Principles of Influence and Internal/External Factors as Predictors of

Online Sales Prior to and During COVID-19: A Mixed-Methods Study

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Abstract

Throughout the world, non-seasonal online retail sales have subsided into a downward spiral. However, in the last decade, retail companies have been developing new marketing strategies intended on giving them the edge and appeal to reinvigorate sales as well as regain momentum. This study explored the post-positivism worldview of the effect in which using Principles of Influence coupled with Internal/External human factors can shape marketing strategies, narratives, images, and lines of persuasion to influence the overall increase within retail sales. Additionally, this study employed a mixed-methods design using a One-Way Analysis of Variance (ANOVA), a thematic analysis and chi square. The (381) participants completed (22) questions utilizing a Likert format and two open ended qualitative questions. The hypothesis posited that Principles of Influence and Internal/External human factors significantly affect online sales both prior to and during COVID-19. The study explored the relationship between Principles of Influence and Internal/External factors and their influence on a consumer's online purchases. The results of this study indicate that the association of Principles of Influence and online sales before COVID-19 was moderately significant. However, the association of Principles of Influence and online sales during COVID-19 was found to be not significant. Internal/external factors were found to be not significant before COVID-19 but was significant during COVID-19 (Table 4). Additionally, the interaction between Principles of Influence and Internal/External factors was significant which implies that Internal/External factors had moderated Principles of Influence during COVID. Thematic Analysis showed that Price 41%, convenience 34%, need 23%, quality 16%, easy to purchase 12%, availability 12%, and time 12% had more of an effect on a consumer's willingness to conduct a purchase than that of Principles of Influence and Internal/External factors. The themes that populated in thematic

analysis were tested using a Chi-Square to determine a relationship among the themes. A statistical significance was then found in the relationship of the themes, X^2 (19, $N = 381$) = 154.333, $p = 0.0001$.

Keywords: influence principles, sales tactics, narrative appeals, decrease in sales, increase in sales, motives for purchasing, Internal/External human factors.

Principles of Influence and Internal/External Factors as Predictors of

Online Sales Prior to and During COVID-19: A Mixed-Methods Study

Past research addresses the effects of Principles of Influence and identifies the requirement for

the collection of internal and external demographic information in sales advertisements.

However, there has been little data available that merges the two supporting marketing efforts

leading to an increase in online sales (Stříteský, Stříteský, Quigley, & Říha, 2016). Considering

the lack of information available it is difficult for retail companies to innovate solutions in their

struggle to maintain substantial profits (Kaspar, Sarah, & Wilbers, 2019). Additionally,

companies are having trouble forecasting the accuracy of sales trends, particularly during non-

seasonal marketing timeframes (Chern, Wei, Shen & Fan, 2015). Consumers directly interact

with salespersons, but the lack of past research has not compared the persuasiveness of these

interpersonal interactions to online sales (Kapoor & Kulshrestha, 2009). Most previous research

regarding online sales has focused on monetary promotions and the short-term effects of

marketing campaigns. Little emphasis has surrounded the psychological or societal factors that

influence a consumer to make a purchase whether in person or online (Liu, Zhang, Huang, Zhang

& Zhao, 2020). Furthermore, although online advertising currently consists of 21% of all

advertising in the United States, it accounts for only 5% of all advertising efforts that lead to

actual retail purchases (Lewis & Reiley, 2014). Moreover, in 2017, an estimated 230 billion

dollars was spent globally on online advertisements (Perju-Mitran, 2018).

Although the aforementioned research regarding online retail sales and its relation to

demographic factors illuminate important findings, no research has been found that has

examined the direct impact of developed narratives introduced into online advertisements. Given

such, further research is warranted that examines the susceptibilities of consumers through

Principles of Influence and Internal/External factor collections to address the documented problem of decreased online retail sales in non-seasonal months (Chern, Wei, Shen & Fan, 2015).

Furthermore, this research explores the theoretical rationale which studies the relationship among spending influencers. Demographics that emphasize the advantages and disadvantages of behavioral patterns in consumer spending address the exploration of social psychology which is the research of interactions among individuals within a group or society (Hadnagy, 2018). This research was assembled in a two-phase explanatory sequential design. First, the quantitative data was presented to illustrate online sales statistics using a piloted survey. Secondly, the qualitative analysis was presented after a detailed thematic analysis and Chi-Square which provided information regarding the reliability and validity of the data. This study focused on the macro-level theory which examined larger social groups and cultural systems (Creswell, 2009). Also, a postpositivist worldview assessed the causes of influential principles and Internal/External factors affecting the relationship with online retail sales (Creswell, 2009).

