

# **The Impact of Quantity of Information on Purchase Intention: The Moderating Effect of Fear of Better Options**

## **INTRODUCTION**

Iyengar and Lepper's (2000) jam experiment showed that excessive choices can reduce purchase intention. A booth with 24 flavors attracted 60% of customers, but only 3% purchased, while a booth with 6 flavors attracted 40%, with 30% making a purchase. The study suggests that too many choices increase decision difficulty and weaken purchase intention.

Consumers may experience Fear of Better Options (FoBO), a tendency to seek better alternatives, impairing quick decision-making (McGinnis, 2020). McGinnis (2004) introduced FoBO as a psychological phenomenon where individuals indefinitely delay decisions in pursuit of better options. In the jam experiment, consumers facing too many choices hesitated or abandoned decisions, reducing efficiency and purchase intention. High-FoBO individuals overanalyze options, leading to procrastination and lower decision efficiency.

In today's digital era, consumers are bombarded with vast information from multiple sources. While information aids decision-making, excessive information overwhelms cognitive capacity, negatively impacting purchase intention (Keller & Staelin, 1987; Furner, Zinko & Zhu, 2016; Korhonen et al., 2018). High-FoBO individuals strive for the perfect decision, spending excessive time filtering information, delaying decisions until a deadline or a perceived optimal choice (McGinnis, 2020). This study examines how FoBO levels and information quantity influence purchase intention.

## **LITERATURE REVIEWS**

### **Definition of Fear of Better Options (FoBO)**

McGinnis (2004) introduced the social theory of *Fear of* (Fo) and later expanded on its analysis in McGinnis (2020), defining psychological traits that influence consumer decision-making. One such trait, Fear of Better Options (FoBO), is the concern that better choices—real or imagined—exist, leading to decision delays (Flecha et al., 2024).

FoBO individuals experience stress and anxiety in decision-making, fearing regret and dissatisfaction (McGinnis, 2020). They continuously seek alternatives and may impulsively change decisions at the last moment, resulting in irrational choices (Armansyah, Ardianto & Rithmaya, 2023; Flecha et al., 2024).

The pursuit of perfection causes over-evaluation of options to avoid regret. Their reluctance to compromise may lead to self-centered decision-making, disregarding others' advice, creating a burden on relationships (McGinnis, 2020).

### **Quantity of information**

Quantity of information is defined as the total amount of information available on a specific topic (Miller, 1956; Hiltz & Turoff, 1985; Nelson, 1994; Jackson & Farzaneh, 2012). Before making an informed decision, individuals often seek information from multiple sources. While advancements in information technology have enabled consumers to access a wealth of product information, excessive information may exceed human cognitive capacity, making it difficult to comprehensively evaluate all available options during decision-making (Ostrom, 2011).

### **Purchase Intention**

Meskaran, Ismail, and Shanmugam (2013) define purchase intention as the likelihood of a consumer being willing to purchase a particular product, brand, or service. Kotler and

Armstrong (2010) describe purchase intention as the probability of a consumer purchasing a specific product, brand, or service, or the likelihood of switching from previously purchased products, brands, and services to other potential alternatives.

### The Impact of Quantity of Information and Fear of Better Options on Purchase Intention

McGinnis (2020) suggests that individuals with a high Fear of Better Options (FoBO) tendency are highly selective in their choices and tend to overanalyze all potential options to avoid post-decision regret. Flecha et al. (2024) also point out that high-FoBO individuals may overthink product-related information, which can trigger impulsive and irrational decision-making at the final stage, potentially leading to decision paralysis. Armansyah et al. (2023) argue that high-FoBO investors may spend excessive time researching investments to ensure they make the most informed decision using all available information. However, this behavior may result in decision delays, causing them to miss critical investment opportunities and timing.

