Journal of Marketing and Consumer Research
ISSN 2422-8451 An International Peer-reviewed Journal
Vol.87, 2022

Covid 19 Pandemic Government Interventions and Their Implications on Shopper Behavior: A Study of Consumers in Kenya

Justus M Munyoki[1] Angeline Mulwa[2]
1. Professor of Marketing, P.O Box 30197-00100 Nairobi, Kenya
2. Senior lecturer, University of Nairobi . P.O. Box 30197-00100 Nairobi, Kenya
*Email of the corresponding author : jmmunyoki@uonbi.ac.ke

Abstract
Studies on consumer behavior continue to attract attention all over the world, because of the implications they have in the market. Behavior as expressed through attitude changes and perceptions can be brought about by many factors including government interventions. The year 2020 has been characterized by many government interventions in trying to contain the corona virus pandemic, and it is important to assess how the measures have influenced shopper behavior. Using the consumer behavior theories (Bagozzi and Kimmel 1995 , Bagozzi et al. (2002) with specific reference to the Rational choice theory (Adam Smith, 1776) and the and the functional attitude theory (when Smith, Bruner, and White (1956) and Katz (1960), the researchers sought to determine the effect of government intervention measures on influence on shopper behavior, and whether shopper demographic characteristics either moderate or mediate the relationship between government intervention measures and shopper behavior. Descriptive cross sectional design was used, with a stratified sample drawn from former students from the School of Business, University of Nairobi. Data was analyzed using descriptive and inferential statistics. The study found that government intervention measures significantly influenced shopper (F value of 3.962, p = 003 < 0.05), and accounted for 22.6% of the changes in shopper behavior ($R^2 = 0.226$). The study found that that contrary to the popular belief that consumers in developing countries put price before quality, in a situation like the corona virus pandemic which has direct effect on the consumers, quality of the products used for prevention comes first and the consumers will buy provided the product is of the right quality. The study found that shopper characteristics have a significant mediating effect on the relationship between government intervention measures and shopper behavior. The researchers recommend that government and other policy makers have relevant information about shopper behavior as a basis for implementing certain measures that may negatively influence their behavior and injure the economy.
Keywords: Covid19 pandemic, operational issues, shopper behavior, consumer attitude
DOI: 10.7176/JMCR/87-03
Publication date: October 31st 2022

1. Introduction

Studies of consumer behavior have been done for a long time, by both marketers as well as psychologists, and researchers largely appreciate that every behavior involves a choice, even if the alternative is taking no action and thus maintaining the status quo (Ajzen, 1996; Ajzen & Fishbein, 1980) . Previous researchers have found that there are many factors that influence consumer behavior, some of which are environmental while others are market oriented (Munyoki, 2011). It is also clear that there are many factors that influence consumer behavior . Behavior is itself part of the attitude that consumers form as a result of exposure either to market related or environment related factors.

In this study, a shopper and a shopper are used interchangeably, given that the definition of the two is largely the same. According to merriam-webster.com , a shopper is a person who purchases goods and services for personal use, while a consumer is a person who a person who buys goods and services. Behavior is itself seen as a manifestation of the attitude perceptions that consumers have towards a situation, such as purchase decision. Government interventions are those measures that a government undertakes either to protect the consumers, safeguard the economy or protect citizens from a certain issue. In this case the interventions are those undertaken by the government to stop the spread of corona cirus pandemic in Kenya.

Whether by psychologists or by marketers, or any other professionals, there is a consensus that consumer behavior is about making choices, given some alternatives. Although not always clearly recognized, every behavior involves a choice, even if the alternative is taking no action and thus maintaining the status quo (Ajzen, 1996; Ajzen & Fishbein, 1980). Attitude has been studied as a predictor of behavior, but mainly focusing on broad attitudinal dispositions and their possible effects on specific behaviors (for example, Eagly & Chaiken, 1993).. In general therefore, it is possible to study attitude as an indicator of behavior.

The corona virus pandemic was never among the major challenges alluded to by researchers and authors as likely determinants of the 21st century. The SARS (Severe Acute Respiratory syndrome) Virus infection of 2003

had come and passed and people moved on with life, with performance of the world economies never being associated with the SARS. In December 2019, the World Health Organization (WHO) China office reported a case of pneumonia like infections of unknown etiology (unknown cause) in Wuhan City, Hubei Province of China. The infections spread so fast that by the end of January 2020, it started being reported in other countries and continents across the world.. On 11th March 2020, the World Health Organization declared it a Pandemic. This meant that the WHO was recognizing the importance and significance of the infection and the likely magnitude of impact it is likely to have worldwide, and was thus signaling all countries across the globe to give it very serious attention in trying to control its spread. As it were countries all over the world started putting measures to try and stop spread of the virus. Some of the measures included measures to control the virus, while others were meant support the economy from collapsing. The measures to control the spread included closing down universities and institutions of learning, social distancing, Travel restrictions , impositions of curfew and Hygiene requirements. For instance, In Japan, where the first case of corona virus was reported in mid-January 2020, the initial response of the Japanese government to the COVID-19 outbreak was a policy of containment that focused on the repatriation of Japanese citizens from Wuhan, the point of origin of the pandemic, and the introduction of new border control regulations (*https://en.wikipedia.org/wiki/2020_coronavirus_pandemic_in_Japan).* This was followed by other measures which included closure of schools closed and restriction of movement in and out of Japan.

