Simplistic Design on Sustainable Products:

How the Simplistic Design of an Eco-friendly Bag is Related to Its Prices, Sales, and Revenue

by

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Abstract

Green consumption is crucial to environmental protection and sustainability, however, it faces a huge green attitude-consumption gap. While previous studies suggest possible solutions from the perspectives of government and industry, this paper studies the impact of design patterns on the market of small green products, which can be referenced by individual businesses.

This paper digs into the online eco-friendly bags market in China, analyzing how simplistic design is related to market price, sales, and revenue. It first located appropriate keywords for data collection with social media listening platforms. Then, qualitative research is conducted to figure out the definition of a simplistic design. Finally, this paper uses linear regression to see the association between simplistic design and the real market.

Keywords: Green consumption, Simplistic Design, Market Analysis, Eco-friendly Bags

Preface

The motivation for researching the relationship between simplistic design and price and sales is trying to quantify the impact of a simplistic design on eco-friendly products. Since past studies have focused on customer perception based on behavior psychological experiments and surveys, I have long awaited the opportunity to do more research from the perspective of the supply side. With the support from the 2022 Business and Economics Honors Program and my advisor, Dean Yuxin Chen, I have conducted a sufficient literature review as well as quantitative analysis to study and present my findings in this paper. Focusing on eco-friendly bags specifically, I was able to calculate the correlation of a simplistic design with the price, sales, and revenue of green products compared to complex ones.

Chapter 1. Introduction

With growing concerns about carbon emissions and environmental pollution, green consumption is considered the only way to achieve a "peak" of carbon emissions by 2030 (Huang et al., 2022, p.38798). Especially in Asia, where unprecedented economic developments happened during the past few decades, the promotion of green consumption is expected to mitigate the overexploitation of natural resources (Lee, 2008, p.573; Nguyen, et al., 2019, p.118). However, the "green attitude-consumption" gap is a main barrier to the increase in green consumption. The "green attitude-consumption" gap is a phenomenon in which customers have a high awareness of the importance of sustainability, but the percentage of actual green consumption is low. For example, in the US, the correlation between the positive attitude toward environmental protection and actual energy-saving behavior was only as low as 6% according to a study in 2008 (Nolan et al., 2008, p.917). Similarly, according to a study in the UK, customer awareness of sustainability has increased, but the consumption of green products remains at only 1-3 percent of the UK market in 2010 (Bray et al., 2010, p.597). During the past decades, many scholars have proposed various possible solutions to narrow this gap. This paper tests whether the simplistic design of green products will contribute to narrowing this gap.

Focusing on eco-friendly bags, this paper will give a market overview of China's online market. While past studies focus more on electric cars and green energy, this study shed light on green groceries and their aesthetic features, which can also provide managerial implications for small businesses. Besides, this study also provides a deeper view of the impact of aesthetic features in the real market.

1.1 Literature Review

As early as 1973, there is already research pointing out that many people claimed to be willing to protect the environment, but few of them are involved in actual sustainable consumption (Maloney & Ward, 1973, p.585). Another frequently used term is 'ethical purchasing gap' (Nicholls & Lee, 2006, p.369). As summarized in the SHIFT framework, previous studies propose many methods to narrow the gap between public awareness of environment protection and green consumption, from social influence, habit formation, the individual self, feelings and cognition, and tangibility (White et al., 2019, p.25). Many of the methods are proposed from the perspectives of policymakers and the general society, for example, increasing emphasizing a shared, superordinate ingroup identity of environment protection (Schultz & Fielding, 2014, p.303), improving public education of environment protection knowledge (Gifford & Nilsson, 2014, p.143), and setting understandable and consistent eco-labels (Taufique et al., 2017, p.296). However, this paper would like to focus on what individual manufacturers and businesses can implement to promote green consumption, and I noticed how aesthetic features can play a role.

Previous scholarships have shown that the aesthetic features of sustainable products may contribute to narrowing the "green attitude-consumption" gap. In general, appearance design is an important element that can impact consumer choice (Creusen & Schoormans, 2005, p.64). For general products, studies show that simplistic design has positive effects on customers' impressions of the products. Simplistic design can communicate messages more quickly (Magnier & Schoormans, 2015, p.56). In the scope of green products, simplistic design is beneficial for customer perception of greenness. According to Kozlowski et al. 's (2019) five-dimensional model of sustainability fashion, aesthetics is listed as an important element of

sustainable fashion as well (p.5). Customers' intention for green consumption can be triggered by certain aesthetic designs as they promote the perception of sustainability. Among those aesthetic attributes, simplicity is an effective factor (Zafarmand et al., 2003, p.180). For instance, Margariti's (2021) experiment proves that larger "white space" will lead customers to perceive a product as more sustainable, even though there is no difference in the inner product (p.1). Correspondingly, green clothes brands avoid complex designs like extremely trendy designs and shimmery and neon colors (Meyer, 2001, p.327). Previous scholars also describe complex designs as "manipulative and untrustworthy" since they give customers a negative impression of overpackaging and untrustworthy (Favier et al., 2019, p.11; Wang, 2016).

By studying from the supplier side, this paper tries to find out whether simplistic design can increase green consumption in the real market. Previous scholars mainly studied the impact of simplistic design on customers' perceptions or based on theoretical models, which means that there is relatively a lack of statistical support about whether a simplistic design can promote green consumption. This paper proposes to study from the supplier side to quantify the association between simplistic design and product price and sales. The reason not to study from the customer's side is that different customers may have various ranges of willingness to pay and preferences, which means that it would be time-consuming to collect a representative sample of customers. On the contrary, looking at the supplier's data gives us a better understanding of the general market. For example, from product pricing, we can anticipate customers' willingness to pay for simplistic or complex designs based on suppliers' estimation, and from monthly sales, we can analyze how customers react to the different pricing strategies. What's more, price, sales, and revenue are more directly related to customer consumption behaviors. Previous research focuses more on customer attitudes and perception, and through studying pricing, sales, and

revenue of green products, we can learn how the impact of simplistic design on customers' perception of greenness is passed on to real consumption.

1.2 Research Issues and Hypothesis

I chose to study the eco-friendly bag, mainly focusing on the online market in China, as it is popular and commonly used. Due to the serious white pollution worldwide, many countries have issued plastic bans. In China, Plastic-Bag Bans (PBB) have been evaluated as "necessary, feasible, and effective" (Zhu, 2011, p.2516). After the implementation of PBB, plastic bag consumption has been reduced and more consumers tend to use eco-friendly bags more (Zhu, 2020). As a daily product usually used for supermarket shopping and carrying extra sundries for commuting, eco-friendly bags can be seen as one of the most widely used sustainable products in today's China, so I choose eco-friendly bags as my target market.