Consumers with low FoBO tendencies seek information from various sources to make informed decisions (Broniarczyk & Griffin, 2014; Hu & Krishen, 2019). However, due to limited information-processing capacity, people often struggle to process all available information and comprehensively evaluate every option (Ostrom, 2011). Payne, Bettman, and Johnson (1991) indicate that as the amount of information consumers acquire increases, decision-making becomes more complex, leading to higher decision difficulty. When the set of considered options and the amount of information expand beyond a certain point, it not only deteriorates decision quality but also causes consumers to consider fewer choices and process only partial information (Hauser & Wernerfelt, 1990; Payne, 1993; Parra & Ruiz, 2009). Additionally, Zinko et al. (2020) and Kato (2020) highlight that excessive textual and product information may reduce consumers' purchase intention.

In summary, high-FoBO consumers desire to obtain all available product information when making decisions and spend substantial time evaluating options to ensure they make the most informed choice, thereby avoiding regret. Insufficient information may increase uncertainty and decision difficulty, ultimately lowering their purchase intention. Therefore, this study hypothesizes that for high-FoBO consumers, a higher quantity of information leads to a higher purchase intention compared to a lower quantity of information.

Conversely, for low-FoBO consumers, an increase in information quantity makes decision-making more complex. Excessive information not only impairs decision quality but also makes them more inclined to consider fewer options, ultimately reducing their purchase intention. Thus, this study hypothesizes that for low-FoBO consumers, a lower quantity of information leads to a higher purchase intention compared to a higher quantity of information. The research hypotheses are as follows:

**H1:** Quantity of information and Fear of Better Options have a significant interaction effect on purchase intention.

**H1-1:** For high-FoBO consumers, a higher quantity of information leads to a higher purchase intention compared to a lower quantity of information.

**H1-2:** For low-FoBO consumers, a lower quantity of information leads to a higher purchase intention compared to a higher quantity of information.

## THE EXPERIMENT

### Experimental Design

This study adopts a 2 (Quantity of Information: High vs. Low)  $\times$  2 (FoBO: High vs. Low) between-subjects experimental design. The objective is to examine the impact of different

levels of information quantity (13 product attributes vs. 7 product attributes) on consumers' purchase intention, with FoBO tendencies (high vs. low) as a moderating factor. A total of 141 participants took part in this experiment. Regarding gender distribution, there were 44 male participants, accounting for 31.2%, and 97 female participants, making up 68.8% of the total sample. In terms of age distribution, the average age of participants was 20.94 years ( $SD = 2.185$ ).

#### Manipulation of the Independent Variable

This study targets university students as research participants, recruiting a total of 141 subjects. A random sampling method was used to assign participants randomly to one of two experimental conditions. The study employs Bluetooth earphones as the simulated product in the experiment.

The manipulation of information quantity follows the approach used in Dörnyei et al. (2017). In the high-information condition, participants were informed that the Bluetooth earphones had 13 different product attributes. In the low-information condition, participants were informed that the Bluetooth earphones had 7 different product attributes. Participants were only allowed to select one product from the given options.

#### Measurement of the Moderator and Dependent Variable

For the moderator variable, this study considers Fear of Better Options (FoBO). The measurement of FoBO is based on the scale developed by Flecha et al. (2024) and is assessed using a 7-point Likert scale (1 = Strongly Disagree; 7 = Strongly Agree) to determine participants' FoBO levels. For the dependent variable, this study examines purchase intention. The measurement of purchase intention follows the scale developed by Lee et al. (2013) and is also assessed using a 7-point Likert scale (1 = Strongly Disagree; 7 = Strongly Agree) to evaluate participants' willingness to purchase the product. The measurements of the moderator and dependent variables are presented in Table 1.