For most countries in Africa, the response has been to shut down institutions, places of worship and other social places, and banning of social gatherings like funerals and weddings. Social distancing has been emphasized, even as governments quickly expanded and prepared special hospitals and isolations centres in readiness for the expected number of infections. Closing down a country's borders, open air markets, restricting movement across regions, and closing institutions of learning is definitely going to have far reaching effects on the economies and social life of many African countries, most of whom have no capacity to sustain themselves without relying on the developed countries.

In Europe the responses have been more or less similar, geared towards shielding employees who may have to stay at home due to sickness or due to quarantine. Itali was the hardest hit by the pandemic, perhaps because of its close ties with China (Hans-Werner Sinn , 2020) .The first case of corona virus was reported in the country on 31st January 2020, when two Chinese tested positive in Rome, then it started spreading so fast that by mid-April 2020, Italy had become one of the world's centres of active coronavirus cases with 103,616 active cases. The Italian government has taken a number of measures which include suspending all flights to and from China and declared a state of emergency.

In Kenya, the measures undertaken to slow down the spread of the pandemic include restrictions on movement across certain counties that were perceived to be the most affected by the pandemic, closure of all institutions of learning closure of social places including places of worship, a required for all people to frequently wash hands, sanitize and put on face masks at all times. Further, a curfew was imposed against movement out of the house between 7.00pm (EAT) and 5.00am. When a government undertakes measures, like the ones that have been undertaken by various governments, this is likely to have an effect on the behavior of consumers. There appears to be no documented research that tries to explain how the interventions really affect shopper behavior, and whether demographic characteristics of the shoppers have any influence on this.

Many studies on government interventions seem to focus on the implications of the interventions on the economy .For instance, Thomas and Wang (1996), Kneller, Bleaney and Gemmell (1999), and Knowles and Garces (2000). The focus has been on the implications of government intervention on economic growth, without saying much about the effect of such interventions on the shoppers. Mwangolo (2015) examined the influence of Kenya government interventions on girl-child dropout in public primary schools in Malindi Sub-county, Kilifi County, Kenya and found that provision of sanitary pads by the government influences completion of girl child. More studies are therefore needed to focus more on the behavioral aspects of the consumers themselves. It is because of this that this study sought to determine the effect of COVID 19 government intervention measures on influence on shopper behavior, and whether shopper demographic characteristics either moderate or mediate the relationship between government intervention measures and shopper behavior

2. Literature Review

The study was guided by the General theory of consumer behavior and the functional attitude theory Consumer behavior theories have been studied for hundreds of years and many models have since evolved to explain various s aspects of the consumer.ost of them seem to suggest various reasons intentions for consumer choice behavior, and the intentions to buy (Bagozzi and Kimmel 1995 , Bagozzi et al. (2002) According to (Schiffman and Kanuk 2007),consumers are said to either fail to see or are ignorant of their options, or make a conscious effort not to consume. Traditionally, approaches to consumer behavior have been influenced by standard economic theory and models, which are based on the assumption of human rationality. Among the key theories guiding rationality is the Rational choice theory which was first described by Adam Smith in 1776 and states

that individuals use rational calculations to make rational choices and achieve outcomes that are aligned with their own personal objectives. The choices are geared toward the individual's best, self-interests.. The theory has been widely used by social and political scientist to try and explain human behavior in decision making. It borrows heavily from the game theory. The theories have their origins in the behavioral economics which draws on psychology and the behavioral sciences in assessing consumer behavior. This field of research has found a number of cognitive, social and emotional variables can impact on choice. Such variables include reference points; social factors; and time-inconsistent preferences. These are very relevant to policy makers and need to be taken into consideration when formulating or implementing policy on issues that can affect consumer behavior.

