

# Effect of Instagram promotion on consumer purchase intention: evidence from Indonesian traditional food of bakpia

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**Abstract.** Social media promotion is one of the current trends used to attract buyers, along with the massive use of information technology. One of them is using Instagram in promotional activities for traditional Indonesian food of Bakpia. This study aims to determine the effect of promotion through Instagram on consumer purchase intention of Bakpia. The study used descriptive method and multiple linear regression analysis. Four hundred respondents participated in this study through an online Google form survey. The results showed that promotional activities using Instagram were in good perception among consumers. Furthermore, based on the multiple regression analysis, the variable of context, communication, collaboration, and connection on Instagram promotion were statistically significant positive effect on purchase intention of bakpia consumers.

## 1 Introduction

Information and communication technology (ICT) applications have developed rapidly in several spheres of life, including telecommunications, business, trade, education, and transportation. The use of information and communication technology is expected to make information more accessible to consumers [1], increase product marketing efficacy [2] and broaden the consumer market [3], all of which would boost producers profits [4].

Instagram is Indonesia's second most popular and most widely used social media in 2022 [5]. One of the advantages of Instagram is that this social media focuses on the use of images and videos, which are media favored by the Millennial Generation and Generation Z as the majority of Indonesia's population [6,7]. Instagram is becoming increasingly attractive to the younger generation [8] with new features, namely snapgram and instastory, a feature that makes it easy for users to post daily activities to their followers on Instagram.

Apart from being a social media for sharing images and videos, Instagram is a social media that is quite effective for building a product brand [9]. The ease of access and the availability of efficiently optimized features [10] make it easier for the product to get

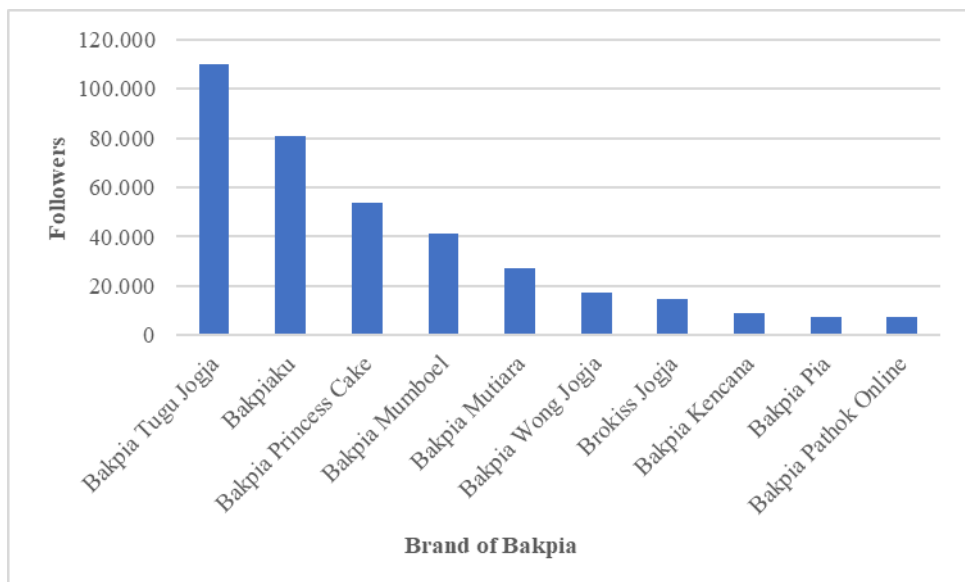
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consumers' attention. With Instagram, consumers can search for any product quickly and easily, accompanied by attractive images and video visualizations. Therefore, many companies are currently using Instagram as a medium to promote their products [11], one of which is the traditional food of Bakpia.

Bakpia is a traditional specialty food from Yogyakarta, Indonesia, made from a mixture of green beans and sugar wrapped in flour and then baked. Bakpia historically comes from the Chinese food Tou Luk Pia or pia cake or green bean cake [12]. It was first introduced by a family of Chinese descent who made it their home industry in Kampung Pathok Yogyakarta in the 1948s. Initially, this Bakpia was only sold door-to-door in retail using a traditional package called “besek”, which is a food container made of woven bamboo. Along with its development, it began to be in great demand by consumers, especially tourists visiting the city of Yogyakarta, so that in the end, it was known as a typical souvenir of Yogyakarta [13,14].

