

ERASMUS UNIVERSITY ROTTERDAM

Erasmus School of Economics

Master Thesis Economics and Business, Marketing

The effect of online sales promotion strategies for (non)durable products

By Yimeng Wang

Student Number: 365525

Supervisor: dr. Agapi T. Fytraki

Second assessor: T.B.D.

Date: 09-02-2023

Contents

1. Introduction	4
1.1. Research Problem & Motivation	5
1.2. Research Objectives	6
1.3. Research Methodology	10
1.4. Thesis Outline	10
2. Literature review	11
2.1. Consumer behavior on the internet	11
2.2. Purchase intention	11
2.3. Effectiveness of sales promotion	12
2.4. Effectiveness of different types of sales promotion	12
2.5. The moderating effect of product durability	15
2.6. Bundles	16
3. Methodology	18
3.1. Research design	19
3.2. Measures	20
3.3. Pre-test	22
3.4. Procedure	23
3.5. Sample demographics	24
4. Results	25
4.1. Assumptions	25
4.2. Types of promotion effect—Monetary VS Non-Monetary	29
4.3. Types of products categories	30
4.4. Related bundles VS unrelated bundles	36
5. Conclusion and discussion	40
5.1. Main findings	40
5.2. Implications for practice	42
5.3. Discussion	43

5.4. Limitations and future research.....	44
References.....	47
Appendix A: Pre-test.....	55
Appendix B: Experimental survey.....	58
Appendix C: Demographics	69

1. Introduction

Sales promotion refers to highlighting the benefits of a specific commodity or service through advertising or a reduced price. Manufacturers and merchants can use it as a marketing tool. Manufacturers use them to boost sales to retailers and consumers. This kind of promotion between manufacturers and retailers is a trade promotion. On the other hand, consumer promotion is another type of promotion that the producer sells directly to the consumer. This paper will discuss the consumer promotion strategy, which producers employ to boost consumer sales (Krafft & Mantrala, 2006). As can be seen, business spent a sizable portion of their budgets on sales promotions to increase customer traffic sales. In other words, they attempt to influence consumers' purchase decisions by using promotions. Numerous studies have examined the effects of sales promotions on customer buying decisions. According to (Luick & Zieger, 1968) and (Joncos, 1990), sales promotions are more effective than other marketing efforts. (Mohamed, 2016) demonstrates that not all promotional tools have a noticeable effect on consumer behavior. The results are inconsistent because various factors, including the internet, will affect how consumers make purchases. For instance, (Singh & Sailo, 2013) claim that buyers are more price sensitive online. With the advent of digital marketing, more people are shopping online. In the first quarter of 2022, the average global Internet penetration rate was 66.2% (Status, 2022). Manufacturers must develop new digital avenues that is a new business model called a direct-to consumer—D2C strategy to market their goods. In 2022, it is anticipated that the worldwide e-commerce market is expected to total 5.55 trillion dollars. As a result, the consumer's responses to online promotions are increasing in value. In addition, there are many forms of promotions that producers use in a variety of circumstances, such as distinct categories. This paper aims to investigate the different consumer responses to various sales and further analyses whether various categories moderate the impact gap for varying types of promotions to help marketers understand more about consumer online promotion and assist them in their research for an effective promotional way to stimulate sales.

More specifically, this research will gather data from people or consumers to evaluate their purchase intentions about the primary online sales promotions to examine the influence on consumer decision making.

1.1. Research Problem & Motivation

Promotions are always one of the most crucial strategies to use to boost sales and revenue. Based on the research of (Cotton & Emerson, 1978), people consume more during the promotion period. The degree of purchasing significantly rises due to promotional offers. Even though there has been a large amount of research on the effects of promotions, online sales promotions still have a distinct effect than offline ones because of how consumers behave. (Chu, Chintagunta, & Cebollada, 2008) used the example of grocery shopping to demonstrate how less price sensitive internet customers are. However, this study will be limited to the scope of online sales promotion and examine the effects of various types of promotion on consumer purchase behavior. Due to the emergence of the digital channel –online shopping development, manufacturers may have more engagement with consumers and sell their products directly to buyers. Producers are more interested in understanding the impact of various sales promotions than retailers because their revenue and reputation are more valuable to them. In addition, in the perspective of (Odunlami & Ogunsiji, 2011), sales promotions will have an influence on the defined objectives in a warehouse before new inventory taking and restocking, new product introduction, encouraging large size units and generating trails among non-users.

Furthermore, regardless of the form of promotions, it will cost the organizers' time and money for the campaigns. Marketers strive to identify the most effective type of promotion to entice people to buy. Consumers respond differently depending on the promotions. A large body of literature confirmed that sales promotions do not have the same impact on consumer decision making. For instance, (Mohamed, 2016) found that general sales promotions such as price discounts, free samples, and buy one get one free with the exception of coupons have significant impacts on consumer behavior, and he examined brand switching and customer

loyalty as indicators of consumer behavior. (Sinha & Smith, 2000) elaborated those promotions like samples is the way of introducing the new product to the customers by providing the products for free. Customers would be easily persuaded to purchase additional products that do not require and higher perceived by customers. The potential customers are targeted in this method because merchandising teams not only introduce the product in the market but also want to create awareness of the product. (Bell & Boztug, 2006) also showed that price reductions result in smaller boost in sales than other types of promotions. (Nakarmi, 2018) revealed that promotions have a reinforcements effect on changing habits of shoppers. Sales promotions, which directly deal with product purchases and enhance the value of the product by either lowering the overall cost of the product or by adding extra benefits to the standard price, boost consumers' consumption or prompt them to try a new brand. The reinforcement effect of more free marketing is more important in the trials by Diamond & Robert (1989) and Diamond W. (1992), and the additional free milk will stimulate the consumption of Rice Krispies.

Consumer promotions come in a variety of forms, and marketers use them in a variety of industries. Food and toiletries, for example, are two of the most important sample user sectors. Discount pricing and sales are primarily used by FMCG companies and retailers (Baker, 2003). Different industries sell different products. That is, because consumer decision making differs significantly across product categories, all product categories do not perform equally across the various types of sales promotions. Product categories heavily influence consumer decision-making, which also help to explain why people react differently to sales promotions in some cases.

1.2. Research Objectives

One of the primary objectives of the study will be to determine the effect of online sales promotions on consumer purchasing behavior. The paper will investigate how consumers respond to various online sales promotions. In addition, how the product category moderates the variations in reactions to various online sales promotions. Marketers defined sales

promotion as activities that often occur during specified time periods for certain products and provide additional incentives to urge consumers to respond quickly. Sales promotion not only provides consumers with money, but it also helps them acquire products or meet household budgets demands (Liang, Yang, Ji, & Yu, 2016).

Based on the disparities in the advantages, sales promotions are classified as monetary and non-monetary, or (Peattie & Peattie, 2003) differentiated them as value—increasing and value adding. Moreover, some researchers such as (Kotler & Keller, 2006) categorized them as samples, coupons, cash refunds, premiums and so on. Different forms of sales promotion may not always produce the same effects. That is to say, not all sales promotions have the same influence on consumers. For instance, a free sample of a product will encourage clients to try the new product. According to (Bruce, 1991), a free sample has a benefit effect on product sales. (Ehrenberg, Hammond, & Goodhardt, 1994) demonstrated that price reductions will entice more irregular customers to purchase the offered products during the promotion period, after which consumers are most likely to return to their loyal brands. Consumers respond differently to diverse sales promotion because they perceive various values for the corresponding varied sales promotions. Even with the same promotion—bundles, consumers may respond differently depending on the freebie with which the product is bundled. For instance, scholars (Uzma & Ravi, 2010) categorized freebies as hedonic and utilitarian and discovered that cross-category bundles that combine hedonic and utilitarian items increase the likelihood that consumers make a purchase. The results were also supported by (Liu & Chou, 2017) , who showed that heterogeneous bundles a greater influence on customers' reactions than homogeneous bundles.

In (Subhojit, 2009)'s paper, he conducted additional analysis for the bundles and separated utilitarian freebies into related and non-related utilitarian freebies. For consumer durables, non-related utilitarian freebies are preferred over cash discount sales promotion. Consumers view the increased volume (volume discount) in non-durable products to be of greater value. In other words, buyers react differently depending on the type of sales promotion they receive and the product categories. Durables are commonly referred to consumer goods that do not

wear out or use up rapidly and hence do not need to be purchased frequently (Will, 2022). This means that once the customer purchases the goods and he or she is temporarily out of the market of that good until it needs replacement (Rundle-Thiele & Bennett, 2001). Non-durables also known as consumables can be compared to durables, which are goods used by individuals and businesses that must be replaced regularly since they wear out or are depleted (Wikipedia, Consumables, 2022).

According to durable products' attributes, consumers purchasing behavior differs from that of non-durables products. For instance, in most of the non-durable cases, wives make the purchase decision alone and payment is made in cash and respondents maintain trying different brands available in the market (Richa & Renu, 2018). While sales promotion has played a more apparent and costly part in the marketing of durable goods since after last decade, customers have learned that promoted products are not always of poor quality. Furthermore, manufacturers must utilize sales promotions to get consumers to buy their products, and merchants frequently use promotions to clear out inventory at the end of the season (Jobn A et al., 1987). Consumer demand for durables is more sensitive to the business cycle than consumer demand for non-durables, therefore, promotions must be used to balance out consumer demand, whether with respect to seasons or the business cycle. Besides, non-durables strive to either increase the package size or number of unites to augment the purchases while durables manufacturers concentrate on trading the consumer up to a model with more features (Jobn A et al., 1987). (Rundle-Thiele & Bennett, 2001) investigated brand loyalty in the durables and non-durable markets and discovered that in the non-durable market, a sales promotion may alter purchase patterns and a single purchaser buying on behalf of the household, who is not necessarily the end-user product, which is consistent with the findings of (Richa & Renu, 2018). (Ovidiu I. & Andrej, 2010) discovered that consumer behaviors differ depending on the types of products, with the non-durable market being more sensitive to repurchasing intention. It suggests that buyers have more brand loyalty for durable products. Since customers have varied views and respond differently depending on the types of products, this paper will continue to investigate the topic --- the

moderating effect of durable and non-durable products on the relationship between promotion type and consumers purchasing behavior. The crucial question of this thesis is as follows:

How do consumers purchase behavior differ among various types of sales promotions and how is the relationship moderated by product durability?

This paper will choose two categories: Domestic Appliance, and Personal Health, both of which are business units within Philips. Furthermore, in each category, this study will select two products and gather data from two distinct nations: the Netherlands and China because these two countries are the most important market for Philips (Ho, 2021).

This paper will adopt the categories of sales promotions, both monetary and non-monetary, which are defined and investigated by (Peter & Sawyer, 1984) to assess the effects of various online promotional sales on consumer behavior. In addition, price discount, cash discount and bundles are as representative metrics in monetary and non-monetary promotions, respectively. Bundling is commonly considered to be the grouping of several products or services and then selling them as a single item at a discounted price. Some bundling packages offer mixed products such as a toothbrush and toothpaste. Some bundles are pure like a TV with cables. While (Uzma & Ravi, 2010) identified related and cross-category bundles, (Liu & Chou, 2017) defined hedonic and utilitarian bundles. They discovered that consumers have diverse preferences for sales promotions based on different types of bundles. As a result, before the research question is answered, it is required to first investigate sub-questions:

- What is the difference in consumers' purchase intention between monetary and non-monetary promotions?
- What is the difference in purchase intention between the related bundles and unrelated bundles?

1.3. Research Methodology

This research will use a survey experiment to measure consumers' behaviors for different types of sales promotions. a 4 (promotion type: monetary—price discount promotion and cash promotion, non-monetary-related bundles and unrelated bundles) between-subject experiment is conducted and then each participant is exposed to all testing products. The data is collected through the experiment survey which is created in Qualtrics. This paper intends to ask people or consumers from the Netherlands, China and the rest countries to engage in the investigation because these are Philips's representative and top two commercial markets (Ho, 2021). Convenience sampling will be employed in this research because it is a non-probabilistic sampling approach. In addition, data from a large number of surveys may be collected rapidly and at a minimal cost using this sampling approach. Price discount, cash discount, related and non-related bundles are all monetary and non-monetary online sales promotional indicators. Domestic Appliance and Personal Health categories will be chosen, and then vacuum cleaner and coffee machine will be selected from the Domestic Appliance category, while toothbrush and facial cleaning brush will be picked from the Personal Health category to examine the moderating effect of durable and non-durable products on the various types of sales promotions. The data is analyzed in SPSS using one-way ANOVA and repeated ANOVA tests and numerous assumptions are tested beforehand.

1.4. Thesis Outline

This thesis will be organised as follow: A literature review on consumers behaviour, effective sales promotion and the moderate effect of product category to identify research gap and develop hypothesis. In chapter 3, The theoretical framework, data collection and methodology will be demonstrated. In chapter 4, the findings will be explained, and chapter 5 covers the conclusion and limitations of this paper.

2. Literature review

In this literature review, theories and concepts regarding the consumer behavior, sales promotions and (non) durable product categories will be introduced and analyzed. This chapter aims to develop the hypotheses about the relationship between consumer behavior and various types of promotions from the existing literature. And then these hypotheses can be further tested in the following chapter.

2.1. Consumer behavior on the internet

Scholars agree that consumers behave differently online and offline, although the results remain unclear. For instance, (Brynjolfsson E & Smith MD, 2000) discovered that online price is more sensitive than that offline, resulting in lower prices and faster price adjustments for online products. While, (Chu, Chintagunta, & Cebollada, 2008) demonstrated that price elasticity is lower online when product and consumers characteristics are taken into account, which is also consistent with the findings of (Arce-Urriza, Cebollada, & Tarira, 2016), who found that the sales promotion effect is not significantly in the online channel. According to (Degeratu, Rangaswamy, & Wu, 2000), the explanation is that consumers who purchase online because they have less time or find it inconvenient to go shopping. There are numerous reasons why consumers choose to shop online. (Singh & Sailo, 2013) argued on their analysis that 40% of respondents prefer online shopping for the price, while 33% prefer it for the convenience and time savings. In addition, when consumers look for a product across multiple online retailers, they are more price sensitive than when they search products within an online store.

2.2. Purchase intention

Consumer purchase intention is a crucial indicator of consumer behaviour. Purchase behaviour refers to the decision and acts people undertake to buy products or services for individual or group use and during this process, a consumer searches for relevant information

based on personal experience and external settings before making a purchase decision after comparison and judgment (Ya & Chang, 2017). According to (Lee & Olafsson, 2009), purchase intention is the likelihood of a consumer intending to acquire a product at a specific period, and the higher the consumer purchase intention, the stronger the purchase probability. In (Yim et al., 2012)'s article, purchase intention is a predictor of customer reactions, and they investigated the effectiveness of advertising on consumer purchase behaviour.

2.3. Effectiveness of sales promotion

Over the last few decades, researchers have focus on the topic sales promotion and examined its effectiveness. Sales promotion has the impact of not only raising sales, but also attracting and encouraging customers to explore new products. For instance, (Cotton & Emerson, 1978) argued that sample promotions attract new consumers to the stores to purchase. (Baker, 2003) demonstrated "agree shampoo" rose to the top of the US market in six months by employing advertisements. Furthermore, online sales promotion is more crucial in the marketing because e-commerce transactions have expanded significantly, and customers can not physically touch or feel the products and salespeople cannot communicate with consumers face to face. As a result, online sales promotion has emerged as one of the most significant communication tools for attracting consumers' attention through the message it conveys (Esmeralda & Salvador, 2014). Online sales promotion serves as a signal to distinguish brands or distribution channels, capturing consumers' attention (Esmeralda & Salvador, 2014). To pique consumers' curiosity and subsequently inspire them to buy the products, sales promotion might offer benefits such as monetary savings (Chandon, Wansink, & Laurent, 2000). In short, when there is a sales promotion, consumer purchase intention increases.

2.4. Effectiveness of different types of sales promotion

Furthermore, numerous researchers proposed that different types of sales promotion elicit diverse promotional responses. Price discounts, which can range from straight price discount to buy one get one free, cash back, free trial, discount card, vouchers, and bundles, are crucial

elements of sales promotion (Robert & Richard, 2010). (Thaler, 1985) utilized the example of automobile rebates to demonstrate that the discount promotion is less desired than the rebate. According to (Mohamed, 2016) , the purpose of his research is to investigate the influence and the relationship of popular promotion methods in the retailer sector. The data was gathered from books and scientifically published publications in order to investigate the impact of the most often used promotion tactics on consumers purchasing behaviour, such as brand switching and customer loyalty. This study discovered that there is no significant relationship between coupons and consumer purchasing behaviour during sales promotion; nevertheless, promotional tools such as price discounts, free samples, and buy one get one free have an impact on the consumer purchasing behaviour.

