

Influence of Artificial Intelligence on Consumer Buying Behavior

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Abstract

Consumer behaviors are dynamic and this as a result of different factors that interplay during the process of buying. Marketers and producer are always in search of new ways to identify how to influence this behavior, that is, the buying behavior of consumers that will give a good outlook on their product. To this end, this research work was carried out to consider how artificial intelligent influences the buying behavior of consumers when making buying decision. This study considers the influence of artificial intelligence on three variables that are: consumer purchasing decision, buying pattern and consumer purchasing outcome. 250 questionnaires were distributed but only 225 were useful to the study. The data was analyzed using spss. The result shows that artificial intelligent has the highest influence on consumer purchasing decision followed by consumer purchasing outcome with buying pattern of consumers having the least. The study recommends that, producers and marketers should use artificial intelligent for influencing purchasing decision, at arriving at purchasing outcome and influencing their buying pattern.

Keywords : Artificial Intelligent, Consumer, Buying Behavior, Purchasing Decision, Buying Pattern

Introduction

Consumers have increased the use of artificial intelligence (AI) technologies for everyday work of life, whether knowingly or unknowingly (An, 2017;Krogue, Larsen & Parry, 2017 and Weber, 2016). With the rate of increase in the use of smartphones, coupled with digital personal assistants that are aided by natural language processing (NLP) and speech recognition program, such as Apple's Siri and Google's Allo, they are becoming the choice apps for searching information and personalized recommendations for products and services (An, 2017). For traveling and tourism, the combination of NLP and machine learning, chatbots (integrated to popular messaging social media apps such as WhatsApp and Facebook Messenger) and robot concierges which are made available in assisting tourist when making decision on hotels reservation, booking flights, other attraction, tour packages etc.

The point of view from the industry perspective, the advancement in AI capabilities will translates into business advantages as AI will enhance

streamline of business processes, provision of better buyers experience which will lead to increased productivity (Krogue, Larsen & Parry, 2017; PwC, 2017). From this, it can be seen that the pace by which companies adopt AI is accelerating with 75% executives from survey carried out in 2016, revealing the plan of actively implementing AI within a planning horizon of three years (Economist, 2016). Consumers will tend to benefit more as a result of companies adopting, advancing and implementing of AI across different industries, thereby, giving rise to more opportunities for consumers to enjoy various benefits that will be offered via sophisticated tools that accompany the adoption of it.

In addition, the competition every organization engaged in is the gaining of loyal customers and at the same time, maintaining them. Howbeit, it has never been an easy task accomplishing this due to the fact that several companies as well as brands are in the competition as well to make abundant profit while sustaining customers base simultaneously. The study of consumer buying behavior played a major role in understanding the factors that influences consumers in making buying decision. Consumers are the main focus of the process in marketing and the standard to measure either success or failure of goods and services. To this end, most companies study consumer behavior because on it hinged the possibility of succeeding. Therefore, acceptance and adoption of AI will be determined by the influence it is going to play on consumer buying behavior since all effort of producers and marketer is to influence buyers' behavior favorably towards buying their product.

Furthermore, economists during the early 80's tends to think about consumer privacy as information asymmetries within a pivotal transaction: take for instance, a consumer will want to hide their interest to pay exactly the same way a firm too hides their real marginal cost. Buyers that have less favorable details (say a low credit score) would prefer to withhold it exactly as the sellers would want to conceal product that are of poor quality (Posner 1981; Stigler 1980). Information economics makes a suggestion that in most cases, both sellers and buyers have an inducement to hide or reveal information that is

private and those incentives are usually fundamental for market efficiency. Considering this in a single transaction context, less privacy cannot be considered to be necessarily bad for efficiency in the economic. Therefore, data technology that shows the type of consumer could expedite an enhanced match between consumer and product type; and data technology which aids buyers in quantifying the quality of product which might motivate production of high quality.

However, AI agents are to meet a standard level of precision in visual object detection, facial recognition and document classification. Self-directed cars should be able to navigate effectively in various weather conditions; for the game-playing, agents should defeat various machine or human opponents; and data-mining agents are to learn about individuals in other for the advertising to be targeted towards them on social media and other available platform. The artificial intelligence of robot is double intelligence of persons that have the capacity of been trained and re-trained, self-realization and the development of both behavioral and creative ability to innovate skills and competences.

