The Effect of Specific Discount Pattern and Product Type on Customers' Purchase Intention in E-commerce Platform

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Abstract. Indonesia is one of the fastest growing countries in terms of penetration, number, and value of electronic transactions. In addition, the number of sellers inside the platform are also rising. Therefore, a good marketing strategy such as discounts is needed to win the digital competition. This research aims to identify the most effective discount pattern on E-Commerce platforms by using experimental methods with 2x3 factorial design cells. Each scenario will represent the combinations between three discount patterns and two consumer's product types. The scenarios were distributed to six different groups of a total 180 randomly selected participants. Two pilot tests were conducted in the first place to find the representative products both for the convenience and specialty goods. Three most used discount patterns were selected from the E-Commerce platform itself. The result shows that percentage and slash price discount has greater impact on the purchase intention of specialty goods rather than on convenience goods. Meanwhile special price discount have a higher impact on convenience good purchase intention. Online sellers are expected to carefully apply discount variations towards their product in order to make it effective and impactful.

Keywords: E-Commerce, Discount Patterns, Consumer Product Types, Experimental Methods

1 Introduction

E-Commerce has been rapidly growing in Indonesia [1]. As the number one country in terms of electronic transaction value growth, Indonesia has already passed Mexico which marked 59% growth rate, with 78% in total growth [2]. In average, Indonesian are spending US$ 228 or equals to Rp 3.019.000 per person for electronic transaction [3], this number is just slightly under Jakarta's provincial minimum wage which probably indicates the rise of middle class as one of the E-Commerce growth indicators [4]. In 2020, as per August, 140 Million transactions are recorded in Indonesia, nearly doubled compared to the previous year with 80 Million transactions [5]. In the beginning of Covid-19 crisis in Indonesia, 274 Million clicks were generated throughout the top 10 E-Commerce sites with food and personal hygiene products as the top categories purchased [6]. Some of Indonesian major e-commerce experience the significant boost on their user increase during Covid 19 pandemic. One of it are Tokopedia, as the highest visit rate e-commerce in Indonesia, Tokopedia successfully gain 2.2 Million new seller in just 9 months since October 2019 to August 2020 which make them have 8.6 Million users in total. Meanwhile Blibli claims to have 27

Thousand UMKM user on their special page 'Galeri Indonesia'.

All these facts shown that Indonesian are getting more familiar with electronic transactions. The interesting fact is that 74% of E-Commerce penetration in Indonesia are coming from Java only, meanwhile Sumatera contribute around 14% and Sulawesi 4% [7], This phenomenon shows that there is still a big chance of growth in the future. All of the E-Commerce's elements must be ready for the digital marketing war, including their seller.

As the number of seller and buyer grow simultaneously, online competition is getting more strict. Satisfaction will not be the only one factor that drives consumers loyalty when it comes to online shopping [8], overload product information will lead to consumer confusion proneness which affect consumers' decision making and even brand loyalty [9]. Online seller need to find the most effective and efficient way to spend their marketing budget for promotion. Bigger discount doesn't mean higher purchase intention, without proper promotion plan, seller will only burning their budget for nothing.

This study used experimental methods in order to get the most valid and reliable data from the real situation and condition of the controlled group. The result is expected to show how product types such as convenience and specialty goods will interact with specific discount patterns such as percentage discount, slash price discount, and special price in order to maximize discount effectivity and boost purchase intention within each type of product on E-Commerce platforms. The six cells from factorial methods used in this study will reveal which discount is more effective on convenience good and which one suit the specialty good more. Results from this study can be used to be an insight to managers in order to plan and execute their promotion strategy.

2 Hypothesis

Copeland, classifying consumer goods based on the consumer's behavior and can be divided as convenience goods and specialty goods. Convenience goods is products that is daily used by consumers, and is bought by comparing it with other brands. Example of convenience goods is toothpaste, sugar, etc. Specialty good is defined as products that attracts consumers with high quality such as cars, television etc [10][11]. Consumers usually have more considerations in purchasing this type of consumer goods Purchase Intention is one of the most important factor for company, because when the purchase intention of customers is increased, then the possibility of consumers buy the product will also increase. Purchase Intention is also one of the indicator of predicting consumer's behavior. Purchase intention can be defined as the possibility of consumers make a purchase on a service or products in the future [12][13]. Promotions is one of the most used technique to improve purchase intention [14].

