Dean&Francis

ISSN 2959-6130

The buying of fast fashion product: Factors affecting consumer behavior

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Abstract:

Previous studies have demonstrated that many factors can play a role in determining consumer behavior. Fast fashion has recently become very popular among teenagers. Through controlled experiments, we examine the effects of herding, anchoring, and framing on consumer choices when buying fast fashion products. We also compare the impacts of anchoring and framing. Our findings indicate that all three factors are strongly related to consumer choices regarding to the fast fashion products, with anchoring having the strongest effect.

Keywords: fast fashion, consumer behavior, herding, anchoring, framing

1 Introduction

Nowadays it is popular to buy fast fashion clothes among teenagers, the shops of the mainstream fast fashion brands can easily be seen in the shopping malls, such as ZARA, H&M, and Hollister. The products of these brands are usually much cheaper, easier to purchase, and have a better appearance. They usually keep up with the latest fashion trends and launch new clothes very quickly, in order to meet the aesthetic needs of the public. Many studies have researched consumer behavior in many different situations, such as online shopping (Singh and Sailo, 2013), tourism (Dimanche and Havitz, 1995), and smartphones (Nagarkoti, 2014). However, only a few studies have focused on consumer behavior regarding fast fashion products. Many factors can have an impact on consumer choices, such as culture (Gajjar, 2013), brand awareness, and brand uniqueness (Su and Chang, 2018)

In this paper, we study the influences and the effectiveness of herding, anchoring, and framing effects on consumer behavior when it comes to purchasing fast fashion clothes by conducting two separate experiments. As for herding, we have setup one control group and one treatment group. The control group is two similar white shirts with the same price. The treatment group also has two shirts with the same price, but the purchase volumes are different, shirt A

with more than 2000 purchases and shirt B with only approximately 100 purchases. We expected to find out how the different purchasing volumes affect consumer choices between A and B. We have put anchoring and framing effects in one experiment with one control group and two treatment groups. The control group represents the teenagers' willingness to buy the shirt at its original price. They-variable is the willingness of the teenagers to buy the shirts with price change ($70 to $35) and discount (50% OFF, now $35).

Previous studies have found that consumers usually consider the choices of others when making book purchasing decisions on the Internet bookstore. (Chen, 2007) We are more easily accessible to others'behavior and consider more about their behavior when making decisions. (ALI et al, 2021) People show a strong inclination to select the product that people around them are using due to their recommendation of satisfied experience. To be specific, each individual has people around them who influence them in various ways, which is the reference groups—comprised of individuals with whom they compare themselves. These groups of individuals eventually become their idols and people mimic them. (Gajjar, 2013) The context influences the original choice preference arising from the framing effect (Chuang et al, 2012) Besides, demonstrates the importance of customer profiling from a psychological perspective, (Strainu, 2021) and the way the problem is framed to the respondents determines the outcomes of their decision-making (Gál, 2018) Ability, characteristics, processing styles, and emotion have negligible influences on anchoring judgments. (Furnham and Boo, 2011) We investigate factors influencing consumer's choices towards fast fashion products including herding, anchoring, and framing effect.

H0: herding doesn't have impact on consumer decision about buying fast fashion products H1: herding has impact on consumer decision about fast fashion products

H0: anchoring and framing do not have impact on consumer decision about buying fast fashion products H1: anchoring and framing have impact on consumer decision about fast fashion products

2 Methodology

2.1 Sample

Fast fashion products typically feature affordable prices and appealing designs, so we set teenagers as our sample. Since most teenagers have limited income or pocket money, fast fashion products not only meet their economic needs but also align with their fashion tastes. Teenagers significantly influence the purchase of products for which they are primary consumers, such as breakfast cereals, snack foods, toys, clothing, and school supplies (Mangleburg, 1990). However, they may have less influence on products that require larger financial investments, such as televisions, refrigerators, and cars (Mangleburg, 1990).

