

Big data and content marketing on purchase decisions online in Indonesia

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Abstract: This study aimed to describe big data, content marketing and purchase decision, analyze the influence of big data and content marketing on purchase decision, and analyze the dominant variable between big data and content marketing on online purchase in Indonesia.

This research was conducted in Indonesia with 134 sample respondents. The method used in this research is descriptive method. This study used a accidental sampling using data collection tools through an online questionnaire.

The results of multiple regression analysis proved the variables of big data and content marketing, partially or simultaneously have an effect on purchase decision. The influence is a positive effect, if a technology online driven function as volume, velocity, variety, veracity, and value, it will encourage consumers to purchase decision in Indonesia. Furthermore, if the content marketing gives a positive impression on a product that is offered online through cognition, sharing, persuasion, and decision making would increase consumers online purchase decision. From testing the hypothesis that the variables of content marketing, it turns out the dominant influence on purchase decision.

Keywords: Big data, content marketing, and purchase decision.

Introduction

At present information and technology have developed rapidly, especially the increasingly massive use of the internet in Indonesia. Based on a survey report of the Indonesian Internet Service Providers Association (APJII) conducted based on field data from March 9 to April 14, 2019 concerning penetration and behavior profiles of internet users in Indonesia, that the population in 2017 was 262 million with 54 internet users, 68% or approximately 143.26 million people spread throughout Indonesia. This has increased in 2018 by 10.12% or as many as 27,916,716 internet users compared to the previous year, assuming a population growth of 0.63% based on BPS projections of population numbers in 2018. The many benefits felt by the public

make the internet a non-existent part inseparable in activities so that it becomes a potential market opportunity, especially in the field of *e-commerce*. Based on data released by Katadata.co.id (04/24/2019) that Indonesia is the growing *e-commerce country* fastest in the world.

This is inseparable from *big data*, which is a term that describes *volume of a large data*, both structured and unstructured data (Pavitra, 2016: 130), which makes it possible for consumers to become a basis for consideration in making purchasing decisions *online*. In addition to *big data*, *content marketing* is also one of the factors driving consumers to make transactions *online*. The availability of interesting, relevant, and valuable content can stimulate consumers to explore further related products offered *online* that lead to purchasing decisions. According to Anand (2014: 83) that *content marketing* is one marketing strategy that provides content that is in accordance with the wants and needs of consumers. The content in question certainly got value (*value*) and the relevance to provide *interest* that stimulate the consumer to perform an action that is transacting.

Literature review

In general terms, making a decision is the selection of actions from two or more alternative choices. According to Syam, Andi Hendra (2017: 43) that a decision is a selection, a choice of two or more possibilities. Decision making can be considered as an outcome or output from mental or cognitive processes that lead to the selection of an action pathway among the available alternatives. According to Sangadji and Sopiah (2018 in Suhartini, 2019: 38) that purchasing decisions are an integration process that combines knowledge to evaluate two or more alternative behaviors, and choose one of them. Roza (2014: 58) revealed that consumer purchasing decisions are inseparable from the lifestyle of those who want to buy products that are useful and have good quality. Of the various factors that influence consumers in purchasing a product or service, consumers usually always consider the quality, price, and products that have been previously identified.

Nurvidiana (2015: 3) argues that in most people, buying behavior is often influenced by two factors namely the environment and marketing stimulus. Marketing stimuli by marketers rely heavily on the internet and *big data* as triggers. The amount of data that is scattered into the media to make purchasing decisions. *Big data* has been used in many businesses. It is not only the size of the data that is the main point but what the organization must do with it. *Big data* can be analyzed for insights that lead to the right decision making and better and profitable business strategies (Bhosale, 2014: 6). The phenomenon *big data* is increasingly important because it allows organizations to collect, store, manage and manipulate large amounts of data at the right speed, at the right time, to get the right insight. According to De Mauro (2016: 130) that *big data is the*

information asset characterized by such a high volume, velocity, and variety to require specific technology and analytical methods for its transformation into value. Information systems combined with the internet, cloud computing, mobile devices, and the *internet of things* have produced volumes of very large data, usually called *big data* (Jeble, 2018: 36).

In the world of marketing, analysis *big data* can be used to identify consumer behavior in interacting and transacting *online*. So that marketers are able to develop marketing strategies where marketers can plan, create, and distribute content that is able to attract the interest of the target consumer to immediately make a buying decision. This marketing strategy is known as *content marketing*. According to Pratiwi (2018: 48) that in creating *content marketing* interesting and creative, several factors that must be considered are *design, current event, the reading experience, timing, and tone*. While Limandono (2017: 3) argues that *content marketing* is a marketing strategy to distribute, plan, and create interesting content with the aim to attract the target market and encourage consumers to become *customers of* a company. Pratiwi (2018: 48) believes that basically, *content marketing* is the art of communicating with customers or prospective customers without having to sell. By providing information that consumers want and need will create *satisfaction* customer and provide mutual value for the company. According to Elisa (2014: 93) that content must 1) be able to generate interest, involve, but also provide information and educate customers; 2) states all values that identify the company in terms of uniqueness, consistency, quality and relevance; 3) be proactive, which is able to develop over time.