Table 1 The measurements of the moderator and dependent variables

Variable	Measurements	References
<b>FoBO</b>	1. Sometimes, I do not know which product to choose during the purchasing process.	Flecha et al. (2024)
	2. I feel distressed when I cannot try or analyze all possible purchase options.	
	3. I tend to make my purchase decision at the last moment.	
	4. I often spend so much time making decisions that, in the end, I only consider the options that benefit me.	
	5. I often feel anxious during the selection process because I am unsure of what I truly want.	
<b>Purchase Intention</b>	1. I will actively plan to purchase Bluetooth earphones.	Lee, Trail, Lee, & Schoentdt (2013)
	2. I intend to purchase Bluetooth earphones.	
	3. I am likely to purchase Bluetooth earphones.	

#### Manipulation Check

This study follows up by asking participants about their subjective perception and evaluation of the number of product attributes presented in a given scenario. The purpose is to verify whether the manipulation of information quantity was successful. In the high-information condition, participants are asked: “I think that having 13 product attributes makes the selection...”; in the low-information condition, participants are asked: “I think that having 7 product attributes makes the selection...” Participants respond using a 7-point Likert scale (1 = Few product attributes; 7 = Many product attributes) to assess their perception of the quantity of product attributes.

## RESULTS

### Manipulation Check Results

To verify the effectiveness of the variable manipulation, a manipulation check was conducted on information quantity (high vs. low) to ensure that participants could correctly distinguish between the different levels of information after viewing the experimental scenario.

An independent samples t-test was performed, and the results showed that the high-information condition ( $M = 5.65$ ,  $SD = 1.210$ ) was significantly higher than the low-information condition ( $M = 4.55$ ,  $SD = 1.550$ ),  $t(1,139) = 4.705$ ,  $p < 0.001$ . This indicates that the experimental manipulation of information quantity was successful.

### Interaction Analysis of Information Quantity and FoBO on Purchase Intention

This study conducted an analysis of variance (ANOVA) to examine the interaction effect of information quantity and Fear of Better Options (FoBO) on purchase intention. To classify participants into high-FoBO and low-FoBO groups, the study first calculated the average score from five FoBO measurement items, each rated on a 7-point Likert scale, across 141 valid responses. The median value (5.20) was used as the cutoff for classification. Participants scoring  $\geq 5.20$  were categorized as high-FoBO, while those scoring  $< 5.20$  were categorized as low-FoBO.

The ANOVA results indicate a significant interaction effect between information quantity and FoBO on purchase intention ( $F(1,137) = 10.048$ ,  $p < 0.01$ ), supporting H1. However, there were no significant main effects of FoBO ( $F(1,137) = .218$ ,  $p > 0.05$ ) or information quantity ( $F(1,137) = 0.174$ ,  $p > 0.05$ ) on purchase intention.

To further investigate the interaction effect, a simple main effects analysis was conducted. For high-FoBO consumers, the high-information condition ( $M = 5.151$ ,  $SD = 1.013$ ) resulted in significantly higher purchase intention than the low-information condition ( $M = 4.500$ ,  $SD = 1.329$ ,  $F(1,74) = 5.873$ ,  $p < 0.05$ ). This supports H1-1. For low-FoBO consumers, the low-information condition ( $M = 4.990$ ,  $SD = 0.980$ ) resulted in significantly higher purchase intention than the high-information condition ( $M = 4.491$ ,  $SD = 0.919$ ,  $F(1,63) = 4.487$ ,  $p < 0.05$ ). This supports H1-2.

## CONCLUSION

### Research Findings

This study expands the theoretical foundation of Fear of Better Options (FoBO) by introducing a new contribution—differentiating consumers with distinct purchasing behaviors based on varying levels of FoBO. For the first time, consumers were categorized into high-FoBO and low-FoBO groups based on their decision-making tendencies.

This study defines high-FoBO individuals as those who continuously seek better or optimal choices, firmly value their right to choose, and remain open to all possible options. In contrast, low-FoBO individuals are those who, in most situations, exhibit behaviors and

characteristics aligned with the general public. When faced with a limited number of choices and information, they can make decisions more easily and quickly. However, when confronted with an excessive number of options or information overload, they are more prone to experiencing decision difficulty and procrastination.

