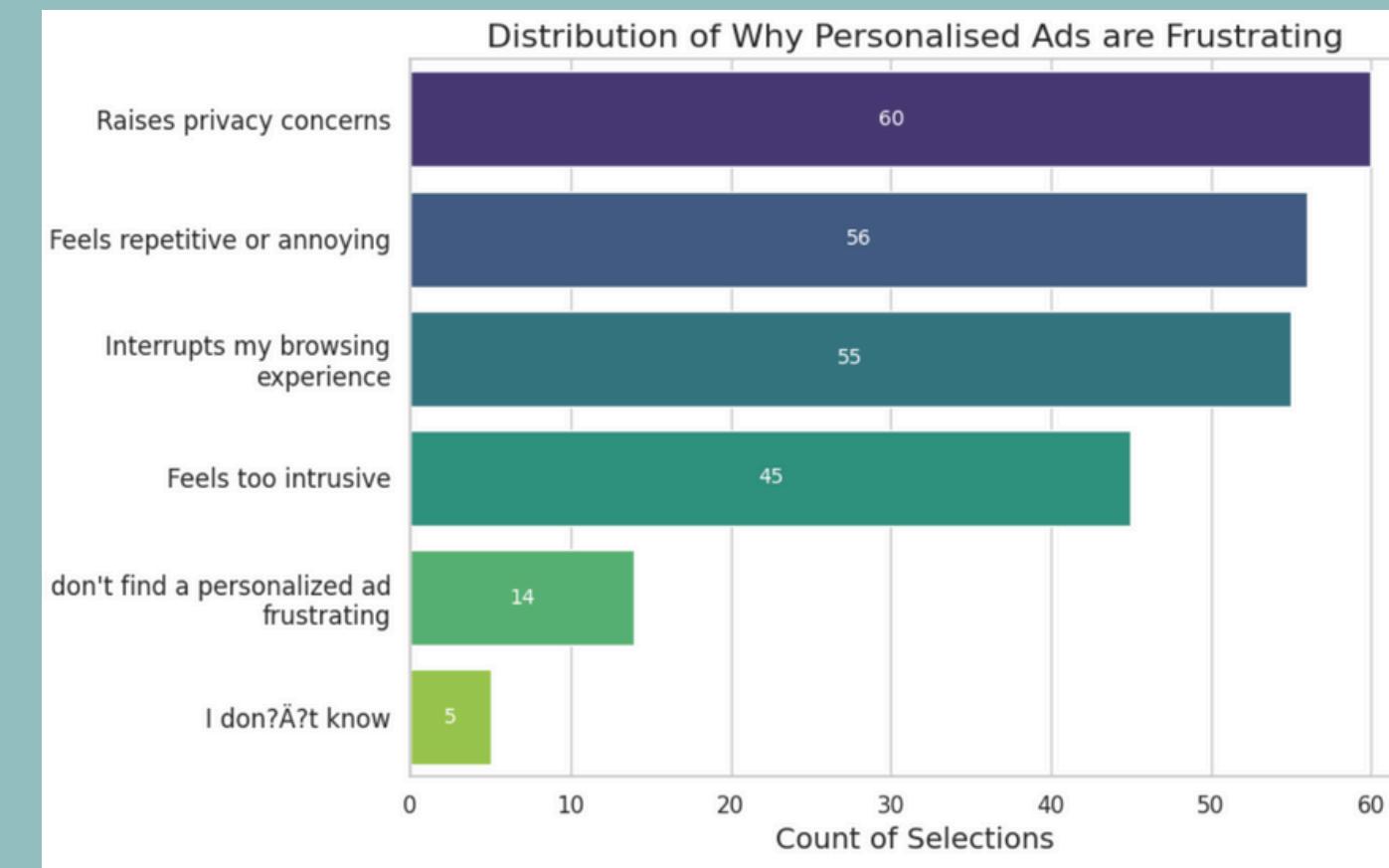