Research methods

This research was conducted *online* for three months from October to December 2019. The study population was consumers who had made purchases *online* in Indonesia with a sample of 134 respondents with a nonprobability sampling technique. The type of sampling used is incidental sampling and purposive sampling. This study uses a quantitative approach to the type of *explanatory research* in order to find out and explain the characteristics of the studied variables. This research is correlational by describing the relationships between the independent variables and the dependent variable through hypothesis testing, namely the t test and the F test.

The variables used are independent variables consisting of *big data* and *content marketing* and the dependent variable, namely the purchasing decision. These variables were analyzed using multiple linear regression analysis in SPSS applications.

Results and discussion of

a. Research Results

In the data validity test, 42 data were tested from processing the data, all indicators have a positive correlation coefficient and are greater than r table, and the probability is smaller than $\alpha = 5\%$, meaning that there is a significant relationship between scores each indicator with a total score. Significant correlations indicate that the indicator really can be used to measure the variable to be measured, in other words the instrument used is valid and thus can be used in research. While the instrument reliability testing is done on the question items that are already valid. The instrument is declared unreliable if the reliability value obtained does not reach 0.6. The reliability test results show that each reliability coefficient value is greater than 0.6 so that the instrument used is declared reliable.

The results of calculations using the SPSS program can be seen in the following table:

Table 1. Recapitulation of the results of multiple linear regression analysis

Variable	Description	Regression coefficient	Standard error	t _{calculated}	Sig.
X ₁	<i>Big Data</i>	0.167	0.84	1.995	0.048
X ₂	<i>Content marketing</i>	0.925	0.86	10.797	0.000
Constant		= 6.876			
R		= 0.835			
R _{Square}		= 0.697			
<i>Adjusted R_{Square}</i>		= 0.693			
F _{count.}		= 150.933			
Sig F		= 0.000			
Dependent Variable = Purchase Decision					

The results of the multiple regression calculation can be found as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

$$Y = 6.876 + 0.167X_1 + 0.925X_2$$

Based on the results of the equation, it can be explained that the constant (α) = 6.876 indicates the magnitude of the purchase decision, if there is no influence from *big data* (X₁) and *content*

marketing (X_2), then the purchase decision (Y) amounted to 6.876. The regression coefficient *big data* (X_1) is 0.167 (β_1), meaning that every time there is an increase in the variable *big data* (X_1) by 1 unit, it will increase the purchase decision (Y) by 0.167 assuming the other variables are fixed. regression coefficient *Content marketing* (X_2) of 0.925 (β_2), meaning that every time there is an increase in the variable *content marketing* (X_2) by 1 unit, it will increase the purchase decision (Y) by 0.925 with the assumption that other variables are fixed.

The multiple correlation coefficient (R) of 0.835; shows that there is simultaneously a strong and direct relationship between *big data* (X_1) and *content marketing* (X_2) with the purchase decision (Y) 83.5%. This relationship can be categorized as strong, as it is known that a relationship is said to be perfect if the correlation coefficient reaches 100% or 1 (either with a positive or negative number).

The results of multiple linear regression analysis, it can be seen the value of the coefficient of determination (R_{square}) of 0.697. This figure shows that the variable *big data* (X_1) and *content marketing* (X_2) can explain variations or able to contribute to the purchase decision variable (Y) of 69.7%, while the remaining 30.3% is caused by other variables not included in the study.

The results of this research hypothesis test can be explained as follows:

1) Hypothesis Test 1

To test the first hypothesis which states that *big data* and *content marketing* have a significant effect on purchasing decisions *online* in Indonesia, then the F test is used as follows:

Table 2. Test results of the test F

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig
1 Regression	7010.623	2	3505.312	150.933,	.000 ^b
Residual	3042.392	131	23.224		
Total	10053.015	133			

a. Dependent Variable: Purchase decision

b. Predictors: (Constant), *Content marketing*, *Big data*

From the results of the calculation of multiple regression analysis with the SPSS program obtained an F_{count} of 150.933 which is greater F_{table} ($150.933 > 3.06$), reinforced with a significance value of $0,000 < 0.05$, then H_0 rejected and H_a accepted which means that the variable *big data* and

marketing content simultaneously significant effect on purchasing decisions *online* in Indonesia, so the first hypothesis is statistically accepted or tested.