Because the effect of different sorts of promotions varies, researchers attempt to categorize and classify them (Schwipper, Peche, & Schmitz, 2020) used a dichotomy to differentiate between monetary and non-monetary sales promotions. The monetary promotion is in the same units as the reference price, whereas the non-monetary promotions provide additional quantities of the purchased products in other units than the price. Because monetary or price promotions stimulate consumption by offering a lower price, marketers provide consumers the option to save money. While monetary promotions benefit consumers not only by price saving, but they are also convenient (Chandon, Wansink, & Laurent, 2000). Customers with clear objectives are more likely to respond to monetary offers. Furthermore, according to (Begon~a & Rodolfo, 2004), monetary promotions have a significant influence on brand choice than the non-monetary promotions. (Gilbert & Jackaria, 2002) evaluated the impact of sales promotions in UK supermarkets and discovered that only monetary promotions have a statistically significant effect on consumers' purchasing behaviour. However, (Mela, C.F, 1997) recommended employing non-monetary incentives because they never harm the brand image and may even help in building one and they are at the very least advantageous in improving the product's brand value.

While there are significant distinctions between these two types: monetary promotions typically provide consumers with pretty rapid reward, but non-monetary promotions are

more relation-based and involve delayed benefits. In order to determine the effectiveness of sales promotions, (Kwok & Uncles, 2005) conducted a quasi-experiment to determine which consumers sales promotions are more effective. Afterwards they discovered that monetary promotions are preferred by a sample of Anglo-Australians and Chinese Australians across all products.

(Alnazer, 2013) also described the differences in reactions to monetary and non-monetary sales promotions as Prospect Theory Value Function implications. According to this theory, monetary promotion is regarded a “loss” since it lowers the purchase price, whereas a non-monetary promotion is considered a “gain” acquired in the transaction. Because both the purchase price and the difference are expressed in monetary terms, people tend to judge price discounts in relative terms. When customers are provided a premium, however, they do not have a precise idea of its monetary value, making it more difficult to deduct its value from the product price. The goal of (Alnazer, 2013)’s article is to investigate how consumers perceive various sorts of promotions, such as price discounts and premiums. According to the findings, monetary sales promotion is more effective than non-monetary sales promotion at a high-level discount (50%) or a moderate level discount (20%). The likelihood that consumers will integrate the gain (discount) and the loss (product paid) rises, resulting in a more favourable appraisal of monetary promotion.

Additionally, (Heilman, Nakamoto, & Rao, 2002) carried out an in-store investigation at two grocery store chains in a middle-class suburb of St. Louis area. Consumers who received a price reduction purchased more than those in the control group who did not receive the unexpected price reduction. They demonstrated how monetary savings enable consumers to spend the extra money on buying other things, resulting in an unexpected psychological income effect that causes consumers to prefer price discounts. As a result, it can be hypothesized as

H1: Monetary promotions have a higher consumer purchase intention than non-monetary promotions.

2.5. The moderating effect of product durability

When marketers utilise the same sales promotions in different categories, they can elicit drastically varied responses from customers. For instance, a study conducted by information Resources (IRI) discovered that a 15% price discount in store improves sales of the promoted brand of toilet tissue by an average of 440.5%, on the other hand, the same promotion in the pasta category boosts sales of the promoted brand by 198.1%. Similarly, the same promotion for a deodorant brand yields an increase of 102% (Narasimhan & Neslin, 1996). Therefore, product categorisation is vital for generating and maximising profits and influencing sales promotion. To further investigate, researchers propose that goods possess features that can be classified as non-durables and durables. According to their special attributes, manufacturers and retailers adapted distinct sales marketing strategies for different types of products. Non-durables promotions frequently try to boost the package size or number of units purchased. In the case of durables, manufacturers and retailers focus on trading the consumer up to a model with more features (John A et al., 1987). (Ovidiu I. & Andrej, 2010) conducted a comparative study to further analyse the differences between durable and non-durable products in terms of relationship between brand loyalty and purchasing frequency / quantity. In their paper, they found brand loyalty is the fundamental factor to increase the frequency and quantity for durable products. While, in the case of non-durables, there is not statistically significant for a possible relation between brand loyalty and purchasing frequency and quantity. Research has shown that consumers are less loyal for non-durables because consumers have lower involvement and risk for this kind of products. If a competing brand is offered at a considerable discount, this may reduce the risk enough for a buyer to switch brands temporarily to trail the alternative (Rundle-Thiele & Bennett, 2001). Thus, sales promotions are more attractive for consumers when they plan to purchase non-durables. Besides that, (Subhojit, 2009) categorised the products as non-durables and durables and observed that consumers prefer volume discount when the product is non-durable, whereas for durables, cash discount is more attractive than the other types of promotions. Because a product attributes and promotions should show a certain degree of coherence. For non-

durable products, preference of volume discount sales promotion is consistent with the easily used up attributes. The cash discount is more valuable when they purchase durables since a durable good is a manufactured product capable of a long and useful life. Consumers are reasonable if the goods are long-lasting and they do not need to buy it regularly. Besides, it is not required to acquire additional quantities of the product, even if it is on sale. As a result, this paper proposes that monetary sales promotion is the preferred kind of promotion for durables for consumers, whereas non-monetary promotion for nondurable products increases consumers' purchase intention. Therefore, the hypothesis should be as follow:

H2: The product category moderates the relationship between promotion types and purchase intention. When a product is durable, the difference between monetary and non-monetary promotions in purchase intention increases; when a product is non-durable, the disparity in purchase intention between monetary and non-monetary reduces.

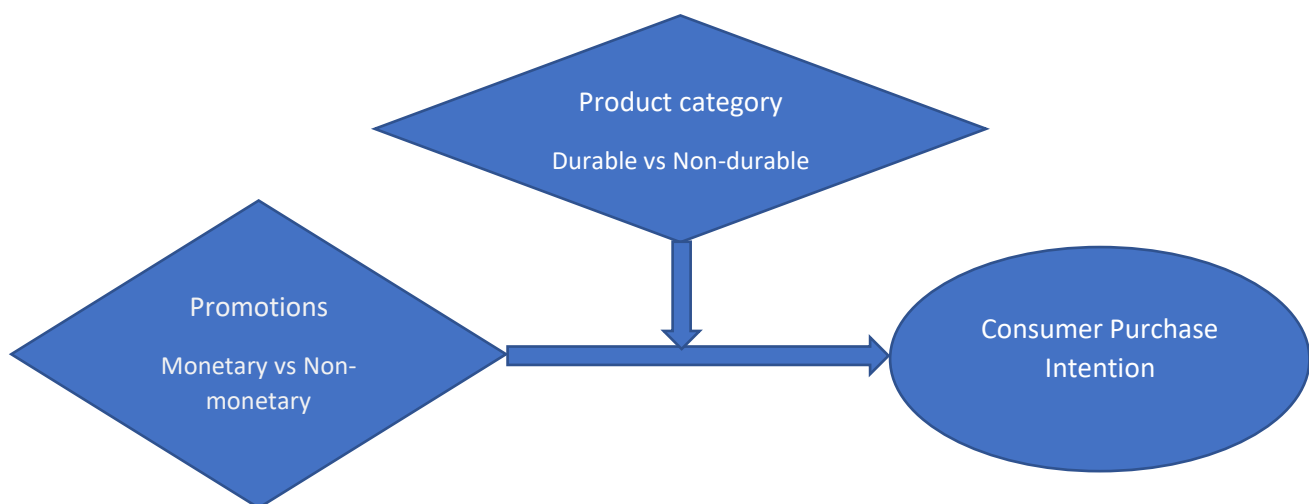


Fig. Research Model of effect of sales promotion Monetary VS Non-Monetary and Moderating effect of Product category

2.6. Bundles

Bundles as a type of non-monetary sales promotion, are also defined as the process of offering two or more products or services in a single package for a lower price, even though most of the time, the individual items may not be offered separately at their regular price (Uzma &

Ravi, 2010). Typing a discount to purchase aggregation can be a useful approach for differentiating, introducing new product like small samples, lowering costs, and cross-selling to a customer who may purchase one but not all the products offered in a bundle (Guiltingan, 1987). Furthermore, bundles can be used to categorise distinct types based on the product with which they are packed. For instance, some products grouped with the same product, while others are bundled with small items such as freebies. Some bundles combine complementary and related products, while others combine cross-category (non-related) products. Given the advent of cross-category bundles of unrelated items, it is crucial to investigate if they are more effective than the other equivalent value types of bundles in improving bundle sales. (Chakravarti, Rajan, Pallab, & Joydeep, 2002) revealed the price-split effects were moderated by the component of a bundle. They conducted comparable experiments with scenarios in which respondents were looking for a refrigerator bundle that included an icemaker or a warranty. They demonstrated that partitioning the price of the bundle - a refrigerator with an icemaker focused attention on add-on consumption benefits and reduce scrutiny of the performance (reliability) ratings the refrigerators. In contrast, the partitioning the price of the bundle with a warranty made product failure a salience concern. Thus, component features may influence how consumers weight specific bundle features, affecting their evaluations and choices. Even though being presented by different items in the same bundle and value, customers have various perceptions and preferences. (Uzma & Ravi, 2010) defined unrelated item bundles as cross-category bundles, as opposed to complementary and related products bundles. They primarily concentrate on this type of bundles since they insisted that unrelated products bundles may differ depending on whether customers' purchases are driven by utilitarian, practical considerations, hedonic or pleasure-seeking concerns. (Liu & Chou, 2017) classified hedonic and utilitarian goods as heterogeneous bundles and two hedonic or utilitarian items as homogenous bundles. (Liu & Chou, 2017) and (Uzma & Ravi, 2010) discovered that consumers purchase intentions are significantly higher for heterogeneous bundles compared to homogeneous ones. They argued that when customers plan to purchase hedonic items, additional utility item in the bundle would lessen purchase guilty feeling and then boost the likelihood of purchase. Furthermore,

it is anticipated that customers would perceive more value in non-related bundles because they will not only gain the functional utility from focal item but will also obtain hedonic pleasure from the unexpected freebie item in the bundle. As a result, the following hypothesis can be made:

H3: Consumers' purchase intention is higher for (non-monetary) bundle products with non-related items than that with related items.

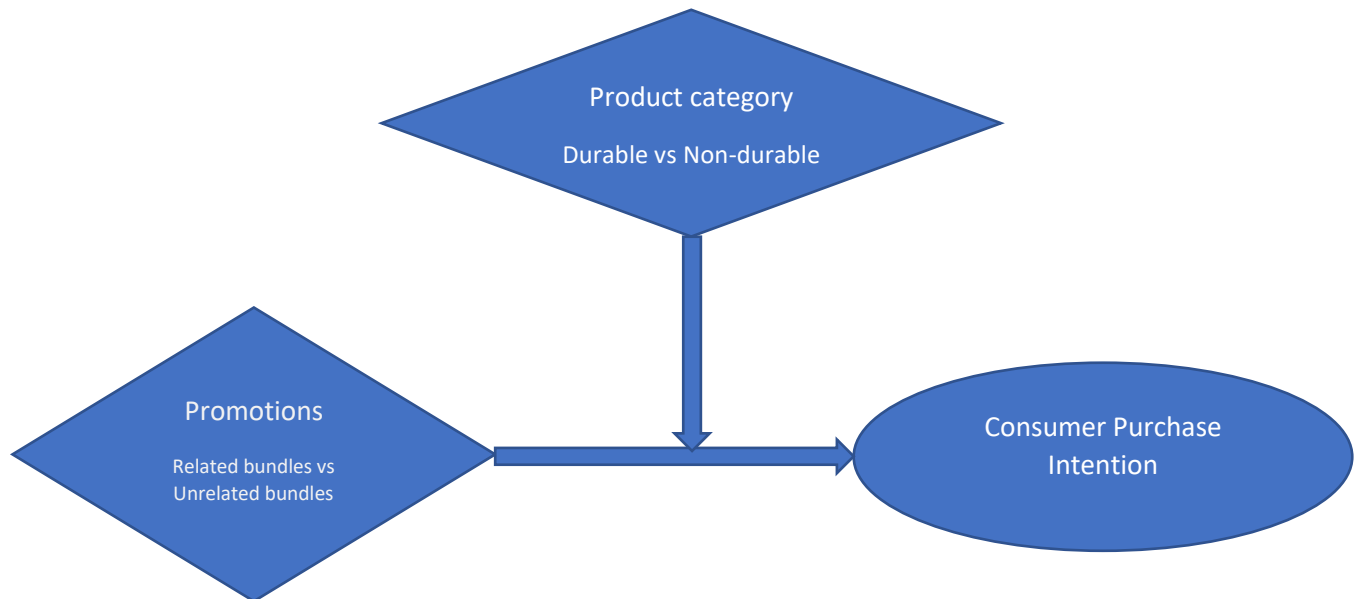


Fig. Research Model of effect of sales promotion related bundles VS Unrelated bund and Moderating effect of Product category

3. Methodology

This research will use quantitative research in its nature, which can be described as a systematic investigation of phenomena by collecting quantifiable data and performing statistical, mathematical or computational techniques. quantitative research collects information from present or potential consumers through sampling methods and the distribution of online surveys, online polls, and questionnaires. This study will employ a survey experiment to assess consumers behavior in response to various types of sales promotions.

The research design, measures, pre-test, procedure, sample demographics and assumptions are all covered in this chapter.

3.1. Research design

A four (promotion type: monetary—price discount promotion and cash promotion, non-monetary-related bundles and unrelated bundles) between-subject experiment is conducted to evaluate the hypothesis given in the literature study. The participants are then exposed to all four testing products. Because many scholars picked purchase intention to represent, it will be used as the dependent variable to measure consumer behaviour (Fernando et al., 2016). The primary independent variable is the type of promotion. In this study, a product category is included to account for moderating effects. Furthermore, four products are chosen for research, two products from each category. One is the domestic appliance from Philips and coffee machines and vacuum cleaners are picked from this product category; another is the personal health care category and then toothbrushes and facial brushes are selected from this category. The following factors influenced the selection of these products: first, these products are particularly popular in D2C online shopping and expected to have customer information about them. Second, marketers of these products frequently utilize sales promotion strategies to boost sales or deal with unhealthy stock in the market.

Furthermore, because the Netherlands, China and other countries are Philips' primary commercial markets, this research will collect consumer information from each of them independently so that the results can be more convincing in different regions (Ho, 2021). According to (Fernando et al., 2016), sample type—students or not influenced the effect of the association between promotions and customer behaviour; also, past studies used student samples more frequently than field samples. Then there is the reality that students respond better to research stimuli. Finally, it is preferable to keep other variables under the same control such as educational level, average age and so on, and which demographic information or customer characteristics have an impact on purchasing behaviour (Muhammad

& Arslan, 2014). The responses were collected between the 16th of November and the 12th of December 2022 and a short analysis of the sample was shown in the following section 3.5.

All participants were exposed to two different kinds of product categories—durable and non-durable and each category had two products that were presented to them, which may make the participants feel difficult to compare the purchasing situation. That means all participants answer four times for their purchase intentions for different products. And then the sample was split randomly into four subsamples based on each sale's promotional scenario. Then the participants rated the situation and data were analysed by multiple statistic tests.

3.2. Measures

Purchase intention as the dependent variable was measured on a 4-item, 7-point Likert scale adapted from (Peng, Zhang, & Wang, 2019) and (Dodds, Monroe, & Grewal, 1991), who investigated purchase intention and willingness to buy in an online context, which are shown in table 2. Using SPSS software, Cronbach's alpha was computed at 0.927 (see Appendix B-14). The four items have been transformed into numerical values between 1 to 7. The average of the four answers was taken to determine the level of purchase intentions. Promotion type is a binary variable, value 0 is represented monetary sales promotion and value 1 is regarded as non-monetary sales promotion. Price discounts and cash discounts are taken as indicators of monetary promotion because they are the main discounts used by Philips. Bundles (buy one with non-related products and buy one with compulsory items) are the indicators to represent the non-monetary promotions. Product bundling is a non-monetary sales promotion technique that groups several products/services together and sell them as a single product (Uzma & Ravi, 2010).

There are two types of product bundling ---related and non-related. In the case of related bundling, a product offers both a bundle with separate components of the bundle for sale, such as a facial cleaner with brushes and a vacuum cleaner with nozzles. Even though each product had a different set of freebies, this paper kept the set of freebies in the same

monetary value. In the case of non-related bundling, the freebie and focal item of the bundle are cross-category, like a vacuum cleaner with a set of notebook paper. Furthermore, in order to make respondents keep the same preference for a non-related freebie, each product had the same freebie – a set of notebook paper. These different types of sales promotions were shown in different scenarios and asked participants to respond.