Along with technological developments, Bakpia's marketing has also changed. In addition to the use of traditional media, Bakpia's marketing is currently also using social media-based marketing media such as Instagram [15]. Currently, several bakpia brands have used Instagram as a marketing tool. Instagram in bakpia promotions is generally intended to introduce products, brand attachments and maintain consumer loyalty to these products [16]. The number of bakpia Instagram accounts that have sprung up at this time makes the competition in bakpia industry more competitive to attract consumers. Figure 1 shows ten bakpia brand accounts in Yogyakarta with the most Instagram followers in 2020.



**Fig. 1.** Number of Followers of 10 Instagram Accounts of Bakpia Brand in Yogyakarta

Figure 1 shows the Top 10 Bakpia brands which was using Instagram as a marketing tool to promote their products to consumers. Based on the number of posts that reach hundreds or even thousands and the number of followers who reach thousands, it can be seen that Instagram is the best option of social media used by the Bakpia brand to promote its products as well as show high interaction and engagement from consumers on Instagram. Instagram is a social media that is easy to use and offers features that allow food producers to optimize their marketing activities [17,18].

The increasing use of Instagram as a promotional medium for specialty food products such as Bakpia and the high consumer interaction on this media are interesting to explore further. Previous research regarding the marketing and promotion activities of bakpia products is generally related to marketing on traditional media [19,20] or digital media marketing in general [21]. The study on the impact of promotional activities through social media, especially Instagram, on consumer purchase intention of Bakpia is limited.

Furthermore, this study selected Bakpia Kukus Tugu Jogja brand due to this brand was relatively new. However, it has gained popularity among tourists who visit Yogyakarta. Moreover, the Instagram official account of Bakpia Kukus Tugu Jogja @bakpiatugujogja, created in 2017, has the highest number of followers compared to other bakpia brand accounts (Figure 1). In addition, the Bakpia Kukus Tugu Jogja Instagram account actively carries out promotional activities and shows high consumer engagement. This can be seen from the number of posts, the number of likes, the frequent posting of Instagram stories or insta-story, and the reposting of consumer updates that mentioned the Instagram account @bakpiatugujogja compared to other social media operated by Bakpia Kukus Tugu Jogja, such as Twitter and Facebook.

The use of Instagram on promotional activities of Bakpia Kukus Tugu Jogja and the high engagement from consumers are interesting to explore, especially concerning consumer purchase intention. Therefore, this study aims to examine consumer perceptions of promotional activity using Instagram and its effect on consumer purchase intention of bakpia products. This research is expected to provide insight into the study of the promotion of traditional food using new media of Instagram and its effect on consumer purchase intention.

## 2 Methodology

This study uses a quantitative descriptive method to examine consumer perceptions of promotional activities using Instagram and analyse the effect of promotion through Instagram on consumer purchase intention of traditional food of Bakpia. Consumer perceptions of the promotion activities were measured using descriptive analysis of a 5-point Likert Scale [22,23]. The effect of promotional activities on Bakpia consumer purchase intention was investigated using Multiple Linear Regression analysis and running on SPSS 15 [24,25].

The primary data in this study were obtained by distributing an online questionnaire during May to June 2020 to followers of the Instagram account of @bakpiatugujogja who noticed the promotional activities of Bakpia Kukus Tugu Jogja through its Instagram account of @bakpiatugujogja and experienced purchasing the products. The followers selected to receive the questionnaire were on the top of the list of @bakpiatugujogja Instagram followers at the time of the study. Furthermore, as many as 632 followers were contacted via Instagram direct message, and 400 followers responded and filled out the questionnaire correctly.

Consumer perceptions of the promotional activities of Bakpia Kukus Tugu Jogja through social media Instagram @bakpiatugujogja were measured descriptively using a score on a 5-point Likert scale. Five variables were asked to consumers who were related to promotional activities through Instagram, variables of Context ( $X_1$ ), Communication ( $X_2$ ), Collaboration ( $X_3$ ), Connection ( $X_4$ ), and consumer purchase intention.

There were 19 indicators for all variables, three statements for context variable (content, message design, and timing), three statements for communication (informativeness, novelty, and interaction), three statements for collaboration (effectiveness, response, and engagement), two statements for connection (feedback and of reciprocity) and four statements for purchase intention (attention, intention, desire, action). A 5-point Likert scale was used to measure all the statements (1 = strongly disagree to 5 = strongly agree) [23]. To determine the percentage level of consumer perception scores [26] from each variable, this study used the following formula:

$$\% = \frac{n}{N} \times 100\% \quad (1)$$

Where:

$n$  = empirical score

$N$  = total score (ideal score)

This descriptive percentage calculation uses the following steps:

