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The Power of Default Option: How Extensive Choices Impact Consumer Decisions

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Abstract:

This study explores choice overload and its impact on consumer decision-making, particularly regarding default options. While prior research indicates that gender may influence decision-making, our findings reveal no significant gender effect on the likelihood of selecting default options, satisfaction levels, or decision-making duration. This suggests that choice overload's effects are applicable across diverse demographic groups. Our research provides important marketing insights, advocating for simplified choice environments to enhance customer satisfaction. Reducing the number of options can alleviate choice fatigue and improve the overall purchasing experience. Conversely, when promoting specific products, creating a choice overload scenario with a designated default option may increase its selection likelihood. The study does, however, recognize limitations, such as the lack of comparisons between scenarios with and without default options and potential participant confusion that may lead to invalid responses. Future research should investigate the role of default options on satisfaction and decision-making time within choice overload contexts and assess whether product categories influence adherence to default options.

Keywords: choice overload; decision making; default option

1. Introduction

In today's world, with an ever-expanding array of choices, people often find it increasingly challenging to make decisions. Consequently, various marketing strategies are essential for facilitating quicker selections. In everyday life, products displayed prominently on shelves are often not necessarily the best or worst options for consumers (Herrmann et al., 2011); they tend to be new or on sale items. Such products are referred to as "default options." A default option is the alternative that a consumer receives if they do not explicitly specify otherwise (Brown & Krishna, 2004). This study aims to elucidate how choice overload affects consumers' purchasing decisions when a default option is present. Specifically, we investigate the likelihood of consumers switching options in such circumstances. The findings highlight the significance for producers, particularly when companies undergo product diversification or introduce new versions.

While there is substantial research on the effects of choice overload—such as the finding that making decisions from numerous options can lead to decreased satisfaction (Lee, 2017) and indecision (Lipowski, 1970)—these studies provide only a broad overview. Limited research has delved deeper into the nuances of this relationship under specific conditions, which our study seeks to address.

In this paper, we employ a mixed-methods approach that effectively combines quantitative analysis with qualitative insights gathered through an online questionnaire. Participants were randomly divided into two groups to ensure diverse regional and age representation. The questionnaire was designed as a personality test to minimize bias and encourage authentic responses. After data collection, we received 144 valid questionnaires and processed the data using Excel.

Our analysis, conducted through a regression model, yielded three main results. First, the likelihood of adhering to the default option is higher in extensive choice settings, as consumers tend to simplify their decision-making process when pressed for time. Second, average satisfaction levels were lower among individuals confronted with a multitude of options, indicating that more consumers were dissatisfied with the default choice. Third, individuals faced with extensive choices took longer to decide, even when default options were available.

The remainder of this article is organized as follows:

section 2 is literature review, section 3 is methodology, section 4 is results, and section 5 is conclusion and discussion.

2. Literature Review

2.1 Default options

A default option is defined as the alternative a consumer receives if they do not explicitly specify otherwise (Brown & Krishna, 2004). However, default options can have negative consequences. For instance, placing fruits and vegetables on children's lunch trays may increase consumption but can also lead to higher waste, making the method less cost-effective (Just & Price, 2013). Research has explored strategies to increase adherence to default options, indicating that switching costs generally diminish the relationship between the desire to switch and the likelihood of doing so. Switching costs encompass both financial and non-financial factors, with financial costs having the most significant impact on decision-making (Matthews et al., 2008).

2.2 Choice overload

Choice overload may increase time spent in making decisions and decrease satisfaction. Evidence from both laboratory settings and real-world scenarios suggests that individuals may be less willing to engage in the market when faced with selecting an alternative from a larger set of options. Contextual inference theory (Kamenica, 2006) posits that when presented with a broader array of choices, individuals are more likely to select simpler alternatives, as their utility is clearer (Iyengar &Kamenica, 2007). Participants given a limited amount of time to choose with a larger set of alternatives found their decisions to be more difficult and frustrating than did participants in the other conditions (Haynes, 2009).