One-way analysis of variance (ANOVA) is used to test the significance of the difference between the mean values of dependent variables in different categories of an independent variable. The independent variable must be measured using an interval or ratio scale and the independent variable must be measured using a nominal or ordinal (categorical) scale. Independent variables are also called factors (Blaikie, 2003).

Another type---repeated measures ANOVA is also applied in this paper which is used to compare the mean differences between groups that have been split into two or more within-subjects factors. Because participants were assigned randomly to different sales promotion type scenarios and then each participant answered four times regarding purchase intentions for four different products.

Statistical repeated measures ANOVA was utilized to study the influence of the independent variable online sales promotion on the dependent variable consumer purchase intention. In addition, moderator product categories were included in the study aiming to answer whether the effectiveness of sales promotion varies between different products. More specifically, the ANOVA was used to compare the difference between the means of consumer purchase intentions for monetary and non-monetary online sales promotions. Furthermore, the influences of the covariates such as demographic factors were tested by ANOVA. Besides that, multiple assumptions were checked to confirm whether the ANOVA is a valid test.

3.3. Pre-test

Even though, some authors such as (Julio, Zárata, & Hernández, 2010) defined oral care goods like toothbrushes and facial brushes as consumable items and home appliances and home electronics such as vacuum cleaners and coffee machines as durable goods. It is still difficult for consumers to evaluate their perceptions of the durability of products because it may be related specifically to the product's technical aspects (Meeds, 2004). Thus, a pre-test needs to be performed. After the participants were familiarized with the general difference between durable and non-durable product types, this paper decided which products typically sold on Philips's official website might be good representatives for either product type. From the identified products, this paper selected an electronic toothbrush and an electronic facial brush to represent the non-durable products and a vacuum cleaner and a coffee machine to represent the durable products: these products also were typically offered in the same price range.

This paper then ran a pretest among 31 people to confirm the selection, using a three-item Likert-type scale for this study. The items were 'this product would probably last a long time', 'there are many features that could malfunction with this product' and 'this product seems to be well crafted' ($\alpha=0.69$), which followed the same procedure as (Meeds, 2004)'s paper. The results from the pre-test for the durable group ($M=4.88$, $SD=1.19$) and the non-durable group ($M=4.02$, $SD=1.36$) indicate that there is a significant difference between the two groups ($P<0.001$) according to the one-way ANOVA test (see table 1 below). So, a toothbrush and a cleansing facial brush represented nondurable products and a vacuum cleaner and a coffee machine were regarded as durable products in the following experiment.

Table 1 *tests of perceptions of the durability of products*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.227	1	23.227	14.097	<0.01
Within Groups	201.005	122	1.648		
Total	224.232	123			

3.4. Procedure

In order to collect the data, a questionnaire was used as a tool for research. A sample of 314 students at least 18 years old living in the Netherlands and China and other countries filled out a survey made in Qualtrics. It started with the normal welcome and the aim of the study. Furthermore, the survey guaranteed that all answers were anonymous and only used for academic purposes so that the respondents would not feel uncomfortable to fill it out and were likely to give honest answers (Cavana, Delahaye, & Sekaran, 2001). Three types of scales were used in the questionnaires. The first one is for classifying the data, called a nominal scale, such as gender. The second one is for ranking the data, called a ratio scale, such as age. The third one is an interval scale, which is a standard rating where a researcher defines a certain number of rated answers such as a 7-point range from strongly disagree to strongly agree, this is asking about purchase intention towards online shopping. All are closed questions since it is easy for respondents to select answers quickly (Cavana, Delahaye, & Sekaran, 2001).

Table 2 *Variables, Questions and Types of scale used*

Variables	Literature	Questionnaire	Type of scale
1. Consumer Demographics	Gerorage (2004), Kwok & Uncles (2005), Liao et al. (2009)	<ol style="list-style-type: none"> 1. What is your gender? 2. What is your age? 3. What is your education background 4. Are you currently living in the Netherlands? 5. Are you currently living in China? 6. Do you know about the Philips Electronic toothbrush or have you ever used the product? 7. Do you know about the Philips Facial Cleansing Brush or have you ever used the product? 8. Do you know about the Philips Vacuum Cleaner or have you ever used the product? 9. Do you know about the Philips Coffee Machine or have you ever used the product? 	Nominal and Ratio scale
2. Purchase intention	Peng et al. (2019), Dodds (1991)	<ol style="list-style-type: none"> 1. The probability that I would consider buying the product from this promotion is high 2. If I were to buy this product, I would consider to buy it from this promotion 3. The likelihood of my purchasing the product from this promotion is high 4. My willingness to buy this product from this promotion is high 	Interval scale (Likert)

Then the respondents were randomly assigned to different types of sales promotions, they were then presented with all products with one of four sales promotions. Subsequently, they were asked about purchase intention for this scenario.

In order to check whether respondents perceived the task as realistic, two statements have been given at the end of the survey, regarding the imaginability and realism of the previously mentioned tasks. These statements are as follows: (1) "I believe that the described scenarios

could happen in the real life” and (2) “I could see myself performing the tasks described in the previous scenarios”. On a 5-point Likert scale, both statements were assessed.

At the start of the survey, Individuals were asked some demographical questions such as their gender, age, educational background, whether they are currently living in the Netherlands or China and whether they are familiar with or had used these items previously. These questions are designed to screen out respondents who are not qualified to participate in this experiment, as well as to determine whether the sample is representative and to account for these characteristics.

Following data gathering, the data analysis phase began. First, the raw data was acquired from Qualtrics and processed in Microsoft Excel in the manner stated in section measures. The data was then exported to SPSS. Several SPSS tests were run to validate the variables used in one-way ANOVA and repeated measures ANOVA. The test determines whether monetary and non-monetary promotional types have a significant effect on purchase intention, whether this effect is considerable attenuated by product category, and at last, whether there is a different effect of bundle promotional sales type on purchase intention. The results of the survey are reported in the following chapter.

3.5. Sample demographics

As previously stated, all participants were asked demographic questions at the start of the survey. There are some reasons for including these questions.

First, this was done to eliminate responders who were not qualified to participate in the experiment. This includes 8 people who now reside in both the Netherlands and China. Furthermore, data from 83 respondents were excluded because they did not complete the survey, and 19 respondents who claimed strongly disagree with imaginability and realism were also removed from the raw data, leaving 204 respondents in the experiment.

Appendix C included graphical representations of the demographics. Gender distribution was as follows: 27% males, 70% females, 2% third gender, and 1% prefer not to say. To

demonstrate respect for the diversity of gender, and after checking, they were serious to fill in the survey, therefore the paper kept the data. The majority of respondents range in age from 18 to 60. More than half of the respondents in the whole sample had a bachelor's degree, and a quarter had at least a high school diploma. The sample is thought to be reasonably representative, although the unequal gender distribution and the relatively high number of those with a bachelor's degree should be taken into account.

Finally, demographic questions were included to be used as covariates in ANOVA testing. With SPSS, the gender and educational level variables were converted into numerical variables in this process.

4. Results

Out of the 204 respondents, 106 completed a survey with a monetary sales promotion and 51 of them were in the price reduction scenario, whereas 98 subjects were given with non-monetary promotions and 52 of them completed the survey with related bundles. ANOVA and repeated measures of ANOVA tests require certain assumptions to be met. This chapter is divided into four sections, the first of which checks for no significant outliers, normal distribution of the dependent variable. and sphericity. The second section focuses on monetary and non-monetary types of promotion, while the third section focuses on the product category moderating impact. Further analysis for non-monetary—the difference between related bundles and unrelated bundles and hypotheses are tested respectively in the fourth section.

4.1. Assumptions

4.1.1. *No significant outliers*

There should be no major outliers in the related groups. Outliers are just single data points within the data. The box plots in figures 1 and 2 are shown that there is no outlier for monetary vs non-monetary promotions, separated by durable and nondurable product categories.

Figure 1 *Observed Value of durable products for different types of promotions*

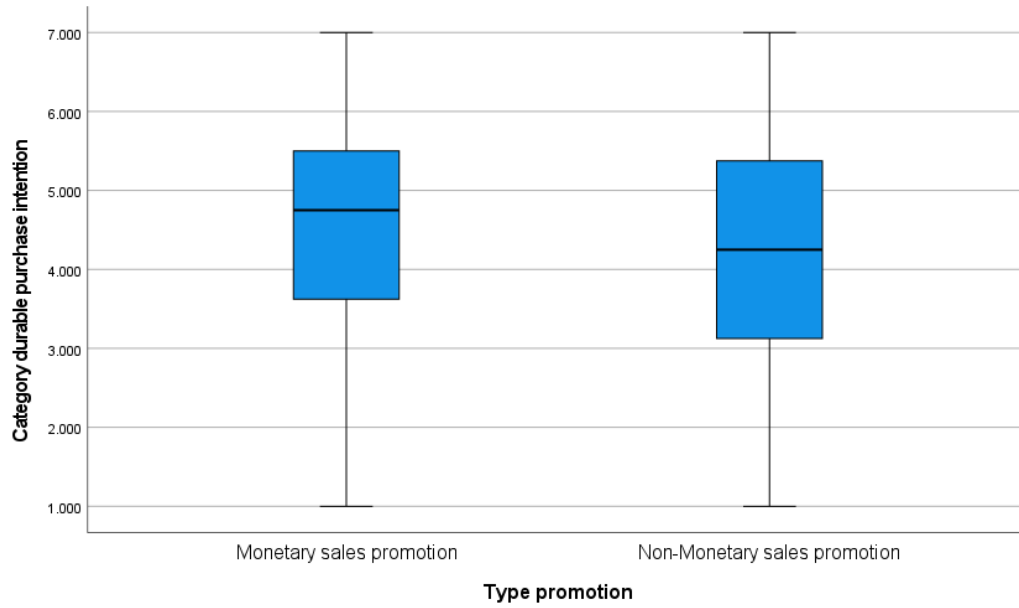
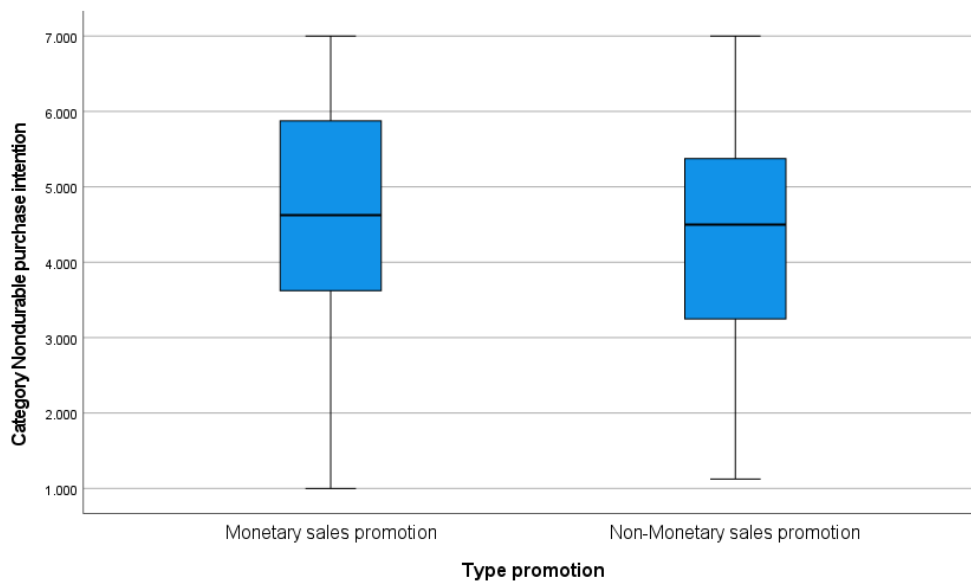


Figure 2 *Observed Value of nondurable products for different types of promotions*



4.1.2. Normal distribution of the dependent variable

The dependent variable should be normally or near to normally distributed for each group. And then, tests of Normality for purchase intention for the durable and nondurable products are shown in table 3 to check whether this variable shows the normal distribution. According to the Kolmogorov-Smirnov and Shapiro-Wilk tests, the purchase intentions for the separated sub-samples do not follow a normal distribution, but they have similar skewness (-0.325 for nondurable products, -0.389 for durable products) and kurtosis (-0.616 for nondurable products, -0.546 for durable products). Furthermore, based on (Ruben Geert, 2023), this assumption is not needed if the sample size ≥ 25 . Thus, data is not adjusted in this paper, but the impact will be discussed in the following chapter.

Table 3: Test of Normality

Dependent variable	Type promotion	Kolmogorov-Smirnov		Shapiro-Wilk	
		df	Sig.	df	Sig.
Nondurable purchase intention	Monetary sales promotion	106	0.041	106	0.006
	Non-Monetary sales promotion	98	0.200	98	0.180
Durable purchase intention	Monetary sales promotion	106	0.038	106	0.020
	Non-Monetary sales promotion	98	0.200	98	0.088

4.1.3. Sphericity

Sphericity means that amount of variable across the differences for all of the groups (both within and between) must be equal or near to equal the variances of the differences between all combinations of related groups must be equal. This is tested in table 4 below. Because Sphericity is violated $p=0 < 0.05$, the paper needs to apply a correction to the degrees of freedom used to calculate the F-ratio. There are three corrections Huynh-Feldt, Greenhouse-Geisser and Lower-bound can be applied. But Epsilon is larger than 0.75, Huynh-Feldt corrections are applied to calculate the F-ratio which are shown in the following tables.

Table 4 *Mauchly's Test of Sphericity*

Within Subjects Effect	Approx.Chi-Square	df	sig.	Greenhouse-Geisser	Epsilon	
					Huynh-Feldt	Lower-bound
Product category (Durable/Nondurable)	0.000	0	0.00	1	1	1

4.1.4. Descriptive statistics

Next, descriptive statistics are shown for purchase intention, promotion types, product categories and other demographic variables. Table 5 shows the statistics for purchase intentions of different sales promotions for all products. Table 6 shows the statistics across the durable and non-durable product categories. Tables 7,8 and 9 show the statistics for genders, educational levels and locations. The tables show that there are enough observations, but each observable subsample is not sharply unequal.

Table 5 *Descriptive statistics for purchase intention across Monetary VS Non-Monetary promotion*

Promotion Type	Mean	N	Std. Deviation
0 (Monetary promotion type)	4.50	106	1.257
1 (Non-Monetary promotion type)	4.22	98	1.356
Total	4.37	129	1.311

Table 6 *Descriptive statistics for purchase intention across Durables VS Non-durable product*

Products category	Mean	N	Std. Deviation
Durable products	4.33	204	1.404
Non-Durable products	4.41	204	1.414
Total	4.37	204	1.311

Table 7 *Descriptive statistics for purchase intention across gender*

Gender	Mean	N	Std. Deviation
Female	4.38	143	1.25
Male	4.35	56	1.49
Third gender	3.84	2	0.84
Prefer not to say	4.48	3	4.48
Total	4.37	204	1.31

Table 8 Descriptive statistics for purchase intention across education level

Education Level	Mean	N	Std. Deviation
High school	3.94	37	1.48
Post-secondary vocational education	4.39	20	1.35
Bachelor	4.46	79	1.32
Master or higher	4.49	68	1.16
Total	4.37	204	1.31

Table 9 Descriptive statistics for purchase intention across different locations

Location	Mean	N	Std. Deviation
China	4.96	84	1.14
Netherlands	4.04	54	1.17
Others	3.88	66	1.35
Total	4.37	204	1.31

4.2. Types of promotion effect—Monetary VS Non-Monetary

Table 5 above shows the mean for the purchase intention is higher for monetary sales promotion than that for non-monetary. Appendix C shows the demographics in total and per promotion type. In order to answer the main research question of how consumers purchase behaviour differs among various types of sales promotions, the main effect of promotion type – Monetary vs non-Monetary needs to be tested by a one-way ANOVA. The results are shown in table 10.

Table 10 purchase intention between Monetary and non-Monetary sales promotion

Purchase intention in total	df	Mean Square	F	Sig.
Between Groups	1	3.858	2.260	0.134
Within Groups	202	1.707		
Total	203			

Notes: Dependent variable: purchase intention. At a 5% significant level, there is no statistical proof for a difference between the effect of monetary versus non-monetary promotion on purchase intention.

It can be seen from table 10, there is no statistical evidence for an effect of promotion type between monetary and non-monetary on the purchase intention: $F(1,202) = 2.26, p = 0.134 > 0.05$, at a 5% significance level. That means the promotion type monetary and non-monetary has no significant difference impact on purchase intention for the testing products. Even the pairwise comparisons in table 11 show that the means of purchase intention for Monetary sales promotion is higher than that for the non-monetary sales group, while there is no statistical evidence to support the difference. Therefore, based on the results of tables 10 and 11, Hypothesis 1: Monetary promotions have a higher consumer purchase intention than non-monetary promotions is rejected.