- 1) Determine the highest and lowest values

$$\text{Highest/Lowest value (\%)} = \frac{\text{Highest/Lowest score}}{\text{Maximum score}} \times 100\% \quad (2)$$

$$\text{Highest value (\%)} = 5/5 \times 100\% = 100\%$$

$$\text{Lowest value (\%)} = 1/5 \times 100\% = 20\%$$

- 2) Determine interval class percentage

The category intervals in this study are as follows:

$$\text{Interval} = \frac{\text{maximum score} - \text{minimum score}}{\text{number of category}} \quad (3)$$

$$\text{Interval} = \frac{(100\% - 20\%)}{5} = 20\%$$

Based on the formula, the resulting score interval is interpreted as follows:

20% - 35,99% = Worse

40% - 51,99% = Bad

52% - 67,99% = Doubtful

68% - 83,99% = Good

84% - 100% = Very good

Furthermore, the influence of Instagram promotion on consumers' purchase intention of Bakpia Kukus Tugu Jogja was analyzed using the 4C dimension model of social media [27], namely context (content, design, message delivery time), communication (message informativeness), collaboration (cooperation), and connection (sustainable relationship) [28]. The analysis is carried out using the Method of Successive Interval (MSI) and then testing the validity and reliability, classical assumption test, multiple linear regression analysis, hypothesis testing, and coefficient of determination.

## 3 Result and discussion

### 3.1 Demographic of respondent

Respondents of this study were followers of the Instagram account of Bakpia Kukus Tugu Jogja (@bakpiatugujogja) who have the experience of purchasing and consuming the product. Five variables are used to demonstrate the demographic of the respondents: gender, age, occupation, monthly income (take-home pay), and the number of dependents. The detail of the demographic of respondents is presented in Table 1.

Table 1 shows that the proportion of respondents based on gender is almost the same. Female respondents are slightly more than male respondents (52%). According to the Indonesian population census 2020, the gender proportion of the country's population between males and females was almost the same [7]. However, the data showed that male citizens are slightly more than females with 50.58%. Moreover, according to the origin of the respondents, the majority came from the Special Region of Yogyakarta (DIY). The 2020

Statistics Indonesia census results showed that the ratio of the male and female population in Yogyakarta was 98 out of every 100 women [29]. In other word, it can be said that the female population in Yogyakarta is more than the male population.

**Table 1.** Demographic of the respondent.

No.	Variable	Range	Respondent	
			Number	%
1.	Gender	Male	192	48.0
		Female	208	52.0
2.	Age (Year)	18 to 25 (Generation Z)	332	83.0
		26 - 39 (Millennial)	60	15.0
		40- 55 (Generation X)	8	2.0
3.	Occupation	Student	256	64.0
		Private employee	72	18.0
		Government official	16	4.0
		Entrepreneur	20	5.0
		Others	36	9
4.	Income	< IDR 1,500,000	208	52
		IDR 1,500,000 – IDR 2,500,000	92	23
		IDR 2,500,000 – IDR 3,500,000	40	10
		> IDR 3,500,000	60	15
5.	Residence	Java Island	360	90
		Sumatra	25	6,3
		Borneo	6	1,5
		Celebes	2	0,5
		Other	7	1,8

Furthermore, based on age, the respondents in this study were dominated by consumers Generation Z (born from 1997 onwards or aged between 10 to 25 years [30]). According to Indonesia Gen Z and Millennial Report 2020, the composition of internet users in Indonesia was dominated by Generation Z due to a shift in the use of communication tools when compared to the older generation [31]. Previously, internet access was dominated by using the computer desktop. After the Generation Z, there was a shift, which was dominated by smartphones, making it easier for users to access various social media such as Instagram.

As for the employment variable, this study shows that the majority of respondents are students and private employees. Previous research stated that Instagram users are dominated by young people such as teenagers and students [32]. Several factors drive young consumers to use Instagram; one of them is the feature that allows users to snap and edit photos, as well as connect with an online photo-sharing community across various social media such as Facebook and Twitter. Another reason is that Instagram allows users to personalize the content through features that make Instagram the application for self-record, identification, and recognition [33].

Furthermore, concerning the residential background, 360 out of 400 respondents came from the provinces in Java Island. As many as 196 respondents were from the Special Region of Yogyakarta, 99 Central Java, 26 East Java, 20 West Java respondents, 12 Jakarta, and Banten consist of 7 respondents. The rest of the respondents came from outside Java Island provinces, such as 25 respondents from Sumatra, 6 from Kalimantan, 1 from Bangka Belitung Islands, Sulawesi, Nusa Tenggara, Papua, and Bali with 2 respondents, respectively. This result shows that although the majority of Bakpia Kukus Tugu Jogja consumers are from Java Island provinces and especially from the Special Region of Yogyakarta, the product is also known to the other regions in several provinces in Indonesia. The majority of respondents or followers of the Instagram account of Bakpia Kukus Tugu Jogja who are coming from Java

Island provinces echoed the report from The Internet User Survey 2020 conducted by the Indonesian Internet Service Providers Association (APJII), which stated that Java Island provinces contributed the majority of Indonesian internet users (43.92%) [34].

