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Understanding Purchase Intentions in AI Contexts: The Role of Trust

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CONTENTS

Introduction

1. Introduction

AI

- Artificial intelligence (AI) has changed the original marketing methods (Puntoni, Reczek, Giesler, and Botti, 2021).

- Quickly process data and convert it into information to achieve a certain goal (Paschen et al., 2019).

- This study explored the **factors that affect the use of AI recommendations and the influence of each factor on purchase intention.**

Literature Review

➕ Regulatory focus   ➕ Product types   ➕ Preciseness of information

2.1 Regulatory focus

Promotion focus

Outcomes: positive

Goal: progress, achievement, ambition, and pursuit of immediate interests

Prevention focus

Outcomes: negative

Goal: safety, responsibility, and obligation to avoid risk

(Higgins, 1996c; Higgins, 1997; Keller et al., 2008; Keller et al., 2015)

2.2 Product type

Search product

Attribute: can be evaluated before purchasing (Franke et al., 2004)

Example: books (Chiang and Dholakia, 2003), computers, watches (Lee et al., 2005) and calculators (Senecal and Nantel, 2004)
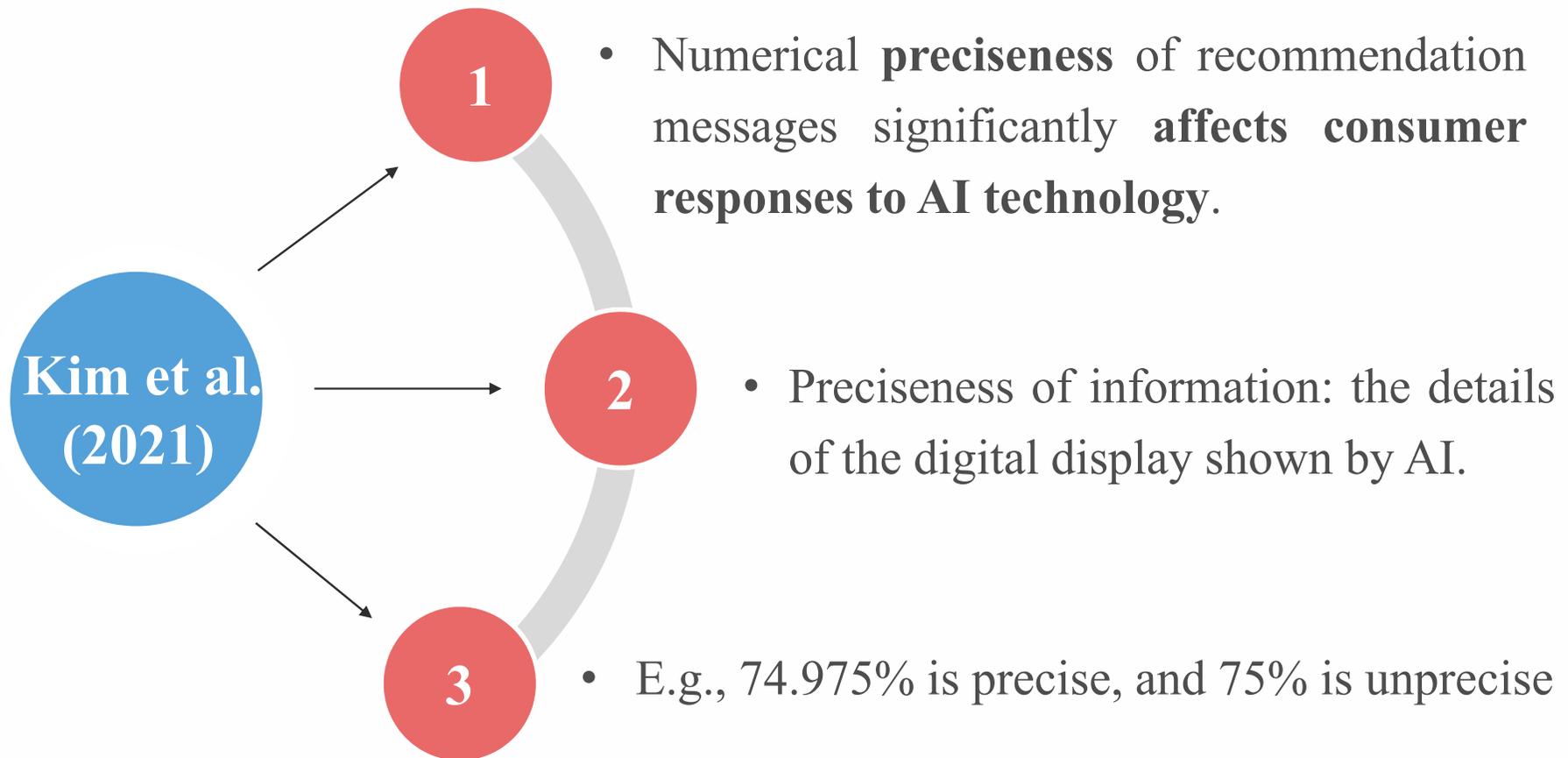
Experience product