2.2 Experimental design

Our targeted respondents are all teenagers aged from 13 to 18. We expected more than 20 samples for each group. The purposes of our experiments are proving herding, anchoring and framing effect on consumer behavior when buying fast fashion products and comparing the impacts of anchoring and framing effects. We have set two experimental groups, one for herding and the other one for anchoring and framing effect. When it comes to herding, our control group1 are two very similar white shirts with the same prices ($35), and we ask the participants to make a decision between A and B. $35 is similar to the real price of clothes of fast fashion brands. Our treatment group1 is the exactly two same shirts with the same price ($35). But shirt A has a purchasing volume of more than 2000, shirt B has a purchasing volume of more than 100 and we let them choose between the two. Our expected result for the control group1 is teenagers are more willing to choose the shirt B, because shirt B is a little bit good-looking than A. The prediction for treatment group 1 is that more teenagers would like to choose the shirt A with higher purchasing volume rather than the shirt B with lower purchasing volume.

As for the anchoring and framing effect, we have set one control group and two treatment group. Because we aimed to compare the effect between anchoring and framing. Our control group2 only put a photo of a shirt with its original price ($35) and we ask the participants about their willingness to buy it. The willingness presents by0-4,0 means not at all, and 4 means very willing to buy. Our treatment group2 is the same shirt with cutting in price ($70→$35), and we measure the same rate. The treatment group 3 is the same shirt with 50% OFF (NOW: $35) and we measure the willingness to buy. We have set 50% because it is attracting and easy to calculate. Our predictions for the control group2 are that the number of teenagers that are willing to buy a shirt is very low, because the shirt is plain-looking, and the price is similar to the market price. The expectation for treatment group2 is that more teenagers are willing to purchase the shirt which price has a cutting in price ($70→$35). As for the treatment group3, we expect that more teenagers are willing to purchase the shirt with 50% OFF ($35). And we expect that the willingness in treatment group 2 is higher than the willingness in treatment group 3, because it is more straightforward to

ISSN 2959-6130

present the information in away of cutting prices.

2.3 Variables

We measure the effectiveness of our treatment through the dependent variables. As shown in table 3, our dependent variable for the herding experiment is the choice between shirt A with higher historical purchasing volume and shirt B with lower historical purchasing volume . The control variables all have an impact on consumer behavior, and we want to exclude their effects. Our control variables are age, gender, carness toward clothes and the frequency of buying clothes. In column 1, we list all the variables including dependent variable and control variables. In column 2, we write the definition for each variable.

In table 6, the dependent variable for anchoring and framing is the willingness to buy the shirt. Our control variables are age, gender, carness, the frequency of purchasing clothes and the price range that the participants are used to accept when buying basic clothes. The table pattern is the same as table 3.

2.4 Data presentation

According to table 1, we collect 67 observations for herding experiment, with 20 for the control group and 47 for the treatment group. We set shirt A with higher historical purchasing volume =1 and shirt B with lower historical purchasing volume=0. Based on column (1) in table 1, the mean preferences in the control group are 0.15 which means that 15% of the teenagers are willing to pick the shirt A. As for the treatment group, the mean of preferences is 0.55 meaning that 55% of teenagers are willing to purchase shirt A. Column 2 is the standard deviation for each variable. Column 3 and 4, we show the minimum and maximum, whereas in column 5, it is the number of observations.

As shown in table 4, we collect 75 observations for anchoring and framing experiment, with 20 for control group, 24 for treatment group 2, and 31 for treatment 3. We set the willingness to buy from 0 to 4, 0 represents not at all, and 4 represents very willing to buy. In column 1, the mean of the willingness for control group is 1.35, people do not show a strong willingness to buy. While, in the treatment group 2, the willingness to buy is 2.33, it shows that more people want to purchase. As for treatment group 3, the willingness to buy is 2.26. The two willingness in treatment groups are both higher than it in the control group, so the anchoring and framing improves the consumption, but the effectiveness of the treatment 2 (anchoring) is higher than treatment 3. Column 2 shows the standard deviation for each variable. Columns 3 and 4 show the minimum and maximum, whereas column 5 shows the number of observations.