To test whether a simplistic design will increase green consumption, this paper proposes three hypotheses based on previous literature. The first hypothesis is that a simplistic design will have a positive relationship with the price of the eco-friendly bag. The logic behind this hypothesis is that simplistic design may help customers as it is perceived as more sustainable, thus expressing their green identity, which is a main motivation for green consumption according to White et al. 's (2019) SHIFT framework (p.25). Johnson et al. (2018) also conclude that the purchase of green bags is not only motivated by altruistic purposes but also for achieving social status and privilege (p.353). What's more, simplistic designs are perceived as higher quality than more complex designs (Favier et al., 2019, p.11). As a result, customers may be willing to pay more for a green product with a simplistic design than with a complex design. The second hypothesis is that a simplistic design will have a positive relationship with the sales of eco-friendly bags. If the price for green products with a simplistic design is different from those with

a complex design, it is hard to tell what the co-effect of price and design on sales is, where we need further analysis. If the second hypothesis is verified, we can say that a simplistic design will help narrow the "green attitude-consumption" gap by promoting the sales of green products. The third hypothesis a simplistic design will have a positive relationship with the monthly revenue of eco-friendly bags, which is calculated by its prices multiply monthly sales. With this figure, we will have more knowledge about whether a simplistic design will have a positive association with the profit of the product.

Chapter 2. Research Design and Data Collection

This chapter will introduce the data source platform, the methods, and platform I use to decide the keywords for searching product data, and the social media contents that I used to label each observation. This chapter will also go through the meaning and calculation method of each variable of an observation. This chapter will end with the data cleaning process.

2.1 data source platforms

The platform I use to collect product data is Taobao (淘宝网). Taobao is one of the biggest shopping platforms in China with billions of products. The information about each product will be listed clearly in the product description, usually covering brand, pattern, material, style, color, size, etc. For the social media content, we choose RED (小红书). RED is one of the most popular social media platforms for young people's lifestyles, where many fashion influencers will share their preferred products. Eco-friendly bags, as part of one's everyday outfit, are also under the scope of fashion influencers' recommendations. For deciding the word for searching, I introduce H&T (http://www.huisituo.net/) a social listening database that collects data from all mainstream media in China.

2.2 keywords for searching product data

The main keywords we use are “eco-friendly bag(环保袋)” and “Shopping bag (购物袋)”, and the processes of locating the keywords are introduced in the following paragraphs.

To figure out all possible appropriate keywords for searching product data, we first inputted the word “eco-friendly bag(环保袋)” into the Taobao Product Search Engine. Taobao search results also provide a column named “Are you also looking for: (您是不是想找:)”, which will show common keywords that are used to search for similar products. Here are some related keywords after searching “eco-friendly bag(环保袋)”: canvas bag (帆布袋), shopping bag (购物袋), eco-friendly handbag (环保手提袋), shopping bag eco-friendly bag (购物袋环保袋), eco-friendly bag with customized logo (环保袋定制 logo), foldable eco-friendly bag (折叠环保袋), environmentally-friendly bag with large capacity (环保袋大容量); waterproof eco-friendly shopping bag (环保袋购物防水), and eco-friendly plastic bag (环保塑料袋), see Figure 1.

Figure 1

Search Result of Related Keywords of “Eco-friendly Bag(环保袋)” on Taobao

Note. From Taobao (https://s.taobao.com/search?q=环保袋&js=1&stats_click=search_radio_all%3A1&initiative_id=staobaoz_20230410&ie=utf8), accessed on December 12, 2022.

Among these keywords, many are in the format eco-friendly bag plus features which should not be the main search words, because features will be included as the independent variables. “Shopping bag (购物袋)” is the only word that can be seen as another potential keyword for searching product data. Eco-friendly bags first gained popularity in China since disposable plastic bags provided for free at supermarkets and many other shopping occasions are banned, so it is understandable that shopping bags now also refers to reusable eco-friendly bags. When we further search for “Shopping bag (购物袋)”, related keywords are environmentally-friendly bag(环保袋), supermarket shopping bag (超市购物袋), handbag (手提袋), tote bag (托特包), canvas pocket (帆布袋), canvas bag (帆布包), eco-friendly shopping bag (环保购物袋), gift bag (礼品袋), plastic bag (塑料袋), beach bag shopping bag (沙滩包购物袋), shopping bag for women (购物袋女包), and shopping bag with tidal sign (购物袋潮牌). Besides eco-friendly shopping bags (环保购物袋), others do not contain more related keywords that feature the same range of products that are referred to by eco-friendly bags (环保袋), see Figure 2.

Figure 2

Search Result of Related Keywords of “Shopping Bag (购物袋)” on Taobao

Note. From Taobao (https://s.taobao.com/search?q=购物袋&js=1&stats_click=search_radio_all%3A1&initiative_id=staobaoz_20230409&ie=utf8),

accessed on December 12, 2022.

We then searched the phrase combination of the environmentally-friendly bag (环保袋) and shopping bag (购物袋), including environmentally-friendly bag (环保袋), shopping bag (购物袋), environmentally-friendly shopping bag (环保购物袋), and environmentally-friendly bag for shopping (购物环保袋), on H&T. Compare to the search result for the environmentally-friendly bag (环保袋) and shopping bag (购物袋), which respectively contains 19050 and 46988 pieces of data from September 11, 2022, to December 11, 2022, environmentally-friendly shopping bag (环保购物袋), and environmentally-friendly bag for shopping (购物环保袋) only contains 3896 and 179 pieces of data during the same period of data, so we conclude that they are not frequently used by most people.

Besides, the word cloud generated by H&T for both eco-friendly bags (环保袋) and shopping bags (购物袋) contains “Green (绿色)”, which means that eco-friendly bag (环保袋) and shopping bag (购物袋) often appear together with “green”. This result indirectly confirmed that our research object is a sustainable product. Based on these observations above, we will use environmentally-friendly bags (环保袋) and shopping bags (购物袋) as keywords for searching product data, see Figure 3-7.

In the Popular Media (热门媒体) section, RED (小红书) ranked as the top 1 popular media in both search results of eco-friendly bags and shopping bags. In other words, people tend to share about eco-friendly bags and shopping bags on RED the most. So, this paper will further collect social media content from RED.

Figure 3

Search Result for Eco-friendly Bag "环保袋" on H&T

Note. From H&T, accessed on December 11, 2022

Figure 4

Search Result for Shopping Bag "购物袋" on H&T

Note. From H&T, accessed on December 11, 2022

Figure 5

Search Result for Eco-friendly Shopping Bag "环保购物袋" on H&T

Note. From H&T, accessed on December 11, 2022

Figure 6

Search Result for Eco-friendly Bag for Shopping "环保购物袋" on H&T

Note. From H&T, accessed on December 11, 2022

2.3 Definition of Simplistic Design

Since the definition of simplistic design differs from person to person, this paper searched posts on RED with the keyword “appearance with simplistic design” (简约穿搭), trying to find shared characteristics among popular posts. With the threshold of 20,000 likes, we collected the top 12 popular posts on RED with the keyword “appearance with simplistic design”.

In Maeda’s *The Laws of Simplicity* (2006), she introduced 10 laws and 3 keys to achieving simplicity in the general design field. In terms of the visual design of commodities, I think two important rules are to reduce unnecessary elements and to subtract the obvious. Reducing unnecessary elements means less color and patterns, and subtracting the obvious emphasizes negative space. As a result, I decide using the number of colors and decoration areas as the two attributes of simplicity.