On the other hand, the functional attitude theory which goes back to the late 1950s when Smith, Bruner, and White (1956) and Katz (1960) separately and independently developed typologies of human attitudes in relation to the functions to which they believed the attitudes served, argues that attitudes are held by individuals because they are important and integral to psychological functioning. Accordingly, the attitude theory helps individuals to form opinions and feelings about situation and can shape individual and group behavior. White (1956) and Katz (1960) theorized that although two people might have an attitude with exactly the same valence, that attitude might serve very different functions for each person. There have been major advances in the study of attitudes, especially through the works of Fishbein and Ajzen, (1975, 1980) which focused on reasoned action, the symbolic approaches (Kinder & Sears, 1981) and Herek (1986, 1987). Herek (1986, 1987) supported both the reasoned action and symbolic approaches, and came up with the neofunctional approach to Attitudes, which proposed that different attitudes regarding the same attitude object may form for different purposes in different situations , and, as such, individuals may hold the same attitudes toward the object, but for a variety of different functions.The theory is very relevant today as it helps shoppers to react in certain ways (negatively or negatively) depending on the exposure to which they are subjected to . Thus when a government makes it mandatory for shoppers to maintain social distance, or not to travel freely, or to regularly wash hands before handling any product, this can have an impact on the attitude that the consumer has, which can be negative or positive.

Silvia (1983) argues that consumers may not be able to always make decisions that are rational and in their best interest, because they often lack sufficient information that sellers may not be ready to provide, hence the need for government intervention on order to protect consumers by ensuring that sellers provide sufficient information to make consumers make informed decisions.. Pettinger (2019) argues that although government interventions ate good, they should be limited to such areas as provision of public goods (e.g. national defense) from general taxation, basic health care and education standards, and environmental regulation and protection. Thus the purpose of interventions should be for the general welfare of the citizens. In this study, a shopper and a shopper are used interchangeably, given that the definition of the two is largely the same. According to merriam-webster.com , a shopper is a person who purchases goods and services for personal use, while a consumer is a person who a person who buys goods and services

Many studies on government interventions seem to focus on the implications of the interventions on the economy .For instance, Thomas and Wang (1996) studied cross-country data for 68 countries (10 East Asian countries plus 58 other developing countries) to estimate the effect of openness and macroeconomic stability, as well as government expenditures on economic growth. They found a significantly positive effect of openness and macroeconomic stability on economic growth and total factor productivity growth and also that government expenditure was significantly correlated with economic growth and total factor productivity growth, but in a non-linear manner. On the other hand, Kneller, Bleaney and Gemmell (1999) examined the effect of both government expenditure and taxation on economic growth using panel data for 22 OECD countries, and found that productive expenditure is significant and positively correlated with growth. Finally, Knowles and Graces (2000) examined the government intervention effect on the output of workers in Asian economies, and found no evidence of any correlation between government consumption and output per worker, once government consumption was measured in local prices. They found that that high levels of government ownership are correlated with lower levels of output per worker, and concluded that government owned firms were less efficient than their private sector counterparts. Mwangolo (2015) did a study to determine the influence of Kenya government interventions on girl-child dropout in public primary schools in Malindi Sub-county, Kilifi County, Kenya and found that provision of sanitary pads by the government influences completion of girl child. Head teacher do not consult all stakeholders in improving the sanitary conditions of the school. It was concluded that government policy on early marriages influences girls' drops out.

The conceptual argument related to this study is that government intervention measures are likely to affect consumer or shopper behavior. This is based on the fact that whenever there is an intervention by the government, it disturbs the operations of the economy and by extension affects the way consumers behave. Further, the changes that occur as a result of the government intervention measures are moderated or mediated by consumer demographic characteristics of the shopper. Arising from this line of conceptualization, three null hypotheses were formulated for testing:

H_1 Government intervention measures have no significant influence on shopper behavior

H_2: Shopper demographic characteristics have no significant mediating effect on the relationship between Covid 19 government intervention measures and shopper behavior

3. Methodology

The study was based on the positivist philosophy, which, according to Cooper and Schindler, (2006), assumes a quantitative approach of exploring phenomena. A positivist approach works with observable and evident social realities in which only phenomena that are observed lead to the creation of reliable data. The study adopted a descriptive cross sectional research design focusing on consumers drawn randomly from former students from the School of Business who graduated between 2013 and 2020. The stratified sample frame comprised 21 Bachelor of Commerce students, 74 Masters Students (Mainly MBA), and 12 Phd students, giving a total of 107 former students. A structured questionnaire was used to collect data, by emailing it to the respondents. The students were first called to confirm their email addresses and only those who respondents were including in the sampling frame. Descriptive statistics was done on all the variables of the study, while regression and correlation analysis were done to establish the hypotheses. To check on the reliability and validity, a pilot study was done by administering the questionnaire to five former students to see the quality of their Reponses and modify the questionnaire in case of any anomalies detected

The study targeted 107 respondents, categorized as Undergraduate, Masters and PhD students . Out of the 07 questionnaires emailed, a total of 75 were filled and returned, giving response rate of 70.1% . All the 36 items of the data collection instrument were subjected to Cronbach's Alpha test and found to have a Cronbach's Alpha coefficient of 0.849, which was considered good enough to warrant further analysis.