2.5 Empirical result

According to Table 2, column 1, when we perform regression analysis solely with herding, it is suggested that herding has a coefficient of 0.403, indicating that herding increases the willingness to buy the shirt from 0.15 to 0.55. In column 2, after controlling for personal characteristics, we can conclude that herding has a positive relationship with the willingness to buy shirt A which is not popular initially, and this is significant at the 1% level. The coefficient is 0.540, which means herding increases the willingness to buy shirt A from 0.15 to 0.69. Since 0.55 is smaller than 0.69, this indicates that the other control variables partially offset the effect of herding on the willingness to buy shirt A.

In column 6 of Table 5, where the regression analysis includes all the variables, it is clear that anchoring has a positive relationship with the willingness to purchase, significant at the 5% level. The coefficient is 0.93, indicating that anchoring can increase the willingness to purchase from 1.35 to 2.28. However, the mean willingness of purchasing is 2.33 under anchoring effect, which aligns with the

previous conclusion. This suggests that when other variables are included in the analysis, it shows a negative incentive towards the effectiveness of the treatment.

Regarding framing effect, it also shows a positive relationship with the willingness to buy,

significant at the 10% level. The coefficient is 0.805, meaning that framing increases the willingness to buy the shirt from 1.35 to 2.155. However, the mean willingness is 2.26 in the framing condition.

In column 1, we perform regression on anchoring without any control variables. Column 2

presents the regression on anchoring with all the control variables. In column 3, we conduct regression with only framing, excluding all control variables, while in column 4, we perform regression on framing with all the control variables. Finally, in column 5, we conduct the regression of both anchoring and

framing without any control variables.

Table 1 Statistics summary of variables about herding

Dep. variable:	Mean (1)	St. Dev. (2)	Min (3)	Max (4)	Observations (5)
Panel A: All Sample					
Age	16.46	1.26	13	18	67
Gender (Female = 1)	0.67	0.47	0	1	67
Frequency (Daily = 5, Annually =1)	2.67	0.89	1	5	67
Careness (Very caring = 4, Not at all = 0)	2.93	0.86	1	4	67
Preference (A=1)	0.43	0.50	0	1	67
Panel B: Control Group					
Age	16.40	1.43	13	18	20
Gender (Female = 1)	0.70	0.47	0	1	20
Frequency (Daily = 5, Annually =1)	2.95	1.00	1	5	20
Careness (Very caring = 4, Not at all = 0)	3.00	0.86	1	4	20
Preference (A=1)	0.15	0.37	0	1	20
Panel C: Treatment Group					
Age	16.49	1.20	13	18	47
Gender (Female = 1)	0.66	0.48	0	1	47
Frequency (Daily = 5, Annually =1)	2.55	0.83	1	5	47
Careness (Very caring = 4, Not at all = 0)	2.87	0.87	1	4	47
Preference (A=1)	0.55	0.50	0	1	47

Table 2 Regression of herding

Dep. variable: purchase intention of shirt with higher historical purchasing volume	(1)	(2)
Herding (purchase volume)	0.403*** (0.125)	0.540*** (0.083)
Age		0.072 (0.049)
Gender		-0.317*** (0.097)
Frequency of Purchase		0.400*** (0.061)
Careness		-0.025 (0.043)
R Square	0.139	0.670
Observations	67	67
Notes: ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.		

Table 3 Variables chart of herding

Variables Definition	
Dependent variables	
Preference	Dummy = 1 if teenagers choose the option A
Control variables	
Age Gender	Participants aged between 13 years old and 18 years old Dummy = 1 if the participant's gender is female

ISSN 2959-6130

Frequency	The frequency of clothing purchases by the participants: 1, 2, 3, 4, 5 indicating annually, seasonally, monthly, weekly, and daily.
Careness	The careness about clothing of teenagers from very caring to no care at all (from 0 to 4)