The robot is a representative of program and technological cognitive complex. Expert in cognitive psychology investigated how effective machine learning skills has offer ways to allow for combination of both cognitive psychology and artificial intelligence. The approach provides a preparation for neural networks that has been accumulated using data of existing behavior. This approach could be said to be a combination of scientific theories of ways humans behave couple with flexibility of the neural network which aid in making better decision by humans in extreme cases and in space. From real life perspective, it makes it possible to accurately determine behavior of human digital twin within extreme situations and space.

Consumers are always faced with situation whereby they make decision. This decision will be determined by what they face and they are always faced with one situation or the other. One of the major decisions they make is buying decision. They might decide to buy a product due to some reason which could be: need for the product,

referral of the product, willingness to try a product or such product given as gift. To this end, some department in companies such as marketing or/and research and development studies and analyzes this consumer behavior in other to set-up new product or to develop the existing one to meet their demand. For example, a company might study and analyze the purchasing time, their mode of buying quantity purchased and consider the type of product or services. This information can only be gotten through artificial intelligent and it is usually so if the purchases are carried out using the e-platform, though not restricted to it.

From the activities mentioned, the pivotal point is to satisfy customer in other to earn their loyalty. However, this could be done by minimizing cost and generate maximum revenue in a better and smarter way. Globalization and boom experienced in the use of electronic social media and website will enable consumers to make comparison between goods and services as well as their price simultaneously. Marketer therefore needs a smart method in other to attract consumers and as well compete in the global world.

To a large extent, through artificial intelligent, a lot will be achieved as a result of studying human behavior and how they make purchasing decision. It has been able to predict buying pattern of consumers to a great extent therefore enabling producers and advertisers make tailored and targeted advert. Unfortunately, as much as artificial intelligent has cause great change; the impact is yet to be felt in most of the third world country. Producers and marketing manufacturer are yet to have the full grasp of it thereby shortchanging themselves and denying even consumers access to varieties of product that they might desire to buy. To this end, this study intends to fill the gap of how artificial intelligence can influence consumer buying behavior which in turn gives better insights to producers and marketing practitioners on how to serve consumer in a more effective way.

Literature Review and Hypothesis Development

Artificial Intelligence, Consumer Purchasing Decision

This research starts by exploring artificial intelligence by firstly examining 'intelligence', which, in the human context, can be defined as one's ability to: learn, deal with a novel situations, comprehend and handle abstract terms, and as well using knowledge in manipulating one's environment (Legg and Hutter, 2007; Sternberg, 2017). Following existing conceptualizations, we can treat artificial intelligence to be "computational agents that act intelligently" (Poole and Mackworth, 2010 p.11). The above definition is a complete departure from previous view about AI. It conceptualizes it as machines that can display human like intelligent in two important ways. It focuses on acting intelligently through performing the following outlined processes that are learning, memorizing, perception, reasoning as well as problem-solving towards goal-directed behavior.

Moreover, previous studies conducted claim that the buying behavior of consumers can be considered as unique based on the survey conducted on consumer buying behavior (e.g. Manali Khaniwale 2015; Baliga and Ely 2011 Adholiya et. al (2018), the studies looks at the factor which influences consumer purchases process and what makes them make the final purchasing decisions. Therefore, there was enough evidence proving that consumers buying behavior are majorly influenced by both consumers' internal and external factors. The level of age, wealth, or talent possessed, we are all consumers (Manali Khaniwale 2015). Hence, understanding of consumer's is now a very important assignment for the marketers, dealers and salesmen.

Choices made by consumers are stalled by different biases and are greatly affected by puzzling factors which are not relevant to the problem under consideration (Coerdacier and Rey 2013). Some of the factors could be sunk cost (Baliga and Ely 2011), anchoring bias (Bodenhansen, Gabriel, and Lineberger 2000), and a host