Table 11 *Pairwise Comparisons*

(I) Promotion Type	(J) Promotion Type	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Monetary	Non-Monetary	0.275	0.183	0.134	-0.086	0.636
Non-Monetary	Monetary	-0.275	0.183	0.134	-0.636	0.086

Notes: Dependent variable: purchase intention. At a 5% significant level, there is no statistical proof for a difference between the effect of monetary versus non-monetary promotion on purchase intention.

4.3. Types of products categories

From tables 5 & 11, we can see the means of purchase intentions are higher for monetary sales promotion (price discount and cash discount) than that for the non-monetary sales promotion (related and unrelated bundles) for all testing products. While there is no significant difference according to the ANOVA test above. Besides that, in order to be consistent with the primary hypothesis, how the product category moderated the impact on purchase intentions between online sales promotion types. And also, each participant in the same type of promotion group is exposed four times to fill in the purchase intentions according to four different products. Thus, a repeated measures ANOVA and one-way ANOVA have been performed to test the product categories. The results are shown in tables 12, 13 and 14.

As we have discussed above, the data does not meet the assumption of sphericity, which means we have to read the results from Greenhouse-Geisser or Huynh-Feldt and also because of Epsilon in table 4 is larger than 0.75, we use Huynh-Feldt results to report the output – within-subjects effects. That is shown in table 12.

First, there is no statistically significant interaction effect between types of promotion (monetary vs non-monetary) and product category (nondurable vs durable) because of the value of $F(1,202) = 0.512$, $p = 0.475 > 0.05$ at a 5% significance level. At the same time, there is also no strong main effect for sales promotion type (monetary vs non-monetary) from the tests between-subjects with covariates in table 13 which are consistent with the output from one-way ANOVA. Besides that, there are no significant effects on the purchase intention for covariates except the one whether participants are familiar with a facial brush. Therefore, hypothesis 2: The product category moderates the relationship between promotion types and purchase intention is rejected, nondurable and durable products will not impact the difference in purchase intention between monetary and non-monetary.

Table 12 *Test of within-subjects Effects*

Source		df	F	Sig.
Product category (Nondurable/durable)	Sphericity Assumed	1	1.397	0.239
	Greenhouse-Geisser	1	1.397	0.239
	Huynh-Feldt	1	1.397	0.239
Product category (Nondurable/durable)* types promotion (Monetary/Non-Monetary)	Sphericity Assumed	1	0.512	0.475
	Greenhouse-Geisser	1	0.512	0.475
	Huynh-Feldt	1	0.512	0.475
Error (product category)	Sphericity Assumed	202		
	Greenhouse-Geisser	202		
	Huynh-Feldt	202		

Notes: Dependent variable: purchase intention. Independent variable: promotion type & product category (durable/nondurable). At a 5% significant level, there is no significance effects for product category and promotion type product category on purchase intention.*

Table 13 *Tests of between-Subjects Effects*

Source	df	F	Sig.
Intercept	1	60.523	<0.001
Typepromotion	1	1.470	0.227
Gender	1	0.003	0.953
Age	1	0.009	0.923
Education	1	0.454	0.501
Location (China/Netherlands)	1	0.854	0.356
Know about Philips Electronic Toothbrush	1	0.270	0.604
Know about Philips Facial Brush	1	9.480	0.002
Know about Philips Vacuum Cleaner	1	6.609	0.011
Know about Philips Coffee Machine	1	1.634	0.203

Notes: Dependent variable: purchase intention. Independent variable: promotion type (Monetary VS Non-Monetary). Covariates: gender, age, education level, location and familiar with the products (know about toothbrush/facial brush/vacuum cleaner/coffee machine). At a 5% significant level, only whether familiar with the product facial brush shows a significant effect and there is no statistical evidence to support the difference between the effect of promotion type on purchase intention.

While according to the descriptive statistics table 14 and parameter estimates table 15, the means of purchase intentions are higher for monetary sales promotion (price discount and cash discount) than that for the non-monetary sales promotion (related and unrelated bundles) in nondurable and durable groups respectively and even in the durable group, purchase intentions between the monetary and non-monetary sales promotion are statistically significantly different: $t=1.668$, $p=0.097 < 0.10$ at 10% significance level.

Table 14 *Descriptive Statistics*

Product category	Type promotion	Mean	Std. Deviation	N
Nondurable Group	Monetary	4.52	1.399	106
	Non-Monetary	4.30	1.429	98
Durable Group	Monetary	4.49	1.351	106
	Non-Monetary	4.16	1.455	98

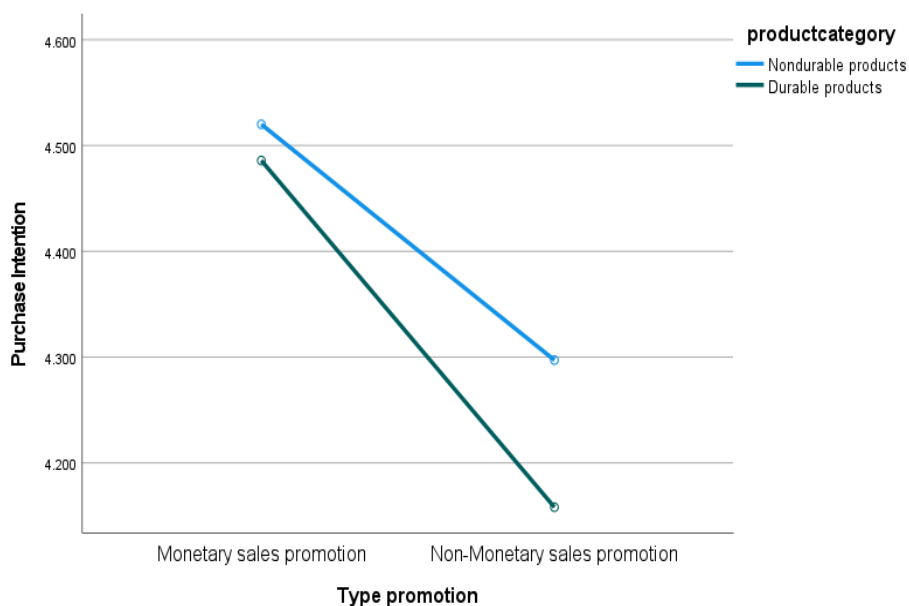
Table 15

Parameter Estimates

Dependent variable	Parameter	B	Std.Error	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Nondurable purchase intention	Intercept	4.297	0.143	30.103	<0.001	4.016	4.579
	Monetary sales promotio	0.223	0.198	1.125	0.262	-0.168	0.613
Durable purchase intention	Intercept	4.158	0.142	29.366	<0.001	3.879	4.437
	Monetary sales promotio	0.328	0.196	1.668	0.097	0.060	0.715

Notes: Dependent variable: purchase intention for nondurable and durable product categories separately. Independent variable: promotion type (Monetary VS Non-Monetary). At a 10% significance level, Monetary sales promotion of durable purchase intention is higher than that of non-monetary sales promotion (0.097<0.10).

Figure 3: Line plots of means of purchase intention in (non)durable category



Notes: Dependent variable: purchase intention. Independent variable: Monetary vs non-Monetary sales promotion for durable and nondurable product categories

The line plot in figure 3 shows the estimated purchase intention for two types of products—Nondurable products and durable products, separated by monetary and non-monetary promotion types. Consumers’ estimated purchase intention for monetary sales promotion type (price discount and cash discount) is higher than that for non-monetary (related and unrelated bundles) no matter it is nondurable or durable. In addition, consumers purchase

intention of nondurable is higher than that of durable products if they are in the same promotion type scenario. The steeper slope of durable products confirms the significant difference between monetary and nonmonetary on consumers purchase intentions.

While the statistical difference P value of 0.097 at a 10% significance level in table 15, which is larger than 0.05 at 5% significance level. That means the strength of evidence in probabilistic terms is not enough. Thus, the paper will further analyse the difference between monetary and non-monetary sales promotion at the product level.

Table 16 *Tests of within-subjects Effects*

Source		df	F	Sig.
Product Level (Tooth brush/Facial brush/Vacuum Cleaner/Coffee Machine)	Sphericity Assumed	3	18.052	<0.001
	Greenhouse-Geisser	2.824	18.052	<0.001
	Huynh-Feldt	2.882	18.052	<0.001
Product Level* types promotion (Monetary/Non-Monetary)	Sphericity Assumed	3	2.850	0.037
	Greenhouse-Geisser	2.824	2.850	0.040
	Huynh-Feldt	2.882	2.850	0.039
Error (product Level)	Sphericity Assumed	606		
	Greenhouse-Geisser	570.467		
	Huynh-Feldt	582.255		

Notes: Dependent variable: purchase intention. Independent variable: promotion type (monetary vs non-monetary) & product level (toothbrush/facial brush/vacuum cleaner/coffee machine). At a 5% significant level, product level and promotion type* product level show significant effects on purchase intention.

The data at the product level still does not meet the assumption of sphericity and also because Epsilon is larger than 0.75, we use Huynh-Feldt results to report the output–within-subjects effects.

First, the interaction effect between types of promotion (monetary vs non-monetary) and product level is statistically significant: $F(2.882, 582.255) = 2.850$, $p = 0.039 < 0.05$ at a 5% significance level. Furthermore, there is also a strong effect for product level: $F(2.882, 582.255) = 18.052$, $p < 0.001$. Thus, this paper should test the effects of product level for monetary and non-monetary separately (Wijnen, W, & P.&Van Kenhove, 2002). From table 17, means of purchase intention for monetary are higher than that for non-monetary for each product level, but only the purchase intention of Vacuum Cleaner has a statistically significant difference

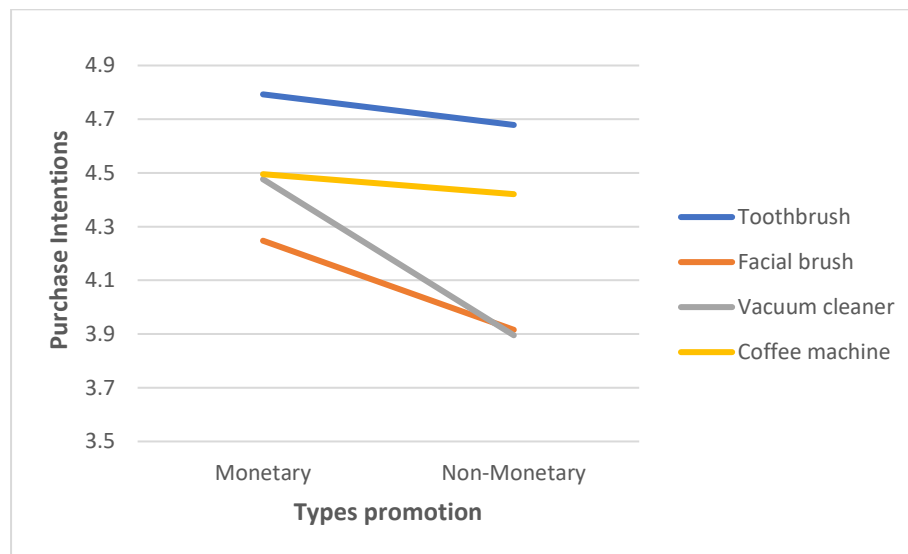
between monetary and non-monetary: $F(1,202) = 7.562, p=0.007 < 0.05$. The line plot in figure 4 also shows the estimated purchase intention for each product level, separated by monetary and non-monetary promotion types. The steepest slope of vacuum cleaner illustrates a big difference between monetary and non-monetary on consumers purchase intentions.

Table 17 ANOVA Tests for monetary vs non-monetary promotions at each product level

Product	Product category	Promotion Type	ANOVA		Mean difference (I-J)	F	Sig.
			Std. Deviation	Mean			
Electronic Toothbrush	Non-Durable	Monetary (I)	1.491	4.7925	0.1139	0.303	0.583
		Non-monetary (J)	1.463	4.6786			
Facial Brush	Non-Durable	Monetary (I)	1.585	4.2476	0.3318	2.105	0.148
		Non-monetary (J)	1.682	3.9158			
Vacuum Cleaner	Durable	Monetary (I)	1.430	4.4764	0.5810	7.562	0.007
		Non-monetary (J)	1.587	3.8954			
Coffee Machine	Durable	Monetary (I)	1.578	4.4953	0.0744	0.107	0.744
		Non-monetary (J)	1.665	4.4209			

Notes: Dependent variable: purchase intention for each product. Independent variable: promotion type (monetary vs non-monetary). At a 5% significant level, there is a statistical proof for a difference purchase intention between monetary and nonmonetary sales promotion for only vacuum cleaner ($0.007 < 0.05$).

Figure 4: Line plots of means of purchase intention for sales promotion in each product level



Notes: Dependent variable: purchase intention. Independent variable: monetary vs non-monetary sales promotions in each product level

4.4. Related bundles VS unrelated bundles

In order to further test whether there is a difference in consumers' purchase intention between products with non-related items and with the related items type of promotion, a repeated ANOVA test was performed and for the most part, is analysed identically to 4.1 and 4.2 parts. However, data is only from related bundles and unrelated bundles groups.

Looking at tables 18 and 19, there is no statistically significant difference between related and unrelated bundle type promotion: $F(1,96) = 0.648$, $p = 0.423 > 0.05$ at a 5% significance level. Even though, the mean of purchase intentions for related bundle promotion is higher than that of unrelated one according to the pairwise comparisons output.

Table 18 *Tests of Between-Subjects Effects*

Source	df	Mean Square	F	Sig.
Intercept	1	3,478.834	939.031	<0.001
Bundle types promotion(related/unrelated)	1	2.399	0.648	0.423

Notes: Dependent variable: purchase intention. Independent variable: promotion type (related bundles VS unrelated bundles). At a 5% significant level, there is no statistical evidence to support the difference between the effect of promotion type on purchase intention.

Table 19 *Pairwise Comparisons*

(I)	(J)	Mean Difference		95% Confidence Interval		
		(I-J)	Std.Error	Sig.	Lower Bound	Upper Bound
Promotion Type	Promotion Type					
Related Bundles	Unrelated Bundles	0.222	0.275	0.423	-0.769	0.325
Unrelated Bundles	Related Bundles	-0.222	0.275	0.423	-0.325	0.769

Notes: Dependent variable: purchase intention. At a 5% significant level, there is no statistical proof for a difference between the effect of related versus unrelated bundles sale promotion on purchase intention.

Table 20 *Tests of within-subjects Effects*

Source		df	F	Sig.
Product category (Nondurable/durable)	Sphericity Assumed	1	1.915	0.170
	Greenhouse-Geisser	1	1.915	0.170
	Huynh-Feldt	1	1.915	0.170
Product category (Nondurable/durable)* types promotion (Related bundle/Unrelated bundle)	Sphericity Assumed	1	0.277	0.600
	Greenhouse-Geisser	1	0.277	0.600
	Huynh-Feldt	1	0.277	0.600
Error (product category)	Sphericity Assumed	96		
	Greenhouse-Geisser	96		
	Huynh-Feldt	96		

Notes: Dependent variable: purchase intention. Independent variable: promotion type (related/unrelated bundles) & product category (durable/nondurable). At a 5% significant level, there is no significance effects for product category and promotion type product category on purchase intention.*

In addition, based on table 20 -test of within-subjects effects, there is no statistically significant interaction effect between bundle types promotion (related and unrelated) and product category (nondurable vs durable) because of the value of $F(1,96) = 0.277$, $p = 0.600 > 0.05$ at a 5% significance level. Moreover, there is no statistically significant influence on purchase intention, whether the product is durable or nondurable. Therefore, H3: Consumers' purchase intention is higher for (non-monetary) bundle products with non-related items than that with related items is rejected and H2 is confirmed rejected by table 20.

Table 21 Descriptive statistics for purchase intentions for sales promotions at each product level

Product	Product category	Promotion Type	Mean	N	Std. Deviation
Coffee Machine	Durable	Price discount	4.46	51	1.695
		Cash discount	4.53	55	1.476
		Related bundle	4.48	52	1.698
		Unrelated bundle	4.36	46	1.644
Vacuum Cleaner	Durable	Price discount	4.45	51	1.396
		Cash discount	4.50	55	1.474
		Related bundle	4.00	52	1.567
		Unrelated bundle	3.78	46	1.619
Facial Brush	Non-Durable	Price discount	4.23	51	1.564
		Cash discount	4.26	55	1.618
		Related bundle	4.04	52	1.839
		Unrelated bundle	3.77	46	1.492
Electronic Toothbrush	Non-Durable	Price discount	4.92	51	1.479
		Cash discount	4.67	55	1.505
		Related bundle	4.81	52	1.547
		Unrelated bundle	4.53	46	1.361

Notes: Dependent variable: purchase intention. The first and two columns show the analysed (sub)sample. The third column shows details of promotion types. The fourth column shows the means. The fifth column shows the number of observations (204 in total), and the last column shows the standard deviations.