The purpose of this mixed-methods cross-sectional explanatory sequential study was to identify how Principles of Influence and Internal/External human factors influenced online retail sales, and to determine if Principles of Influence and Internal/External factors influenced online sales prior to and during the COVID-19 pandemic.

H_1: Principles of Influence and Internal/External human factors significantly affect online sales prior to COVID-19.

H_2: Principles of Influence and Internal/External human factors significantly affect online sales during COVID-19.

For this study, Principles of Influence were defined as: Reciprocity, Commitment and Consistency, Social Proof, Liking, Authority, and Scarcity. Furthermore, Internal/External factors were defined as: Beliefs, Attitudes, Brands, and Events.

Literature Review

Targeting Consumers using Data Mining Software

Global marketing advertisers spent nearly 230 billion on advertisements in 2017 (Kaspar, Sarah, & Wilbers, 2019). Additionally, 21% of all advertisements globally are presented online but only 5.5% of those advertisements prior to the COVID-19 pandemic led to retail purchases (Lewis & Reiley, 2014). This confirmation further warrants the exploration of demographically targeted advertisements and their effect on consumers (Hadnagy, 2018). Rather than directly targeting a specific demographic cohort through general messaging campaigns, one must first determine what drives this group in their decision making. Kaspar, Sarah, and Wilbers (2019) explain that the amount of research conducted on demographically targeted advertisements is sparse.

To assist in this endeavor researchers and innovators have now created several types of data mining software, which can detect algorithms in a person's browsing and spending behaviors (Chern, Wei, Shen, & Fan, 2015). Additionally, companies can employ online collection programs that pinpoint keyword searches that attain data from a target and then correspond future advertisements to match previous searches (Fire & Puzis, 2015). To compliment keyword searches needed to collect pertinent information for targeting, researchers point out that psychographics play a huge role in a consumer purchase encounters, and that demographic characteristics such as cognition, motivation, and emotions must be overtly

distinguished to develop the perfect messaging campaign expanding the potential for online sales

decision making (Kapoor & Kulshrestha, 2009).

Cialdini (2007) proposes a framework that when used correctly can enhance the overt

data collection of a specific audience to allow marketers to achieve optimal success in their

elicitation for additional overt data collection and can also persuade individuals to say "yes" to a

sale. The use of these techniques is supported through data collection but are also problematic to

pinpoint at times as recognized by Stříteský, Stříteský, Quigley, and Říha, (2016), who have

identified that external factors constantly influence behavioral changes within a target audience.

This theory makes it difficult to identify what universal themes will remain consistent amongst a

group to increase an advertiser's potential to succeed in influencing decision making. To combat

this issue the researchers have chosen to retarget their audiences after a refined assessment has

been conducted (Hadnagy, 2018). The use of Principles of Influence coupled with overtly

collected demographic information can create a context in which to develop advertisement lines

of persuasion (Cialdini, 2007).

Online Marketing Practices and Consumer Demographics

Stříteský, Stříteský, Quigley, and Říha (2016) pointed out that the primary role of

advertisers is to avoid excessive spending on marketing practices that have little to no effect on

consumers, but instead should focus on specific behaviors that increase the productivity of data

mining, identifying behavioral indicators and message development. Researchers Chern, Wei,

Shen, and Fan (2015) seem to support this observation but have leveraged review systems that

collect the number of page reviews and comments and follow up by minimizing their search for

broader exploration.

On the contrary Kaspar, Sarah, and Wilbers (2019) believe that while demographically targeted narratives are important and relevant in successful advertisements, visual attractions are more effective in influencing advertisement efforts than that of demographically catered narratives. Dissimilar hypotheses were proposed by Liu, Zhang, Huang, Zhang, and Zhao (2020) when they inferred that consumer decision making was largely persuaded by advertisements that depicted products relevant or important to them. How do advertisers determine what is most important to a targeted group? A few researchers describe the three most important characteristics needed for targeting a specific group as the psychographic, demographic, and geographic aspects, but only geographic aspects are monitored regularly through consumer reviews and data mining (Stříteský, Stříteský, Quigley, & Říha, 2016).