Table 4 Statistics summary of variables about anchoring

Dep. variable:	Mean (1)	St. Dev. (2)	Min (3)	Max (4)	Observations (5)
Panel A: All Sample					
Age	16.01	1.45	13	18	75
Gender (Female = 1)	2.70	0.95	0	1	75
Frequency (Daily = 5, Annually =1)	2.64	1.06	0	4	75
Careness (Very caring = 4, Not at all = 0)	2.82	1.28	1	5	75
Price Range (>$140 = 5, <$35 = 1)	1.89	1.40	0	3	75
Willingness (Very willing = 4, not at all = 0)	2.04	1.4	0	4	75
Panel B: Control Group					
Age	15.00	1.29	13	17	20
Gender (Female = 1)	0.60	0.50	0	1	20
Frequency (Daily = 5, Annually =1)	2.95	0.94	1	5	20
Careness (Very caring = 4, Not at all = 0)	2.75	1.16	0	4	20
Price Range (>$140 = 5, <$35 = 1)	3.10	1.33	1	5	20
Willingness (Very willing = 4, not at all = 0)	1.35	1.09	0	3	20
Panel C: Treatment Group (Anchoring)					
Age	16.33	1.34	13	18	24
Gender (Female = 1)	0.75	0.44	0	1	24
Frequency (Daily = 5, Annually =1)	2.50	0.93	1	5	24
Careness (Very caring = 4, Not at all = 0)	2.54	0.98	0	4	24
Price Range (>$140 = 5, <$35 = 1)	2.58	1.21	1	5	24
Willingness (Very willing = 4, not at all = 0)	2.33	1.49	0	4	24
Panel C: Treatment Group (Framing)					
Age	16.42	1.48	13	18	31
Gender (Female = 1)	0.65	0.49	0	1	31
Frequency (Daily = 5, Annually =1)	2.55	0.89	1	5	31
Careness (Very caring = 4, Not at all = 0)	2.84	0.93	0	4	31
Price Range (>$140 = 5, <$35 = 1)	2.45	1.23	1	5	31
Willingness (Very willing = 4, not at all = 0)	2.26	1.39	0	4	31

Table 5 Regression of anchoring

Dep. variable: Willingness to purchase	(1)	(2)	(3)	(4)	(5)	(6)
Anchoring (decrease in price)	0.983* *	0.974*			0.983*	0.927**
	(0.402)	(0.531)			(0.410)	(0.447)
Framing (discount)			0.908**	0.906**	0.908**	0.805*
			(0.368)	(0.446)	(0.388)	(0.448)
Age		0.413		0.420*		0.504**
		(0.531)		(0.214)		(0.209)
Gender		-0.148		-0.131		-0.511
		(0.525)		(0.478)		(0.409)
Frequency of Purchase		0.739		0.958** *		0.784**
		(0.536)		(0.324)		(0.310)
Careness		-0.346		-0.133		-0.116
		(0.219)		(0.182)		(0.159)
Price Range		0.502**		0.294*		0.408** *
		(0.221)		(0.172)		(0.152)
R Square	0.125	0.267	0.111	0.288	0.090	0.251
Observations	44	44	51	51	75	75
Notes: ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.						

Table 6 variables chart of anchoring

Variables Definition	
Dependent variables	
Willingness	The willingness to buy a shirt from very willing to buy to unwilling to buy (from 0 to 4)
Control variables	
Age	Participants aged between 13 years old and 18 years old Dummy = 1 if the participant's gender is female
Gender	The frequency of clothing purchases by the participants: 1, 2, 3, 4, 5 indicating annually, seasonally, monthly, weekly, and daily.
Frequency	The careness about clothing of teenagers from very caring to no care at all (from 0 to 4)
Careness	the price range that teenagers are used to accept when they buy clothes: $0-$35 (1), $35-$70 (2), $70-105 (3), $105-$140 (4), $140-$175 (5)
Prefer price range	

3. Conclusion and discussion

In this paper, we focus on three factors that affecting consumers' behavior when buying fast fashion products: herding, anchoring and framing effect. We separate our sample of experiment into 5 groups, which means there are two control groups and three treatment groups in the experiment. As for herding, we have control group 1 and treatment group 1. Control group 1 provides two very similar shirts with a same price named as shirt A and shirt B and we ask participants to choose one. Based on control group 1, we set shirt A with purchase volume which more than 2000, and shirt B with purchase volume which more than 100 for treatment group 1.