Descriptive statistics

The study sought to determine the demographic characteristic of the responded. This is because consumer behavior is expected to be associated with the demographic characteristics of the shopper. The demographic characteristics assess included age, gender and marital status. The results are shown in table 1

Table 1: Demographic characteristics of the respondents

Program		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	16	21.3	21.3	21.3
	Masters	49	65.3	65.3	86.7
	PhD	10	13.3	13.3	100.0
	Total	75	100.0	100.0	
Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	33	44.0	44.0	44.0
	Female	42	56.0	56.0	100.0
	Total	75	100.0	100.0	
Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 to 29 years	1	1.3	1.3	1.3
	30 to 39 years	13	17.3	17.3	18.7
	40 to 49 years	47	62.7	62.7	81.3
	50 years and above	14	18.7	18.7	100.0
	Total	75	100.0	100.0	
Marital Status		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	27	36.0	36.0	36.0
	Married	48	64.0	64.0	100.0
	Total	75	100.0	100.0	

From the table, we realize that 78.6% of the respondents were either masters or PhD level students, while 21.3% were undergraduate. 56% of the respondents were female, while 44% were male. 62.7% were aged between 40 and 49 years, with only 1.3% being less than 29 years old. This can be explained by the fact that majority of the respondents were Masters level graduates who had already done their first degree. 64% of the respondents were married while 36% were single. Marital students has been seen to influence consumer behavior and those married have been found to exhibit different shopping behaviors compared to those that are single.

Five government intervention measures, namely, closure of learning institutions, travel restrictions, social distancing requirements, impositions of curfew and hygiene requirements were assessed. These were among the initial measures that the government of Kenya took to try and control the spread of the corona virus pandemic. The respondents were asked to indicate the extent to which they agreed with various statements regarding each of the five items, on a scale of 1 to 5 (**Key:** 1. Strongly disagree 2. Disagree 3 Indifferent 4. Agree; 5.

Strongly agree). The results are shown in table 2

Table 2: Descriptive statistics on Covid 19 Government intervention measures

	N	Minimum	Maximum	Mean	Std. Deviation
Closure of learning institutions					
Closure of institutions of learning has affected my reading culture	75	1.00	5.00	3.2800	1.43847
Closure of institutions of learning has made me discover new ways of studying	75	1.00	5.00	4.1467	.99585
Closure of institutions of learning has increased my use of internet sources for information than before	75	1.00	5.00	4.4667	.90544
I now use the computer and mobile phone more often that before	73	1.00	5.00	4.3836	.86007
Travel restrictions					
I rarely use public means when travelling	74	1.00	5.00	3.8919	1.45779
I generally no longer like travelling by air	74	1.00	5.00	2.9054	1.25151
I only travel when it is absolutely necessary	74	1.00	5.00	4.1486	1.15489
I prefer working from home	74	1.00	5.00	3.8919	1.23386
Valid N (listwise)	72				
	N	Minimum	Maximum	Mean	Std. Deviation
Social distancing requirements					
Social distancing has affected how I select items in supermarkets	75	1.00	5.00	3.4267	1.27527
Social distancing has affected how I buy items from small scale dealers	75	1.00	5.00	3.4400	1.40693
Social distancing has affected how I interact with people in social events	74	1.00	5.00	4.4865	.92519
Impositions of curfew					
I am now more time conscious than before	75	1.00	5.00	3.9467	.98493
I spend less time comparing products than before	75	1.00	5.00	3.1067	1.36137
I now make heavier purchases to avoid shortages in the house	75	1.00	5.00	3.7600	1.22849
Hygiene requirements					
I am now used to washing hands before entering supermarkets	74	1.00	5.00	4.5270	.78029
I now use face mask without feeling bad about it	74	1.00	5.00	3.8514	1.18994
Sanitizers, soap and facemasks are now very essential products to me	73	1.00	5.00	4.3151	.94099
Valid N (listwise)	73				

As indicated in table 3, all the indicators regarding closure of institution of higher learning had a mean sore of more than 3.5 , with an exception of 'closure of institutions of learning has affected my reading culture' (M = 3.2800 SD = 1.43847). The highest was 'Closure of institutions of learning has increased my use of internet sources for information than before' (M= 4.4667 MD =.90544). This is an indication that closure of institutions of higher learning has affected the shoppers in many ways. Travel restrictions were also found to have had a major influence on shopper behavior, as all the indicators on travel restrictions had scores above 3.5, with an exception of the statement that 'I generally no longer like travelling by air'; which had a mean score of 2.9054. As of Social distancing requirements, the statement that 'Social distancing has affected how I interact with people in social events' had the highest mean score (M = 4.4865, SD = .92519) while the other two indicators had a mean score of more than 3.4). This demonstrates that social distancing measures had implications on the shoppers.. All the indicators of the intervention involving Impositions of curfew had mean scores of less than 4.0, with the highest being that of making the shoppers more time conscious ((M = 3.9467, SD = .98493). Finally, all the indicators of Hygiene requirements had a mean score of more than 3.5, which shows that hygiene requirement measures have had a significant effect in shaving the behavior of shoppers

In making purchase decisions, shoppers quality and price are sometimes major considerations, depending on the situation. Usually, shoppers like to make comparisons of various products and brands on the basis of the information available, and time pressure. In order to get some idea about the main considerations, the respondents were asked to indicate what they mainly consider when buying face masks and sanitizers. These are

the two main products whose demand had certainly increased during Covid 19 pandemic. The aim was to gauge whether it is the price or the quality that matters most to the shoppers especially as regards to protecting themselves from Covid 19 infection. The results are given in table 3.