Additionally, gender and age can influence decision-making in the context of choice overload. Women tend to place more importance than men on factors such as uncertainty, time/money constraints, the consequences of decisions, task factors, emotions, and social pressure. Conversely, men score higher on goals, motivation, and work pressure. Age also plays a role, as individuals of different ages prioritize different aspects of decision-making (Lizarraga et al., 2007).

In summary, there is lack of experiments that prove the relationship, so we aim to investigate the relationship between the default option and choice overload. Therefore, we propose our hypothesis as follows:

H0: Choice overload reinforces the selection of default options.

H1: Choice overload has no significant impact on the choice of default options.

3. Methodology

3.1 Experiment

Our study employs a mixed-methods approach that combines quantitative analysis with qualitative insights derived from an online questionnaire. This design allows for a comprehensive exploration of the research questions, providing a holistic view of the complexities into consumer decision-making.

For data collection, we used the Questionnaire Star platform, which facilitated the calculation of response times, satisfaction levels, and the gathering of basic demographic information, alongside external influences. The data collection method enhances the comprehends of our findings and offers a deeper inquiry to the factors influencing consumer behavior.

Participants were randomly divided into two groups from diverse regions and age groups. The selection criteria targeted participants with a fundamental understanding of consumer behavior, the ability to comprehend the scenario in the context, and basic arithmetic skills. This strategic selection improves the relevance and applicability of our findings.

We designed the questionnaire as a personality test in disguise which aims to blur our experimental intention. This approach aimed to minimize bias and encourage genuine responses. Participants were tasked with selecting a bottled milk product under a time constraint of 15 seconds. The control group faced a simpler task, choosing from three milk options with varying expiration dates, while the experimental group had to select from 20 different options. This design investigated the impact of choice overload on decision-making processes.

3.2 Hypothesizes

In the preface of our data analysis, we formulated several hypotheses based on theoretical frameworks on choice overload. The first aspect examined the relationship between choice overload and the selection of default options. Our null hypothesis (H0) states that choice overload reinforces the selection of default options, while our alternative hypothesis (H1) suggests that choice overload has no significant impact on the choice of default options.

We further explored other aspects of decision-making. We hypothesized that choice overload elongates the decision-making process, forming our null hypothesis (H0), while our alternative hypothesis (H1) claims that choice overload does not influence decision-making duration.

Finally, we investigated the effect of choice overload on consumer satisfaction. Our null hypothesis (H0) asserts

that choice overload decreases overall satisfaction, whereas our alternative hypothesis (H1) contends that choice overload has no significant impact on satisfaction levels.

3.3 Statistics summary

Data collection was conducted using the Questionnaire Star platform, and our data analysis was carried out using Excel to investigate the relationships between various variables and to verify our hypotheses. To quantify these relationships, we assigned a value of 1 to our null hypotheses (H0) and a value of 0 to our alternative hypotheses (H1), with the treatment group represented as 1 and the control group as 0. A regression analysis was then conducted to assess the interplay between the two groups, ultimately aiming to draw meaningful conclusions from the data.

Our study seeks to demonstrate the dynamics of consumer choice overload and its implications for decision-making processes in our mix-method approach. Summary statistics is shown in table 1 as below.

Table 1 Statistics Summary

Variables	Observation	Mean	Std.dev.	Min	Max
Panel A: Control Group					
Likelihood to switch	72	0.57	0.50	0	1
Satisfaction degree	72	85.64	21.21	0	100
Time taken to make decision	72	12.94	3.35	2.80	15.14
Intention	72	0.96	0.20	0	1
Gender	72	0.19	0.40	0	1
Panel B: Treatment Group					
Likelihood to switch	72	0.86	0.35	0	1
Satisfaction degree	72	76.4	27.82	0	100
Time taken to make decision	72	14.11	2.46	3.49	15.14
Intention	72	0.92	0.28	0	1
Gender	72	0.24	0.43	0	1