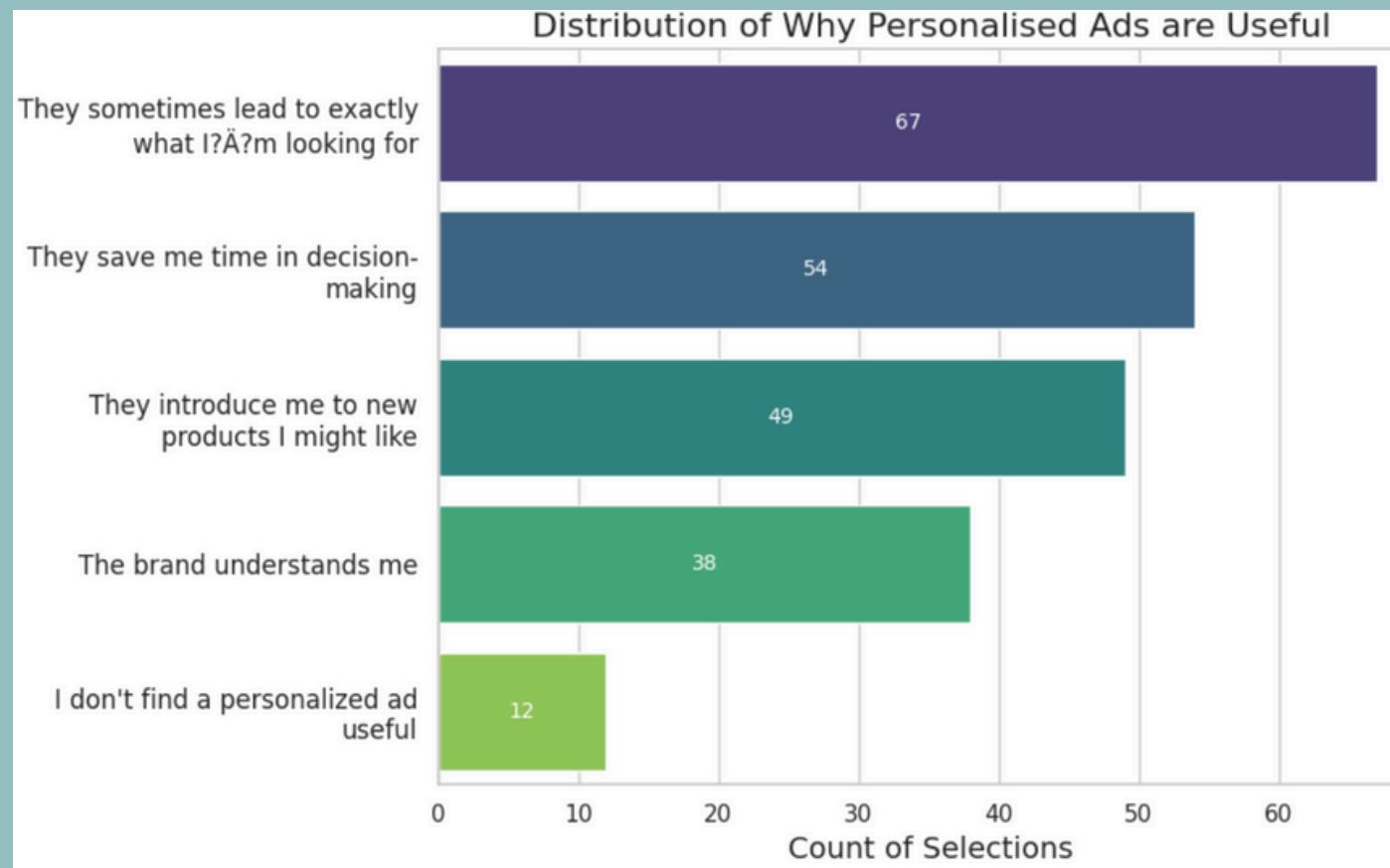