Attribute: cannot be assessed before purchase (Franke et al., 2004)

Example: perfumes (Chiang and Dholakia, 2003), music CDs (Weathers et al., 2007), and wines (Klein, 1998)

2.3 Preciseness of information

1

- Numerical **preciseness** of recommendation messages significantly **affects consumer responses to AI technology**.

Kim et al. (2021)

2

- Preciseness of information: the details of the digital display shown by AI.

3

- E.g., 74.975% is precise, and 75% is unprecise

2.4 Trust and purchase intention

Trust

- This study defines trust as believing that the information recommended by AI is credible and meets the needs of consumers.

Purchase intention

- The purchase intention of the online shopper is the final stage after various prompts of online shoppers (Athapaththu and Kulathunga, 2018).
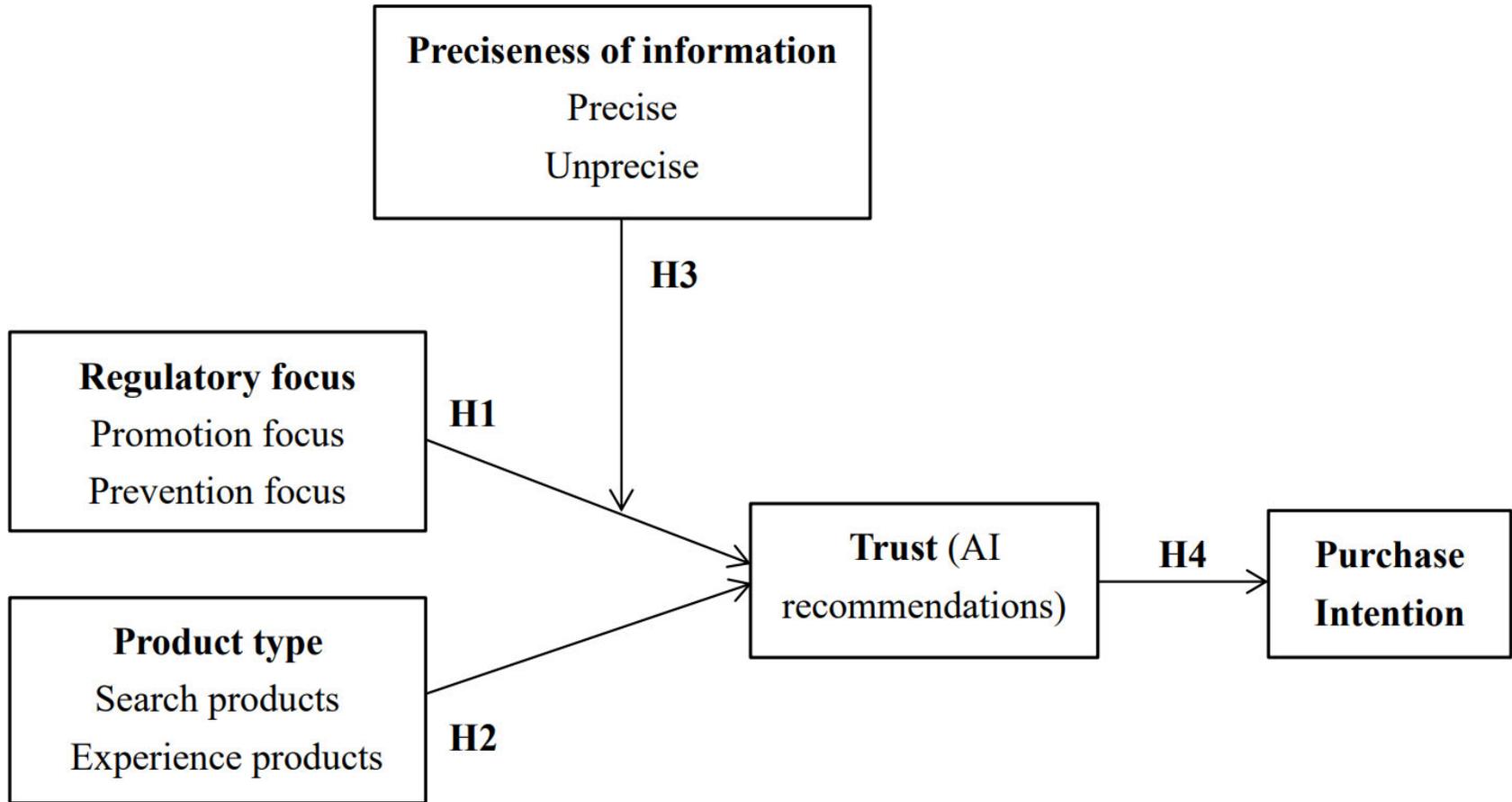
Methodology