Table 21 shows the estimated purchase intention for every product, separated by each promotion type. Consumers' estimated purchase intentions for monetary sales promotion types (price discount and cash discount) are higher than those for non-monetary (related and unrelated bundles) in general products except a toothbrush. Only Vacuum Cleaner has a statistically significant difference in purchase intention between monetary and non-monetary. Furthermore, consumers purchase intention of toothbrushes is higher than the other products no matter which type of sales promotion according to figure 4. Besides that, consumers prefer related bundle promotion types for toothbrushes which can be seen a small peak in figure 5, but there is no statistical evidence to support the scenario.

Figure 5: Line plot of means of purchase intention for toothbrush at four types of sales promotions



5. Conclusion and discussion

As sales promotion still accounts for a large part of the budget for companies and the intention is to give the product greater appeal and value, this study aims to investigate the impact of different sales promotions on consumer behavior (Begon~a & Rodolfo, 2004). In the literature, numerous works try to analyze how various promotion types influence the purchase intention of consumers. One model was used to include durable (nondurable) product category moderator in this research. And the model was used twice for monetary vs non-monetary and related bundles vs unrelated bundles respectively. This chapter covers the main findings, comparisons between the theoretical and empirical part of this study, limitations, and recommendations for future research.

5.1. Main findings

Multiple sub-questions were posed in the process of answering the main research question. The first sub-question which is also the first hypothesis involves the difference in purchase intention between monetary and non-monetary promotions. This paper used price discounts and cash discounts as the indicators of monetary promotion and found there is no difference between monetary promotions and non-monetary promotions. This led to the first hypothesis was rejected, which is contradicted with prior research that stated price discounts are preferred over other types of sales promotions (Gilbert & Jackaria, 2002).

The moderating effect of product categories on the relationship between promotion type and purchase intention is the subject of the second sub-question. (Subhojit, 2009) had shown that consumers prefer volume discounts when the product is non-durable, whereas, for durables, cash discount is more attractive than the other types of promotions. Because product attributes and promotions should show a certain degree of coherence. For non-durable products, the preference for volume discount sales promotion is consistent with the easily used-up attributes. The cash discount is more valuable when they purchase durables since a durable good is a manufactured product capable of a long and useful life. Consumers are

reasonable if the goods are long-lasting, and they do not need to buy them regularly. Therefore, the second hypothesis was based on the insights above, while according to the repeated ANOVA test, there is no statistically significant moderating effect for durable (nondurable) product category between different sales promotion types. Thus, the second hypothesis was rejected.

For the third hypothesis, the difference in purchase intention between related bundle and unrelated bundle, there is no statistical proof evidence to show the difference between them. Therefore, the third hypothesis was rejected which contradicted the paper of a prior study of (Uzma & Ravi, 2010) who discovered that consumers purchase intentions are significantly higher for unrelated bundles compared to related bundles.

The three aforementioned sub-questions were posed to answer to the main research question. The research question states the following:

How do consumers purchase behavior differ among various types of sales promotions and how is the relationship moderated by product durability?

From the main findings, it is concluded that monetary and non-monetary promotions show no significant difference in the purchase intentions of consumers. Furthermore, there is also no statistically significant evidence to support the difference between related bundles and unrelated bundles in attractiveness to consumers. Durable and nondurable products do not moderate the difference between various sales promotion types no matter monetary vs non-monetary or related bundles and unrelated bundles. However, product attributes do have some impacts on sales promotions. The paper further separated the purchase intention based on different product categories and found for the durable categories subsample, the purchase intention is different between monetary and non-monetary promotions. While for non-durable product categories, there is no significant difference between monetary and non-monetary promotions. There is a big difference between monetary and non-monetary on vacuum cleaner purchase intentions at a 5% significance level. While for the same durable group—coffee machine, the various types of promotions do not have a significant level of

difference. In addition, we can see for the product toothbrush, the purchase intention for this product is much higher than for other products and consumers prefer related bundles promotion rather than cash discounts, even though there is no statistical evidence to support the scenario. But we can find out the consumers purchase intentions are different for different types of sales promotions. It cannot be generally concluded that the monetary type of promotion is higher than non-monetary promotion. Durable or nondurable products do not moderate the difference between the various type of promotions, while products themselves have some impact on the difference between the various types of promotions.

5.2. Implications for practice

Managers and merchandising teams often have pressure to boost their sales, but they are struggling to decide upon their promotion strategies. This study examined the effects of different promotion types, which will be helpful to managerial decision-making.

In general, for a marketing team, the results could be valuable in deciding promotion strategies. At first, consumers do not value monetary promotions significantly higher than non-monetary promotions. This is a valuable insight for companies to clear inventory, especially for the companies like Philips which produces multiple products. Clearing inventory is a common goal of promotions and also increases cash flow to have more research and development budget. Instead of providing customers with a price discount or cash discount, a bundle promotion of the same promotional value could be taken into consideration. That is not only clearing the inventory but also exploring products to more potential customers.

Another interesting point for researchers and managers is that there is no durable or nondurable product category moderating effect for the link between promotion types and promotional effectiveness. However, the product itself still exists attributes to impact the promotion attractiveness. It means researchers can explore more products to test and marketing managers do not need to apply different strategies for durable or nondurable products. Managers need to pay attention to product attributes themselves for promotional strategies even though they belonged to the same durable or nondurable category. For

example, for vacuum cleaners and coffee machines in Philips, cash discounts and price discounts are far more attractive for a vacuum cleaner, compared to the related or unrelated bundles promotion strategy. While for a coffee machine, there is no significant difference between monetary and non-monetary. Therefore, this paper suggests that for marketing managers, it would be better to apply monetary sales promotions such as price discounts or cash discounts for a vacuum cleaner.

5.3. Discussion

There are several differences between the findings of this study and prior literature on sales promotions. First main effect of promotion type on purchase intention has been investigated by many researchers. However, the results of this study indicated there is no statistical preference between monetary promotions and non-monetary promotions, which is contradicted with some of the previous literature because of multiple causes, such as the representative indicators of types of promotion. In the papers of (Begon~a & Rodolfo, 2004), they found price discounts influence buying and brand choice behaviour while there is no evidence to support the influence of other sales promotions respectively. While there are many sales promotional forms to represent monetary sales promotions, this paper not only used price discounts but also cash discounts as the indicators of monetary sales promotion and then compared differences in the purchase intentions directly in the same model. Another part of the difference is research objects, this paper chose toothbrushes, facial brushes, vacuum cleaners and coffee machines as the testing products. Most research on promotions and consumer behaviour focus on fast-moving consumer goods like UK supermarket consumer review (Gilbert & Jackaria, 2002). This paper found out that product attributes do have an impact on sales promotion, which can also be confirmed this kind of contradiction.

Bundle products come with a more complicated buying process because of the component of a bundle. Consumers have their own perceptions and preferences according to the paper by (Chakravarti, Rajan, Pallab, & Joydeep, 2002). At first, the main component research object is a refrigerator in their paper which is different from this study and then the bundle items an

icemaker and a warranty are not related and non-related items. Even though (Liu & Chou, 2017) and (Uzma & Ravi, 2010) discovered that related and unrelated bundles are different in purchase intention for cross-category bundles. That is the combination bundle of hedonic and utilitarian goods, however, the testing products of this paper belong to utilitarian goods.

5.4. Limitations and future research

5.4.1. Limitations

There are some limitations in this study. First, due to time and budget limitations, this paper only consisted of 204 subjects. Due to the limited numbers and demographic characteristics, the representative for the entire population for Dutch and Chinese populations is difficult to establish. For example, there was a large share of females, a large share of higher education people (above bachelor) and fewer more than 60 years old people. The sample does not seem perfectly accurate to represent the whole population of the Dutch and Chinese populations. Moreover, the participants are students, and it was also not recorded which part of the Netherlands and China respondents are from. These might be different between students and other people, and it is still possible exists differences between various areas within the same country.

Second, the normality assumption was violated when this paper used repeated measures of ANOVA. While an ANOVA is quite robust against violations of the normality assumption, which means the type I error rate remains close to the alpha level specified in the test (Aaron R., Daniel, & Chelsea M., 2022). And also, the type I error and power of F-statistic are not altered by the violation of the normality according to the paper of (Maria J & Jamue, 2022).

Another limitation is the reliability 3-item measure for the pre-test. The Cronbach's alpha is 0.688 which is close to 0.7, which is considered moderate, but acceptable (Pallant, 2001), while there is not much literature to evaluate the durability of a product except (Meeds, 2004), which could impact the results of the study.

There are some limitations that are related to the research design such as the options of sales promotion types and representative products. There are many monetary sales promotion types like coupons and bonuses and so on. Besides that, more products could be tested such as fast-consuming food and other electrical products. Moreover, more related or unrelated freebies such as pens, cafeteria umbrellas, and so on could be chosen. Those factors could have affected the results.

As stated earlier, this study research focuses on students in the Netherlands, China and other countries, while this led that the tasks performed might not be realistic to everyone because of many factors like educational level, income level and so on. Respondents have some familiar or economic biases when they made purchase decisions. In addition, respondents in this experimental survey will not consider different alternatives before making their purchase decision, just stated their purchase intention. Even though there are two questions asked to each participant, to make sure the imaginability and realism of the paper, the realism could still be improved because it is still the experimental environment not a real-life observation for each participant.

5.4.2. Future research

This research is a basis for future research to expand on. According to the results and limitations of this study, multiple suggestions are made for future research. First of all, the relationship between promotion types and promotion effectiveness and its possible moderators are still topics that need to be attracted more attention for future research. Future work needs to be extended to other categories of products in which consumer purchase behaviour could vary. It is becoming more important for managers to properly plan their promotion strategies based on different product attributes. Further research could expand a larger sample with more covariates like income level. Furthermore, there are many options for different sales promotion types and a large number of products that further research can choose from.

Another suggestion for further research is to expand more dependent variables, not only focusing on the purchase intention but also adding the factor of brand choice behaviour. It would also be interesting to analyse the influence that consumers have on their reactions to loyalty when they are in different sales promotion scenarios, including their own characteristics such as socioeconomic and demographic factors. Moreover, whether the type of different sales promotion would incentive customers to switch brands? It could contribute to managers acquiring market share and increasing brand value. In conclusion, future research should provide marketing managers or brand managers with frameworks that include brand factors, more range of products and various types of sales promotions.

References

- Gudigantala, N., Bicen, P., & Eom, M. (2016). An examination of antecedents of conversion rates of e-commerce retailers. *Management Research Reviews*, 82-114.
- Kusum L., A., & Scott A., N. (1998). The Effect of Promotion on Consumption: Buying More and Consuming It Faster. *Journal of Marketing Research*, 390-398.
- Aaron R., C., Daniel, L., & Chelsea M., P.-P. a. (2022, 5 16). *Power Analysis with Superpower*. Retrieved from Introduction to Superpower: <https://aaroncaldwell.us/SuperpowerBook/index.html#preface>
- Alexandra Luong, & David Slegh. (2014). Hedonic product discounts: When is the price right? *Nankai Business Review International*, 356-364.
- Alnazer, M. (2013). The moderating role of promotional benefit level and brand awareness on the effectiveness of prie discount and premium. *International Journal of Business and Management Invention*, 112-120.
- Arce-Urriza, M., Cebollada, J., & Tarira, M. (2016). The effect of price promotions on consumer shopping behavior across online and offline channels: differences between frequent and non-frequent shoppers. *Inf Syst E-Bus Manage*, 69-87.
- B.C.COTTON, & EMERSON M. BABB. (1978). Consumer response to promotional deals. *Journal of Marketing*, 109-113.
- Bake Well, C., & Mitchell, V. (2003). Generation Y Female Consumer Decision-Making Styles. *International Journal of Retail and Distribution Management*, 95-106.
- Baker, M. (2003). *The marketing Book*. Burlington: Butterworth-Heinemann.
- Bandyopadhyay, S. e. (2009). Developing a framework to improve retail category management through category captain arrangements. *Journal of Retailing and Consumer Service*, 315-319.
- Begon~a, A. A., & Rodolfo, V. C. (2004). Consumer evaluations of sales promotion: the effect on brand choice. *Euopean Journal of Marketing*, 54-70.
- Bell, D. R., & Boztug, Y. (2006). The positive and negative effects of inventory on category purchase: An empirical analysis. *Springer Science*, 1-14.
- Ben Lowe, & Bradley R.Barnes. (2011). Consumer Perceptions of Monetary and Non-monetary Introductory Promotions for New Products. *Journal of Marketing*, 629-651.
- Blaikie, N. (2003). *Analyzing Quantitative Data*. London: Sage Publications.

- Blattberg, Robert C., & Scott A. Neslin. (1990). *Sales Promotion: Concepts, Methods and Strategies*. Englewood Cliffs, NJ: Prentice Hall.
- Bruce, L. (1991). The effect of free samples on immediate consumer purchase. *The journal of consumer marketing*, 31-37.
- Brynjolfsson E, & Smith MD. (2000). Frictionless commerce? A comparison of internet and conventional retailers. *Manage Sci*, 563-585.
- Cambell, Leland, & William D. Diamond. (1990). Framing and Sales Promotions: The Characteristics of a "Good Deal". *Journal of Consumer Marketing*, 25-31.
- Cavana, R., Delahaye, B., & Sekaran, U. (2001). *Applied business research qualitative and quantitative methods*. Australia: John Wiley & Sons.
- Chakravarti, D., Rajan, K., Pallab, P., & Joydeep, S. (2002). Partitioned Presentation of Multi-Component Bundle Prices: Evaluation, Choice and Underlying Processing Effects. *Journal of Consumer Psychology*, 215-230.
- Chandon, P., Wansink, B., & Laurent, G. (2000). A benefit congruency framework of sales promotion effectiveness. *The Journal of marketing*, 65-81.
- Chitturi, R., Raghunathan, R., & Mahajan, V. (2008). Delight by design: The role of hedonic versus utilitarian benefits. *Journal of Marketing*, 48-63.
- Chu, J., Chintagunta, P., & Cebollada, J. (2008). Research note: a comparison of within-household price sensitivity across online and offline channels. *Mark Sci*, 283-299.
- Cotton, B., & Emerson, M. (1978). Consumer Response to Promotional Deals. *Journal of Marketing*, 109-113.
- Creswell, J. (1994). *Research Design: Qualitative & Quantitative Approaches*. London: SAGE Publications.
- Degeratu, A., Rangaswamy, A., & Wu, J. (2000). Consumer choice behavior in online and traditional supermarkets: the effects of brand name, price, and other search attributes. *Int J Res Mark*, 55-78.
- Diamond, W. (1992). Journal of Retailing. *Just what is a dollar's worth? Consumer reactions to price*, 254-270.
- Diamond, W., & Robert, R. (1989). The Framing of Sales Promotions: An Approach to Classification. *Advances in Consumer Research*, 494-500.
- Dodds, W., Monroe, K., & Grewal, D. (1991). Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. *Journal of Marketing Research*, 307-319.

- Ehrenberg, A., Hammond, K., & Goodhardt, G. (1994). The after effects of price related consumer promotions. *Journal of Advertising Research*, 11-21.
- Esfahani AN, & Jafarzadeh M. (2012). Studying impacts of sales promotion on consumer's psychographic variables: A case study of Iranian chain stores at City of Kerman. *Interdisciplinary Journal of Contempor Research in Business*.
- Esmeralda, C., & Salvador, D.-G. (2014). The Quality of Internet-User Recall A Comparative Analysis by Online Sales-Promotion Types. *Journal of Advertising Research*, 56-70.
- Fernado , d., & Claudio, H. (2015). Moderating Effects of Sales Promotion Types. *Brazilian Administration Review*, 169-189.
- Fernando et al. (2016). Meta-Analysis of the Long- and Short-Term Effects of Sales. *JOURNAL OF PROMOTION MANAGEMENT*, 425-442.
- Gilbert, D., & Jackaria, N. (2002). The efficacy of sales promotions in UK supermarkets: a consumer view. *Niternational Journal of Retail & Distribution Management*, 315-322.
- Guiltinan, J. (1987). The Price Bundling of Services: A Normative Framwork. *Journal of Marketing*, 74-85.
- Heerde, v., Peter S. H., L., & Dick R., W. (2004). Decomposing the Sales Promotion Bump with Store Data. *Marketing Science*, 317-334.
- Heilman, C., Nakamoto, K., & Rao, A. (2002). Pleasant Surprises: Consumer Response to Unexpected In-Store Coupons. *Journal of Marketing Research*, 242-252.
- Hirschman, E., & Holbrook, M. (1982). Hedonic consumption: emerging concepts, methods and propositions. *Journal of Marketing*, 92-101.
- Ho, A. (2021). *Driving profitable growth in Greater China*. Greater China: Philips.
- Hui Jiang, & Junhai Ma. (2018). Effects of Internet Sales Promotion on a Differential Advertising Model. *Discrete Dynamics in Nature and Society*, 1-11.
- Jobn A et al., Q. (1987). Opportunities and Risks of Durable Goods Promotion. *Sloan Management Review; Cambridge*, 27-40.
- Joncos, L. (1990). A retailer promotion policy model considering promotion signal sensitivity. *Marketing Science*, 339-356.
- Julio, J., Zárate, H., & Hernández, M. (2010). The Stickiness of Colombian Consumer Prices. *Ensayos sobre politica economica*, 100-152.