For the statistical summary of the control and treatment groups, it is obvious that the treatment influences participants' behavior and satisfaction. The treatment group shows an evidently higher likelihood to switch, with a mean of 0.86 compared to 0.57 in the control group. This suggests that choice overload effectively motivates participants to consider switching, indicating a successful outcome in this regard. However, as switching likelihood increases satisfaction degree also comes at a cost: the treatment group also exhibits a lower mean satisfaction degree of 76.4, compared to 85.64 in the control group. This decline in satisfaction, coupled with a slight increase in the time taken to make decisions (14.11 units in the treatment group versus 12.94 units in the control group), suggests that while the treatment encourages switching, it may do so by bringing dissatisfaction of the decision-making while may be offset by deliberation.

Moreover, the impact on participants' intention to act appears to be minimal, with only a slight increase from 0.19 in the control group to 0.24 in the treatment group. This modest change indicates that while the treatment might influence behavior, it does not substantially change by the participants' underlying intentions. The gender distribution between the two groups remains similar, with no significant differences observed, indicating that gender is not a major factor in the observed outcomes. All in all, the analysis highlights the effectiveness of the treatment in promoting switching likelihood, along with some trade-offs in terms of satisfaction and decision-making time.

4. Results

4.1 The effect of extensive choice on the likelihood of sticking with the default option

In Table 2, column (1) indicates a positive and statistically significant relationship between extensive choice and the likelihood of sticking with the default option. The coefficient is 0.292 at 1% significant level meaning that in extensive choice settings, individuals are, on average, 29 percentage points more likely to choose the default option in the treatment group compared to the control group. When considering other variables, such as purchase inten-

tion and gender, the regression coefficient remains stable at 0.294, still significant at less than 1%. Detailed regression results can be found in Table 2.

Table 2 The effect of extensive choice on the likelihood of sticking with default option

Dependent variable: Likelihood to stick with default option		
	(1)	(2)
Extensive choices	0.292***	0.294***
	(0.072)	(0.072)
Intention		-0.023
		(0.150)
Gender		-0.067
		(0.088)
N	144	144
R-sq	0.104	0.108
Notes: Standard errors in parentheses; *** P<0.01, ** P<0.05, * P<0.1		

4.2 The effect of extensive choice on the satisfaction degree

In Table 3, column (1) shows that the relationship between extensive choice and satisfaction degree is significantly negative, with a regression coefficient of -9.236. The p-value, which is less than 0.05, confirms the statistical significance of this finding. The average satisfaction level in the control group is 85.64, while in the treatment group, it drops to 76.4, indicating a decrease of 9.24 (Summary statistics presented in Table 1). This difference is visually represented in the pie chart, where Figure 2 illustrates a smaller dark blue area (indicating satisfied individuals) and a larger purple area (indicating dissatisfaction) compared to Figure 1. The regression coefficient remains largely unchanged when intention and gender are factored in, with a value of -9.053 and a p-value still below 0,05. Detailed regression results can be seen in Table 3.

Table 3 The effect of extensive choice on the satisfaction degree

Dependent variable: Satisfaction degree		
	(1)	(2)
Extensive choices	-9.236**	-9.053**
	(4.123)	(4.159)
Intention		6.908
		(8.604)
Gender		2.519
		(5.055)
N	144	144
R-sq	0.034	0.040
Notes: Standard errors in parentheses; *** P<0.01, ** P<0.05, * P<0.1		