Since the definition of simplistic design differs from person to person, this paper searched posts on RED with the keyword “appearance with simplistic design” (简约穿搭), trying to find more commonly accepted rules for defining simplicity regarding the number of colors and decoration area. With the threshold of 20,000 likes, we collected the top 12 popular posts on RED with the keyword “appearance with simplistic design”. According to the products recommended in those posts, we find that all products recommended with simplistic design fulfill (links see Appendix A): 1) the number of colors less than four; 2) decoration area less than 30% of one side of the bag. To be more specific, the number of colors is counted based on the number of color categories. For example, a diverging pattern from red to blue will be defined as having two colors. Eco-friendly bags usually have patterns centered in the middle of one side of the bag, so when deciding whether a product fulfills the decoration area, I approximate the area of the minimal circle that can contain the pattern of the bag and compare it to the area of one

side, which is usually a rectangle. This process for defining whether a product fulfills the two criteria is conducted manually.

This paper defines a bag design as simplistic when it fulfills both criteria. I also include two rousted designs by defining simplistic design as fulfilling either of the two criteria. The results of using the other two definitions are attached in Appendix B.

2.4 Data Collection and Cleaning Process

Using the keywords “eco-friendly bags” and “shopping bags”, we collect the product information from the first ten pages of each result on Taobao according to the “comprehensive ranking” (综合排序). “Comprehensive ranking” is the default ranking method on Taobao. Here we only chose the top ten pages shown on the PC end because these products are more available for customers when they search for products online. Products appearing after the first ten pages are less likely to be viewed by customers and have much fewer monthly sales.

For independent variable selection, I collect product features that are possibly related to its price or sales as well. Besides simplistic design or not, we will collect product features including material, size, comprehensive ranking, and store rating. Materials can impact the price since their costs are different which will directly impact the prime cost of the product and eventually impact the price settings. Similarly, the total size of the material used can also impact the price. Higher product ranking and store ratings may be considered more qualified, causing higher prices and sales. We also record the price and sales of each product.

Then, for the data cleaning process, I noticed that many stores allow customers to customize the patterns in eco-friendly bags. I removed these observations because I cannot classify their design style. Many products appear in both keyword search results. For these repeated products, we calculate their “comprehensive ranking” using the average of their ranking

of the two search results. I also removed products that have IP issues, for example, many sellers sell fake IKEA eco-friendly bags, which are removed as well. Among the remaining observations, we noticed 4 products that had much higher prices. These four products have prices over ¥148, while the fifth highest price is only ¥39.9. After further research, these 4 products all appear only at the end of the search result of "shopping bags" (ranked 191,197,291 and 206 of total 207 products). They are tote bags, which have much different usage occasions than other observations. As a result, we decided to remove these products from our dataset and our total number of observations is 203. All the data were collected on January 19th, 2023.

For the data analysis method, we will construct several linear regression models, one log_price (taking logarithm based on ten of Price (¥) Per Item) as the dependent variable, one log_sales (taking logarithm based on ten of Monthly Sales) as the dependent variable, and one taking log_(price*sales) (taking logarithm based on ten of Price (¥) Per Item multiplies Monthly Sales) as the dependent variable. Here I take the logarithm of monthly sales because there are exponential differences between the monthly sales numbers. We use effect coding to define indicator variables for the material variable since we have no reference category (Mayhew & Simonoff, 2015). Eco-friendly bags with simplistic designs will be labeled as 1 and those with complex designs will be labeled as 0.

Chapter 3. Data Description

The descriptive statistics of numerical variables are shown in Table 1. I noticed that the Store Rating of the top products has a relatively small standard deviation, with an average store rating of 4.8 out of 5.0. The price range of eco-friendly bags is between ¥3.2 to ¥39.9. Compared to the average disposable income per person in China in 2022, which is 31.37 thousand yuan, these eco-friendly bags are generally affordable for the majority of Chinese consumers (Ma, 2023).

Table 1

Descriptive Statistics of Numerical Variables

	Comprehensive Ranking	Store Rating	Price (¥) Per Item	Monthly Sales
Mean	207.576	4.826	15.109	635.961
Standard Error	6.453	0.004	0.622	79.717
Median	198.000	4.800	12.800	300.000
Mode	167.000	4.800	19.900	100.000
Standard Deviation	91.935	0.055	8.865	1135.798
Sample Variance	8452.112	0.003	78.595	1290037.068
Kurtosis	-0.193	0.613	1.215	34.160
Skewness	0.415	-0.136	1.389	5.313
Range	401.500	0.300	36.700	9900.000
Minimum	11.500	4.600	3.200	100.000
Maximum	413.000	4.900	39.900	10000.000
Sum	42138.000	979.700	3067.090	129100.000
Count	203	203	203	203

Note. Data was collected on January 19th, 2023.

The descriptive statistics of categorical variables are shown in Table 2 and Table 3. We can see that Oxford Fabric is the most common material for eco-friendly bags in the Chinese market, and the most common size of these eco-friendly bags is Large, regardless of the design style. This phenomenon is understandable. Eco-friendly first gained popularity in China after the PBB and was used as a substitute for those large disposable plastic bags at supermarkets. A large size usually ensures enough capacity to contain bought groceries.

Table 2

Descriptive Statistics of Categorical Variables with Complex Design

		Size			
Material	Extra large	Large	Middle	Small	Count
Canvas		2	5	1	2
Cotton			2		2
Nylon		5			5
Oxford Fabric	1	60	10	2	73
Paper				1	1
Plastic	1	8		2	11
Polyester		5		2	7
PP				1	2
PPF		1			1
Count	2	81	17	9	109

Table 3

Descriptive Statistics of Categorical Variables with Simplistic Design

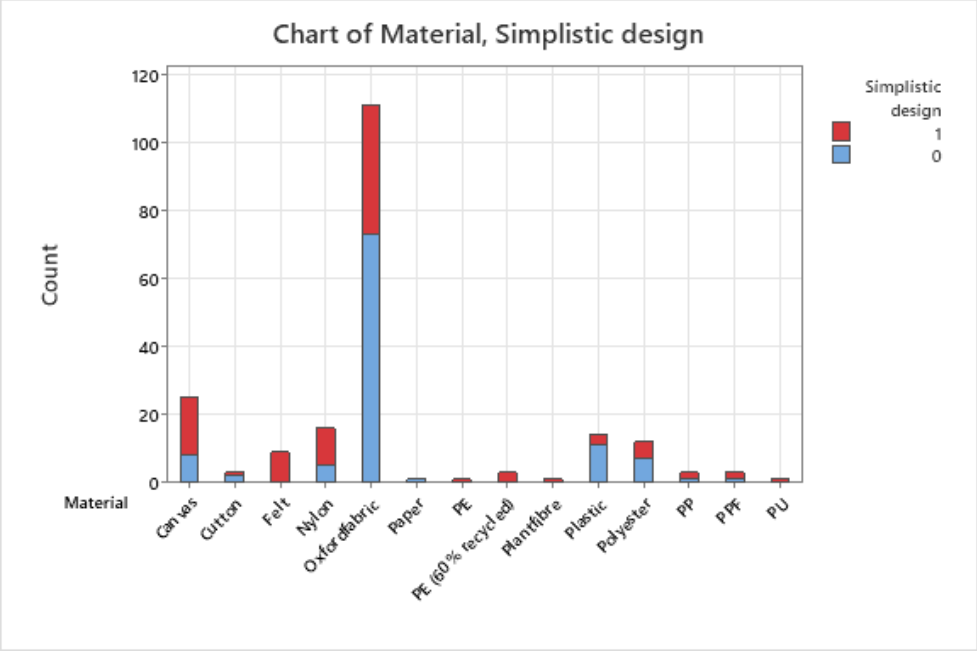
		Size			
Material	Extra large	Large	Middle	Small	Count