Kaspar, Sarah, & Wilbers (2019) have also mentioned that the attentional effect of targeting demographic factors may have become obsolete and ineffective due to an increased interest in flooding online portals with sales information without the proper data needed to target a population. It is promoted that the two largest attributes to online sales advertisements are informative sales pitches and trust factors concerning the source of information (Perju-Mitran, 2018).

Hadnagy (2018) explains that data collection can be extremely difficult when attempting to gather demographic factors because there are an estimated 4.48 million websites on the world wide web as of 2018. This overwhelming aspect makes it extremely imperative to utilize data mining and survey tools to decrease the researcher's volume of information that will need to be scanned (Fire & Puzis, 2015). Researchers have developed a method to track behavioral patterns through structural models using qualitative designs and concluded that the average time spent on

internet websites is three hours daily, and that participants visited an average of two social media

forums daily (Perju-Mitran, 2018).

The positive effects of online shopping gathered from more than 1.6 million consumers

demonstrates that online advertisements increase sales by 5% on average, but 93% of those

increases occur at a physical store location, and 78% of those increases are attributed to

customers who never actually clicked on the advertisement displayed online (Lewis & Reiley,

2014). One gap in this research is that it does not specify from which age group does the most

sales come from.

Advertisement Accessibility to Different Age Groups

It was determined that 96.5% of young adults from the ages of 16-24 check internet

browsers and social mediums daily, which make them a prime target for marketing campaigns.

However, there are no findings that validate this age group with increased spending habits due to

online enticements, and as well as the lack of income which greatly affects this segment

(Stříteský, Stříteský, Quigley, & Říha, 2016). Moreover, researchers have concluded that young

adults are not the only groups to show an increased online presence. 90% of adults between the

ages of 20-29 use social media daily, as do 77% of adults between the ages of 30-49.

Additionally, as of 2017, the presence of online users age 50 and over has grown to over 35%

(Perju-Mitran & Budacia, 2017). These variations make it tempting to target all three groups

through demographic advertisement means, while still developing separate marketing strategies.

Women visit communication websites 5% more than men, and 70% of these women said they

visited communication sites as compared to 64% of men (Stříteský, Stříteský, Quigley, & Říha,

2016). This may conclude that women are more receptive to online advertisements.

Perju-Mitran (2018) mentions while certain online platforms may reach all targeted groups, only a portion of every group is affected, and the accessibility to a larger percentage of each cohort may be found on other sites. In a study conducted by Stříteský, Stříteský, Quigley, and Říha, (2016), qualitative responses were collected from approximately two million men who stated they preferred to get their daily information from television or radio as opposed to an online source, which further validated the necessity for universal advertisement narratives.

Appeals and Strategies Utilized to Target Consumers

Caildini (2007) projected that the informational advances of society will become so accelerated and information conduits will become so robust that Principles of Influence will shape cognitive behaviors into persuading individuals to act on their impulses and encouraging them to comply with little thought associated with their action. Furthermore, researchers Kapoor and Kulshrestha (2009) validated this projection when they deliberated that when consumers are in an assessment mindset, they are more likely to purchase without cognitively processing their decision. This theory is also supported by the "halo effect", which is defined as a cognitive mindset of unconscious favoritism in making decisions based on little information that influences the actions of others (Kaspar, Sarah &, Wilbers, 2019). It is possible to capitalize on these cognitive influences through the incorporation of scarcity, authority, liking, social proof, commitment and consistency, and reciprocity (Cialdini, 2007).

Researchers have recently developed eye-tracking processes which is focused on why so many online users experience a phenomenon called "banner blindness". This is defined as the ability to ignore advertisements due to over-saturation (Kaspar, Sarah, & Wilbers, 2019). Several interviewees who participated in an interview stated that online advertisements were a bother, and they had become accustomed to ignoring such notifications; a description traditionally

known as habitation (Perju-Mitran, 2018). A limited number of companies have resorted to targeting previous customers through brand names, and beautiful images in their efforts to recruit new customers. In general, these efforts have failed. However, consistently targeting previous customers have aided in the survival of various brands such as Yoplait 150, Netflix, and other companies promoted by Yahoo advertisement campaigns (Lewis & Reiley, 2014). Although promotional sales are meant to draw in new consumers, it continues to be difficult in pinpointing the exact line of persuasion to influence a purchase because not all consumers respond to positive stimuli in the same manner (Liu, Zhang, Huang, Zhang, & Zhao, 2020). The maturity level, busy lifestyle, and spending habits of a consumer occasionally determine their hyper-efficiency level and spending choices; particularly their willingness to price match, shop online, or be influenced by online advertisements (Stankevich, 2017).