The experimental results indicate that in high-FoBO individuals, a higher quantity of information has a stronger positive effect on purchase intention than a lower quantity of information. Additionally, this study presents a novel perspective—high-FoBO consumers, driven by the fear of missing out on the best option, tend to actively seek more information, including details on both similar and different product categories, online reviews, and expert recommendations. This behavior helps them find the most suitable option that aligns closely with their purchasing goals.

For low-FoBO individuals, a lower quantity of information results in higher purchase intention compared to a higher quantity of information. As information quantity increases to an excessive level, decision accuracy and quality begin to decline. These consumers prefer moderate and practical information that helps them make choices efficiently. However, when the amount of information exceeds their cognitive processing capacity, information overload has a significant negative impact on their purchase intention (Cheng, Ouyang & Liu, 2020).

### Practical Implications

For consumers with high FoBO tendencies, a higher quantity of information leads to greater purchase intention. Therefore, this study suggests that businesses implement personalized marketing strategies through e-commerce platforms.

Companies can design an FoBO trait questionnaire during membership registration to collect consumer preference data. Based on this information, businesses can provide diverse and detailed product information tailored to high-FoBO consumers. For example, platforms can present systematic product comparisons by categorizing and organizing information based on product type, functionality, reviews, expert recommendations, and real-world usage scenarios.

By offering structured and comprehensive information, businesses can help high-FoBO consumers analyze and make decisions more efficiently, ultimately enhancing purchase intention. Moreover, this approach can increase consumer reliance on the platform and improve overall customer satisfaction.

### Research Limitations

This study focuses on information quantity in experimental manipulation but acknowledges that information types (e.g., text, reviews, images, videos) also affect purchase intention (Sasaki et al., 2011; Hu & Krishen, 2019; Zinko et al., 2020; Wang et al., 2024).

Sasaki et al. (2011) suggest that in public decision-making, consumers prefer popular products with extensive textual and attribute information, increasing reliance on shopping trends and herd behavior. Zinko et al. (2020) find that images in online reviews mitigate the negative effects of insufficient information and information overload. Wang et al. (2024) argue that while textual reviews enhance usefulness, excessive text leads to information overload, reducing effectiveness. However, visual elements (images/videos) combined with text can alleviate overload effects and boost purchase intention.

This study suggests future research should explore how different information types interact with FoBO traits (high vs. low) and influence purchase intention under varying information quantity levels.