Canvas		9	6	2	17
Cotton			1		1
Felt		4	3	2	9
Nylon		9	2		11
Oxford Fabric	2	29	4	3	38
PE		1			1
PE (recycled)	2	1			3
Plant Fiber		1			1
Plastic	2	1			3
Polyester		5			5
PP		1			1
PPF	2				2
PU		2			1
Count	8	63	16	7	94

The average price for all 203 eco-friendly bags is ¥15.11. The numbers of simplistic designs and complex designs are comparatively even. The average for the 109 eco-friendly bags with complex designs is ¥12.75 and the number for the 94 eco-friendly bags with simplistic designs is ¥17.85. The average monthly sale for all 203 eco-friendly bags is 635.96. The average monthly sales for the 109 eco-friendly bags with complex designs is 694.50 and the number for the 94 eco-friendly bags with simplistic designs is 568.08.

Figure 7

Bar chart of Material, Simplistic Design



Note. Simplistic 1 refers to simplistic design and 0 refers to complex design.

Figure 5 shows the distribution of design patterns for different materials. We can see that for Oxford fabric bags, more products have a complex design while for canvas, more have a simplistic design.

Chapter 4. Analysis and Implications

4.1 Regression Analysis

For the regression analysis, the independent variables include store rating, comprehensive ranking, size, material, as well as simplistic design or not. These variables are included as they may have an impact on pricing and sales. Table 4 shows the regression results. For the regression analysis on sales taking price as an independent variable, we tested the correlation between log_price and standard residual error. The result shows that there are no obvious correlations: the correlation between log_price and standard residual error for log_sales (1), (2), (3), and (4) is -0.001, -0.00225, -0.0004 and -0.0012.

Table 4

Regression results

	Log_price	**Log_sales (1)**	**Log_sales (2)**	**Log_sales (3)**	**Log_sales (4)**	**Log_(Price*Sales)**
Constant	-4.69***	2.82	2.55	3.32	1.76	-0.02
	(1.31)	(2.41)	(2.4)	(3.46)	(3.73)	(2.45)
Store Rating	1.204***	0.16	0.217	0.037	0.402	0.89*
	(0.271)	(0.508)	(0.507)	(0.725)	(0.796)	(0.509)
Comprehensive Ranking	-0.00001	-0.002181***	-0.002212***	-0.002629***	-0.001814***	-0.002186***
	(0.000167)	(0.000298)	(0.000296)	0.000426	(0.000458)	(0.000314)
Size						
extra large	0.035	0.083	0.092	0.118	0.235	0.104
	(0.0626)	(0.111)	(0.111)	(0.202)	(0.164)	(0.117)
large	0.0129	0.0041	0.0095	-0.0566	0.0747	0.0123
	(0.0288)	(0.0513)	(0.0511)	(0.0867)	(0.076)	(0.054)
middle	-0.0285	-0.1071	-0.1202	-0.131	-0.161	-0.1237*
	(0.0398)	(0.0709)	(0.0709)	(0.108)	(0.105)	(0.0746)
Material						
Canvas	0.1531***	-0.0091	-0.0002	0.039	0.082	0.084
	(0.0536)	(0.0975)	(0.0971)	(0.151)	(0.124)	(0.101)
Cotton	0.332***	0.311	0.258	0.386	0.151	0.513**
	(0.12)	(0.218)	(0.219)	(0.269)	(0.362)	(0.226)

Felt	-0.0123	-0.209	-0.219*		-0.087	-0.218
	(0.0747)	(0.133)	(0.132)		(0.147)	(0.14)
Nylon	-0.0167	-0.032	-0.032	-0.032	0.015	-0.041
	(0.0604)	(0.107)	(0.107)	(0.17)	(0.134)	(0.113)
Oxford Fabric	-0.0431	-0.2312***	-0.2282***	-0.1756	-0.1526	-0.257***
	(0.0414)	(0.0739)	(0.0735)	(0.0983)	(0.0956)	(0.0777)
Paper	-0.446**	-0.219	-0.108	-0.199	0.56	-0.491
	(0.198)	(0.358)	(0.361)	(0.355)	(0.358)	(0.372)
PE	0.136	0.559	0.583*		0.382	0.642
	(0.194)	(0.346)	(0.344)		(0.243)	(0.364)
PE (recycled)	-0.282**	0.46**	0.39*		0.382	0.289**
	(0.123)	(0.223)	(0.225)		(0.243)	(0.231)
Plant Fiber	0.094	-0.191	-0.183		-0.128	-0.138
	(0.192)	(0.342)	(0.34)		(0.35)	(0.361)
Plastic	-0.0362	-0.109	-0.138	-0.044	-0.318	-0.13
	(0.0648)	(0.115)	(0.116)	(0.13)	(0.25)	(0.122)
Polyester	-0.0114	-0.364***	-0.367***	-0.331	-0.318	-0.37***
	(0.0656)	(0.117)	(0.116)	(0.146)	(0.173)	(0.123)
PP	-0.153	-0.204	-0.197	0.233	-0.371	-0.296
	(0.116)	(0.207)	(0.206)	(0.354)	(0.259)	(0.217)
PPF	0.151	-0.047	-0.068		-0.12	0.045
	(0.123)	(0.219)	(0.218)		(0.303)	(0.23)
Simplistic design						
1	0.0595***	-0.0674**	0.178			-0.0309
	(0.0162)	(0.0298)	(0.142)			(0.0303)
Log_price		-0.393***	-0.165	-0.17	-0.686***	
		(0.132)	(0.184)	(0.199)	(0.203)	
Log_price*Simplistic design			-0.438*			
			(0.247)			

Note. * indicates p<.1; ** indicates p<.05; *** indicates p<.01; Column of Log_sales (1) represents the regression result on Log_sales, taking both simplistic design and Log_price as independent variables; Column of Log_sales (2) represents the regression result on Log_sales with an additional interaction term Log_price*Simplistic design; Column of Log_sales (3)

represents the regression result on Log_sales taking only complex designs; Column of Log_sales (4) represent the regression result on Log_sales taking only simplistic designs.

Also, among the 203 observations, six of them are branded products from official online channels, including four from IKEA, one from MUJI, and one from GAP. We also run the model without these branded products and the results are similar. The full regression analyses without branded products are in Appendix C. One interesting observation is that the 5 branded eco-friendly bags all have a simplistic design.

According to the regression model on log_price, simplistic design shows strong statistical significance with a positive correlation with log_price ($\beta = 0.0595$, SE = 0.0162, $p = 0.000$). Compared to an average design, a simplistic design is associated with a ¥1.15 increase in the price per item for eco-friendly bags if all the other variables are the same. Therefore, our first hypothesis is accepted, but the price difference is not very huge.

This positive correlation may be explained by some precious literature. Firstly, simplistic designs may be perceived as having higher quality than brands with more complex designs (Favier et al., 2019, p.11), as a result, sellers will set a little higher price as a response to customers' preference. Secondly, a simplistic design requires more design skills than one expects (Margariti, 2021, p.18), and sellers may need to hire skilled designers for eco-friendly bags.