Table 3. Key considerations when buying a mask or Face mask

Statement	N	Minimum	Maximum	Mean	Std. Deviation
Price of the face mask	75	1.00	5.00	3.8000	1.12706
Brand of the face mask	74	1.00	5.00	3.3378	1.20816
Quality of the face mask	74	1.00	5.00	4.4189	.87596
Price of the sanitizer	74	1.00	5.00	3.9189	1.01707
Brand of the sanitizer	73	1.00	5.00	3.7808	1.18141
Quality of the sanitizer	73	1.00	5.00	4.3288	1.01454
Valid N (listwise)	73				

From the results, it is found that shoppers give priority to quality when making a purchase decision regarding sanitizers and face masks. Second to consider is the price, followed by the brand. This seems to contradict that brand is a mark of quality, but it can be explained by the fact that at the time of doing this study, many brands of masks and sanitizers were still relatively new to the market and shoppers could not easily identify specific brands. This gives an opportunity for large companies that have already established themselves as big brands to to come up with sanitizers and face masks so that shoppers can associate the products with those companies . Similarly, small firms and start ups have an opportunity to makes sanitizers and masks that of high quality and use them to penetrate the market, with the hope that these products will grow into very strong brands within the Kenyan market

Lastly the shoppers were asked to indicate the extent to which they agreed with various statements regarding their attitudes and perceptions a result of government intervention measures to control the spread of the corona virus (**Key:** 1. Strongly disagree 2. Disagree 3 Indifferent, 4. Agree; 5. Strongly . The results are shown in Table 4

Table 4: Consumer attitudes and perceptions

Attitude	N	Minimum	Maximum	Mean	Std. Deviation
Since corona virus pandemic was declared, I prefer shopping in the supermarkets	75	1.00	5.00	3.2800	1.25806
I have developed negative attitude towards traveling by public means	75	1.00	5.00	4.0400	1.01927
Since the corona virus pandemic, I am now much more conscious of product quality than before	75	1.00	5.00	3.4133	1.10397
I no longer think it is important to travel abroad	75	1.00	5.00	3.0800	1.37310
Valid N (listwise)	75				
Perception	N	Minimum	Maximum	Mean	Std. Deviation
I consider shopping in the supermarkets as safer than in an ordinary retail shop	73	1.00	5.00	3.2192	1.34626
I consider products displayed by hawkers as unsafe	72	1.00	5.00	3.6528	1.15258
I perceive products from certain countries as bad	73	1.00	5.00	2.8219	1.27304
I perceive products made in Kenya as better that those from foreign countries	73	1.00	5.00	2.7808	1.05734
Putting on a face mask makes me feel bad	73	1.00	5.00	2.5753	1.35316
Valid N (listwise)	72				

As shown in table 4, consumer attitude and perceptions have been affected in many ways by the government intervention measures. As of attitude, the highest influence has been on travelling by public means, which shows that consumers have developed a negative attitude towards travelling by public means (M = 4.0400 , SD = 1.01927), followed by the statement that 'Since the corona virus pandemic, I am now much more conscious of product quality than before (M = 3.4133, SD = 1.10397). On the other hand, perception does not seem to be very important as far as consumer behavior is concerned, as evidenced by the fact that only one statement (I consider products displayed by hawkers as unsafe) scored more that 3.5 (M = 3.6528, SD = 1.15258). in fact, three of the four statements had a mean score of less than 3.0. This shows that attitude is very key component in the determination of consumer behavior.

Hypotheses testing

Two hypotheses were tested. The fist hypothesis sought to test the significance of the government operation measures on consumer behavior. The hypothesis tested was

H_1 Government intervention measures have no significant influence on shopper behavior

To test the hypothesis, regression analysis and correlation analysis was done to test the effect of the government intervention measures on the shopper behavior. The model summary, ANOVA, and coefficients are as shown in table 5a and 5b.