### 3.2 Consumer perception on Bakpia Kukus Tugu Jogja Instagram promotion

As previously mentioned, consumer perceptions of the promotional activities of Bakpia Kukus Tugu Jogja through social media Instagram @bakpiatugujogja were analyzed descriptively using a 5-point Likert scale. Consumers were asked five variables related to promotional activities through Instagram: context, communication, collaboration, connection, and consumer purchase intention.

Table 2 shows that the context variable with three indicators, namely promotional content, message design, and timing in the delivery of promotions, shows a good category with an average score of 81.7%. Choosing the best Instagram content is essential to gaining interest from consumer. One of the features of Instagram content is reposting consumer's updates. A study found that reposting the consumer's update is one of the tools that producers could optimize to increase the performance of promotional activities on Instagram [35].

The second variable of communication also shows a good category with an average score of 83%, which means that the information provided by the @bakpiatugujogja account was easy to understand, and the message conveyed was clear. The Instagram facilitates interaction between consumers and the company (represented by the @bakpiatugujogja account admin). The informativeness of the Instagram promotional program could deliver the message to consumers [36].

Furthermore, the collaboration variable perception was in the excellent category with an average score of 75.3%, which means that respondents consider the Instagram promotion was effective in conveying messages, the company's response was good, and deserves to put like button or comment on it. This result demonstrated that the information provided by the @bakpiatugujogja Instagram account follows what consumers need and want. A good response from the administrator of the Instagram account @bakpiatugujogja could encourage consumer engagement, such as pressing the like button and commenting. A study found that digital engagement influences purchase intention [37].

**Table 2.** Consumer perception on Bakpia Kukus Tugu Jogja Instagram promotion

Variable	Indicator	Score		Category
		%	Average	
Context	Content	84	81.7%	Good
	Design	82		
	Timing	79		
Communication	Informativeness	84	83.0%	Good
	Novelty	83		
	Interaction	82		
Collaboration	Effectiveness	78	75.3%	Good
	Response	75		
	Engagement	73		
Connection	Feed back	78	74.5%	Good
	Reciprocal	71		
Purchase Intention	Attention	75	76.3%	Good
	Intention	76		
	Desire	83		
	Action	71		
			<b>78.2%</b>	<b>Good</b>

The connection variable, which has a feedback indicator and the presence of reciprocity, also shows a good category with an average score of 75%, which means there was reciprocity and connection between followers who were respondents of the @bakpiatugujogja Instagram account or in other words respondents were happy to visit the social media channel of Bakpia Kukus Tugu Jogja to obtain information related to the company (percentage value 78%), and a few respondents shared promotional posts/messages for the @bakpiatugujogja account to friends or relatives (71% percentage value). Lastly, regarding the purchase intention variable, the total score is 77% which also shows a good category. It can be concluded that Bakpia Tugu promotional activities through Instagram could build good communication with consumers, which is expected to increase consumers' intention to purchase their products. Company feedback on consumer response is essential and positively affects purchase intentions [38].

In conclusion, consumer perceptions of the promotion activities of Bakpia Kukus Tugu Jogja through Instagram @bakpiatugujogja generally show a good category. This can be seen from all the variables that show a good category with an average score of 78.2%. As seen from each variable, this study shows that the communication variable has the highest perception score of 83%, while the connection variable shows the lowest perception value of 74.5%, although it is still in the good category. These results confirm previous studies where official Instagram account promotion proved to increase consumer purchase intention [39].

### 3.3 Effect of Instagram promotion on consumer purchase intention

The effect of promotion through Instagram social media on consumer purchase intention of Bakpia Kukus Tugu Jogja was analyzed using multiple linear regression. Multiple linear regression analysis was used to determine the effect of the independent variables context, communication, collaboration, and connection on the dependent variable of consumer purchase intention Bakpia Kukus Tugu Jogja). The form of the multiple linear regression equation was expressed in the following equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \varepsilon \quad (4)$$

Where,  $Y$  was purchase intention of Bakpia Kukus Tugu Jogja;  $X_1$  was Context;  $X_2$  was Communication;  $X_3$  was Collaboration;  $X_4$  was Connection;  $a$  was constant;  $\varepsilon$  was error term;  $b_1, b_2, b_3, b_4$  were coefficient.