- ➕ Research framework
- ➕ Experimental design
- ➕ Sample

3. Methodology - Research framework

3. **Methodology -** Research framework

H1: Consumers with a prevention focus have a higher trust in AI recommendations than consumers with a promotion focus.

Cheng, Kao, Chuang and Chen (2013) pointed out that consumers with a prevention focus have higher conformity.

To avoid losing a sense of belonging or making bad decisions, consumers with a prevention focus choose to decide with the masses.

AI recommendation is generated based on public purchase data and personal past shopping behavior representing the choice of most people.

3. Methodology - Research framework

H2: Compared with experience products, consumers have higher trust in AI recommendations for search products.

Search products give consumers more trust than experience products when using provider recommendations (Payne and Bettman, 1992).

Consumers must experience the experience product first to understand its effects. Thus, experience products are less suitable for online purchases (Peterson et al., 1997).

3. Methodology - Research framework

H3: While the information is precise, the gap of trust in AI recommendations between consumers with a promotion focus and a prevention focus will be reduced.

H4: The higher the consumer trust in AI recommendations, the higher their purchase intention.

Kim et al. (2021) confirmed that precise information could increase consumer trust in AI, increasing consumer behavioral intentions.

Consumers with a promotion focus are purpose-oriented and care about obtaining their desired results. Accurate product information can increase credibility (Xie and Kronrod, 2013), thus increasing trust in AI recommendations.

3. Methodology - Research framework

H1: Consumers with a prevention focus have a higher trust in AI recommendations than consumers with a promotion focus.

H2: Compared with experience products, consumers have higher trust in AI recommendations for search products.

H3: While the information is precise, the gap of trust in AI recommendations between consumers with a promotion focus and a prevention focus will be reduced.

H4: The higher the consumer trust in AI recommendations, the higher their purchase intention.

3. Methodology - Sample

1 This study used Microsoft Forms to send 280 questionnaires.

2 People with **shopping experience participated in a formal experimental design**.

3 In total, **268 valid questionnaires** were collected.

4 The subjects were volunteers who conducted **experiments online**.

5 were **randomly assigned to one of the eight experimental** designs.

Most subjects were 21-30 years old; 52.81% of subjects were female. Furthermore, 52.06% of subjects were students.

3. Methodology - Experimental design

Pre-test questionnaires were to ensure the correct manipulation of relevant variables.