Furthermore, marketers may have to develop separate themes to target purchase behaviors depending on consumers' age and gender (Stříteský, Stříteský, Quigley, & Říha, 2016). Perju-Mitran and Budacia (2017) emphasized that attitudes and the way individuals communicate online can be significantly different depending on age, gender, hobbies, attitudes, values, and beliefs as seen in appealing marketing strategies and online applications.

Another extension of online sales influences is exhibited through the form of online reviews by customers and can act as a conduit to enhance a company's advertisement scheme through references and positive assessments (Chern, Wei, Shen, & Fan, 2015). Also, the context of positive online reviews can be so powerful as to completely weaken the seemingly helpful nature of a negative review (Liu, Zhang, Huang, Zhang, & Zhao, 2020).

Consumer Spending Influenced by Crisis

The COVID-19 pandemic has forced the majority of the world to become confined to their residence which has also revolutionized social media marketing opportunities and increased one's ability to become attracted to targeted marketing schemes (Sheth, 2020). Moreover, consumers evaluate spending opportunities according to need and desire, but during a crisis, many revert to basic needs first as compared to desires as referenced in Maslow's hierarchy of needs model (Maslow, 1954). Depending on the length of a crisis, consumers may resort to fulfilling most of their desires if it appears there may not be a projected end to the crisis (Mehta, Saxena, Purohit, 2020). Additionally, the induction of a crisis into a society can at times trigger panic buying and media influence exaggerates this type of herd mentality frenzy as shown from historical contexts such as 9/11, Hurricane Katrina, the H1N1 scare and now the COVID-19 pandemic (Loxton, Truskett, Scarf, Sindone, Baldry & Zhao, 2020). According to the Facteus FIRST Report (2021) since the onset of the COVID-19 pandemic, overall consumer spending has fallen 12%. Including, Walmart with 11% yearly decrease. However, fast food restaurants have seen a 7% increase throughout 2020. Also, as identified by Baker, Farrokhnia, Meyer, Pagel & Yannelisk (2020) orders given by state and federal governance to shelter in place greatly influenced the sharp reduction in consumer spending, predominantly at brick-and-mortar retail establishments as well as restaurants.

Method

Overview of Design

A mixed-methods explanatory sequential comparative design was used (Gliner, Morgan & Leech, 2009). This approach first focused on the quantitative effect of Principles of Influence and Internal/External Factors on online sales. A scale was created from the six components of Principles of Influence which were: reciprocity, commitment and consistency, social proof,

authority, liking, and scarcity. Similarly, a scale was created from the four components of

Internal/External human factors. Internal human factors were measured through attitudes and

beliefs, while external human factors were measured through brands and events. A Two-Way

Analysis of Variance ANOVA was used to test the hypothesis.

Next a qualitative analysis was conducted on two open-ended questions placed in the

survey to test the research questions and identify similarities or differences to compare with

quantitative findings. All 381 responses for each open-ended question were thematically

analyzed. Q23 comprised of 20 different thematic categories and Q24 comprised of 17 different

thematic categories. The data was then placed into a Chi-Square to determine statistical

significances amongst categories.

The purpose of this survey design was to collect quantitative and qualitative data needed

to examine the association between attribute independent variables Principles of Influence and

Internal/External human factors and the dependent variable of online sales. The rationale for

choosing a survey method for data collection was the expeditious way information could be

collected which facilitated a quicker analysis period for both quantitative and qualitative results.

This survey was conducted with a cross-sectional approach which facilitated the collection at one

point in time. This study was initiated through the form of an online piloted survey, but both

quantitative and qualitative information was applied in the survey across closed-ended Likert

scaled statements and open-ended questions.