**Table 3.** Multiple Regression Analysis.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 <sup>(a)</sup>	.588	.583	3.47064

ANOVA(b)						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6780.050	4	1695.012	140.719	.000 <sup>(a)</sup>
	Residual	4757.921	395	12.045		
	Total	11537.970	399			

Coefficients <sup>(a)</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.952	1.060		4.674	.000
	Context	.572	.109	.231	5.239	.000
	Communication	.392	.117	.157	3.339	.001
	Collaboration	.608	.125	.252	4.865	.000
	Connection	.928	.144	.288	6.464	.000

The regression analysis results, as presented in Table 3. It shows that all independent variables were statistically significant in influencing consumer purchase intention in Bakpia Kukus Tugu Jogja. The connection variable ( $X_4$ ) is the most influential variable in this study. This result echoed the previous study on the effects of the 4C social media dimension on purchase intention [27,28].

Table 3 shows that the  $R^2$  value was 0.588. It can be concluded that the 58.8% variation of consumer purchase intention in Bakpia Kukus Tugu Jogja can be explained by independent variables (context, communication, collaboration, connection), while the remaining 41.2% was influenced by other factors not examined in this study. Furthermore, based on the results of the regression analysis as presented in Table 3, the multiple regression equation models can be formulated as follows:

$$Y = 4.952 + 0.231X_1 + 0.157X_2 + 0.252X_3 + 0.288X_4 \quad (5)$$

This model explains that the context variable ( $X_1$ ), which consists of three indicators of content, design, and timing, has a statistically significant positive effect on consumer purchase intention of Bakpia Kukus Tugu Jogja ( $Y$ ). The coefficient value of 0.231 indicates that an increase in the context variable by one unit may increase consumer purchase intention of Bakpia Kukus Tugu Jogja by 23.1 percent. This result was in line with the previous study that the content of Instagram promotion influences consumer purchase intention [40].

Furthermore, the communication variable ( $X_2$ ) was statistically proven to have a positive effect on consumer purchase intention of Bakpia Kukus Tugu Jogja, with a coefficient value of 0.157, indicating an increase in the communication variable by one unit could increase consumer purchase intention in Bakpia Tugu Jogja steamed 15.7 percent. The communication variable consists of three indicators: informativeness, novelty, and interaction. A previous study showed that interaction in social media such as Instagram and Youtube or called parasocial interaction has a significant and positive relationship to purchase intention [41].

The following variable, collaboration ( $X_3$ ), showed results as expected, which was statistically proven to have a positive effect on consumer purchase intention in Bakpia Kukus Tugu Jogja with a coefficient value of 0.252. This means that an increase in collaboration variable (effectiveness, response, and engagement) by one unit can increase consumer purchase intention in Bakpia Kukus Tugu Jogja by 25.2 percent. Engagement on social media is important and has a positive relationship with purchase intention [42].

Finally, the connection variable ( $X_4$ ), composed of two indicators, namely feedback and reciprocal, has a statistically significant positive effect on consumer purchase intention in Bakpia Kukus Tugu Jogja. A coefficient value of 0.288 shows that an increase in the connection variable by one unit could increase consumer purchase intention of Bakpia Kukus Tugu Jogja by 28.8 percent. A previous study showed that consumer involvement with a brand's social media, influences the positive perception toward the brand, which in the future could affect the purchase intention from the brand [43].

## 4 Conclusions

Evidence from the study has shown that consumers of Bakpia Tugu Jogja @bakpiatugujogja are dominated by the female from Generation Z who have employment status as students and earn less than IDR. 1,500,000.00 and live in Java Island provinces.

In relation to the influence of Instagram on consumer purchase intention in Bakpia Kukus Tugu Jogja, the independent variables of context, communication, collaboration, and connection showed a statistically significant effect on consumer purchase intention. The four variables show the perceived value both by consumers and partially or jointly have a significant positive effect on consumer purchase intention in Bakpia Kukus Tugu Jogja.



This research provides an overview of the study of Instagram promotion on food product marketing, especially the specialty food of Bakpia. However, there are limitations to this study. The R square is relatively low, which means that the model proposed in this study is not quite strong enough to explain the variation in consumer purchase intention. Future studies may consider including other variables that may influence purchase intention such as education, level of income and other variables related to food purchase intention. Moreover, this study uses online surveys, so it may not cover consumers who have problems or are not familiar with using online surveys. Future research can be expanded to other consumers, making the coverage more comprehensive.

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