Experimental design 1			
Experimental groups	Regulatory focus	Product types	Preciseness of information
1	Promotion focus	Search products	Precise
2			Unprecise
3		Experience products	Precise
4			Unprecise
5	Prevention focus	Search products	Precise
6			Unprecise
7		Experience products	Precise
8			Unprecise

The experiment design was a 2 (regulatory focus: promotion focus/prevention focus) x 2 (product types: search products/experience products) x 2 (preciseness of information: precise/unprecise) online experiment.

3. Methodology - Experimental design

The experiment was conducted as an online questionnaire.

1. Subjects were asked to complete the basic information.

2. Subjects were presented with a scenario.

3. Subjects were asked to answer questions about their trust and purchase intention toward the products using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree).

3. Methodology - Experimental design

- Promotion focus group "Recently, your watch has broken, so you want to go online to buy a new watch. You feel that wearing a watch can enhance your concept of time and achieve the effect of showing your fashion sense."
- Prevention focus group "You think wearing a watch can prevent you from being unable to quickly know the time."

- Search product: watch
- Experience product: perfume

- Precise information displayed 80.135%,
- Unprecise information displayed 80%.

Results

4. Results

Table 1   Results of ANOVAs of experimental design

Dependent variable	Independent variables	df	MS	F-value	p-value
Trust	Regulatory focus	1	2.932	6.476*	0.012
	Product types	1	4.275	9.444**	0.002
	Preciseness of information	1	2.498	5.112*	0.034
	Regulatory focus × Preciseness of information	1	2.293	5.065*	0.025

Note: *p<0.05; **p<0.01; ***p<0.001

The results showed that trust had a significant positive effect on purchase intention (F=285.979, p=0.000) and supported H4.

4. Results

Hypotheses		Result
H1	Consumers with a prevention focus have a higher trust in AI recommendations than consumers with a promotion focus.	Supported
H2	Compared with experience products, consumers have higher trust in AI recommendations for search products.	Supported
H3	While the information is precise, the gap of trust in AI recommendations between consumers with a promotion focus and a prevention focus will be reduced.	Supported
H4	The higher the consumer trust in AI recommendations, the higher their purchase intention.	Supported

Conclusion and Implication

- Conclusion
- Managerial implications
- Limitations and future research

5.2 Conclusion

1 Consumers with a **prevention focus** have a **higher trust** in AI recommendations.

2 Consumers have a **higher trust** in AI recommendations for **search products**.

3 While the information is **precise**, the gap of trust in AI recommendations between consumers with a promotion focus and a prevention focus will be reduced.

4 Consumer **trust** in AI recommendations has a **positive effect** on their **purchase intention**

5.3 Managerial implications

(1) Companies could use AI recommendations when consumers are prevention focus

- **Result:** Consumers with a prevention focus have greater trust in AI recommendations.

- **Suggestion:** Companies could use prevention focus messages in the AI recommendation to trigger consumers' situational regulatory focus.

(2) Companies could use AI recommendations when products are search products

- **Result:** Consumers have higher trust in search products than experience products.

- **Suggestion:** If companies want to use AI recommendations on the Internet, search products can achieve better results.

5.3 Managerial implications

(3) Companies could present AI recommendation messages in precise numbers for consumers with a prevention focus to enhance consumer trust

- **Result:** Consumers with a prevention focus had significantly higher trust in AI recommendations when the information was precise.

- **Suggestion:** Display the numbers in detail (e.g., 80.135%) instead of approximate numbers (e.g., 80%).

(4) Companies could increase consumer purchase intention by increasing consumer trust in AI recommendations

- **Result:** The higher the consumer trust in AI recommendations, the higher their purchase intention.

- **Suggestion:** Companies can improve consumer purchase intentions by understanding the factors that increase consumer trust in AI recommendations.

5.4 Limitations and future research

Limitations

1. **Sample:** sample structure was mainly Taiwanese

2. **Regulatory focus:** consumer characteristics may bias subjects, or they cannot be brought into context.

3. **Products:** only traditional watches and perfumes

Suggestion

1. **Sample:** expand the research scope and collect a wider sample

2. **Regulatory focus:** test subjects first to identify consumers who are the real prevention focus and promotion focus before conducting research

3. **Products:** use more diverse products

Thank you for attention