Upon conclusion of quantitative data collection, a Cronbach's Alpha was used to

examine the internal consistency of each predictor. A Two-Way Analysis of Variance ANOVA

instrument was used to determine the amount of variance accounted for between each predictor

and the dependent variable (online sales). Additionally, it was equally important to analyze the

covariance and measure any significant differences between the IVs on the DV due to the data being collected during COVID-19. An ANCOVA was used with COVID-19 as the covariant.

For the second phase of this mixed-methods explanatory sequential research design, there was an unobtrusive qualitative analysis conducted over themes collected throughout the survey process. Throughout this analysis similarities and differences were annotated and compared to data collected quantitatively. The application of the qualitative collection was the aggregation of all open-ended responses, thematic segmentation, coding data in a structural manner, implanting categorial responses into Chi-Square SPSS analysis, and conducting interpretations (Creswell, 2009).

The quantitative data was compared to the qualitative data after both sets of data were analyzed and prepared for associations. As part of the qualitative segmentation, a codebook was generated to capture the 6 different levels for IV1 (Principles of Influence), and 4 levels for IV2 (internal and external human factors). These levels served as major components for each listed IV and were measured for association with the DV (online retail sales).

Finally, when conducting qualitative narrative aggregation, the segmented themes were transformed into a section called "complex theme connections" (Creswell, 2009). This focused on narratives that were connected to the variables listed. Additionally, the qualitative responses that are not related to the levels within each IV were identified during the sentiment analysis process. The process of conducting a Chi-Square on each qualitative question was completed by processing the observed and expected variables and determining the Chi-Square Index and Alpha level.

Participants and Sampling Plan

During this process, a sampling technique discussed by Gliner, Morgan and Leech, (2009) (non-probability convenience snowball sampling) was applied to increase the popularity of the survey and encourage participation to more than just the recommended number of participants by G-Power (Faul, Erdfelder, Buchner & Lang, 2009). The actual recommendation from the G-Power Statistical T-Test was 55 participants. The initial effect size estimate for this analysis was $t(55) = 2.00665$, $p < .15$, $d = .80$. While the power was listed at .80, and the number of predictors was two, an alpha level of .05 was used to estimate the sample size (Faul, Erdfelder, Lang, & Buchner, 2007). There were no restrictions placed on the number of participants permitted to complete the survey, neither were there be any perimeters emplaced to control the amount of female versus male contributors.

Although the projected participant model was to be no less than 55, the snowball sampling technique brought in 381 participants, 17% Males and 83% Females. Moreover, participants were above the age of 18. All populations within the United States were eligible to participate and were not restricted by gender, ethnicity, age, marital status, education, or community upbringing, but this information was used to further categorize results to specify target audiences for future studies. The potential bias of respondents and their answers were removed because the researcher had no personal influence on the respondent's answers. Additionally, all participation and answers given were completely anonymous and the survey grew following the number of times it was shared to different people and groups on Facebook using the non-probability convenience snowball sampling method.

Procedures

An initial pilot was conducted with family, friends, and capstone professor to determine if the statements listed, and questions asked throughout the survey were representative of the IVs

and DV. After completion of pretesting, a recruitment statement was sent out over Facebook for

participation in the self-constructed survey. Before initiating the survey, each participant was

directed to read, and agree, to a consent form which was the first page populated after clicking

on the survey link. The second page displayed statements about demographics which facilitated

the illustration of deviations amongst demographic categories.

Volunteers were asked to share the surveys with friends, families, and coworkers to

ensure a larger sample size was created. After the completion of all three documents, the

volunteer was then thanked on the completion page, at which time they were directed to exit out

of the survey. Once the data is collected, participants were assigned a numerical identifier. Data

was then password protected and only the researcher has access to the initial results. After each

survey was completed, the volunteer's participation ceased other than continuing to recommend

the survey to additional participants, which was their choice.

During the second phase of research, qualitative data collected from open-ended

questions listed throughout the survey was analyzed and the answers were segmented using

sentiment analysis tools. Additionally, this type of qualitative collection ensured data

collaborated alongside quantitative results promptly which saved time and expenses of

transcribing (Creswell, 2009). Also, once the qualitative results were segmented, they were

placed in categorical order for the thematical analysis. Furthermore, this process did not discover

narratives that were contrary to the hypothesis but did identify additional categories for

exploration in future research.