- Kathleen J, W. (2004). *The Impact of Cause-Related Marketing on Consumer Attitude to the Brand and Purchase Intention:A Comparison with Sponsorship and Sales Promotion*. Queensland: ACADEMIA.
- Kaveh, A., Nazari,M., Rest,J., I. van der,&Mira, & S.A. (2020). Customer engagement in sales promotion. *Marketing Intelligence & Planning*, 424-437.
- Kotler, P., & Keller, K. (2006). *Marketing Management*. NJ.: Prentice Hall.
- Krafft, M., & Mantrala, M. (2006). *Retailing in the 21st Century*. Berlin: Springer.
- Kumar, A., & Burner, G. (2005). Explaining consumer acceptance of handheld Internet devices. *Journal of Business Research*, 553-568.
- Kwok, S., & Uncles, M. (2005). Sales promotion effectiveness: the impact of consumer differences at an ethnic-group level. *Journal of Product & Brand Management*, 170-186.
- Lee, J., & Olafsson, S. (2009). Two-way cooperative prediction for collaborative filtering recommendations. *Expert Systems with Applications*, 5353-5361.
- Liang, R.-D., Yang, W., Ji, D., & Yu, C. (2016). The effect of sales promotions on consumers' organic food response. *British Food Journal*, 1248-1262.
- Liu, H.-H., & Chou, H.-Y. (2017). The Selection of Freebies and the Preference for Freebie Promotions----A Perspective on Item Characteristics. *Journal of Behavioral Decision Making*, 420-434.
- Luick, J., & Zieger, W. (1968). *Sales promotion and Modern Merchandising*. New York: MC Graw Hill.
- M., C., & Calantone, R. e. (2018). Disentangling the Effects of Promotion Mix on New Product Sales: An Examination of Disaggregated Drivers and the Moderating Effect of Product Class. *Journal of Business Research*, 286-294.
- M.Henderson, C. (1985). Modeling the Coupon Redemption Decision. *Association for Consumer Research*, 138-143.
- Maik, E. (2015). Waht makes deal-of -the-day promotions really effective?The interplay of discount and time constraint with product type. *Intern. J. of Research in Marketing*, 387-397.
- Maria J, B., & Jamue, A. (2022). Non-normal Data in Repeated Measures ANOVA: Impact on Type I Error and Power. *National Library of Medicine*, 21-29.

- Maximilian Schacker, & Katarina Stanoevska-Slabeva. (2021). *Understanding the Impact of Sustainability and CSR Information in D2C Online Shops on Consumer Attitudes and Behavior--A Literature Review*. Hawaii: Hawaii Internatioanl conference on System Sciences.
- Meeds, R. (2004). Cognitive and attitudinal effects of technical advertising copy: the roles of gender, self-assessed and objective consumer knowledge. *International Journal of Advertising*, 309-335.
- Mela, C.F. (1997). The long-term impact of promotion and advertising on consumer brand choice. *Journal of Marketing*, 248-261.
- Mike, R., Peter, T., Felix, M., & Karen, B. (2014). Economic and utilitarian benefits of monetary versus non-monetary in-store sales promotions. *Journal of Marketing Management*, 247-268.
- Mohamed, S. (2016). Impact of Promotional Tools on Consumer Buying Behavior in Retail Market. *International Journal of Business and Social Science*, 75-85.
- Montaner, T., & Pina, J.-M. (2008). The Effect Of Promotion Type And Benefit Congruency On Brand Image. *The Journal of Applied Business Research*, 15-28.
- Muhammad, g., & Arslan, K. (2014). The promotional tools and situational factors' impact on consumer buying behavior and sales promotion. *Public Administration and Governance*, 179-201.
- Nakarmi, A. (2018, Spring). *EFFECT OF SALES PROMOTION ON CONSUMER BEHAVIOR*. Retrieved from Theseus: <https://www.theseus.fi/handle/10024/142006>
- Narasimhan, C., & Neslin, S. (1996). Promotional Elasticities and Category Characteristics. *Journal of Marketing*, 17-30.
- Odunlami, I., & Ogunsiji, A. (2011). Effect og sales promotion as a tool on organizational performance. *JETEMS*, 9-13.
- Ovidiu I., M., & Andrej, B. (2010). A comparative study of the relationship between brand loyalty and market share among durable and non-durable products. *Journal of Management and Marketing*, 137-145.
- Peattie, S., & Peattie, K. (2003). *The marketing book*. London: Buterworth-Heinemann.
- Peng, L., Zhang, W., & Wang, X. (2019). Moderating effects of time pressure on the relationship between perceived value and purchase intention in social E-commerce sales promotion: Considering the impact of product involvement. *Information & Management*, 317-328.

- Peter, R., & Sawyer, A. (1984). Psychological Perspectives on Consumer Response to Sales Promotion. *Marketing Science Institute*, 47-62.
- Richa, T., & Renu, A. (2018). To study the consumer buying behaviour for non-durables: Influence of sources of information. *International Journal of Home Science*, 103-108.
- Robert, C., & Richard, A. (2010). SALES PROMOTIO. *OXFORD HANDBOOK OF PRICING MANAGEMENT*, 1-58.
- Rothschild, M., & William, C. (1981). Behavioral Learning Theory: Its Relevance to Marketing and Promotions. *Journal of Marketing*, 70-78.
- Ruben Geert, v. (2023, Jan. 19). *SPSS tutorials*. Retrieved from SPSS Repeated Measures ANOVA Tutorial: <https://www.spss-tutorials.com/spss-repeated-measures-anova/comment-page-1/#comments>
- Rundle-Thiele, S., & Bennett, R. (2001). A brand for all seasons? A discussion of brand loyalty approaches and their applicability for different markets. *Journal of Product*, 25-37.
- Santini, F. d., Valter Afonso Vieira, Claudio Hoffmann Sampaio, & Marcelo Gattermann Perin. (2016). Meta-Analysis of the Long- and Short-Term Effects of Sales. *JOURNAL OF PROMOTION MANAGEMENT*, 425-442.
- Schwipper, S., Peche, S., & Schmitz, G. (2020). Mobile Location-Based Services' Value-in-Use in Inner Cities: Do a Customer's Shopping Patterns, Prior User Experience, and Sales Promotions Matter? *Schmalenbach Business Review*, 511-564.
- Sharma D, & Parida B. (2018). Determinants of conflict in channel relationships: a meta-analytic review. *Journal of Business & Industrial Marketing*, 911-930.
- Singh, A., & Sailo, M. (2013). Consumer Behavior in Online Shopping: A Study of Aizawl. *International Journal of Business & Management Research*, 45-49.
- Sinha, I., & Smith, M. (2000). Consumers' Perceptions of Promotional Framing of Price. *Psychology & Marketing*, 257-275.
- Somesh, K., & Priyanka, V. (2020). Impact of sales Promotion's benefits on perceived value: Does product category moderate the results? *Journal of Retailing and Consumer Services*, 1-11.
- Status, I. W. (2022, 04 30). *Internet World Status*. Retrieved from Internet World Status: <https://www.internetworldstats.com/stats.htm>
- Subhojit, B. (2009). Effect of product category on promotional choice: comparative study of discounts and freebies. *Management Research News*, 120-131.

- Subrata K. Sen, & Scott A. Neslin. (1996). Promotional Elasticities and Category Characteristics. *Journal of Marketing*, 17-30.
- Teck Weng, & Cyril the Run, E. (2013). Consumers' personal values and sales promotion preferences effect on behavioural intention and purchase satisfaction for consumer product. *Asia Pacific Journal of Marketing and Logistics*, 70-101.
- Teresa, M., & Jose-Miguel, P. (2008). The Effect of Promotion Type and Benefit Congruency on Brand Image. *The Journal of Applied Business Research*, 15-27.
- Thaler, R. (1985). Mental Accounting and Consumer Choice. *Marketing Science*, 199-214.
- Uzma, K., & Ravi, D. (2010). Price-Framing Effects on the purchase of Hedonic and Utilitarian Bundles. *Journal of Marketing Research*, 1090-1099.
- W.Y.Huang, & A.J.Dubinsky. (2013). Measuring customer pre-purchase satisfaction in a retail setting. *The Service Industries Journal*, 212-229.
- Walters, R. G., & Scott, B. (1988). A Structural Equations Analysis of the Impact of Price . *Journal of Marketing Research*, 51-63.
- Wijnen, K., W, D., & P.&Van Kenhove, P. (2002). *Market Research with SPSS: statistical processing and interpretation*. England: Pearson Education Limited.
- Wikipedia. (2022, 08 10). *Consumables*. Retrieved from Wikipedia:
<https://en.wikipedia.org/wiki/Consumables>
- Wikipedia. (2022, 05 01). *Wikipedia*. Retrieved from Wikipedia:
https://en.wikipedia.org/wiki/Conversion_rate_optimization
- Will, K. (2022, 08 10). *Macroeconomics*. Retrieved from Investopedia:
<https://www.investopedia.com/terms/d/durables.asp>
- Xia Y., Xiao T., & Zhang G.P. (2017). The impact of product returns and retailer's service investment on manufacturer's channel strategies. *Decision Sciences*, 918-955.
- Ya, A., & Chang, P. (2017). A Study on the Effects of Sales Promotion on Consumer Involvement and Purchase Intention in Tourism Industry. *Journal of Mathematics, Science and Technology Education*, 8324-8330.
- Yi, Y., & Yoo, J. (2011). The Long-Term Effects of Sales Promotions on Brand Attitude Across Monetary and Non-Monetary Promotions. *Psychology & Marketing*, 879-896.
- Yim et al. (2012). THE IMPACT OF STEREOSCOPIC THREE-DIMENSIONAL (3-D) ADVERTISING: The Role of Presence in Enhancing Advertising Effectiveness. *Journal of Advertising*, 113-128.

Zeithaml, V.A. (2018). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 2-22.

Appendix A: Pre-test

The following are screenshots of the Pre-test survey used in this research, made in Qualtrics. The screenshots show the way the survey is seen by participants. Each respondent is exposed to all testing products—toothbrush is one of the example.

Figure A-1

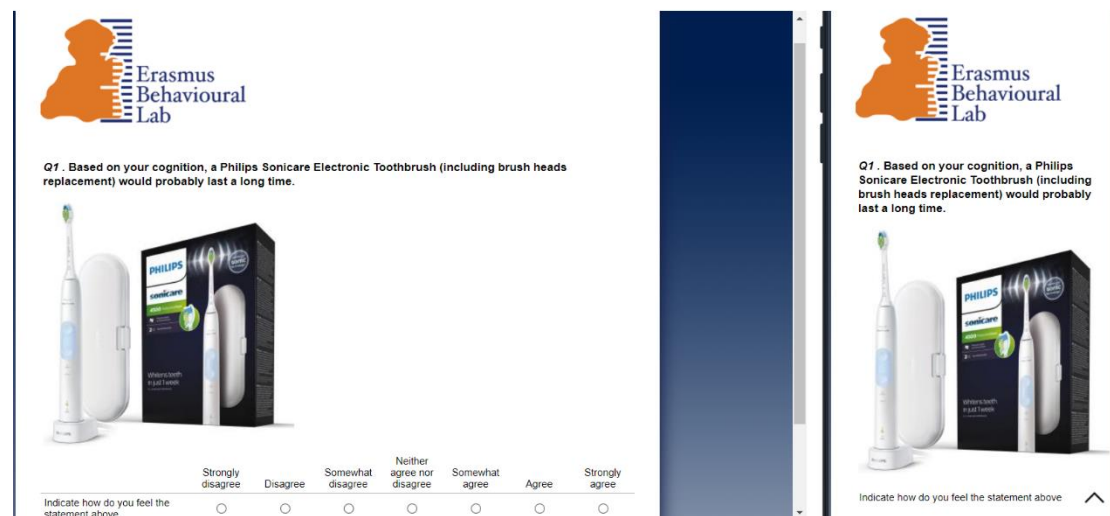


Figure A-2

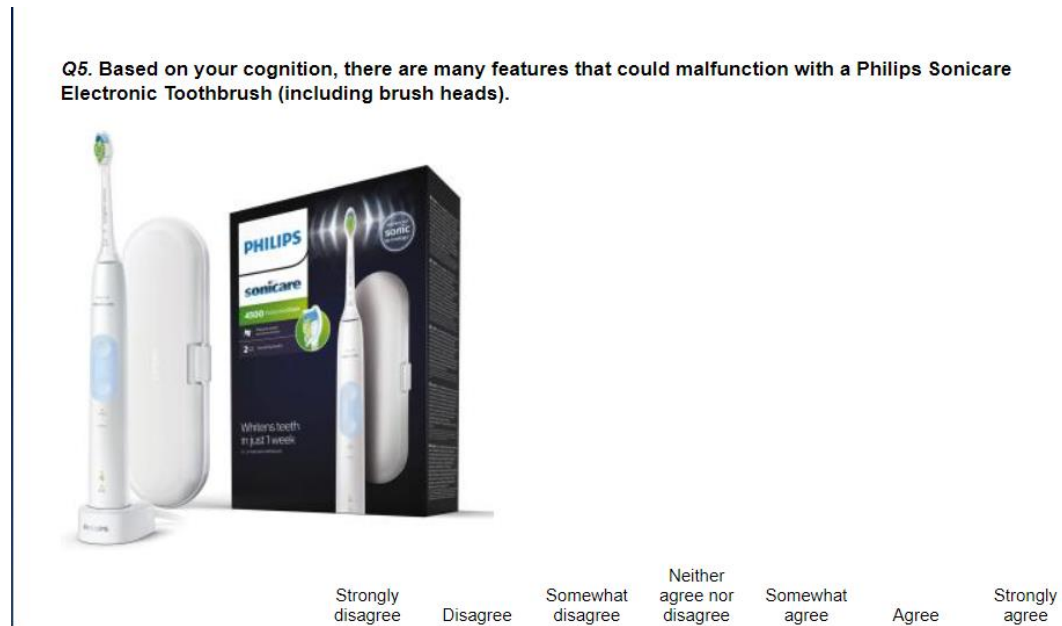


Figure A-3

Q9. Based on your cognition, a Philips Sonicare Electronic Toothbrush (including brush heads) seems to be well crafted.



Table A-1 Reliability 3-item measure for durability of the testing products (Cronbach's alpha)

Reliability statistics	
Cronbach's Alpha	N of Items
0.688	3

Notes: Cronbach's alpha for three items is 0.688

Table A-2 Tests of Homogeneity of one-way ANOVA

Tests of Homogeneity of Variances		Levene Statistic	df1	df2	Sig.
Dependent variable	Based on Mean	.973	1	122	.326
	Based on Median	.260	1	122	.611
	Based on Median and with adjusted df	.260	1	117.191	.611
	Based on trimmed mean	.847	1	122	.359

Notes: Tests the null hypothesis that there is homogeneity of variance. P-value of the Levene Statistic is not significant ($0.326 > 0.05$) and therefore, homogeneity of variance is assumed.

Appendix B: Experimental survey

The following are the screenshots of the main experimental survey applied in this study, made in Qualtrics and collected by the platform SurveySwap.io. There are four products and four different sales promotions in the survey. Participants were exposed to all four testing products but assigned to one of four sales promotion randomly.