Randomized Experiment



RESEARCH GOAL 1

KEY FINDINGS



Why useful ?

1. They sometimes lead to exactly what I'm looking for
2. Save time in decision making

Why frustrating ?

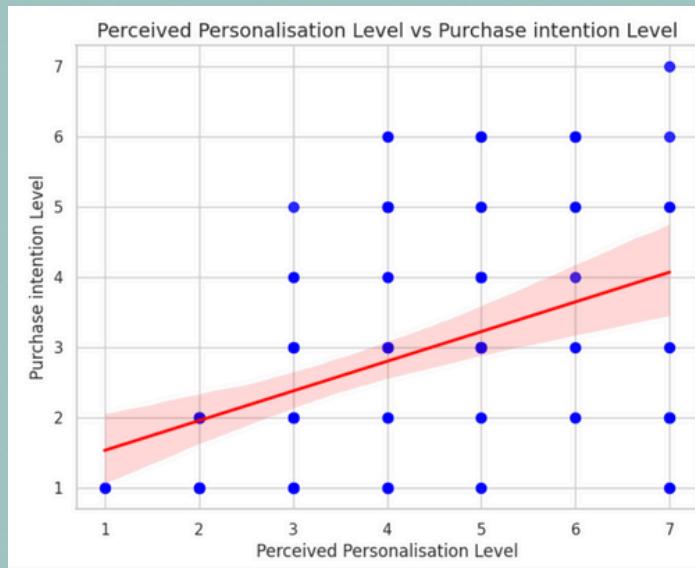
1. Raise privacy concerns
2. Feel repetitive or interruptive

Negative reactance is mostly directed towards Retailer Platform.

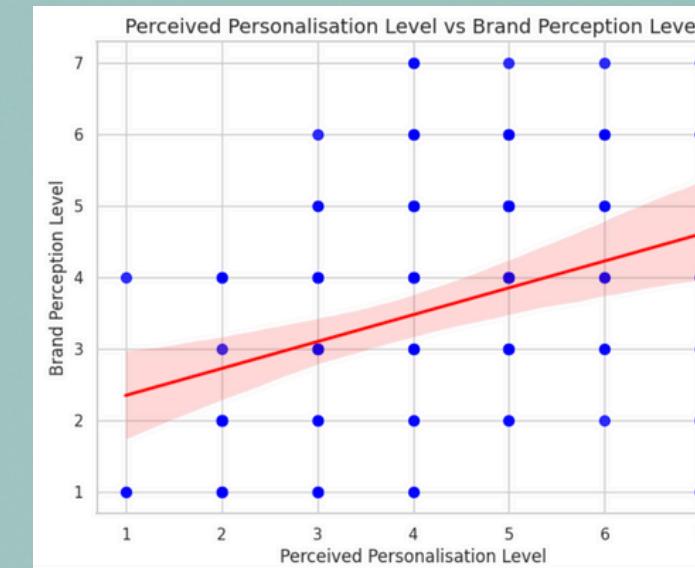
RESEARCH GOAL 2

STATISTICAL ANALYSIS RESULTS

Pearson's correlation test



$r = 0.423$, Shared Variability = 18%
P-Value = $3.55e-06$



$r = 0.367$, Shared Variability = 14%
P-Value = $7.41e-05$



$r = 0.368$, Shared Variability = 14%
P-Value = $6.81e-05$

There is a meaningful **positive relationship** between Perceived personalisation level and

- Purchase intent level
- Brand perception level
- Ad impression level

P-value << 0.05: Observed correlation is statistically significant

OLS Linear Regression Test

OLS Regression Results						
Dep. Variable:	Purchase intention level	R-squared:	0.180			
Model:	OLS	Adj. R-squared:	0.172			
Method:	Least Squares	F-statistic:	23.88			
Date:	Thu, 20 Mar 2025	Prob (F-statistic):	3.55e-06			
Time:	14:14:27	Log-Likelihood:	-202.55			
No. Observations:	111	AIC:	409.1			
Df Residuals:	109	BIC:	414.5			
Df Model:	1					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[0.025	0.975]
const	1.1129	0.391	2.843	0.005	0.337	1.889
Perceived personalisation level	0.4228	0.087	4.886	0.000	0.251	0.594
Omnibus:	4.145	Durbin-Watson:	1.875			
Prob(Omnibus):	0.126	Jarque-Bera (JB):	3.118			
Skew:	0.275	Prob(JB):	0.210			
Kurtosis:	2.390	Cond. No.	12.8			
Notes:	[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.					