Measurement Instruments

A self-constructed survey was used to collect data for both the quantitative and

qualitative information. This survey was then listed on SurveyMonkey to facilitate easy access

and avoid constant referrals. The components completed prior to accessing the survey questions included reading the Recruitment Statement, accepting the terms on the Consent Form, and answering demographic statements on the Background Information Form. After these were completed respondents then entered the Survey which included a list of 22 statements from a Likert categorical scale. These response selections ranked from 1 = Least Likely, 2 = Unlikely, 3 = Moderate, 4 = Likely, and 5 = Very Likely. Each selection is intended to describe their perceived likeliness to participate in the function discussed in each statement. Additionally, the survey included two open-ended questions which measured distinctions between both IVs, and the future spending prediction of why participants see themselves purchasing more or fewer items online in the future.

Results

Data Collection

Data was collected using a survey constructed on SurveyMonkey. The study was advertised on Facebook with a recruitment statement throughout eight days between the dates of August 16 – 24 2020. After the data collection period ended, the data was downloaded into excel where it was cleaned, arranged, and segmented. To ensure there was no missing data, a range command was conducted on all data to determine if any missing values needed to be addressed. No missing values were present. All questions were answered due to a survey design where participants were required to complete each response before moving on to additional questions.

Programing conditional functions into excel was the first step used to clean and organize quantitative data and synchronize the data with the respective codebook. Furthermore, survey statement responses were listed on a Likert scaling range from 1 = Least likely to 5 = Very Likely. Following the organization of quantitative data, the segmentation of qualitative data

began on the two open-ended questions listed at the end of the survey. The 381 qualitative

responses for question 31 and the 381 qualitative responses for question 32 were then segmented

within prescribed categories. After the quantitative data was organized into excel it was then

uploaded into SPSS for further analysis. Once uploaded the data was then processed for analysis.

Ethical Considerations

To ensure the privacy of the participants no names or identifiable information was

collected and each participant was assigned a numerical identifier. Furthermore, ethical

considerations were noted and addressed on the consent form and before the execution of the

survey. No participants were deceived throughout this process and any questions were answered

by the description listed on the consent form. All participants will be made fully aware of the

purpose of the study and how the information was used. Concerning qualitative data collection,

all data was recorded exactly as listed on each participant's response, and interpretation of these

responses was thematically segmented as accurately related to described topics. Lastly, only true,

concise, and accurate depictions of results were presented throughout the study. The only

stopping rules associated with data collection were if a participant decided they no longer wished

to participate in the survey they could have exited by closing their browser. This termination of

the survey would have been anonymous.

Reliability, Validity, and Bias Check

As shown in Table 1. The internal consistency reliability of all questions was

examined by using a Split-Halves Reliability Analysis (Gliner, Morgan & Leech, 2009, p. 158).

All Cronbach's Alpha Scores below A = .70 are deemed unreliable, while all above a = .70 are

deemed reliable. Part 1 N of items were (14), and the value was a = .415 (unreliable) while Part 2

N of items were (14) and the value was a = .796 (reliable). The correlation between forms was

.538, and the Spearman-Brown Coefficient was identical at .699 between both equal length and unequal lengths. The Guttman Split-Half Coefficient measured as .637. This data analysis measures the scale reliability and shows that the survey statements were deemed reliable. The reliability coefficients of the Cronbach's alpha should be over .70 (Gliner, Morgan & Leech, 2009, p. 220), if the coefficient is too low, it is unreliable, if it is too high then there may be items that are repetitious throughout the survey. Furthermore, face validity was established before the execution of the survey because the survey statements had been checked by experts within the field of persuasion and influence to ensure the instrument would accurately measure the consumers spending motivations (Gliner, Morgan & Leech, 2009, p. 166).