As for anchoring and framing, we have control group 2, treatment group 2 and treatment group 3. Control group 2 provides a white shirt with its original price ($35), and we collect the participants' willingness to buy the shirt. Treatment group 2 and treatment 3 we separately collect participants' willingness to buy the shirt with price change ($70 to $35) and the shirt with 50% OFF (NOW: $35).

We collect data from them through 5 different surveys.

ISSN 2959-6130

Based on our experimental data, herding, anchoring and framing all in a high significance level. Herding is at 1% significance level, anchoring is at 5% significance level, and framing is at 10% significance level. The coefficient for herding is 0.540, the coefficient for anchoring is 0.927, the coefficient for framing is 0.805. It concludes that herding, anchoring and framing all have a positive impact on consumers' decision-making about fast fashion products. Consumers are more willing to purchase a shirt with high purchase volume, due to herding. On the anchoring and framing side, they have stronger willingness to buy shirts with deduction in the price level.

The anchoring effect has a significant positive correlation with the willingness to purchase, showing an increase of 97.4 percentage points when the effects of other variables are excluded. This finding underscores the importance of strategic pricing and promotional tactics in fast-fashion marketing, as anchoring simplifies decision-making by providing a clear reference, reducing cognitive load, and making it easier for consumers to justify and evaluate their choices and the price of the product.

The framing effect positively correlates with a 90.6 percentage points increase in purchase intention. This effect influences decision-making at a fundamental cognitive level, making it a powerful tool in shaping purchase intentions. Nevertheless, when the same discount is offered in both framing and anchoring groups, the framing effect group has a negative increase in purchase intention of 6.8 percentage points over the anchoring effect group. This occurs because the anchoring effect establishes a powerful reference point that influences perceptions and decisions across various contexts, often overriding other cognitive considerations. In contrast, the framing effect, while impactful, remains more context-dependent and may not consistently influence decisions in the same way.

Our findings suggest that the herding effect positively correlates with consumers' purchase intention of shirt with higher historical purchasing volume, resulting in a 54 percentage points increase. When consumers see high purchases of the shirt, they are more likely to follow suit, whereas shirt with a higher historical purchasing volume is a reluctant choice for most consumers in the control group where we do not show the historical sales volumes. Fast fashion brands can utilize the herding effect to reinforce the notion that consumers tend to prioritize collective behavior over individual preferences to promote sales of a particular item. However, in solitary decision-making contexts, the impact of the herding effect diminishes. Therefore, in the context of making decisions on an online survey, the anonymity and lack of immediate social cues allow consumers to focus more on their individual choices.

The interplay of the herding effect, anchoring effect, and framing effect shows a significant correlation with purchase intention, supporting our hypotheses, with the anchoring effect having the highest increase in purchase intention by the coefficient of 0.927. According to the experiments, the framing effect shows a coefficient of 0.805, which the efficiency is slightly lower than the anchoring effect. As for herding, with a gradient of 0.540, it is less effective than the other two effects.

Fast fashion brands can use the herding effect to reinforce the notion that consumers tend to prioritize collective behavior over individual preferences to promote sales of a particular item. Understanding these psychological biases of herding, anchoring, and framing provides valuable insights for marketers aiming to enhance consumer engagement and drive sales. Future research should explore how the control variables such as gender, age, price preference, and frequency of clothing purchase influence the effectiveness of the herding, anchoring, and framing effects.

Nevertheless, since our surveys only focused on the teenage group which aged between 13 to 18 and mainly living in Asia, it is not comprehensive. Online surveys also restricted the ability to observe the consumers' actual shopping behaviors and decision-making processes. Furthermore, online surveys miss out the opportunity to capture some other factors that may influence consumers' decisions, such as emotional states or in-store displays. Besides, the consumers may not report their shopping habits clearly through online survey.

Acknowledgement

Lina Chao, Guangyue Guan, Zhuoyue Yao contributed equally to this work and should be considered co-first authors.

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