- **P>|t|: 0.000:** Perceived personalisation level has a statistically significant positive impact on purchase intention level.
- **R-squared: 0.180:** Suggests that other factors are also influencing purchase intention.

Hypothesis 1 = True
High levels of personalization in advertising leads to greater purchase intent.

RESEARCH GOAL 2

STATISTICAL ANALYSIS RESULTS

ANOVA

Objective : To test whether **perceived personalization level** (independent variable) significantly affects:

- Ad Impression Level
- Brand Perception Level
- Purchase Intention Level

Performed ANOVA for each dependent variable.

	F- Statistic	P-Value	Conclusion
Purchase Intent	7.14	2.14e-06	Perceived personalization strongly influences purchase intention
Brand Perception	5.6	4.42e-05	Perceived personalization affects how people perceive the brand
Ad Impression	6.2	1.36e-05	Perceived personalization level significantly impacts ad impression level

ANOVA results for Ad Impression Level:

F-statistic: 6.202955005412264, P-value: 1.3631119960055799e-05

ANOVA results for Brand Perception Level:

F-statistic: 5.6151693532193105, P-value: 4.4252168730070554e-05

ANOVA results for Purchase Intent Level:

F-statistic: 7.145383174904303, P-value: 2.1411411133850384e-06

For all dependent variables:

P value << 0.05

Indicates a statistically significant effect

LEVENE'S TEST

Objective: To check homogeneity of variables

	Statistic	P-Value
Purchase Intent	2.628	0.021
Brand Perception	2.039	0.067
Ad Impression	1.156	0.336