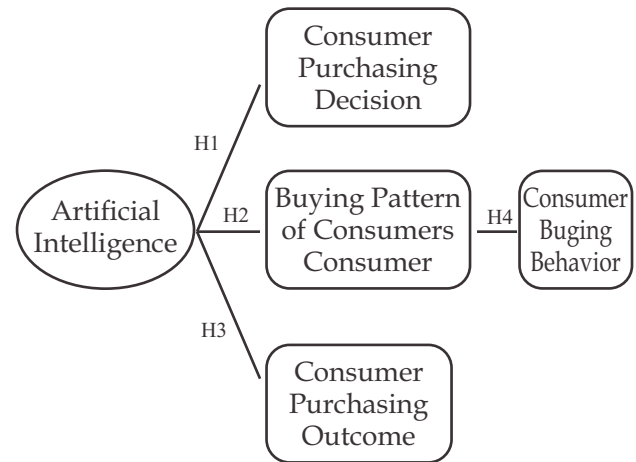
of others (Arandjelović 2017; Beykikhoshk et al. 2017; Arandjelović 2016). Considering the above and its implication on both companies that seeks to increase sales and consumers that seeks who seek to have good control over their decisions, its less surprising to see lots of amount of research carried out in this area (Sifa et al. 2015; Xie et al. 2009; Asghar 2016; Kaefer, Heilman, and Ramenofsky 2005). Sifa et al. (2015), in their research identified certain number of controllable factors that influences consumer's decision and what affects their purchase decision. They include their interactions, location, name etc. They found out, for instance, making use of variable such as creating more levels in a game have the ability to increase in-game sales (Sifa et al. 2015) which is reasonable to be applicable generally. Suh et al. (2004) made a proposition on method that can be used to predict purchasing decision of customers in support of realtime web marketing.

Other research was carried out by Kaefer, Heilman, and Ramenofsky (2005) made use of neural network in predicting the time to market new products via classifying new consumers as either 'bad' or 'good'. Tuarob (2013) forecast sales of product through data gathered from social media. Their result indicated a good one in the prediction of smartphone sales which can predict it up to three months in advance. Larivière and Van den Poel (2005), also employed the forest random techniques to a real life set of data in order to be able to predict and understand three significance measures of customers' outcome that are: their next buy, partial defection/ cancelling an ordered product and profitability of customers evolution. The novelty that was evidence in their work was that different variables input were discovered to be having the greatest impact based on the three mentioned predictions of interest (Larivière and Van den Poel 2005).

Another factor that has been increasing attention in the artificial intelligence community is the challenges that are involved in retaining customer churn (Xie et al. 2009) and also, increase in customer loyalty (Xie et al. 2009; Buckinx, Verstraeten, and Van den Poel 2007; Sifa et al. 2015). Retailers view that revealing possible context and complex dependent features of purchasing situations are very valuable in

knowing the potential of the customer buying behavior (Buckinx, Verstraeten, and Van den Poel 2007).

Figure I : Model of Relationship between Artificial intelligent and Consumer Buying Behaviour



Therefore, the research considers the null hypothesis:

H₀₁: There is significant relationship between artificial intelligent and consumers purchasing decision.

Artificial Intelligence, Buying Pattern of Consumers

Dawson et al (2006) defines buying behavior to be set of attitudes that depicts the patterns of choices made by consumers. Aside from internal factors that are essential which are obvious as influencer of buying behavior, there are various degree of external situational context which affect the choices been made by consumers. It can then be said that different combination of consumer's buying consciousness and other factor are external incentives that have the capacity of remodeling pattern of behavior (Lawan and Zanna, 2013). Purchase behavioral pattern of consumers exhibited mostly in developing economies has witnessed sharp change as a result of global interaction, improvement in information and communication technologies, increase in per capita income, urbanization, improvement and awareness of both education and health sector, changes in the family sector as well as lifestyle and household movement that tends towards higher

income groups (Rao, 2000; Shetty, 2002; Deshingkar et al., 2003; Vepa, 2004; KPMG, 2005; Kaushik, 2005; Kaur and Singh, 2007; Pingali, 2007).

Research carried out by Eng, Douglas and Verschure (2015) carried out a research on an interactive space that learns to influence human behavior. The main focus of the research is the design of intelligent environments space that can influence its users action and how such action can be learned. Distributed adaptive control was applied to the learning of effective cues that act as a guide for visitors towards a specific direction. The result shows that by using learning mechanism, Ada was able to influence the behavior of visitors by learning to deploy specific types of cues.

To build on the seminal work of Russell and Norvig (2016), the concept “computational agents that act intelligently” does not measure performance of artificial intelligence when considering fidelity to human behavior rather performance known as rationality (Russell and Norvig, 2016). We can refer to AI as rational if it does the “right thing” considering what it knows. From a rational view or perspective of Artificial Intelligence, it acts in other to achieve best desire outcome or in uncertainty, the expected outcome that is best. Distinguishing between rational behavior and human, suggestions here are not that human are not really rational but rather sometimes, human behavior might not necessarily get the best final outcome (Kahnemann and Tversky, 1979).