## REFERENCES

- Armansyah, R. F., Ardianto, H., and Rithmaya, C. L. (2023). Understanding gen z investment decisions: capital market literacy and emotional biases. *Jurnal Manajemen dan Kewirausahaan*, 25(2), 105-119.
- Broniarczyk, S. M., and Griffin, J. G. (2014). Decision difficulty in the age of consumer empowerment. *Journal of Consumer Psychology*, 24(4), 608-625.
- Cheng, P., Ouyang, Z., and Liu, Y. (2020). The effect of information overload on the intention of consumers to adopt electric vehicles. *Transportation*, 47, 2067-2086.
- Dörnyei, K. R., Krystallis, A., & Chrysochou, P. (2017). The impact of product assortment size and attribute quantity on information searches. *Journal of Consumer Marketing*, 34(3), 191-201.
- Flecha, J. A., Santos Corrada, M., Perez, S., Dones, V., and Rodriguez, L. H. (2024). Exploring the influence of uncontrolled social media use, fear of missing out, fear of better options, and fear of doing anything on consumer purchase intent. *International Journal of Consumer Studies*, 48(1). e12990.
- Furner, C. P., Zinko, R., and Zhu, Z. (2016). Electronic word-of-mouth and information overload in an experiential service industry. *Journal of Service Theory and Practice*, 26(6), 788-810.
- Hauser, J. R., and Wernerfelt, B. (1990). An evaluation cost model of consideration sets. *Journal of Consumer Research*, 16(4), 393-408.
- Hiltz, S. R., and Turoff, M. (1985). Structuring computer-mediated communication systems to avoid information overload. *Communications of the ACM*, 28(7), 680-689.
- Hu, H. F., and Krishen, A. S. (2019). When is enough, enough? Investigating product reviews and information overload from a consumer empowerment perspective. *Journal of Business Research*, 100, 27-37.
- Iyengar, S. S., and Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing?. *Journal of Personality and Social Psychology*, 79(6), 995-1006.
- Jackson, T. W., and Farzaneh, P. (2012). Theory-based model of factors affecting information overload. *International Journal of Information Management*, 32(6), 523-532.
- Kato, T. (2020). Diversity in product colors and grades: Impact on purchase intention. In *ISPIM Conference Proceedings* (pp. 1-11). The International Society for Professional Innovation Management (ISPIM).
- Keller, K. L., and Staelin, R. (1987). Effects of quality and quantity of information on decision effectiveness. *Journal of Consumer Research*, 14(2), 200-213.
- Korhonen, P. J., Malo, P., Pajala, T., Ravaja, N., Somervuori, O., and Wallenius, J. (2018). Context matters: The impact of product type, emotional attachment and information overload on choice quality. *European Journal of Operational Research*, 264(1), 270-279.
- Kotler, P., and Armstrong, G. (2010). *Principles of marketing*. Pearson education.
- Lee, D., Trail, G. T., Lee, C., and Schoenstedt, L. J. (2013). Exploring Factors that Affect Purchase Intention of Athletic Team Merchandise. *ICHPER-SD Journal of Research*, 8(1), 40-48.
- McGinnis, P. J. (2004). Social theory at HBS: McGinnis' two FOs. *The Harbus*, 10(5).

- McGinnis, P. J. (2020). *Fear of missing out: Practical decision-making in a world of overwhelming choice*. Sourcebooks, Inc.
- Meskaran, F., Ismail, Z., and Shanmugam, B. (2013). Online purchase intention: Effects of trust and security perception. *Australian Journal of Basic and Applied Sciences*, 7(6), 307-315.
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81-97.
- Nelson, M. R. (1994). We have the information you want, but getting it will cost you!: held hostage by information overload. *XRDS: Crossroads, The ACM Magazine for Students*, 1(1), 11-15.
- Ostrom, E. (2011). Background on the institutional analysis and development framework. *Policy Studies Journal*, 39(1), 7-27.
- Parra, J. F., and Ruiz, S. (2009). Consideration sets in online shopping environments: the effects of search tool and information load. *Electronic Commerce Research and Applications*, 8(5), 252-262.
- Payne, J. W. (1993). *The adaptive decision maker*. Cambridge University Press.
- Payne, J., Bettman, J. R., & Johnson, E. J. (1991). Consumer decision making. *Handbook of Consumer Behaviour*, 50-84.
- Sasaki, T., Becker, D. V., Janssen, M. A., and Neel, R. (2011). Does greater product information actually inform consumer decisions? The relationship between product information quantity and diversity of consumer decisions. *Journal of Economic Psychology*, 32(3), 391-398.
- Soto-Acosta, P., Jose Molina-Castillo, F., Lopez-Nicolas, C., and Colomo-Palacios, R. (2014). The effect of information overload and disorganisation on intention to purchase online: The role of perceived risk and internet experience. *Online Information Review*, 38(4), 543-561.
- Wang, L., Che, G., Hu, J., and Chen, L. (2024). Online Review Helpfulness and Information Overload: The Roles of Text, Image, and Video Elements. *Journal of Theoretical and Applied Electronic Commerce Research*, 19(2), 1243-1266.
- Zinko, R., Stolk, P., Furner, Z., and Almond, B. (2020). A picture is worth a thousand words: how images influence information quality and information load in online reviews. *Electronic Markets*, 30, 775-789.