Price promotion is the most common way of promotion in the market. Promotion itself has the main purpose to drive usage and sales towards a product or service [15]. There are three dimensions of individual response in terms of measuring a promotion, first is cognition which include knowledge, perception, and beliefs towards the stimulus. Second, affection which influence attitudes, feelings, and emotions of an individual, and the last is conation or a response in a form of behavior [16]. Price promotion are commonly categorized and presented as percentages, monetary amount, or combination [17], meanwhile [18] divided into five, cash, quantity, functional, seasonal, and incentive discount. The result from these discounts will depend on the product category and any other factors [19]. It is quite tricky to use this

kind of promotion, otherwise there will be no relationship or interaction at all within the promotion and the purchase behavior itself [20]. Thus, marketer should know how consumers did their purchase decision through some indicators which stated by Rachma [21] as reference price, perceived quality, and perceived value. Pricing strategy on price promotion acts as the most common long-term marketing tool strategy [22], including reference price that will affect consumers' consideration and perception [14] that leads to purchase intention and price attractiveness [23].

Based on the commonly used price promotions and discount patterns on the e-commerce platform, this paper aims to investigate deeply about the possible interaction within the discount and product type towards purchase intention. Each hypothesis will represent each experiment group from this research.

Previous study indicates that promotion have a significant impact towards perceived price attractiveness and purchase intention on the offline store [15]. The results shows that monetary amount discount are more effective and interesting for woman rather than any other discount form such as percentage, fixed price, etc. This may caused by the individual perception of a price level, one's expensive might be cheap for the other [24]. Monetary discount shows a real cut off price, so it will influence the most. In other research, percentage off discount have a greater impact on high-priced product, because it is associated with a better service quality [25]. In the other hand, percentage discount are consider as relative, which means the value will grow along with the regular price, that is why high-priced product or specialty product are more interesting with this kind of discount. From these studies, the hypothesis are:

H1. Percentage discount has a higher impact on specialty product's purchase intention.

Slash price or monetary discount have a psychological effect towards consumers because of its reference price. This reference price will show a higher price and influence consumers' subconscious mind of perceived price attractiveness. High-priced products will be more interesting in the form of net cash discount or in this case, slash price [26]. In short, purchase decision is not only depend fully on the final price, but also the reference price [23]. Higher reference price also indicates good quality and high demand, so that will refer to the rarity of this discounted price on the specific product or services [23]. Price perception also achieved faster with a comparison between reference and final price [22]. The hypothesis build from these studies are:

H2. Slash price or monetary discount has a higher impact on specialty product's purchase intention.

Armstrong and Chen [27] once revealed that in most selling models, consumers will only care about price level which directly shows quality of the product itself, and both reference price and discount price has no effect at all. Thus, fixed price actually have its own function to build consumers' perception towards product quality, meanwhile place might also have quite strong influence. Consumers also have their own cor elation between selling place and price level beside the fact that they will only buy something when the final price didn't exceed their own individual valuation as the result of product quality observation. There is still limited research about the impact of fixed price on purchase intention, this research will try to dig deeper about this issue [27].

H3. Absolute or fixed price has a higher impact on specialty product's purchase intention.

3 Method

The experiment result in this paper was an extension research towards the discount framing effects and its impact on customer's purchase intention on specific product types. Based on observation and theoretical classification, specialty and convenience products are chosen because of the availability throughout the e-commerce platform. Experiment methods were adopted to gain the most relevant fact and result based on the cur ent condition. 3 X 2 factorial designs are used to accommodate two dependent variables which are three levels of discount patterns and two levels of product types. Means there are six different scenarios distributed randomly to approximately 188 participants. The flow of the experiment started with two pilot tests, manipulation check, pre-test, and the main test. Details of each step provided Table 1.

Table 9. Details of Each Step Provided

Scenario	Factors	
	Product Type	
	Convenience	Specialty
Percentage	A	D
Absolute price	B	E
Slash Price	C	F

3.1 Pilot Test

The first pilot test are conducted to gain as much information about what products are categorized as specialty and convenience goods. Open questions questionnaires are distributed to 30 participants. The definition for specialty and convenience good stated, added by the visualization of categories examples from one of the e-commerce platforms. The results shows handphone and body wash as the representative of specialty and convenience goods. Meanwhile, the second pilot test aimed to get the specification detail of the handphone and how much people are willing to spend their money to buy the product, the average price will be present in the scenario mock up.

3.2 Manipulation Check

This step is required on experimental methods to make sure that the product representative, discount pattern and discount amount on the mock up are clear enough to be understood by the participants. Distributed to 30 participants with a few questions about what specific discount patterns are shown on the mock up and how much or how many discounts are offered. In the first result, the percentage discount mock up came up with more than 6% margin of er or, which lead to a second manipulation check with a little modification and the results was 0% of er or. Based on these results, these mock ups are ready to be distributed for the main test.