The relatively small figure of correlation between simplistic design and price may be caused by the generally narrow price range and the high price sensitivity of customers towards green products. As discussed in the descriptive result part, the price range of simplistic design is narrow, from ¥3.2 to ¥39.9. Regarding price sensitivity, previous scholars have proved that price plays a significant role in determining the intentions of consumers toward the purchase of green

products (Agyeman, 2014, p. 196; Kumar & Mohan, 2021, p.153). Although people are concerned about the environment, the prices of green products still largely impact making a purchase decision (Malik et al., 2017, p.53). What's more, the price of products impedes product choice and has a connection between environmental concerns and willingness to pay (Kim & Choi, 2005); Kumar & Mohan, 2021, p.157). Because of these phenomena, sellers of eco-friendly bags will avoid setting the price too high and mitigate the price of their product to the general market to keep the competitiveness of their products.

In general, materials also show strong statistical significance with log_price ($p = 0.01$), which may be caused by the cost difference between raw materials and the printing and sizing technology needed for different fibers. Store rating also shows a strong statistical significance with a positive correlation with log_price ($\beta = 1.216$, SE = 0.267, $p = 0.000$). This is also understandable, as these online shops need to make efforts, such as providing good customer service, and qualified products, to keep a high store rating.

I noticed that comprehensive ranking and size both show no statistical significance. The reason can be that Taobao sellers usually don't know their comprehensive ranking from a user perspective. Size is also not important here because the differences in the cost of the same material for different sizes are subtle compared to other factors.

Based on the regression models on sales, the simplistic design amplifies the negative correlation between price and sales. In the regression mode on sales without interaction term, the simplistic design has statistical significance with a negative correlation with log_sales ($\beta = -0.0674$, SE= 0.0298, $p = 0.025$). The log_price is also negatively related with log_sales ($\beta = -0.393$, SE= 0.132, $p = 0.003$). In the regression mode on sales with the interaction term, the interaction term is negatively correlated with log_sales ($\beta = -0.438$, SE= 0.247, $p = 0.078$). In the

regression model with only complex designs on log_sales, log_price does not show statistical significance, and in the regression model with only simplistic designs on log_sales, log_price is negatively related to log_sales with strong statistical significance ($\beta = -0.686$, SE= 0.203, $p = 0.001$). All these results point to a possible explanation that a simplistic design amplifies customers' price sensitivity towards eco-friendly bags, which is a different finding from our second hypothesis. This finding is also aligned with previous literature on customers' price sensitivity towards green products (Agyeman, 2014, p. 196; Kumar & Mohan, 2021, p.153).

Moreover, it is noticeable that the comprehensive ranking shows a negative correlation to log sales with strong statistical significance in all regression models on log_sales. This means that a product shown to customers earlier is associated with more sales. However, this may be because the number of sales is involved in the calculation of comprehensive ranking.

For the regression model on revenue, only comprehensive ranking shows statistical significance with a negative correlation. In other words, simplistic design does not relate to less revenue although the price is set higher. It means a potentially higher price margin and total profit if we assume that having a simplistic design does not cause higher costs.

All in all, this regression model has provided statistical support that the simplistic design of common green products, such as eco-friendly bags, is correlated with a potentially higher price of the product. Although the higher price, together with the simplistic design, is correlated negatively with sales, the simplistic design is not related to revenue, which implies a higher price margin for eco-friendly bags with simplistic designs. The results without branded products and with alternative definitions are similar to the main result we have here. See Appendix B and C.

4.2 Implications and Significance

In terms of theoretical implications and significance, this paper uses statistical methods to attest to previous scholars' conclusions about the impact of simplistic design on green products. According to the findings that a simplistic design amplifies the negative correlation between price and sales, this paper questions the effectiveness of how simple design can help narrow the green attitude-consumption gap in the real market. This is not to say that previous studies are not valid. Customers may perceive the green product with simplistic designs as more environmentally friendly and with higher quality, but sellers are setting a higher price at the same time. Such higher prices may in return impede the expansion of green consumption. Besides, this paper focuses on a less researched while a large category of green consumption. Previous studies focus more on organic foods, electric cars, green energy, etc. This paper sheds light on eco-friendly bags, which have a large customer base in China.

This paper also provides important insights for businesses. Based on our statistical analysis, there is possibly a higher pricing range for green products with simplistic designs. What's more, there is a potentially higher profit margin. Businesses may use this information to increase their total profit. Again, this paper emphasizes the significance of customers' price sensitivity to green products.

Chapter 5. Conclusion

Overall, this paper uses regression analysis to quantify the correlation between simplistic design and real market figures by focusing on eco-friendly bags in China. This statistical analysis shows a positive correlation between simplistic design and the price of the green product, which according to the previous studies, is because that simplistic design will give customers a positive impression of higher quality and more sustainability (Magnier & Schoormans, 2015, p.56; Favier et al., 2019, p.11; Wang, 2016; Margariti's, 2021, p.1). As a supplement to previous studies on customers' price sensitivity in green products (Agyeman, 2014, p. 196; Kumar & Mohan, 2021, p.153), this paper finds that a simplistic design amplifies the negative correlation of a higher price on sales. In terms of revenue, since there is no obvious correlation between simplistic design and revenue, this paper suggests that the simplistic design may bring a higher profit margin.

Upon analysis of the research study, this paper identified the following limitations. Firstly, our focused green product is narrow, only on eco-friendly bags, and the definition of simplicity may be different. However, this result can function as a reference for other common eco-friendly groceries with relatively cheap prices. Future studies may focus more on other categories of green products, such as reusable coffee cups, etc. Secondly, the result for eco-friendly bags may not be applicable to other countries without Plastic-Bag Bans or places where free paper bags are commonly provided. Thus, future research may replicate the study under different cultures and political backgrounds to test the generalization of the findings. Finally, although these eco-friendly bags are named eco-friendly because they can be reused, their impact on the environment may not be easily calculated. Future studies may take a deeper look at how often these eco-friendly bags are used and deposited or recycled by customers.

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Appendix A: Social Media Contents on Simplistic Design

Table 5

Links to popular RED content about “appearance with simplistic design” (简约穿搭)

Number of Likes (thousand)	link
20	http://xhslink.com/19ismp
20	http://xhslink.com/0Flsmp
23	http://xhslink.com/Farsmp
23	http://xhslink.com/Oissmp
26	http://xhslink.com/y6wsmp
28	http://xhslink.com/fVysmp
59	http://xhslink.com/JTHsmp
30	http://xhslink.com/DeSsmp
31	http://xhslink.com/F3Rsmp
38	http://xhslink.com/pwNsmp
39	http://xhslink.com/lRNsmp
57	http://xhslink.com/6BKsmp

Note. The data was collected on April 23, 2023.

Appendix B: Regression Analysis using Different Definition of Simplistic Design

Table 6 shows the regression results by defining simplistic design by decoration area smaller than 30%.