Table 5a: Model summary and ANOVA

Model Summary	R	R Square		Adjusted R Square	Std. Error of the Estimate	
1	.475[a]	.226		.169	.93568	
Model ANOVA		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.345	5	3.469	3.962	.003[b]
	Residual	59.534	68	.875		
	Total	76.878	73			

a. Dependent Variable: Attitude

b. Predictors: (Constant), Closure of learning institutions , Travel restrictions , Social distancing requirements , Impositions of curfew, Hygiene requirements

As shown in table 6a, the model had an R^2 value of 0.226, and an F value of 3.962 . This indicates that the government intervention measures explained 22.6% of the consumer behavior changes during the Corona Virus pandemic. This is understandable, given than from consumer behavior theories and models, there are very many factors that explain consumer behavior, and so for a single factor to account for over20% is not mean. The F value of 3.962 is significant at 0.05 ($p = 0.003 < 0.05$). This is an indication of the significance of the government interventions on the consumer behavior. The regression coefficients table (Table 6b) shows that all the government intervention ,measures have a positive influence on consumer behavior, although these are not significant, except Travel restrictions which has a β value of .389 ($p = 0.002 < 0.05$).

Table 5b: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.765	.772		2.288	.025
	Closure of learning institutions	.195	.132	.173	1.476	.144
	Travel restrictions	.346	.105	.389	3.293	.002
	Social distancing requirements	.025	.136	.023	.184	.854
	Impositions of curfew	.163	.137	.156	1.191	.238
	Hygiene requirements	-.173	.197	-.131	-.879	.383

a. Dependent Variable: Attitude

The regression equation that can be derived from this relationship is

Y = 1.765 + 0.173 Cli + 0.389 Trr +0 .023Sod + 0.156Imc - 0.131Hyr

Where Y = consumer behavior (attitude), Cli = Closure of learning institutions, Trr = Travel restrictions, Sod = Social distancing requirements, Imc = Impositions of curfew and Hyr = Hygiene requirements

The results show that hygiene requirements affect attitude negatively. This means that the hygiene measures such as requirement to regularly washing hands, use of sanitizers, and face masks, has impacted negatively on shopper behavior by changing the attitude that consumers have towards the measures take. It may be because consumers associate the hygiene requirements with issues like time wastage, associated costs and so on. We then test the correlation between indicators of government intervention measures and attitude in order to see if they are significant, before making a final conclusion. The results of the correlations among the various variables is shown in Table 6.

Table 6: Correlation coefficients

		Closure of learning institutions	Travel restrictions	Social distancing requirements	Impositions of curfew	Hygiene requirements	Attitude
Closure of learning institutions	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	75					
Travel restrictions	Pearson Correlation	.260*	1				
	Sig. (2-tailed)	.025					
	N	74	74				
Social distancing requirements	Pearson Correlation	.170	.239*	1			
	Sig. (2-tailed)	.147	.040				
	N	74	74	74			
Impositions of curfew	Pearson Correlation	.301**	.238*	.353**	1		
	Sig. (2-tailed)	.009	.041	.002			
	N	75	74	74	75		
Hygiene requirements	Pearson Correlation	.388**	.414**	.475**	.564**	1	
	Sig. (2-tailed)	.001	.000	.000	.000		
	N	74	74	74	74	74	
Attitude	Pearson Correlation	.272*	.423**	.138	.231*	.195	1
	Sig. (2-tailed)	.018	.000	.242	.046	.095	
	N	75	74	74	75	74	75

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

From the correlations table, we find a positive and significant correlation between Closure of learning institutions and attitude (r = 0.272, significant at 0.05), travel restrictions and attitude (r = .423, significant at 0.01) and Impositions of curfew and attitude (r = 0.231, significant at 0.05) . All these intervention measures have significant and positive influence on attitude (shopper behavior). We find that although most of the beta values are insignificant, the F value is significant ($p = 0.003 < 0.05$) and most of the correlation coefficients are also significant. We therefore reject the hypothesis that government intervention measures have no significant influence on shopper behavior. We therefore conclude that government intervention measures have significant influence on shopper behavior.

The second hypothesis sought to test the mediating effect of consumer demographic characteristics on the relationship between Covid 19 government intervention measures on shopper behavior . The specific hypothesis tested was

H_2: Shopper demographic characteristics have no significant mediating effect on the relationship between government intervention measures and shopper behavior

The hypothesis was tested using the Baron and Kenny (1986), stepwise regression analysis approach, which has four steps, as advocated by Bennett (2000), Shaver (2005) and Fairchild and MacKinnon (2009);). The first step was to test for the relationship between the independent variable and the mediator (path 'a'), while the second step was to test the relationship between the independent variable and the dependent variable (lath 'c'). The third step was to test the relationship between the mediator and the dependent variable (path 'b'). A final step was to combine the independent and the mediator and regress them on the dependent variable. This graphically illustrated in figure 1