Fig 1. Mock Ups

3.3 Pre Test

Pre test are crucial for the questions items stated on the main test. Six dimensions of purchase intentions are carefully selected and curated from previous study. Presented with six Likert scale to avoid neutral answers. Validity and reliability tests will show how strong and consistent the questions items are. KMO or Kaiser-Meyer-Olkin and component matrix values on CFA analysis must be > 0.5 for each question item to make it valid. Based on the table below, each question item has > 0.5 value for both components, making them valid to proceed to the next step.

Table 2. Validity and reliability tests

Variable	Indicators Code	KMO	Bartlett's Test	Component Matrix	Result
Purchase Intention (Convenience Good)	PI 1	0.765	0.000	0.780	Valid
	PI 2			0.535	Valid
	PI 3			0.835	Valid
	PI 4			0.728	Valid
	PI 5			0.676	Valid
	PI 6			0.594	Valid
Purchase Intention (Specialty Good)	PI 1	0.739	0.000	0.874	Valid
	PI 2			0.932	Valid
	PI 3			0.933	Valid
	PI 4			0.630	Valid
	PI 5			0.824	Valid
	PI 6			0.891	Valid

3.4 Main Test

Six different scenarios are distributed to approximately 180 participants, with each group containing 30 participants. Three groups representing convenience good with body wash product and the other three representing specialty group with handphone product. Three discount patterns applied for each goods. Descriptive statistics are used to see mean value of each scenario to measure purchase intentions, T-test conducted to see the significant difference between goods, and the last is two-way ANOVA to analyze the significant relationship within the discount patterns and products type. Hypotheses are tested and even though the mean value for specialty product on percentage and slash price have higher purchase intention and seems to prove the hypothesis, the results are still rejected for all hypotheses. This results caused by the insignificant correlation within the variables shown from the

T-test and ANOVA. In short, all three hypotheses have no support from inferential statistics side. The complete mean value are on the table 3.

Table 3. The complete mean value

Product Type	Discount Type	Mean	Number of Participant
Convenience Good	Percentage	3.89	31
	Slash Price	3.73	30
	Special Price	3.87	32
Specialty Good	Percentage	4.15	30
	Slash Price	3.92	30
	Special Price	3.54	31

4 Result

Results collected from 188 eligible participants which passed the screening questions including whether they have made any successful purchase through the online channel in the last three months. Female participants dominate with 54.5% and the rest are male. Participant's age ranging from 17 to more than 55 years, categorized as boomers generation until millennials, this widespread proof that online transactions in Indonesia has penetrated well. Meanwhile average monthly spending is collected for deeper analysis towards discount effectiveness on each level of regular spending. These participants are divided into six different scenarios, each scenario has 30 participants on average.

The results from descriptive statistics answered three main research questions about purchase intention level on each discount type and product type in online platforms or e-commerce. This research wants to show which discount type works better in which type of product through mean value from each scenario. From table above, the conclusion are MSG=4.15 > MCG=3.89 which means purchase intentions on specialty goods are higher than convenience goods when it is presented with a percentage discount. Meanwhile for slash price discount, works better with specialty goods MSG=3.92 > MCG=3.73. The last discount type is special price, a different result revealed with higher purchase intention level on convenience good MCG=3.87 > MSG=3.54, makes the third hypothesis rejected.

Fig 2. Interaction Effect
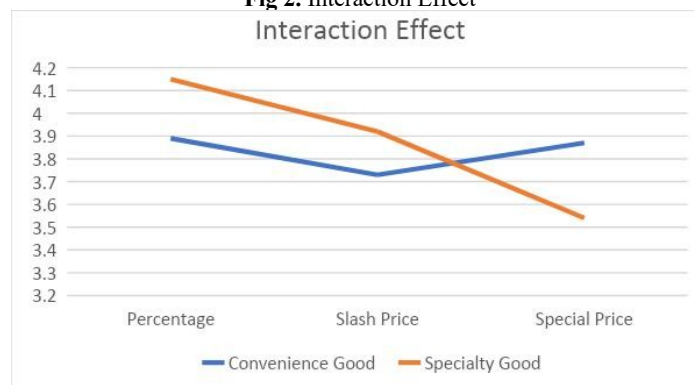
T-test results from both product types on all types of discounts shows sig. > 0.05 which means there are no significant differences on how consumers behave towards each discount type and product type. Meanwhile, two-way ANOVA test also revealed the insignificant interaction effect between dependent and independent variables both from F and sig. value. This insignificant differences and interaction, canceled all the accepted hypotheses based on the mean value. Hypotheses accepted when there are support from both descriptive and inferential statistics.