To emphasize Simon (1996), human behavior is bounded rational, that is, they are limited by the information they have, the cognitive abilities, and the unlimited amount of time they have to make such decisions. Secondly, on the key notion element of artificial intelligence is “computational agents”. Referring again to Russell and Norvig (2016), in information systems, an agent observes things in the environment and therefore acts upon what is in the environment. Human agents observe via their eyes, what they hear and through other organs, and act on what has been observed by using the hands, legs or voice. Computer agent makes use of sensors like cameras, or keystrokes to

observe inputs thereby acting on the environment by moving objects or displaying output on a screen or writing files. Therefore, including the notion, “computational agents” we postulate artificial intelligence as an agent that solves problem practically as against only in principle.

Research carried out by Tussyadiah & Miller (2019) on the perceived impacts of artificial intelligence and responses to positive behavior change intervention. Questionnaire was distributed to a survey panel online and 621 was analyze. The research targeted resident of UK and USA who traveled within a certain time frame and have stayed in commercial accommodation or hotel. The study found out three underlying views of Artificial Intelligent impacts that are the Laggards, the Aficionados and the realists. The study suggested that mainstream consumers belongs to the realists and are likely to respond positively to AI recommendation which shows that there is a positive role between AI response to behavioral change.

From the empirical evidence, we therefore have the hypothesis as

H₀₂ : There is significant relationship between artificial intelligent and buying pattern of consumers

Readiness of Producers in Adopting Artificial Intelligent, Consumer Purchasing Outcome

With the recent breakthrough in computing capabilities, there have been unprecedented developments in artificial intelligence technologies in the area of recognition of voice, natural language processing as well as machine learning. As a result of this, there have been increasing interests in intelligent based product; therefore, there is also an interesting increase in artificial intelligence technologies. Intelligence product can be described as physical objects which possess intelligence to make independent decision and actions arising from its interaction with the environment where it's operating (González García et al., 2017). If intelligent products can be considered as an innovative IT product, a proper knowledge of the factors that affects the

behavioral intention to the use of AI-based intelligent product will start by understanding previous research of the adoption of innovative products. Different scholars have developed different theories and model in explaining this phenomenon.

Jarvinen and Taiminen (2016) carried out a research to investigate organizational process in developing valuable content in meeting customers' needs and integrating marketing content with the sales process. The researcher finds out that the use of marketing automation to generate high-quality sales via content personalization and targeting the behavior of customer.

Most of the studies conducted on the use of innovative products are rooted in the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology and Theory of Planned Behavior (TPB) (Grob, 2015). There has been wide use of TAM in explaining the intention of using it in different fields that includes internet-based intelligent system (Changchit, 2003), intelligent healthcare systems (Chen et al., 2017; Hsieh, 2015), intelligent system of advertising intelligent advertising systems (Aguilar and Garcia, 2018), intelligent use of robots (Liang and Lee, 2017) and web 3.0- intelligent based learning environment (Changchit, 2003). The UTAUT as well as TPB have overtime been made use in analyzing intelligent games (Lim, 2003; Hamari and Koivisto, 2013) also in intelligent healthcare systems (Fan et al., 2018), agent-based research systems (Zhang and Zhang, 2007), the intelligent learning systems (Fernández-Llamas et al., 2018; Roll et al., 2018) and system of advertising that recommends (Oechslein et al., 2014).

It is expedient for developers of product and investors mostly corporate investors to be able to predict the various effects of these factors on consumers' acceptability of AI-based product that are intelligent at diffusion time. An understanding of the models that best explain the acceptance phenomena and the factor that influence the purchase of intelligent AI-based product will be of help on this matter. There is an adoption of TPB, TAM, Value-based Adoption Model (VAM) and UTAUT in order to create an understanding on the acceptance of intelligent goods and services.

Firstly, TAM was developed from TRA for the purpose of making a better understanding of the users acceptance uses of information system (Davis, 1985, 1989). This model is widely used in explaining the behaviors of consumers toward adoption of technology (Lee et al., 2003).

Over the time, TAM has been used severally in the study of the acceptance of different types of information technology (Kim and Shin, 2015; Karahanna and Straub, 1999; Subramanian, 1994; Adams et al., 1992). It is usually referred to as a robust acceptance theory (Hendrickson et al., 1993; Segars and Grover, 1993). For instance, TAM was used in explaining business intelligence system (Wang, 2016) wearable gadgets such as smart watch (Chuah et al., 2016, Kim and Shin, 2015; Yang et al., 2016), intelligent tourism (Venkatesh and Davis, 2000), use of smart in-store technology (Kim et al., 2017), use of smartphone credit card (Ooi and Tan, 2016), and a host of others.