2) Hypothesis 2

To test the second hypothesis which states that the *big data* dominant influence on purchase decisions *online* in Indonesia, the t test was used as follows:

Table 3. The results of the t test testing Coefficients^a

model	unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.876	3.465			1.984,049
1 <i>Big Data</i> <i>Content</i>	marketing, 925,	167,084,	136 086,734	1,995, 10.797,	048 000

a. Dependent Variable: Purchasing decisions

t test results for each variable can be explained as follows:

a) *Big Data* (X1)

The results obtained by t test analysis value_t of 1.995 with a significance value of 0.048 which is less than 0.05 (0.048 < 0, 05), which means that H₀ is rejected and H_a accepted, so evident in partial *big data* (X₁) a significant effect on purchasing decisions (Y).

b) *Content marketing* (X2)

Results of t test analysis obtained a value of 10.797 and significance value of 0.000, which is smaller than 0.05 (0.000 < 0.05), which means that H₀ is rejected and H_a accepted, so evident in partial *content marketing* (X₂) has a significant effect on purchasing decisions (Y).

Based on the results of the analysis above, it can be seen that *big data* and *content marketing* partially have a significant effect on purchasing decisions. Next to find out the variables that have a dominant influence on purchasing decisions is to see the magnitude of the regression coefficient

of the variables that have a significant effect on purchasing decisions. The independent variable that has the biggest and significant coefficient is the variable that has a dominant influence on purchasing decisions. The magnitude of the regression coefficients of each independent variable sequentially is *big data* of 0.136 and *content marketing* of 0.734. Thus the variable that has a dominant influence on purchasing decisions is *content marketing*, so in this second hypothesis turns out that H_{0is} is accepted and $H_{a is}$ is rejected, which means that the variable *big data* does not have a dominant effect on purchasing decisions. So the *content marketing* variable has a dominant variable based on the regression coefficient value greater than the *big data* that is $0.734 > 0.136$.

b. Discussion of research results

Based on the results of the first hypothesis test in this study shows that the variables *big data* and *content marketing* significantly influence purchasing decisions *online*. The results of multiple regression analysis prove that the variables *big data* and *content marketing* together (simultaneously) or individually (partially) influence the purchase decision. This influence is a positive influence, meaning that if technology *online* is driven by its functions in form of *the volume, velocity, variety, veracity* and *value*, it will encourage purchasing decisions for products offered *online* in Indonesia. Furthermore, if *content marketing* gives a positive impression on a product offered *online* through *cognition, sharing, persuasion, and decision making*, it will increase consumer purchasing decisions.

The results of this study are consistent with research conducted by Jeble (2018: 36) which states that *big data* can be used to make intelligent and decisions *real-time* in improving business results. In today's era, business executives are challenged with high expectations from customers, high competition, rising labor and material costs and shorter product life cycles. Globalization blurs boundaries between countries. Location and distance from markets are no longer barriers to market access. In such a turbulent environment, companies need to continuously scan for risks and opportunities and make business decisions quickly based on available data (Jeble, 2018: 40). This is in line with the results of Merendino's research (2018: 67) which shows that *big data* significantly influences decision making. *Big data* has the potential to disrupt the organization's senior management, encourage directors to make decisions more quickly and to shape their ability to cope with changing environments. The new paradigm in searching data and information (via *big data*) has influenced all aspects of consumer behavior where consumers have switched from traditional sources (manual) to the internet media to collect, store, manage, and manipulate large

amounts of data and information at high speed at the right time so that it can be a basis for consumers to make purchasing decisions *online*.

Interesting and creative content about a product offered *online*, gives a high contribution to attracting consumers in making transactions. The results of this study are consistent with research conducted by Anand (2014: 83) which states that *content marketing* is one of the marketing strategies that provides content that suits the desires and needs of consumers. *Content marketing* is a medium for consumers to obtain data and information related to the products needed so that purchasing decisions can be implemented properly. *Content marketing* is very closely related to purchasing decisions, the need alone is not enough to immediately make a purchase decision, of course consumers need a variety of accurate information so there is no mistake in making a purchase decision and the source of information is *content marketing*.

Conclusions

The results of the analysis show that *big data* is quite potential as data and information in making purchasing decisions *online* in Indonesia, *content marketing* has a positive influence on consumer purchasing decisions *online* in Indonesia.

Based on the results of the analysis show that the variables *big data* and *content marketing* simultaneously have a significant effect on purchasing decisions *online* in Indonesia. The variable that has the dominant influence on purchasing decisions *online* in Indonesia is *content marketing*. This shows that the more positive *content marketing* presented by marketers then can improve consumer purchasing decisions *online* in Indonesia.

Suggestions

It is expected that marketers can present *content marketing* that provides information, educates, and is relevant to the wants and needs of consumers so as to create a shopping experience that benefits all parties.

For further researchers to be able to develop related research variables in order to enrich the reader's insight and provide broader knowledge and more benefits.

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