Table 4. T-test

Variables	Category	Participant	t	Sig. (2-tailed)
Percentage Discount	Convenience Good	31	-0.979	0.332
	Specialty Good	30		
Slash Price Discount	Convenience Good	30	-0.514	0.609
	Specialty Good	30		
Special Price (Fixed Price)	Convenience Good	32	0.999	0.322
	Specialty Good	35		

Table 5. ANOVA

Variable	Interaction	F Value	Sig
Discount Type	Main Effect	1.072	0.344
	Product Type	1.078	0.342

5 Discussion

Based on mean value, the purchase intention level shows that specialty product performed well with percentage and slash price, meanwhile convenience good are more suitable with fixed price discount. However, there are no significant differences and interaction which can support the hypotheses. The absence of physical observation on the real product seems to have bigger impact than it seems. This also might have been the main reason for consumers' inability in weighing the real value or benefit from a discount form. Online consumers only have limited sources to observe the product [27] which leads to the indifferent way of how they make decisions both on convenience and specialty goods.

Online consumers rely on more external factors, such as testimonial or previous buyer's review, picture shown as display, store ratings, etc. Dissatisfaction that happen much during online transaction, especially in Indonesia might be the main driver of this cause. In short, no matter how interesting the discount are, it will not directly impact or cor elate with consumers' purchase intention. Data shown there are still a lot of factors to consider a future purchase.

6 Conclusion

While e-commerce platform penetration keeps growing across Indonesia and boosts both online transaction volume and value, a strategic promotion plan has become one of the most crucial features. Online consumers can do price and written quality observation with just a few clicks ahead, making the

online competition harder than the actual offline store. This research shows that there are no significant differences between how Indonesian online consumers consider the attractiveness of the specific discount pattern on the types of goods. And turns out, even though there are no significant relationship between online goods that sell online and discounts, this research still can show how types of goods can influence online consumers' purchase intention in Indonesia's e-commerce platform.

7 Implication

The main purpose of a promotion is to generate a 'call-to-action' behavior for the consumers. Based on the well known concept AIDDA, in the middle of millions of products on e-commerce, the first A which is short for attention is playing a big part to win the competition. A combination of goods type and specific discount pattern can be one of the ways to attract customers' intention to click on the product, read the specifications and finally make a purchase based on that process. While specialty goods categories will drive more purchase intention towards percentage and slash price discounts, convenience goods will look more attractive with special price or fixed price. This results can be a simple guideline for online sellers to start their promotion on e-commerce platform and winning the consumers attention and purchase intention.

Online store owners are expected to carefully crafted the discount scheme. Default campaign from e-commerce will only provide space for some exposure towards the online store, but will not guarantee the conversion of the exposure into a purchase intention or decision. A good discount scheme and also eye catching content will attract awareness which will be the key of this conversion.

8 Limitation and Future Research Directions

This study represents the general view of online shoppers in the Indonesian e-commerce platform. Only specialty and convenience goods as the most available and common category are used in this research to decrease participants' confusion. A more specific product category may shows more details and give better insight. Also, this research only focuses on online consumers in Indonesia's e-commerce platform, and definitely does not represent the offline consumers behavior. Adding more variables such as discount levels, consumers' loyalty, and gender might give more specific and focus results to the future research.

References

[1]   G. Charlotte, "Indonesia is the world's fastest-growing e-commerce market," *The New Economy*, 2019. https://www.theneweconomy.com/business/indonesia-is-the-worlds-fastest-growing-e-commerce-market.

[2]   Kominfo, "Kemkominfo: Pertumbuhan e-Commerce Indonesia Capai 78 Persen," 2019. https://kominfo.go.id/content/detail/16770/kemkominfo-pertumbuhan-e-commerce-indonesiacapai-78-persen/0/sorotan_media.

[3]   M. Machine, "Saturated sectors: Finding gaps in the ecommerce market in 2019," *Retrieved May*, vol. 19, p. 2020, 2019.

[4]   D. Lestari, "Measuring e-commerce adoption behaviour among gen-Z in Jakarta, Indonesia," *Econ. Anal. Policy*, vol. 64, pp. 103–115, 2019.

[5]   J. P. Prakoso, "Di Tengah Pandemi, BI Laporkan e-Commerce Agustus Naik hingga 140 Juta Transaksi," *Finansial. Bisnis.Com*, 2020. https://finansial.bisnis.com/read/20201021/11/1308044/di-tengah-pandemi-bi-laporkan-e-commerce-agustus-naik-hingga-140-juta-transaksi.