Table 6

Regression results using alternative definition 1

	Log_price	Log_sales (1)	Log_sales (2)	Log_sales (3)	Log_sales (4)	Log_(Price*Sales)
Constant	-4.66***	2.79	2.31	2.92	2.04	-0.03
	(1.3)	(2.41)	(2.4)	(3.55)	(3.59)	(2.45)
Store Rating	1.199***	0.166	0.266	0.114	0.345	0.892*
	(0.271)	(0.509)	(0.507)	(0.742)	(0.766)	(0.51)
Comprehensive Ranking	-0.00005	-0.0022***	-0.002242***	-0.002643***	-0.001853***	-0.002195***
	(0.000167)	(0.000297)	(0.000296)	0.000434	(0.000446)	(0.000313)
Size						
extra large	0.0368	0.079	0.093	0.12	0.201	0.101
	(0.0624)	(0.111)	(0.111)	(0.204)	(0.155)	(0.117)
large	0.01	0.0075	0.0142	-0.0487	0.088	0.014
	(0.0288)	(0.0512)	(0.0509)	(0.0888)	(0.0729)	(0.054)
middle	-0.0284	-0.1063	-0.1245*	-0.143	-0.15	-0.1229
	(0.0397)	(0.0709)	(0.071)	(0.111)	(0.102)	(0.0747)
Material						
Canvas	0.1492***	-0.0052	0.0145	0.08	0.07	0.086
	(0.0536)	(0.0976)	(0.0974)	(0.161)	(0.118)	(0.101)
Cotton	0.331***	0.313	0.255	0.384	0.141	0.515**
	(0.12)	(0.219)	(0.219)	(0.273)	(0.356)	(0.226)
Felt	-0.0113	-0.213	-0.221*		-0.103	-0.22
	(0.0745)	(0.133)	(0.132)		(0.143)	(0.14)
Nylon	-0.0149	-0.034	-0.035	-0.039	0.004	-0.043
	(0.0603)	(0.108)	(0.107)	(0.173)	(0.131)	(0.113)
Oxford Fabric	-0.0421	-0.2308***	-0.2291***	-0.18*	-0.1607	-0.256***
	(0.0414)	(0.074)	(0.0735)	(0.1)	(0.0925)	(0.0778)
Paper	-0.445**	-0.218	-0.089	-0.183		-0.489
	(0.198)	(0.358)	(0.362)	(0.36)		(0.372)
PE	0.135	0.558	0.587*		0.549	0.641*
	(0.194)	(0.346)	(0.344)		(0.352)	(0.364)

PE (recycled)	-0.281**	0.459**	0.381*		0.396	0.289
	(0.123)	(0.223)	(0.225)		(0.238)	(0.231)*
Plant Fiber	0.096	-0.196	-0.187		-0.147	-0.142
	(0.192)	(0.342)	(0.34)		(0.344)	(0.361)
Plastic	-0.0437	-0.098	-0.142	-0.059	-0.223	-0.124
	(0.0642)	(0.115)	(0.116)	(0.137)	(0.208)	(0.121)
Polyester	-0.0093	-0.366***	-0.369***	-0.335**	-0.335	-0.37***
	(0.0656)	(0.117)	(0.116)	(0.149)	(0.169)	(0.123)
PP	-0.151	-0.208	-0.2	0.236	-0.391	-0.29
	(0.116)	(0.207)	(0.206)	(0.359)	(0.254)	(0.217)
PPF	0.152	-0.047	-0.075		-0.093	0.046
	(0.123)	(0.219)	(0.218)		(0.297)	(0.23)
Decoration area < 30%						
1	0.06***	-0.0653**	0.21			-0.0286
	(0.0162)	(0.0296)	(0.144)			(0.0301)
Log_price		-0.393***	-0.126	-0.134	-0.678***	
		(0.132)	(0.189)	(0.207)	(0.199)	
Log_price* Decoration area < 30%			-0.495*			
			(0.254)			

Note. * indicates p<.1; ** indicates p<.05; *** indicates p<.01; Column of Log_sales (1) represents the regression result on Log_sales, taking both simplistic design and Log_price as independent variables; Column of Log_sales (2) represents the regression result on Log_sales with an additional interaction term Log_price*Simplistic design; Column of Log_sales (3) represents the regression result on Log_sales taking only complex designs; Column of Log_sales (4) represent the regression result on Log_sales taking only simplistic designs.

Table 7 shows the regression results by defining simplistic design by decoration area smaller than 30% without branded products.

Table 7

Regression results using alternative definition 1 without branded products

	Log_price	Log_sales (1)	Log_sales (2)	Log_sales (3)	Log_sales (4)	Log_(Price*Sales)
Constant	-4.61***	2.83	2.17	2.92	1.5	0.19
	(1.3)	(2.46)	(2.46)	(3.55)	(3.67)	(2.48)
Store Rating	1.198***	0.17	0.307	0.114	0.472	0.855*
	(0.27)	(0.519)	(0.52)	(0.742)	(0.787)	(0.515)
Comprehensive Ranking	-0.000008	-0.002198***	-0.002248***	-0.002643***	-0.0019***	-0.002201***
	(0.000166)	(0.000304)	(0.000303)	0.000434	(0.000465)	(0.000318)
Size						
extra large	0.0202	0.102	0.099	0.12	0.2	0.113
	(0.0681)	(0.124)	(0.123)	(0.204)	(0.172)	(0.13)
large	0.0137	-0.0027	0.0102	-0.0487	0.0929	0.0057
	(0.0302)	(0.0552)	(0.0552)	(0.0888)	(0.078)	(0.0576)
middle	-0.0234	-0.1165	-0.1292*	-0.143	-0.15	-0.129
	(0.0403)	(0.0737)	(0.0735)	(0.111)	(0.106)	(0.077)
Material						
Canvas	0.1032*	-0.01	0.011	0.08	0.099	0.049
	(0.0557)	(0.103)	(0.103)	(0.161)	(0.122)	(0.106)
Cotton	0.443***	0.45*	0.353	0.384		0.706**
	(0.142)	(0.266)	(0.269)	(0.273)		(0.27)
Felt	-0.0597	-0.225	-0.232*		-0.086	-0.26
	(0.0758)	(0.139)	(0.138)		(0.148)	(0.145)
Nylon	-0.0592	-0.042	-0.043	-0.039	0.022	-0.076
	(0.0615)	(0.113)	(0.112)	(0.173)	(0.133)	(0.117)
Oxford Fabric	-0.0842*	-0.2407***	-0.24***	-0.18*	-0.1447	-0.2888***
	(0.0436)	(0.0805)	(0.0799)	(0.1)	(0.0972)	(0.0832)
Paper	-0.491**	-0.249	-0.122	-0.183		-0.531
	(0.195)	(0.363)	(0.367)	(0.36)		(0.373)
PE	0.091	0.553	0.586*		0.583*	0.605*
	(0.191)	(0.349)	(0.347)		(0.348)	(0.365)
PE (recycled)	0.083**	0.322	0.364*		0.397	0.372
	(0.205)	(0.375)	(0.372)		(0.39)	(0.391)
Plant Fiber	0.049	-0.202	-0.191		-0.125	-0.178
	(0.19)	(0.346)	(0.344)		(0.341)	(0.362)