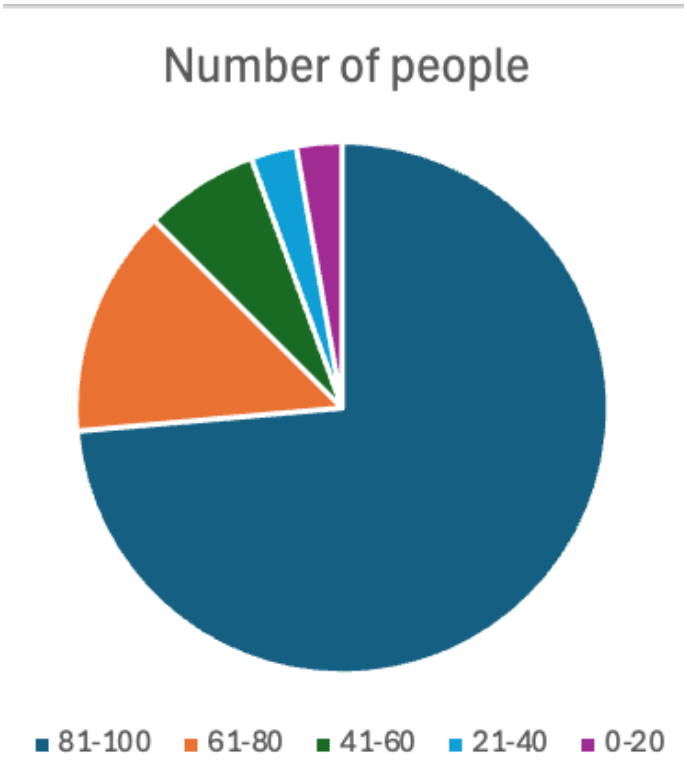

Figure 1 Satisfaction degree in control group

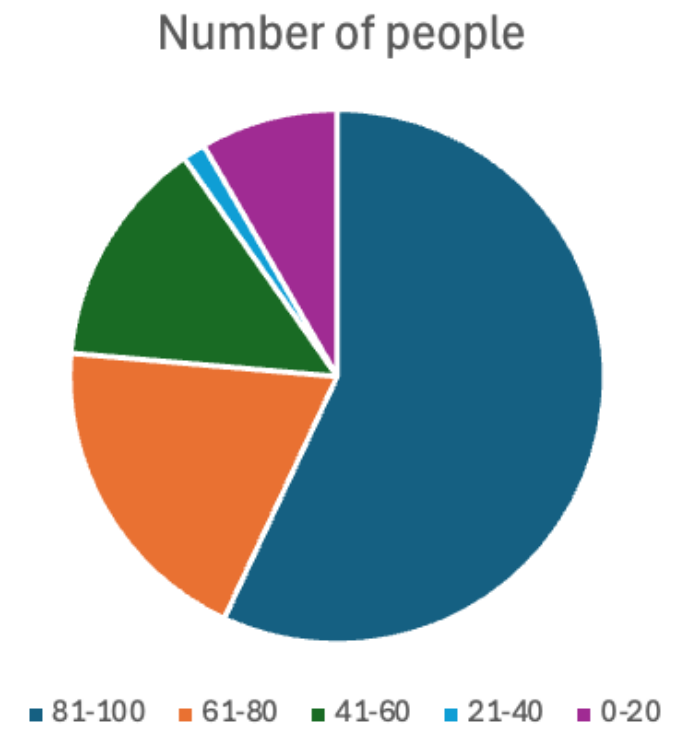

Figure 2 Satisfaction degree in treatment group

4.3 The effect of extensive choice on the time taken to make decision

In Table 3, column (1) demonstrates a positive correlation between the time taken to decide and extensive choice, as evidenced by a regression coefficient of 1.177, with a p-value indicating statistical significance at below 0.05. The average decision-making time in the treatment group is 14.11 seconds, which is 1.17 seconds longer than the 12.94 seconds in the control group. Intention and gender have minimal impact on the results, with regression coefficient showing a slight increase to 1.288 and a p-value of less than 0.01, further confirming the significance of this relationship. Detailed regression results are provided in Table 4.

Table 4 The effect of extensive choice on the time taken to make decision

Dependent variable: Time		
	(1)	(2)
Extensive choices	1.177**	1.288***
	(0.490)	(0.485)
Intention		1.609
		(1.002)
Gender		-1.069*
		(0.589)
N	144	144
R-sq 0.039 0.081		
Notes: Standard errors in parentheses; *** P<0.01, ** P<0.05, * P<0.1		

5. Discussion

5.1 The effect of extensive choice on the likelihood of sticking with default option

The strong positive relationship between extensive choice and the likelihood of sticking with the default option is statistically significant, underscoring the robustness of our findings. In extensive choice settings, individuals often experience decision paralysis; to simplify their decision-making process, they are more likely to choose the default option. This result remains consistent when intention and gender are considered, indicating these factors do not significantly influence the probability of sticking with the default option.