[6]   Statista, "ASEAN countries: Gross domestic product (GDP) per capita in current prices from 2010 to 2020," 2020. .

[7]   Euromonitor, "Vitamins in Indonesia," 2020. https://www.euromonitor.com/vitamins-in-indonesia/report.

[8]   D. Goutam and B. Gopalakrishna, "Customer loyalty development in online shopping: An integration of e-service quality model and commitment-trust theory," *Manag. Sci. Lett.*, vol. 8, no. 11, pp. 1149–1158, 2018.

[9]   S. Alarabi and S. Grönblad, "The effects of consumer confusion on decision postponement and brand loyalty in a low involvement product category." 2012.

[10]   M. T. Copeland, "Relation of consumers' buying habits to marketing methods," *Harv. Bus. Rev.*, vol. 1, no. 2, pp. 282–289, 1923.

[11]   H. Song and Y. Jiang, "Online Personalized Advertising Avoidance by Chinese Consumers: The Effect of Consumer Good Types," *Noble Int. J. Bus. Manag. Res.*, vol. 1, no. 6, pp. 107–117, 2017.

[12]   C.-L. Hsu, C.-Y. Chang, and C. Yansritakul, "Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating effects of country of origin and price sensitivity," *J. Retail. Consum. Serv.*, vol. 34, pp. 145–152, 2017.

[13]   P. C. S. Wu, G. Y.-Y. Yeh, and C.-R. Hsiao, "The effect of store image and service quality on brand image and purchase intention for private label brands," *Australas. Mark. J.*, vol. 19, no. 1, pp. 30–39, 2011.

[14]   A. Rong-Da Liang, "Exploring consumers' bidding results based on starting price, number of bidders and promotion programs," *Int. J. Hosp. Manag.*, vol. 37, pp. 80–90, 2014.

[15]   N. Büyükdağ, A. N. Soysal, and O. Kitapci, "The effect of specific discount pattern in terms of price promotions on perceived price attractiveness and purchase intention: An experimental research," *J. Retail. Consum. Serv.*, vol. 55, p. 102112, 2020.

[16]   A. Beerli and J. D. M. Santana, "Design and validation of an instrument for measuring advertising effectiveness in the printed media," *J. Curr. Issues Res. Advert.*, vol. 21, no. 2, pp. 11–30, 1999.

[17]   A. J. Della Bitta, K. B. Monroe, and J. M. McGinnis, "Consumer perceptions of comparative price advertisements," *J. Mark. Res.*, vol. 18, no. 4, pp. 416–427, 1981.

[18]   P. Kotler, "Moderni marketing. 4th European Edition." Praha: Grada Publishing (in Czech), 2007.

[19]   E. T. Anderson and D. I. Simester, "Long-run effects of promotion depth on new versus established customers: three field studies," *Mark. Sci.*, vol. 23, no. 1, pp. 4–20, 2004.

[20]   A. S. C. Ehrenberg, K. Hammond, and G. J. Goodhart, "The after-effects of price-related consumer promotions," *J. Advert. Res.*, vol. 34, no. 4, pp. 11–22, 1994.

[21]   R. Nurmasarie, "Pengaruh Promosi Penjualan Dan Penjualan Perseorangan Terhadap Keputusan Belanja Tidak Terencana," *J. Ilmu Manaj.*, vol. 1, no. 2, 2013.

[22]   H.-W. Kim, Y. Xu, and S. Gupta, "Which is more important in Internet shopping, perceived price or trust?," *Electron. Commer. Res. Appl.*, vol. 11, no. 3, pp. 241–252, 2012.

[23]   T. Zhang, P. Li, L.-X. Yang, X. Yang, Y. Y. Tang, and Y. Wu, "A discount strategy in word-of-mouth marketing," *Commun. Nonlinear Sci. Numer. Simul.*, vol. 74, pp. 167–179, 2019.

[24]   K. B. Monroe and R. Krishnan, "The effect of price on subjective product evaluations," *Perceived Qual.*, vol. 1, no. 1, pp. 209–232, 1985.

[25]   K. Nusair, H. J. Yoon, S. Naipaul, and H. G. Parsa, "Effect of price discount frames and levels on consumers' perceptions in low-end service industries," *Int. J. Contemp. Hosp. Manag.*, 2010.

[26]   S.-F. S. Chen, K. B. Monroe, and Y.-C. Lou, "The effects of framing price promotion messages on consumers' perceptions and purchase intentions," *J. Retail.*, vol. 74, no. 3, pp. 353–372, 1998.

[27]   M. Armstrong and Y. Chen, "Discount pricing," *Econ. Inq.*, vol. 58, no. 4, pp. 1614–1627, 2020.