Plastic		-0.0816	-0.114	-0.156	-0.059	-0.228	-0.16
		(0.0651)	(0.119)	(0.121)	(0.137)	(0.213)	(0.124)
Polyester		-0.0822	-0.418***	-0.429***	-0.335**	-0.46**	-0.464***
		(0.0685)	(0.126)	(0.125)	(0.149)	(0.187)	(0.131)
PP		-0.198*	-0.223	-0.217	0.236	-0.381	-0.335
		(0.115)	(0.212)	(0.211)	(0.359)	(0.255)	(0.22)
PPF		0.196	0.12	0.007			0.231
		(0.191)	(0.35)	(0.353)			(0.365)
Decoration area < 30%							
	1	0.063***	-0.0622**	0.216			-0.0257
		(0.016)	(0.0305)	(0.15)			(0.0306)
Log_price			-0.428***	-0.161	-0.134	-0.747***	
			(0.137)	(0.196)	(0.207)	(0.213)	
Log_price*Decoration area < 30%				-0.503*			
				(0.267)			

Note. * indicates p<.1; ** indicates p<.05; *** indicates p<.01; Column of Log_sales (1) represents the regression result on Log_sales, taking both simplistic design and Log_price as independent variables; Column of Log_sales (2) represents the regression result on Log_sales with an additional interaction term Log_price*Simplistic design; Column of Log_sales (3) represents the regression result on Log_sales taking only complex designs; Column of Log_sales (4) represent the regression result on Log_sales taking only simplistic designs.

Table 8 shows the regression results by defining simplistic design by number of colors less than four.

Table 8

Regression results using alternative definition 2

	Log_price	Log_sales (1)	Log_sales (2)	Log_sales (3)	Log_sales (4)	Log_(Price*Sales)
Constant	-4.64***	2.73	2.69	2.39	3.67	-0.05
	(1.31)	-2.41	(2.4)	(3.81)	(3.44)	(2.45)
Store Rating	1.194***	0.182	0.186	0.26	-0.03	0.896*
	(0.273)	-0.508	(0.508)	(0.804)	(0.73)	(0.509)
Comprehensive Ranking	0.000003	-0.002195***	-0.002195***	-0.002577***	-0.001731***	-0.002191***
	(0.000168)	-0.000298	(0.000297)	0.000456	0.000415	(0.000313)
Size						
extra large	0.0382	0.082	0.091	0.024	0.166	0.104
	(0.0628)	-0.112	(0.112)	(0.296)	(0.132)	(0.117)
large	0.0195	-0.0041	-0.0026	-0.065	0.0588	0.008
	(0.0292)	-0.0518	(0.0518)	(0.12)	(0.0662)	(0.0545)
middle	-0.0267	-0.1104	-0.1203*	-0.173	-0.161	-0.1258
	(0.0401)	-0.0712	(0.0718)	(0.146)	(0.0911)	(0.0749)
Material						
Canvas	0.1508***	-0.0045	-0.0073	0.294	-0.039	0.086
	(0.0539)	-0.0976	(0.0976)	(0.194)	(0.108)	(0.101)
Cotton	0.298**	0.352	0.352	0.437	0.432	0.531**
	(0.12)	-0.217	(0.217)	(0.361)	(0.264)	(0.225)
Felt	-0.001	-0.22*	-0.226*		-0.155	-0.221
	(0.0746)	-0.132	(0.132)		(0.136)	(0.139)
Nylon	-0.0141	-0.035	-0.037	-0.01	-0.03	-0.042
	(0.0606)	-0.108	(0.108)	(0.179)	(0.127)	(0.113)
Oxford Fabric	-0.0496	-0.2255***	-0.2266***	-0.158	-0.192**	-0.255***
	(0.0414)	-0.0736	(0.0736)	(0.108)	(0.0864)	(0.0772)
Paper	-0.431**	-0.243	-0.169	-0.398		-0.503
	(0.2)	-0.359	(0.366)	(0.381)		(0.373)
PE	0.139	0.558	0.565		0.471	0.643*
	(0.195)	-0.346	(0.346)		(0.347)	(0.364)
PE (recycled)	-0.273**	0.449**	0.41*		0.423*	0.285
	(0.124)	-0.222	(0.226)		(0.229)	(0.231)
Plant Fiber	0.099	-0.194	-0.193		-0.193	-0.139
	(0.193)	-0.342	(0.342)		(0.34)	(0.36)

Plastic	-0.0509	-0.095	-0.117	-0.044	-0.089	-0.125
	(0.0644)	-0.114	(0.116)	(0.15)	(0.18)	(0.12)
Polyester	-0.0179	-0.358***	-0.358***	-0.341**	-0.304*	-0.368***
	(0.0658)	-0.117	(0.117)	(0.163)	(0.154)	(0.123)
PP	-0.144	-0.216	-0.209	0.04	-0.405	-0.301
	(0.116)	-0.207	(0.207)	(0.383)	(0.25)	(0.217)
PPF	0.157	-0.054	-0.075		-0.136	0.041
	(0.123)	-0.22	(0.221)		(0.285)	(0.23)
Number of Colors < 4						
1	0.0546***	-0.0643**	0.079			-0.0314
	(0.016)	-0.0292	(0.141)			(0.0298)
Log_price		-0.4***	-0.24	-0.33	-0.556***	
		-0.131	(0.202)	(0.229)	(0.184)	
Log_price*Number of Colors < 4			-0.26			
			(0.25)			

Note. * indicates p<.1; ** indicates p<.05; *** indicates p<.01; Column of Log_sales (1) represents the regression result on Log_sales, taking both simplistic design and Log_price as independent variables; Column of Log_sales (2) represents the regression result on Log_sales with an additional interaction term Log_price*Simplistic design; Column of Log_sales (3) represents the regression result on Log_sales taking only complex designs; Column of Log_sales (4) represent the regression result on Log_sales taking only simplistic designs.

Table 9 shows the regression results by defining simplistic design by number of colors less than four without branded products.