5.2 The effect of extensive choice on the satisfaction degree

The decrease in satisfaction levels from 85.64 in the control group to 76.4 in the treatment group indicates that having too many choices can lead to diminished satisfaction. Our findings align with general research suggesting that too many options can result in lower satisfaction (Lee, 2017). Additionally, satisfaction levels are not significantly affected by intention and gender, this result further emphasizing the strong impact of choice overload.

5.3 The effect of extensive choice on the time taken to make decision

The increased time taken to make decisions when there are extensive choices suggests that choice overload can lead to longer decision-making time. This finding is consistent with previous studies that have observed similar effects (Lipowski, 1970). The impact remains significant at the 99% confidence level when accounting for intention and gender.

Overall, our findings align with existing literature on the impact of choice overload which indicates that our result exclusively influenced by extensive choices. Unlike previous studies suggesting that gender influences decision-making in situations of choice overload (Cruz, 2017), our results indicate no significant gender effect on individuals' likelihood of sticking with the default option, satisfaction levels, or decision-making duration. This suggests that the impact of choice overload is generally applicable

across diverse population groups.

5.4 Marketing implications

Our results provide valuable insights for marketing strategies. To enhance customer satisfaction and optimize the buying experience, businesses should simplify the choice environment rather than overwhelming customers with excessive options. Reducing the number of displayed options can effectively alleviate customers' choice fatigue, ultimately improving satisfaction levels. However, if the goal is to promote a specific product, creating a choice overload scenario while designating that product as the default option can increase its selection likelihood. For instance, if a company aims to promote a particular bottled milk product with an expiration date of December 15, 2025, setting this option as the default among various alternatives would likely enhance its chances of being chosen.

5.5 Limitations and future research

This study has three primary limitations. First, we did not encounter research that included an experimental design featuring only extensive choices without a default option. This lack of comparison prevents us from fully understanding the impact of default options on satisfaction and decision-making time. Second, some participants may have completed the questionnaire multiple times due to misunderstandings about the scenario, leading them to choose the bottled milk with the latest expiration date in subsequent attempts, potentially invalidating those results. Third, our study focused on a specific product—bottled milk with varying expiration dates—which may not generalize to other product types.

Future research could explore the impact of default options on satisfaction and decision-making time within the context of choice overload. Additionally, examining different product categories could reveal whether product type influences individuals' likelihood of sticking with the default option in scenarios of choice overload.

6. Conclusion

In the study, we wonder if setting a default option is a good marketing strategy; hence, we explored the time people spend in making decisions, satisfaction and likelihood to stick with the default option under choice overload with a default option presents. It has significant advantages and disadvantages. Precisely, the existence of default option helps producers sell the products they most want to sell but it may also decrease consumers' satisfaction.

We employ a mixed-methods approach that effectively combines quantitative analysis with qualitative insights. Data were collected using an online consumer survey in which respondents were divided into 2 groups randomly. One group was shown with three bottles of milk with different expiry dates, the other was shown with many bottles of milk with different expiry dates. Both groups have same default option. The three main results we got are: first, the likelihood of adhering to the default option is higher in extensive choice settings; second, average satisfaction levels were lower among individuals confronted with a multitude of options; third, individuals faced with extensive choices took longer to decide, even when default options were available.

Our research opens the door to many questions. Are there any other marketing strategies that can help product diversification or introduce new versions under the state of choice overload? Can we find an approach that can completely remove the preference or bias? We leave these questions to future research.

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Yixuan Xiao, Bingyi Xiong and Jingyun Zou contributed equally to this work and should be considered co-first authors.

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