In the article of Al-Sukkar, Hussein and Abu (2013), they identify the effect of applying artificial intelligence in fashioning their marketing strategies. The study revealed that there is an effect of applying artificial intelligence for shaping organization marketing strategy that will be deployed through cost leadership, direct marketing, diversification and alliance.

From various empirical evidence and theoretical arguments, our hypothesis is thus stated

H₀₃ : There is significant relationship between producer readiness in adopting artificial intelligent influencing the consumer purchasing outcome

Artificial Intelligence, Variables Affecting Consumer Buying Behavior

Here, variable that affects consumer buying behavior is the combination of the three dimension this study considers which are Factors that influenced consumer buying behavior are multi-faceted. This could be prices or any other factor such as cookies, retargeting and so on that have ability of influencing their buying decision which they themselves might not be aware of but affect their decision making process(Asamoah

and Chovancova, 2011). According to traditional economist assumption, markets are efficient in their duties and the participants in the market are rational. Artificial intelligent has the capacity to influence the dimension of consumers buying behavior by studying collecting data on how consumers makes buying decision and analyzing the basic perception leading to consumers purchases. Artificial intelligent might be able to gather that sometimes, the right pricing strategy that is been supported by good promotion and distribution programs can affect all the dimension of consumer buying behavior thereby influence their buying decision (Stivings, 1996).

Therefore, without regard for age, level of education, wealth or talent, everyone is a consumer. Therefore, the understanding of their behavior is a very important assignment for salesmen, dealers and marketers to comprehend. Their behavior can be referred to all feelings, thought and actions which individuals have or do before or during buying idea, product or service (Al-Salamin and Al-Hassan, 2016). The concept of buyers' behavior provides answer as at to: why, when, where and what makes buyers makes purchases. Therefore, the result of buyers' behavior is the buyer's decision on choice of product. Consumer behavior studies individuals, groups or organizations on how they make selection, the way they buy, make use and eventual disposal of ideas, services, goods or experience in order to satisfy their wants and needs (Kotler & Keller, 2012). According to Blackwell et al (2006), he provided a common model by which a consumers makes decision, which according to him are problem recognition, information search, evaluation of alternatives, purchase decision and post purchase decision. He noted that they are processes by which consumers goes through before making purchases decision.

Millennial and Generation Z are internet savvy and will want to make buying through e-platform making sellers gather vital information about their previous purchases which is a great way to gather information on how they make their decision on buying and they form a large section of the market (Manoj and Sinha, 2019). Since data are been able to be traded, stored and later used even after a long time after transaction, this will make data useable

in future through AI (Jin, 2018). Issues arise when either of the party refuses to give further details in future for a particular transaction. Factors that influence the consumer and the buying pattern is the willingness of the buyers of supplying information especially sensitive ones because the seller might be reluctant in restricting the data collected for just the purpose the data was collected and the information collected might get to the wrong hand, thereby, becoming uncontrollable and negatively used by any other party that has access to the information (Acquisti et al. (2016) and Odlyzko (2003)). The big data has been the main data collector which identifies individual consumers by itself and in some cases combines with other data sets with the sole aim of having this data to influence the buying decision of buyers. All of the dimensions that affect buying behavior could be either internal factor or external factor but each has the ability to influence the outcome of the buyers' decision. The external factor which is information and it is majorly gotten through artificial intelligent gathering (Jin, 2018).

From the above and various evidences from the discussion, our hypothesis is thus stated

H₀₄ : There is a significant relationship artificial intelligence and variables affecting consumer buying decision.

Methodology

The study employed survey research and employed cross sectional research design method, which is considered as the most suitable method for this research due to its longitudinal surveys that takes longer period to be carried out compared to cross sectional study (Kothari & Garg, 2014). The population of the study is made up of youth that uses internet and buy product online. Due to this, an online questionnaire was administered to the respondent with the targeted groups that have vast knowledge of the internet and as well member of some specific social media group were trading activities takes place. Data were collected through primary source using structured questionnaire. A total of 250 questionnaires was administered to both producers/ marketers and the consumers. Out of the 250 questionnaire that was administered, 240 was returned and 225 was useful for the study.