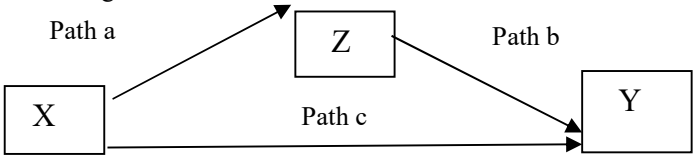

Figure 1: Mediation Path Diagram
X= Independent variable; Z= Mediator; Y= dependent variable

According to Fairchild and MacKinnon (2009); Shaver (2005) and Bennett (2000) when both coefficients for paths a, and b are significant, then Z mediates the relationship between X and Y and path c checks the link strength. Baron and Kenny (1986) argue that for mediation to occur, the effect of the independent variable on the dependent variable in the 3rd equation must be less than in the second equation.. The steps may be summarized as

Step 1: $Z= \beta_0+ \beta_1X+\varepsilon$ (X predicting Z)
Step 2: $Y = \beta_0+ \beta_1X+\varepsilon$ (X predicting Y)
Step 3: $Y= \beta_0+ \beta_1Z+\varepsilon$ (Z predicting Y)
Step 4: $Y= \beta 0+ \beta_1Z+ \beta_2X+\varepsilon$ (X and Z predicting Y)
Where Y = shopper behavior, X = government intervention, Z = shopper demographic characteristics
The results of the tests are as given in table 7.

Table 7 Mediation test results

Steps/paths		R square	F	Sig	Beta value	Sig
step 1	Regression of X on Z	0.02	0.167	0.684	-0.409	0.684
step 2	Regression of X on Y	0.074	5.849	0.018	0.272	0.018
step 3	Regression of Z on Y	0.02	1.484	0.227	1.218	0.227
step 4	Regression of X on Y while controlling for Z	0.098	3.911	0.24	0.28	0.015

The findings in table 8 show that the beta coefficients for step 4 is less than that in step 3, and that all the steps show evidence of the variables influencing one another. This supports the assertion by Baron and Kenny (1986), that for mediation to occur, a relationship must be established in all the three steps. We further find that the R square value in the final step is less than that in step 2, which again supports Baron and Kenny (1986) that the effect of the independent variable on the dependent variable in the 3rd equation must be less than in the second equation. This is proof that the mediator variable (shopper demographic characteristics) has mediating effect on the relationship between the independent variable (Government interventions) and the dependent variable (shopper behavior). We therefore reject the hypothesis that 'Shopper demographic characteristics have no significant mediating effect on the relationship between government intervention measures and shopper behavior and conclude that Shopper demographic characteristics have significant mediating effect on the relationship between government intervention measures and shopper behavior

4. Conclusion

The findings of this study shows that government intervention measures undertaken during the Covid 19 pandemic has influence the attitudes and therefore the behavior of shoppers in Kenya. This is in like with the existing theories about consumer behavior, which suggest shat changes in the environment can affect the attitudes of consumers towards certain products or brands. The students shows that not all measures have led to similar influences, and while some measures such as closure of rated of learning institutions had the greatest influence (perhaps because the respondents were former students and so closely associated with learning institutions), other factors were rated at a slightly lower level.

From the study findings we can also conclude that as an indicator of behavior, attitude is a much more powerful indicator than perception. Most of the indicators of perception showed lower mean scores compared to indicators of perception.

.Finally, we can conclude in spite of the corona virus which has negatively affected most shoppers in terms of their purchasing power, the consumers are very sensitive quality and when making a purchase, quality comes before price. This is unlike the common belief that consumers in poor countries enjoy more price elasticity than in the rich countries (Murphy, 2013). However, this may be because of the kind of respondents chosen for the study, which focused on graduates of Business, with at least a first degree. Perhaps an ordinary shopper would behave differently

5. Recommendations

The results of this study have shown that shoppers are sensitive to government interventions, but not all the interventions have similar influence. Closure of institutions of learning seems to have the highest effect on the shoppers. Similarly, social distancing requirements was also found to have major effects on the shopper. We therefore recommend that government needs to relevant information about shopper behavior and when implementing intervention measures, consider ones that will minimize affecting the shoppers negatively, as this can also arm the economy

Secondly, we found that shoppers put quality first when buying materials related to protection against Covid 19. Manufactures need therefore to put a clear balance between quality and pricing of the products being

sold to shoppers. While generally high quality also means higher prices, there should be a balance that ensures that both the manufacturer and the shoppers get value for their money.

Finally, we have established that shopper characteristics, have a mediating effect in the relationship between government intervention measures and shopper behavior. We therefore recommend that policy makers should always consider the demographic characteristics, especially gender, when implementing various interventions

6. Suggestions for further research

The study targeted former students from the Business school, meaning they either had graduated or where about to graduate with at least a bachelor's degree. Over 50% of them were graduate level students. Their behavior may therefore be different form ordinary shoppers who may be very learned. They were for instance found to be price insensitive when it comes to making purchase decisions. A similar study focusing on ordinary shoppers may need to be done to deter mine their shopper behavior

A second recommendation is to carry out a study focusing on other government interventions, especially those meant to protect consumers from exploitation, or measures meant to safeguard the economy, to see how these measures affect shopper behavior

Finally, considering that this study focused on the end users, and did not establish the economic implications of the behavioral changes, a broader study focusing on the economic implications of the changing shopper behavior can shed more light on what is likely to happen in the post Covid 19 pandemic.