Figure B-1 Introduction

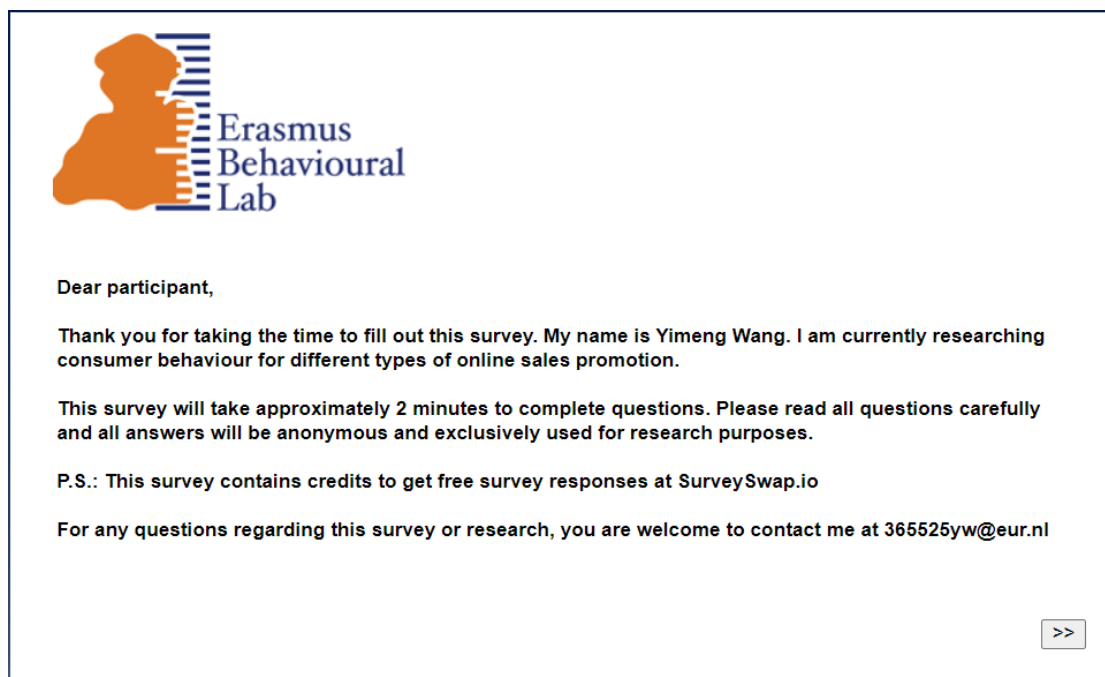



Figure B-2




What is your gender?

- Male
- Female
- Non-binary/third gender
- Prefer not to say

NEXT!

Figure B-3




What is your age?

- below 18
- 18-60
- above 60

NEXT!

Figure B-4



what is your education background?

- High school
- Post-secondary vocational education(MBO)
- Bachelor
- Master or higher

[NEXT!](#)

Figure B-5




Are you currently living in the Netherlands?

- No
- Yes

[NEXT!](#)

Figure B-6



Erasmus
Behavioural
Lab


Are you currently living in China?

No

Yes

NEXT!

Figure B-7



Erasmus
Behavioural
Lab

Do you know about the Philips Facial Cleansing brush or have you ever used this kind of product?

No

Yes

NEXT!

Respondents will be presented randomly with one of four sales promotional types, and they are exposed to all testing products ---vacuum cleaner is one of the examples.

Figure B-8



The probability that I would consider buying this Philips Vacuum Cleaner from this promotion is high.



Philips Vacuum Cleaner

Bundles promotion: Brush head & Nozzle

A brush & a nozzle in worth 20 euros are bundled with a Philips Vacuum Cleaner, when you purchase the product

Properties:

- Color: White
- Battery Voltage: 3.6V
- Charging time: 16-18 hrs
- Accessories: Brush & Service tool
- Dust content: 0.5L
- Filter system: 2-stage cyclonic action
- Product dimensions: 444*133*109mm
- Product weight: <1 kg
- Casing: >90% recycled material
- Instructions: 100% recycled paper

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Click to write Choice 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure B-9



Figure B-10

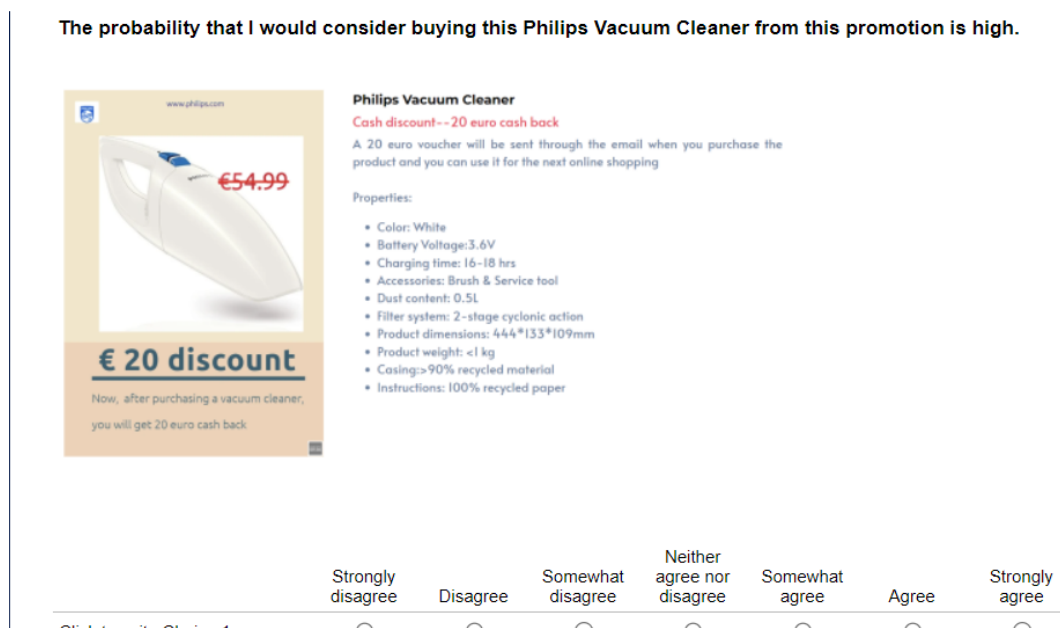



Figure B-11

The probability that I would consider buying this Philips Vacuum Cleaner from this promotion is high.



Bundles with notebook
Now, a set of notebooks in worth 20 euros is bundled with a Philips vacuum cleaner, when you purchase the product.

Philips Vacuum Cleaner
Bundles promotion: a set of notebooks
A set of notebooks in worth 20 euros is bundled with a Philips Vacuum Cleaner, when you purchase the product

Properties:

- Color: White
- Battery Voltage: 3.6V
- Charging time: 16-18 hrs
- Accessories: Brush & Service tool
- Dust content: 0.5L
- Filter system: 2-stage cyclonic action
- Product dimensions: 444*133*109mm
- Product weight: <1 kg
- Casing: >90% recycled material
- Instructions: 100% recycled paper

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Click to write Choice 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure B-12 two items measurement of realism and imaginability



Please rate the following statements on a scale from 1 (strongly disagree) to 5 (strongly agree).

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I believe that the described scenarios could happen in real life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could see myself performing the tasks described in the previous scenarios	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure B-13 Survey flow

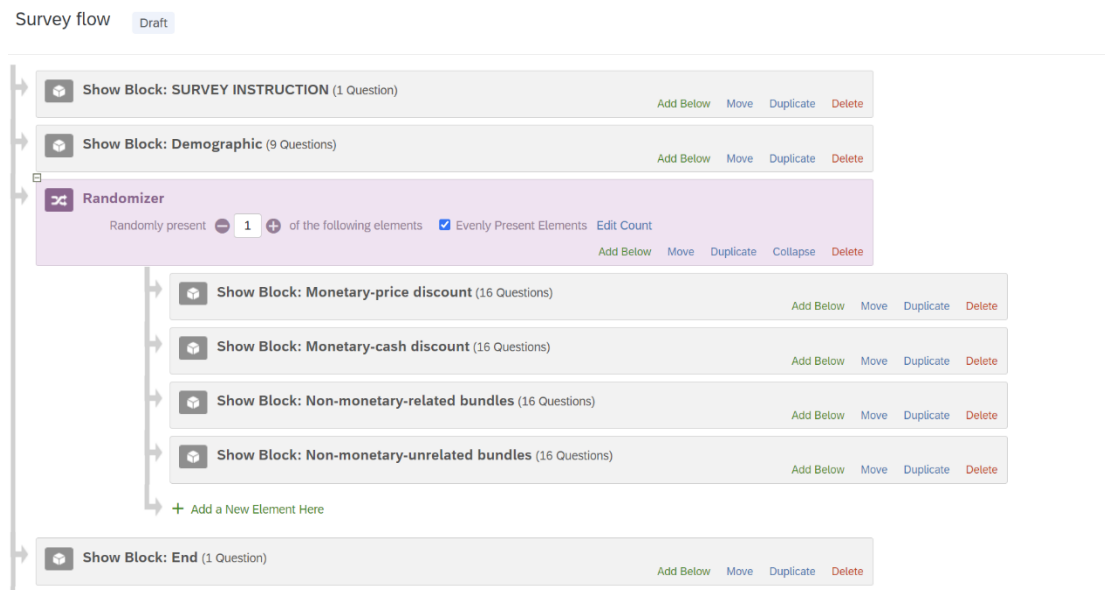


Table B-14 Reliability 4-item measure for purchase intention (Cronbach's alpha)

Reliability statistics	
Cronbach's Alpha	N of Items
0.927	4

Notes: Cronbach's alpha for four items is 0.927

Table B-15 Descriptives for nondurable and durable subsamples

Descriptives			Statistic	Std. Error
Category nondurable purchase intention	Mean		4.41299	.099006
	95% Confidence Interval for Mean	Lower Bound	4.21778	
		Upper Bound	4.60820	
	5% Trimmed Mean		4.44608	
	Median		4.50000	
	Variance		2.000	
	Std. Deviation		1.414082	
	Minimum		1.000	
	Maximum		7.000	
	Range		6.000	
	Interquartile Range		2.094	
	Skewness		-.325	.170
	Kurtosis		-.616	.339
Category durable purchase intention	Mean		4.32843	.098571
	95% Confidence Interval for Mean	Lower Bound	4.13408	
		Upper Bound	4.52279	
	5% Trimmed Mean		4.36547	
	Median		4.50000	
	Variance		1.982	
	Std. Deviation		1.407877	
	Minimum		1.000	
	Maximum		7.000	
	Range		6.000	
	Interquartile Range		2.125	
	Skewness		-.389	.170
	Kurtosis		-.546	.339

Notes: Dependent variable: purchase intention for nondurable and durable subsamples. This is the descriptive data for skewness and kurtosis

Table B-16 Tests of Homogeneity of one-way ANOVA

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
purchase intention in total	Based on Mean	.537	1	202	.464
	Based on Median	.534	1	202	.466
	Based on Median and with adjusted df	.534	1	200.893	.466
	Based on trimmed mean	.572	1	202	.450

Notes: Dependent variable: purchase intention. Tests the null hypothesis that there is homogeneity of variance. P-value of the Levene Statistic is not significant ($0.464 > 0.05$) and therefore, homogeneity of variance is assumed.

Table B-17 Repeated measures of ANOVA for hypothesis 2

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type IV Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Product category (Nondurable/durable)	Sphericity Assumed	.764	1	.764	1.397	.239	.007
	Greenhouse-Geisser	.764	1.000	.764	1.397	.239	.007
	Huynh-Feldt	.764	1.000	.764	1.397	.239	.007
	Lower-bound	.764	1.000	.764	1.397	.239	.007
product category (Nondurable/durable) * Typepromotion (Monetary/Non-Monetary)	Sphericity Assumed	.280	1	.280	.512	.475	.003
	Greenhouse-Geisser	.280	1.000	.280	.512	.475	.003
	Huynh-Feldt	.280	1.000	.280	.512	.475	.003
	Lower-bound	.280	1.000	.280	.512	.475	.003
Error(productcategory)	Sphericity Assumed	110.491	202	.547			
	Greenhouse-Geisser	110.491	202.000	.547			
	Huynh-Feldt	110.491	202.000	.547			
	Lower-bound	110.491	202.000	.547			

Notes: Dependent variable: purchase intention; Independent variable: product category & promotion type. Product category is nondurable and durable; promotion type is monetary vs non-monetary.

Table B-18 Repeated measures of ANOVA for hypothesis 3

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Product category (Nondurable/durable)	Sphericity Assumed	.901	1	.901	1.915	.170	.020
	Greenhouse-Geisser	.901	1.000	.901	1.915	.170	.020
	Huynh-Feldt	.901	1.000	.901	1.915	.170	.020
	Lower-bound	.901	1.000	.901	1.915	.170	.020
Product category * types promotion (Related bundle/unrelated bundle)	Sphericity Assumed	.130	1	.130	.277	.600	.003
	Greenhouse-Geisser	.130	1.000	.130	.277	.600	.003
	Huynh-Feldt	.130	1.000	.130	.277	.600	.003
	Lower-bound	.130	1.000	.130	.277	.600	.003
Error(productcategory)	Sphericity Assumed	45.165	96	.470			
	Greenhouse-Geisser	45.165	96.000	.470			
	Huynh-Feldt	45.165	96.000	.470			
	Lower-bound	45.165	96.000	.470			

Notes: Dependent variable: purchase intention; Independent variable: product category & promotion type. Product category is nondurable and durable; promotion type is related bundles vs unrelated bundles.