Reliability Test : where: Consumer purchasing decision =0.715* Buying pattern of consumers =0.732* Consumer purchasing outcome =0.781* Artificial intelligent = 0.851. A Cronbach Alpha coefficient of 0.7 was considered as a sign of reliability of instrument that is used in measuring variables of the study. George and Mallery (2003), said a Cronbach's alpha coefficient of > 0.7 is acceptable to be internally consistent of the items in the scale measuring the variables.

Descriptive statistics was adopted and the hypotheses were tested using correlation statistics, sample and the linear regression model. Because the study's independent variable is consumer buying behavior factors, multiple regression models was formulated. The model was employed to consider the relationship that exists between consumer buying behavior factors and artificial intelligent. The linear regression model presents the relationship between artificial intelligent and consumer buying behavior variable. The model was proposed as follows:

$$Y = \chi_0 + \chi_1 X_1 + \chi_2 X_2 + \chi_3 X_3 + \dots \dots \dots (1)$$

Where χ_0 , χ_1 , χ_3 and χ_4 = the unknown estimates to be determined (regression coefficients)

Test of Hypothesis and Result

Hypothesis One: there is statistical significant relationship between artificial intelligent and consumer purchasing decision

Table 1 : Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549 ^a	.301	.293	2.680
a. Predictors: (Constant), PS				

Source : Primary Data

From the table above, R-value here has .549 indicating that there is a strong positive relationship existing between artificial intelligence and consumer purchasing decision. The result shows that artificial intelligent influences consumers purchasing decision to 54.9 percent. The R square indicates 30.1 % of the variance is explained by the model and is moderately have high impact in influencing the consumer purchasing decision.

The table above measures the Analysis of Variance (ANOVA). It is used to assess the significance of the fitted regression model. From the table above,

Table 2 : ANOVA Statistics

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	266.215	1	266.215	37.076	.000 ^b
	Residual	617.501	86	7.180		
	Total	883.716	87			
a. Dependent Variable: CONNTSTA						
b. Predictors: (Constant), PS						

Source : Primary Data

Y = Artificial intelligent; X1 = consumer purchasing decision; X2 = buying pattern of consumers; X3 = consumer purchasing outcome X4= variables affecting consumer buying behavior; = error term.

F-ratio (F-calculated) value is 37.076, P = 0.000. Since P < 0.05 the hypotheses was accepted. There was statistical significance between artificial intelligence having effect on consumer purchasing decision.

Table 3 : Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
1		B	Std. Error	Beta		
	(Constant)	2.406	2.486		.968	.336
	PS	.868	.143	.549	6.089	.000

a. Dependent Variable: CONNTSTA

Source : Primary Data

Table above shows the fitted model coefficients. It indicates that artificial intelligent influenced consumer purchasing decision (6.089) significant with 0.000 at 0.05 level of significance.

Hypothesis Two: there is statistical significant relationship between artificial intelligent and buying pattern of consumers.

Table 4 : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 ^a	.135	.125	2.982

a. Predictors: (Constant), RM

Source : Primary Data

The result shows that R value is .367. It shows that the R-value of 36.7% of the variance is explained by the model and has a moderate impact on buying pattern of consumers. The R square of the modal summary is .135. It means that 13.5% of the variance is explained by the model and have a low impact on the consumer buying behavior

Table 5 : ANOVA Statistics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	119.011	1	119.011	13.384	.000 ^b
	Residual	764.705	86	8.892		
	Total	883.716	87			

a. Dependent Variable: CONNTSTA
b. Predictors: (Constant), RM

Source : Primary Data

The ANOVA table above shows that artificial intelligent is significant in influencing buying pattern of consumers at calculated Fratio (F-calculated) value of 13.384 with a p value of 0.00 level of significance. The hypothesis was thereby accepted because it shows that the model has statistical significant on the buying pattern of consumers which influences the buying decision of consumer.

Table 6 : Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.170	3.098		1.992	.050
	RM	.685	.187	.367	3.658	.000
a. Dependent Variable: CONNTSTA						

Source : Primary Data

The result above revealed that there was a statistically significant relationship between consumer purchasing outcome and artificial intelligent with a coefficient of 3.658 with significance 0.000 of at a significance level of $P < 0.05$

Hypothesis Three: there is statistical significant relationship between artificial intelligent and consumer purchasing outcome

Table 7 : Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445 ^a	.198	.189	2.870
a. Predictors: (Constant), MB				

Source : Primary Data

From the table above, it can be seen that the R value is .445 which shows that the model account for 44.5% of the consumer buying behavior through artificial intelligent with an R square of .198 indicating that 19.8 % of the variance can be explained by the model.