References

Ajzen, I. (1996). Th esocial psychology of decision making. In E. T. Higgins & A. W. Kruglanski (Eds.*), Social psychology: Handbook of basic principles (pp. 297–325). New York, NY: Guilford.*

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood-Cliff s, NJ: Prentice-HallCooper, D. R., & Schindler, P. S. (2006). Business Research Methods: New York: McGraw-Hill/Irwin

_____Australian Government: Department of Finance and Deregulation: Influencing Consumer Behaviour: Improving Regulatory Design

https://www.pmc.gov.au/sites/default/files/publications/Influencing_consumer_behaviour.pdf Eagly, A. H., & Chaiken, S. (1993). *Th e psychology of attitudes*. Fort Worth, TX: Harcourt Brace.

Bagozi, R., et al., 1995. A comparison of leading theories for the prediction of goal-directed behaviours. *British Journal of Social Psychology, 34, (4) 437-461.*

Bagozi, R., et al., 2000. Cultural and Situational Contingencies and the Theory of Reasoned Action: Application to Fast Food Restaurant Consumption. *Journal of Consumer Psychology, 92, (2) 97-106.*

Hans-Werner Sinn ,(2020); How best to fight the economic impact of the coronavirus pandemic . The Guardian, 17th March 2020. *https://www.theguardian.com/business/2020/mar/17/how-best-to-fight-the-economic-impact-of-the-coronavirus-pandemic*

Icek Ajzen (2008), *Consumer attitudes and behavior*. In book: Handbook of Consumer Psychology, Publisher: New York: Lawrence Erlbaum Associates, Editors: C. P. Haugtvedt, P. M. Herr, F. R. Cardes. (pp.525-548)

Katz, D (1960). "The functional approach to the study of attitudes". Public Opinion Quarterly. ***24*** *(2, Special Issue: Attitude Change): 163–204.*

Kinder, D.R.; Sears, D.O. (1981). "Prejudice and politics: Symbolic racism versus racial threats to the good life". Journal of Personality and Social Psychology. ***40*** *(3): 414–431.*

Kneller, R., M.F. Bleaney and N. Gemmell (1998) 'Growth, public policy and the government budget constraint: evidence from OECD countries', *School of Economics University of Nottingham Discussion Paper no98/14*

Knowles S and Garces A, (2000) ; Measuring Government Intervention and Estimating its Effect on Output: With Reference to the High Performing Asian Economies. *Centre for Research in Economic Development and International Trade, University of Nottingham*

Munyoki, J.M. (2013). *Marketing Management: Theory and Practice*. Downtown Publishers and printers, Nairobi

Murphy D P (2013); Why are Goods and Services more Expensive in Rich Countries? Demand Complementarities and Cross-Country Price Differences . *Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Paper No. 156 http://www.dallasfed.org/assets/documents/institute/wpapers/2013/0156. pdf*

Mwangolo, S B (2015); Influence of Kenya government interventions on girl-child dropout in public primary schools in Malindi Sub-county, Kilifi County, Kenya. *Unpublished Master of Education in Educational Administration, University of Nairobi.* http://erepository.uonbi.ac.ke/handle/11295/90826

Pettinger T (2019**);** *Pros and cons of government intervention*. Economics : **1 November 2019**

Schifman L. G., et al., 2007. *Consumer Behavior*. 9th ed. New Jersey: Prentice Hall.

Schaefer, D., & Dillman, D.A , (1998), "Development of a Standard E-mail Methodology: Results of an Experiment." Public Opinion Quarterly, 62, 1998, PP.378-397.

Sivo S. A, Saunders,C., Chang Q., and Jiang J. J. (2006); How Low Should You Go? Low Response Rates and the Validity of Inference in IS Questionnaire Research. *Journal of the Association for Information Systems Vol. 7 No. 6, pp. 351-414/June 2006*

*Smith M.B , Bruner J.S & White R.W (1956): Opinions and Personality. New York, John Wiley & Sons, Inc., 1956, 8 vo, viii + 294 p". International Communication Gazette. **3** (3): 260.*

Sylvia L 1983) The Rationale For Government Intervention In Seller-Consumer Relationships . *Policy Studies Review, Vol. 2 No. 3, February, 1983 https://onlinelibrary.wiley.com/doi/epdf*

Thomas, V. and Y. Wang (1996) 'Distortions, interventions, and productivity growth: is East Asia different?', *Economic Development and Cultural Change, vol.44,pp.265-88*.