Appendix C: Demographics

Figure C-1 Pie chart of gender distribution for the whole sample

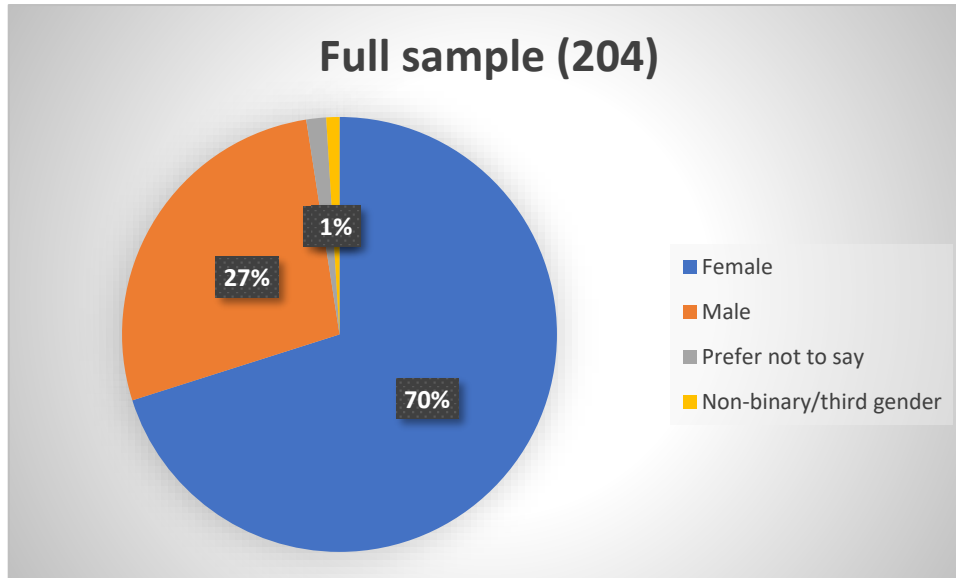


Figure C-2 Pie chart of gender distribution for monetary sales promotion

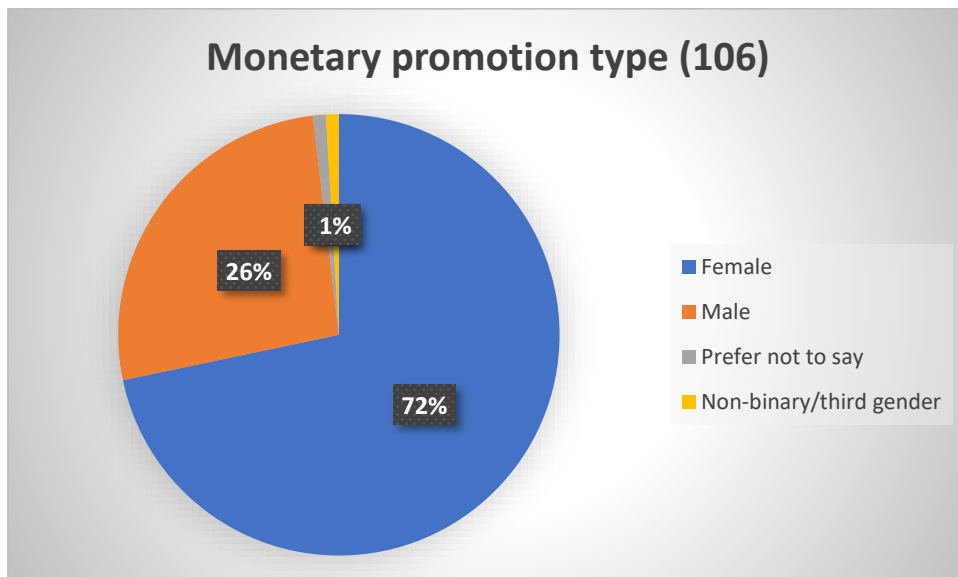


Figure C-3 Pie chart of gender distribution for nonmonetary sales promotion

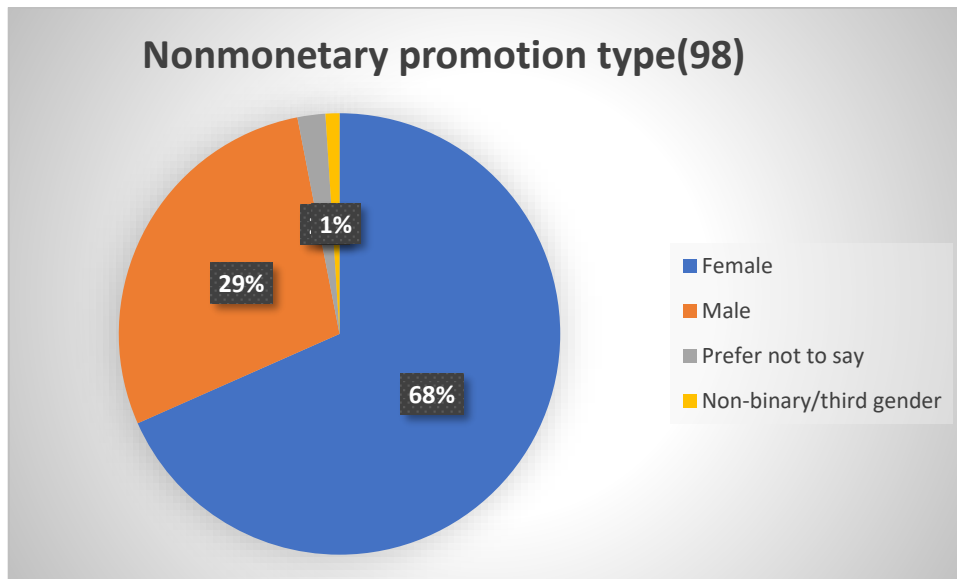


Figure C-4 Pie chart of gender distribution for related bundles

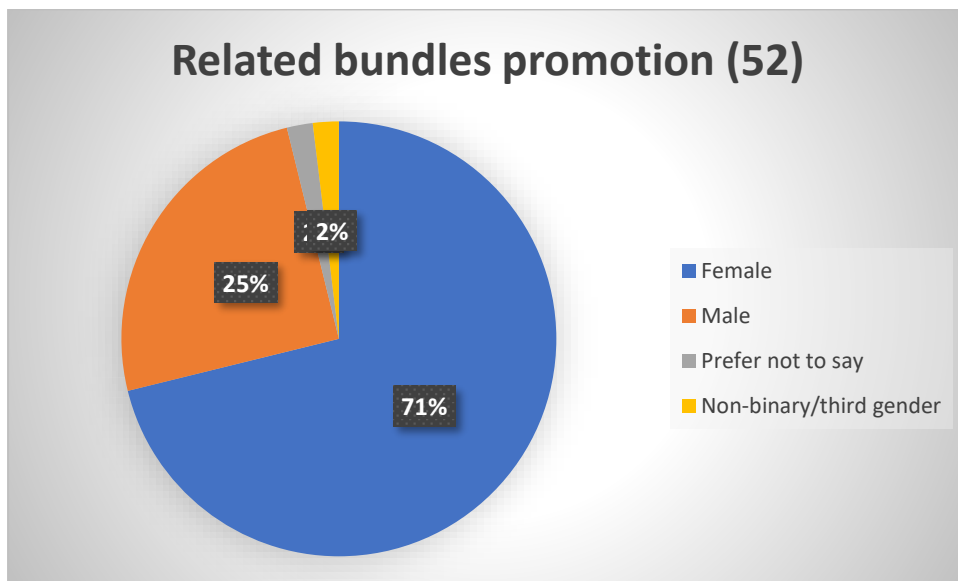


Figure C-5 Pie chart of gender distribution for unrelated bundles

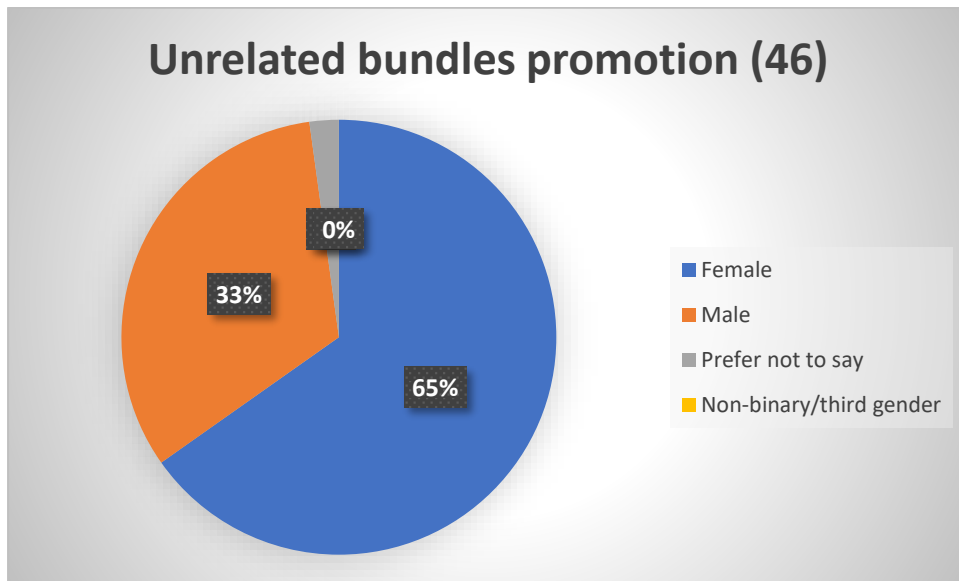


Figure C-6 Pie chart of education level distribution for the whole sample

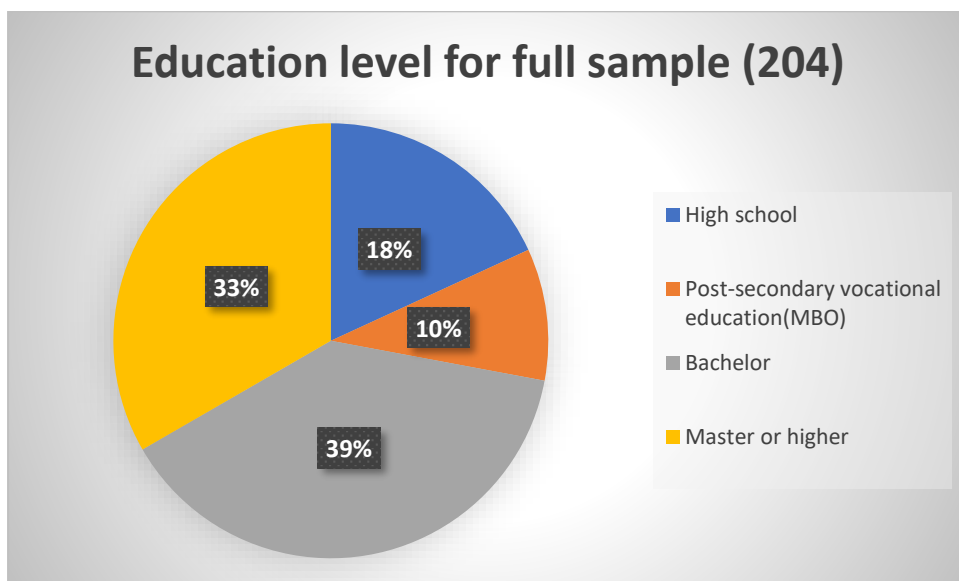


Figure C-7 Pie chart of education level distribution for monetary sales promotion

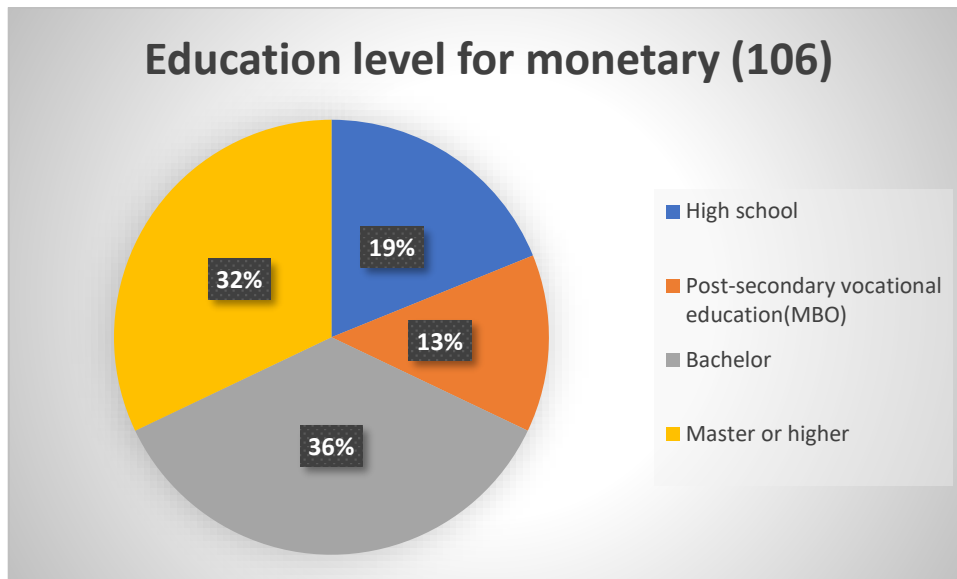


Figure C-8 Pie chart of education level distribution for non-monetary sales promotion

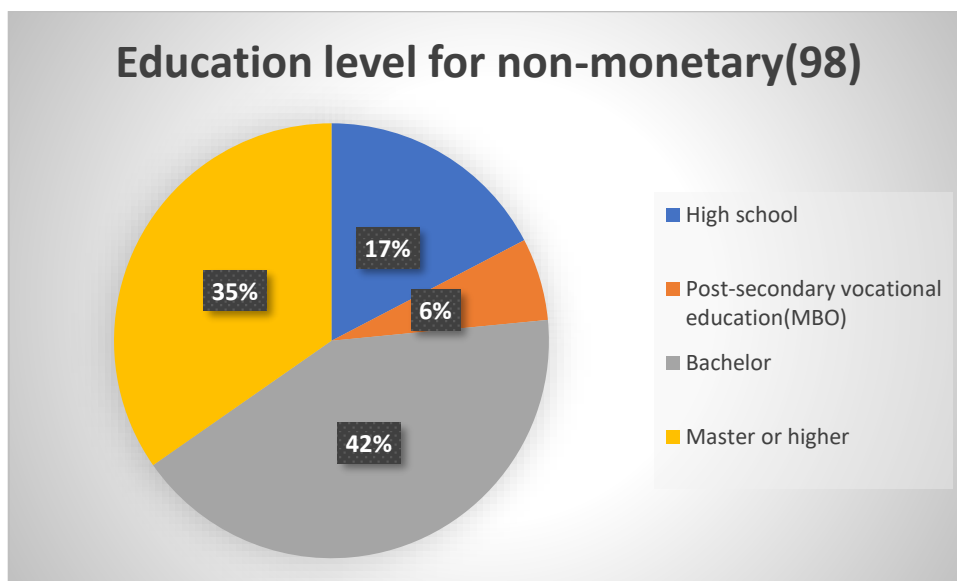


Figure C-9 Pie chart of education level distribution for related bundles

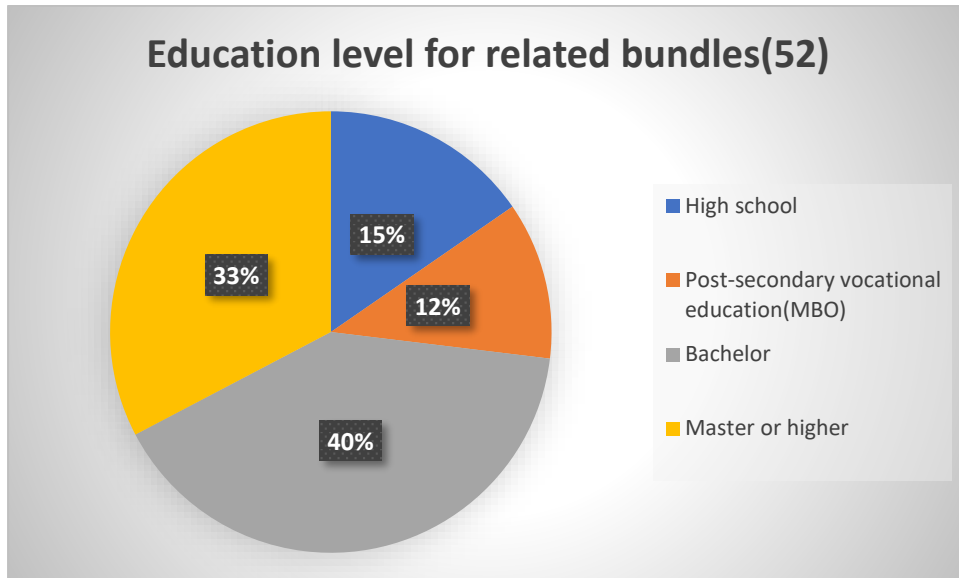


Figure C-10 Pie chart of education level distribution for unrelated bundles

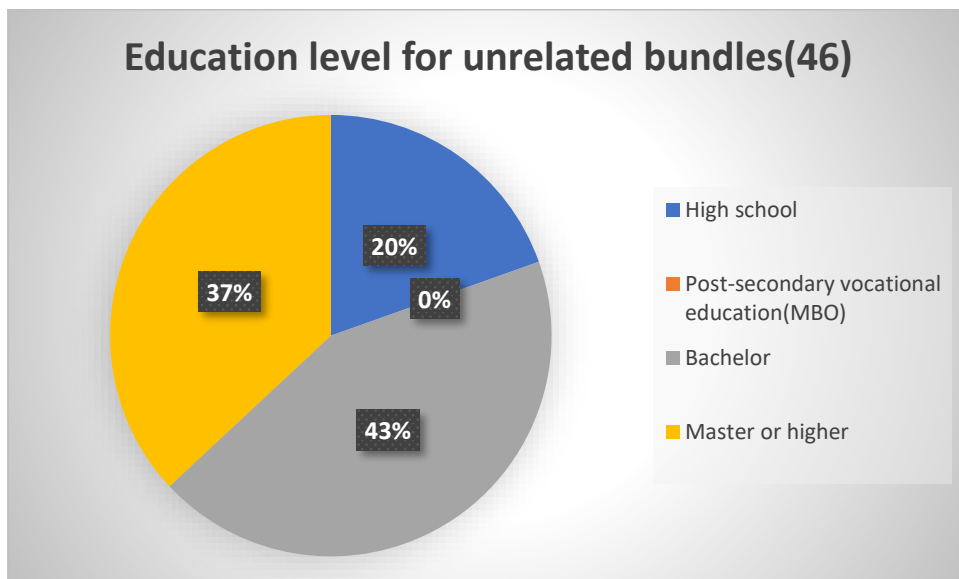


Figure C-11 Bar chart of the realism of the surveys performed by respondents

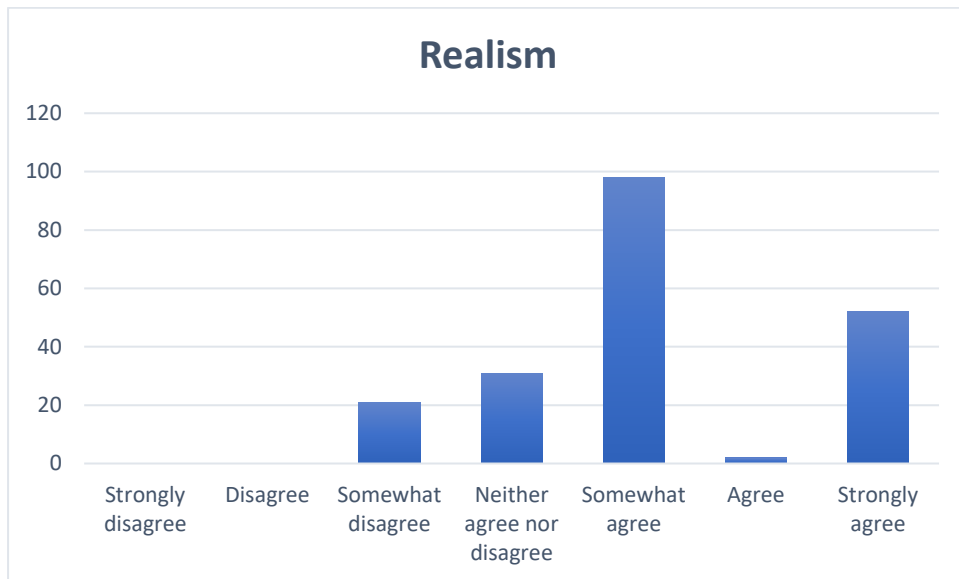


Figure C-12 Bar chart of the imaginability of the surveys performed by respondents