Independent Variables (Internal Reliability Analysis)

The Cronbach Alpha Coefficient was used to determine the reliability for each independent variable. Principles of Influence consisted of 12 questions: $\alpha = .79$ ($M = 3.16$, $SD = .523$). Internal/External Factors consisted of eight questions: $\alpha = .72$ ($M = 3.92$, $SD = .472$). Both scales were deemed reliable as they exceeded $\alpha = .70$ (Gliner, J. A., Morgan, G. A., & Leech, N. L. (2009). Moreover, as listed in the IV descriptives data in table 3 (POI) and table 4 (I/E Factors), participants who were influenced to purchase an item online due to Principles of Influence ($\alpha = .79$) was ($M = 3.16$, $SD = .523$) compared to that of participants who were influenced to purchase an item online due to Internal/External Factors ($\alpha = .72$) was ($M = 3.92$, $SD = .472$) were more enticed to purchase due to Internal/External during pre-COVID conditions.

Dependent Variables

Two dependent variables of online sales (Prior to COVID-19 and During COVID-19) were developed to determine how many times a participant had purchased an item online within

the last five months on a scale between five choices (1-5, 6-10, 11-15, 16-20, 21+). The average

sales for 5 months: March – September 2019 and March – September 2020 were used for the two

dependent variables.

Descriptive Statistics

Forty- eight percent (48%) of participants made 21+ online purchases in the past five

months prior to COVID-19 (March – September 2019) as compared to nearly 37% during

COVID-19 (March-September 2020). The Principle of Influence with the lowest mean ($M =$

2.27, $SD = .94$) regarded purchasing an item online if it were the latest trend with 67% stating

they would be unlikely or very unlikely to purchase the item. The Principle of Influence with the

highest mean ($M = 4.33$, $SD = .69$) regarded buying a brand that the participant had purchased

before and liked with 90% stating they would likely or very likely purchase the item again. The

Internal/External factor with the lowest mean of making an online purchase regarded purchasing

from a company that assisted a cause the participant was passionate about and had sent a

message to ask if they were interested in purchasing a similar product to one they had purchased

in the past ($M = 3.29$, $SD = .92$) with nearly 76% stating they were moderately likely or likely to

purchase the item. The Internal/External factor with the highest mean regarded a participant's

willingness to make an online purchase of an item thy held a positive attitude toward with 87%

stating they would likely or very likely purchase the item.

Test of the Hypothesis 1

H_1: Principles of Influence and Internal/External human factors significantly affect online

sales prior to COVID-19.

A 2 (Principles of Influence) X 2 (Internal/External factors) between-subjects Two-Way

Analysis of Variance (ANOVA) revealed all effects were statistically significant at the $p < .05$

level. The main effect for Principles of Influence yielded an F ratio of $F(3, 371) = 3.54$, $p = .015$.

Thus, there was a significant difference between Least Likely ($M = 3.00$), Unlikely ($M = 4.03$,

Moderate ($M = 3.26$), and Likely ($M = 4.75$) to make an online purchase. A post-hoc pairwise

comparison using Tukey's-b showed that participants who indicated they were Likely to

purchase online ($M = 4.75$) made significantly more online purchases than those who indicated

they were least likely ($M = 3.00$) or moderately likely ($M = 3.26$) to make an online purchase.

The main effect for Internal/External factors was also significant $F(3,371) = 2.68$, $p =$

.046. Thus, there was a significant difference between Unlikely ($M = 2.60$), Moderate ($M =$

3.56), Likely ($M = 4.33$), and Very Likely ($M = 4.38$). A post-hoc pairwise comparison using

Tukey's-b showed that participants who indicated they were Very Likely ($M = 4.38$) or Likely

($M = 4.33$) to purchase online made significantly more online purchases than those who

indicated they were Unlikely ($M = 2.60$) to make an online purchase.

The interaction effect was also found to be significant $F(3,371) = 4.31$, $p = .005$. This

suggests that Internal/External factors moderate the relationship between Principles of Influence

and the likelihood of making an online purchase.

Test of the Hypothesis 2

H$_2$: Principles of Influence and Internal/External human factors significantly affect online

sales during COVID-19.

A 2 (Principles of Influence) X 2 (Internal/External factors) between-subjects Two-Way

Analysis of Variance (ANOVA) revealed that the main effect for Principles of Influence yielded

an F ratio of $F(3, 371) = 0.78$, $p = .505$. Thus, there was not a significant difference between

Least Likely ($M = 2.67$), Unlikely ($M = 3.37$) Moderate ($M = 3.91$), and Likely ($M = 4.19$) to

make an online purchase.