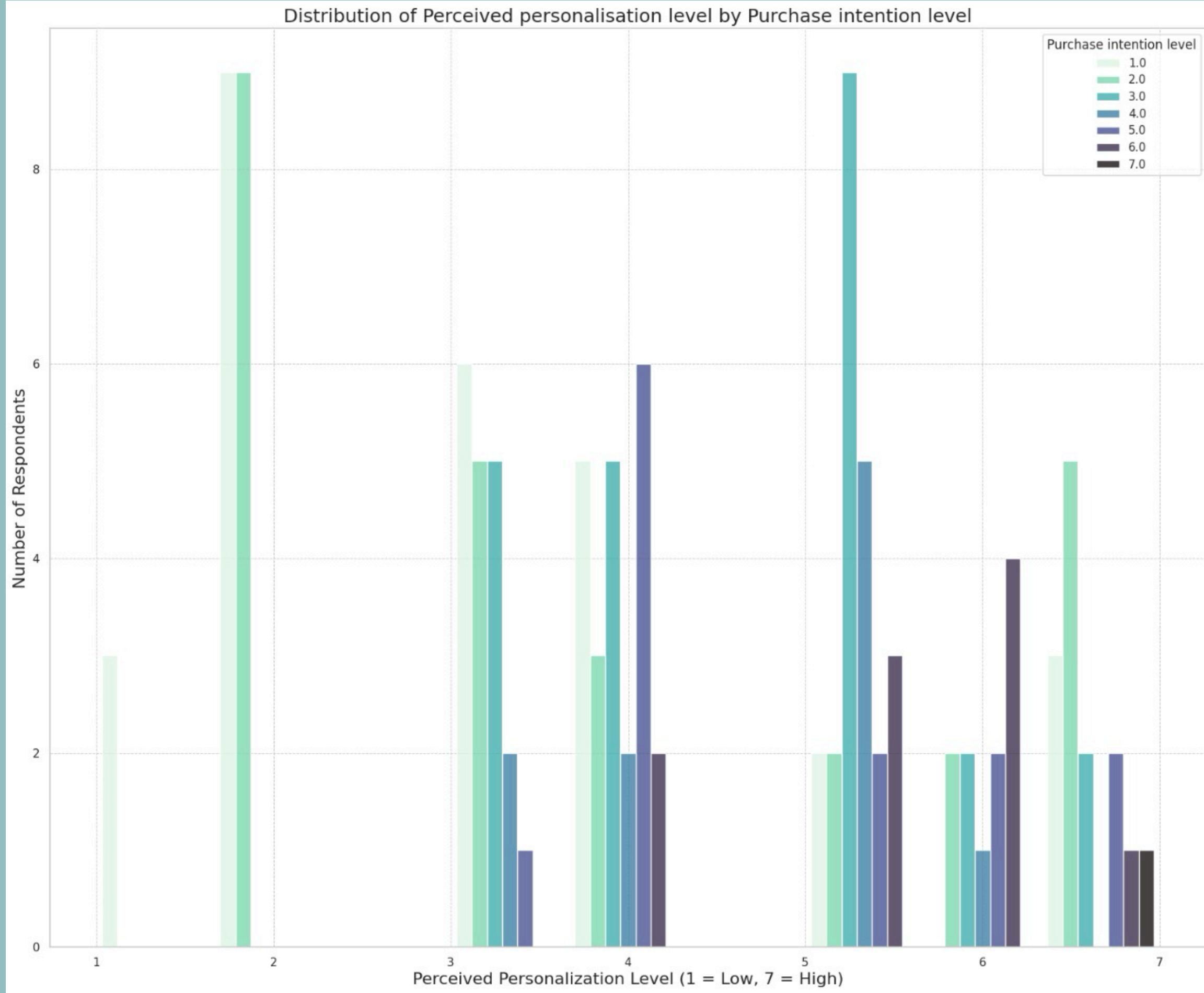
For Purchase Intention:

P value < 0.05, significant difference between the variance

Regular ANOVA may be

inaccurate (Welch's ANOVA).

RESEARCH GOAL 2



At low personalization levels (1–2): Low purchase intention levels reported (1–2)

As personalization increases (3–6): Rise in high purchase intention levels (5–7)

At very high personalization (7):

- Number of high purchase intent respondents (6–7) doesn't increase dramatically
- Still a presence of lower purchase intention levels (1–3)

Hypothesis 2 = True
Extremely high levels of perceived personalization in advertising leads to lower purchase intent.

*Greater sample size would be required to fully validate these results.

CONCLUSION

- **Personalisation is subjective:** How people feel about personalization matters more than whether the ad is actually personalized.
- **Positive Impact:** Personalization could make consumers feel that the brand understands their needs and preferences while also saving time in decision making, which can lead to higher brand perception and purchase intention.
- **Negative Impact:** Too much personalization can be seen as intrusive, leading to annoyance or frustration. This could reduce purchase intention and negatively impact the brand perception.
- **Retailer Consideration:** Choosing the right retailers and maintaining brand authenticity is crucial. Messaging should be tailored to stand out from retailer-driven ads

FUTURE SCOPE

- **Impact of repeated exposure:**

How does repeated exposure to highly personalized ads impact consumer behavior over time?

- **Brand Loyalty vs. Short-Term Sales**

Does high personalization build long-term brand loyalty or just influence short-term sales?

- **Establishing Causality in Personalization**

Exploring the causal chain: Personalization → Ad Impressions → Brand Perception → Purchase Intent

- **Cross-Platform Comparisons**

How does ad personalization effectiveness vary across social media, e-commerce, and streaming platforms?

- **AI & Behavioral Data for Deeper Insights**

Can deep learning predict purchase intent based on subtle behavioral cues like scroll speed or hover time?

Future studies can build on this research by incorporating deeper psychological, behavioral, and contextual factors

THANK YOU