Table 8 : ANOVA Statistries

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	175.375	1	175.375	21.292	.000 ^b
	Residual	708.341	86	8.237		
	Total	883.716	87			
a. Dependent Variable: CONNTSTA						
b. Predictors: (Constant), MB						

Source : Primary Data

Table above, measures the Analysis of Variance (ANOVA) used to assess the significance of the fitted regression model. From the table above, Fratio (F-calculated) value is 21.292, P = 0.000. Since $P < 0.05$ the hypotheses was accepted. Therefore, there is a statistical significance between artificial intelligent and consumer purchasing outcome.

Table 9 : Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
1	(Constant)	B	Std. Error	Beta	2.267	.026
		5.774	2.547			
	MB	.731	.159	.445	4.614	.000
a. Dependent Variable: CONNTSTA						

Source : Primary Data

The coefficient shows that the model used in determining the variance is significant at p value of 0.000 with the T value at 4.614

Hypothesis Four: artificial intelligent has statistical significance on variables affecting consumer buying behavior

Table 10 : Coefficients

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.382 ^a	.146	.136	2.962
a. Predictors: (Constant), MS				

Source : Primary Data

The table above shows that the R value is .382 indicating that there is a positive relationship that exists between artificial intelligence and variable affecting consumer buying behavior. The result shows that artificial intelligent influences the variables affecting consumer buying decision to 38.2%. The R square indicates 14.6 % of the variance is explained by the model and has moderate impact in influencing the consumer purchasing decision.

Table 11 : ANOVA Statistrs

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	128.999	1	128.999	14.699	.000 ^b
	Residual	754.717	86	8.776		
	Total	883.716	87			
a. Dependent Variable: CONNTSTA						
b. Predictors: (Constant), MS						

Source : Primary Data

The table above was used in measuring the Analysis of Variance (ANOVA) used to assess the significance of the fitted regression model. From the table above, Fratio (F-calculated) value is 14.699, P = 0.000. Since P < 0.05 the alternative hypotheses was accepted, because it is statistically significant that artificial intelligent influences the variable affecting consumer buying decision.

Table 12 : Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.501	2.871		2.264	.026
	MS	.632	.165	.382	3.834	.000
a. Dependent Variable: CONNTSTA						

Source : Primary Data

From the above result, it shows that there was a statistical significant relationship between artificial intelligent and variables affecting consumers buying behavior with a coefficient of 3.834 with significance 0.000 of at a significance level of P < 0.05.

Discussion of Findings

From the analysis of the result above, artificial intelligence in relations with consumer purchasing decision has the highest relationship with 57%. It shows that artificial intelligence has a great influence on the purchasing decision of consumers. This is consistent with the result of the survey carried out by Tussyadiah & Miller (2019) which shows that artificial intelligent changes the behavioral pattern of consumers thereby influencing their purchasing decision. Also, artificial intelligent and consumer purchasing outcome has a high of 44.5% indicating there is a relationship between artificial intelligent and the way consumer makes purchasing decision. This is consistent with the result of the research carried out by Jarvinen and Taiminen (2016) which found out that content personalization and targeting the behavior of customer influences consumers purchasing decision while artificial intelligent and buying pattern of consumers have the least relationship among the variables with 36.7% relationship. So, there is 36.7% relationship that exists between artificial intelligence and the buying pattern.

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Conclusion and Recommendation

The study assessed the relationship that exists between artificial intelligent and consumer buying behavior in order to contribute empirical evidence to producers including marketers that uses e-platform. To this end this research has filled the gap by establishing the relationships that exist between consumer purchasing decision, consumer purchasing outcome, buying pattern of consumers and artificial intelligent statistically by making use of different buying e-platform to sample their opinions. The study concludes that there is a notable significant effect of artificial intelligence on consumer purchasing decision and consumer purchasing outcome however, there is a less relationship but significant between artificial intelligent and buying pattern of consumers.

The study further revealed that artificial intelligent is a salient predictor of consumer buying behavior therefore it should be a major instrument when the objective is to influence the buying behavior of consumers. The study therefore recommends that, producers and marketers should use artificial intelligent as an instrument for influencing purchasing decision, at arriving at purchasing outcome and influencing their buying pattern.

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