Table 9

Regression results using alternative definition 2 without branded products

	Log_price	Log_sales (1)	Log_sales (2)	Log_sales (3)	Log_sales (4)	Log_(Price*Sales)
Constant	-4.62***	2.79	2.67	2.39	3.4	0.18
	(1.31)	(2.45)	(2.46)	(3.81)	(3.5)	(2.48)
Store Rating	1.197***	0.182	0.204	0.26	0.043	0.859*
	(0.272)	(0.518)	(0.519)	(0.804)	(0.745)	(0.514)
Comprehensive Ranking	-0.000011	-0.002189***	-0.00219***	-0.002577***	-0.001679***	-0.002194***
	(0.000168)	(0.000304)	(0.000304)	0.000456	0.000429	(0.000318)
Size						
extra large	0.0202	0.109	0.11	0.024	0.175	0.119
	(0.0688)	(0.125)	(0.125)	(0.296)	(0.143)	(0.13)
large	0.024	-0.0151	-0.0108	-0.065	0.0564	-0.0009
	(0.0307)	(0.0557)	(0.0559)	(0.12)	(0.0698)	(0.0582)
middle	-0.0213	-0.1219	-0.1293*	-0.173	-0.1712*	-0.1332*
	(0.0408)	(0.074)	(0.0743)	(0.146)	(0.0936)	(0.0772)
Material						
Canvas	0.1077*	-0.011	-0.014	0.294	-0.058	0.05
	(0.0561)	(0.103)	(0.103)	(0.194)	(0.112)	(0.106)
Cotton	0.388***	0.506*	0.507*	0.437	0.793	0.728***
	(0.142)	(0.262)	(0.262)	(0.361)	(0.361)	(0.269)
Felt	-0.0453	-0.232*	0.239*		-0.18	-0.259
	(0.076)	(0.138)	(0.138)		(0.142)	(0.144)
Nylon	-0.0559	-0.044	-0.047	-0.01	-0.059	-0.075
	(0.062)	(0.112)	(0.113)	(0.179)	(0.132)	(0.117)
Oxford Fabric	-0.0906**	-0.238***	-0.2401***	-0.158	-0.221**	-0.2893***
	(0.0438)	(0.0802)	(0.0803)	(0.108)	(0.0945)	(0.0829)
Paper	-0.477**	-0.277	-0.205	-0.398		-0.548
	(0.198)	(0.363)	(0.37)	(0.381)		(0.374)
PE	0.098	0.552	0.559		0.444	0.608*
	(0.193)	(0.349)	(0.349)		(0.347)	(0.364)
PE (recycled)	0.1	0.305	0.314		0.282	0.364
	(0.207)	(0.374)	(0.374)		(0.378)	(0.391)
Plant Fiber	0.056	-0.201	-0.199		-0.212	-0.174
	(0.191)	(0.346)	(0.346)		(0.341)	(0.361)

Plastic	-0.0877	-0.115	-0.136	-0.044	-0.138	-0.164
	(0.0656)	(0.119)	(0.121)	(0.15)	(0.188)	(0.124)
Polyester	-0.0907	-0.412***	-0.416***	-0.341**	-0.419**	-0.463***
	(0.0689)	(0.125)	(0.125)	(0.163)	(0.17)	(0.13)
PP	-0.188	-0.232	-0.227	0.04	-0.428	-0.337
	(0.116)	(0.212)	(0.212)	(0.383)	(0.254)	(0.219)
PPF	0.188	0.119	0.056			0.224
	(0.193)	(0.35)	(0.355)			(0.364)
Number of Colors < 4						
0	0.0556***	-0.0628**	0.08			-0.0311
	(0.0159)	(0.0297)	(0.145)			(0.03)
Log_price		-0.434***	-0.278	-0.33	-0.498***	
		(0.136)	(0.206)	(0.229)	(0.174)	
Log_price*Number of Colors < 4			-0.259			
			(0.257)			

Note. * indicates p<.1; ** indicates p<.05; *** indicates p<.01; Column of Log_sales (1) represents the regression result on Log_sales, taking both simplistic design and Log_price as independent variables; Column of Log_sales (2) represents the regression result on Log_sales with an additional interaction term Log_price*Simplistic design; Column of Log_sales (3) represents the regression result on Log_sales taking only complex designs; Column of Log_sales (4) represent the regression result on Log_sales taking only simplistic designs.

Appendix C: Regression Analysis without Branded Products

Table 10 shows the regression results without branded products.

Table 10

Regression results without branded products

	Log_price	Log_sales (1)	Log_sales (2)	Log_sales (3)	Log_sales (4)	Log_(Price*Sales)
Constant	-4.64***	2.86	2.44	3.32	1.28	0.2
	(1.3)	(2.46)	(2.45)	-3.46	(3.81)	(2.48)
Store Rating	1.204***	0.163	0.251	0.037	0.516	0.853*
	(0.27)	(0.519)	(0.519)	-0.725	(0.817)	(0.514)
Comprehensive Ranking	-0.000025	-0.002179***	-0.002217***	-0.002629***	-0.001849***	-0.002192***
	(0.000167)	(0.000304)	(0.0003036)	0.000426	(0.00048)	(0.000318)
Size						
extra large	0.0172	0.107	0.101	0.118	0.245	0.116
	(0.0683)	(0.124)	(0.124)	-0.202	(0.185)	(0.13)
large	0.0171	-0.0065	0.0044	-0.0566	0.0759	0.0039
	(0.0303)	(0.0552)	(0.0553)	(-0.0867)	(0.0822)	(0.0577)
middle	-0.023	-0.1177	-0.1259	-0.131	-0.166	-0.13*
	(0.0404)	(0.0737)	(0.0735)	-0.108	(0.11)	(0.077)
Material						
Canvas	0.1073**	-0.014	-0.004	0.039	0.113	0.048
	(0.0557)	(0.103)	(0.102)	-0.151	(0.128)	(0.106)
Cotton	0.443***	0.446*	0.363	0.386		0.704**
	(0.142)	(0.265)	(0.268)	-0.269		(0.27)
Felt	-0.0609	-0.221	-0.23*		-0.067	-0.257
	(0.0761)	(0.139)	(0.138)		(0.152)	(0.145)
Nylon	-0.0612	-0.039	-0.04	-0.032	0.035	-0.074
	(0.0617)	(0.113)	(0.112)	-0.17	(0.136)	(0.118)
Oxford Fabric	-0.0853*	-0.2407***	-0.2392***	-0.1756	-0.135	-0.2895***
	(0.0436)	(0.0804)	(0.0799)	-0.0983	(0.101)	(0.0832)
Paper	-0.492**	-0.25	-0.142	-0.199		-0.533
	(0.196)	(0.363)	(0.366)	-0.355		(0.373)
PE	0.091	0.554	0.582*		0.594	0.607
	(0.191)	(0.349)	(0.348)		(0.354)	(0.365)
PE (recycled)	0.087	0.318	0.357		0.355	0.371

		(0.205)	(0.374)	(0.373)		(0.4)	(0.39)
Plant Fiber		0.046	-0.196	-0.188		-0.104	-0.175
		(0.19)	(0.346)	(0.344)		(0.348)	(0.362)
Plastic		-0.0735	-0.125	-0.152	-0.044	-0.329	-0.166
		(0.0657)	(0.12)	(0.12)	-0.13	(0.258)	(0.125)
Polyester		-0.0843	-0.417***	-0.426***	-0.331	-0.441	-0.464***
		(0.0685)	(0.125)	(0.125)	-0.146	(0.191)	(0.131)
PP		-0.201*	-0.219	-0.214	0.233	-0.358	-0.333
		(0.115)	(0.212)	(0.211)	-0.354	(0.261)	(0.22)
PPF		0.192	0.12	0.029			0.229
		(0.191)	(0.35)	(0.352)			(0.365)
Simplistic design							
	1	0.0626***	-0.0646**	0.182			-0.0282
		(0.0162)	(0.0307)	(0.147)			(0.0308)
Log_price			-0.426***	-0.201	-0.17	-0.752***	
			(0.137)	(0.189)	-0.199	(0.217)	
Log_price*Simplistic design				-0.443*			
				(0.259)			

Note. * indicates p<.1; ** indicates p<.05; *** indicates p<.01; Column of Log_sales (1) represents the regression result on Log_sales, taking both simplistic design and Log_price as independent variables; Column of Log_sales (2) represents the regression result on Log_sales with an additional interaction term Log_price*Simplistic design; Column of Log_sales (3) represents the regression result on Log_sales taking only complex designs; Column of Log_sales (4) represent the regression result on Log_sales taking only simplistic designs.

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