The main effect for Internal/External factors was significant $F(3,371) = 4.58$, $p = .004$. Thus, there was a significant difference between Unlikely ($M = 2.10$), Moderate ($M = 2.97$), Likely ($M = 3.94$), and Very Likely ($M = 4.04$) to make an online purchase. A post-hoc pairwise comparison using Tukey's-b showed that participants who indicated they were Very Likely to purchase online ($M = 4.04$) made significantly more online purchases than those who indicated they were Unlikely ($M = 2.10$) to make an online purchase.

Although Principles of Influence had no effect on online sales during COVID-19, the interaction effect was found to be significant $F(3,371) = 4.31$, $p = .005$. This suggests that Internal/External factors moderate the relationship between Principles of Influence and the likelihood of making an online purchase. The effect of Internal/External factors on online sales changes depending on the unlikeliness/likeliness of purchasing an item online due to Principles of Influence.

Thematic Analysis

Research Question 1: What is the relationship between Principles of Influence and Internal/External factors on online retail sales?

Twenty themes were identified; the most significant themes mentioned were: Price 41%, convenience 34%, need 23%, quality 16%, easy to purchase 12%, availability 12%, and time 12%. These themes had more of an effect on a consumer's willingness to conduct a purchase than that of Principles of Influence and Internal/External factors. Additionally, the themes were tested using a Chi-Square to determine a relationship among the themes. A statistical significance was found in the relationship of the themes, $X^2 (19, N = 381) = 104.000$, $p = 0.0001$.

Research Question 2: Why do you see yourself purchasing more items online in the future?

Fourteen themes were identified; the most significant themes mentioned were: More 53% (predicting more online purchases in the future as compared to the previously), convenience 34%, COVID-19 (quarantine) 22%, easy to purchase16%. The themes were tested using a Chi-Square to determine a relationship among the themes. A statistical significance was found in the relationship of the themes, X^2 (19, N = 381) = 154.333, p = 0.0001.

The results of the thematic analyses and Chi Square tests support the research questions and that there was no significance of IV1 (POI) on online sales during COVID. Likewise, Internal/External Factors had substantial significance on online sales during COVID than compared to before the pandemic.

Exploratory Analysis

Chiu, Lin, & Tang (2005) stated that gender may be a moderator when buying on the internet. Hernandez, et. al (2011) investigated age, gender, and income as moderators of online shopping behavior. They found that the moderator of gender disappeared when a sample of experienced shoppers was analyzed. A *t*-test for Independent Samples was used to test the difference in online purchase behavior between males and females both prior to COVID-19 and during COVID-19. Prior to COVID-19, women (*M* = 4.12, *SD* = 1.10) reported significantly more online purchases than males (*M* = 3.69, *SD* = 1.00), *t*(379) = -2.91, *p* = .004.

A significant difference was also found for online purchases during COVID-19 with women (M = 3.64, SD = 1.39) again, making significantly more purchases online than men (M = 2.61, SD = 1.40), *t*(379) = -5.39, *p* = .0001.

The finding of significant gender differences both prior to COVID-19 and during COVID-19 provides support to psychological theories regarding gender differences between

males and females and gender-based perceptions (Venkatesh and Morris, 2000) which may influence making online purchases.

Discussion

Interpretation of Major Expected Findings

The findings of this study showed that the association of Principles of Influence and online sales before COVID-19 was moderately significant. However, the association of Principles of Influence and online sales during COVID-19 was found to be not significant. Internal/external factors were found to be not significant before COVID-19 but was significant during COVID-19 (Table 4). Additionally, the interaction between Principles of Influence and Internal/External factors was significant which implies that Internal/External factors had moderated Principles of Influence during COVID. Furthermore, qualitative findings show there to be a significant association of attributes related to online sales as a reaction to the COVID -19 pandemic (e.g., convenience 34%, COVID 22%, ease 16% (Table 6). This research contributed to the current knowledge of online sales influencers because it provides baseline consumer attitudes and the number of items purchased before COVID-19 but provides indications that online sales have decreased. Moreover, there were significant differences between female's and male's online shopping behaviors prior to and during COVID. An independent-samples t-test was conducted to compare Male and Female online shopping behaviors prior to COVID and during COVID.

Limitations

The limitations associated with this study included a lack of resources available relating to Principles of Influence and Internal/External factors as they relate to online sales. Additionally, there was a selection bias throughout the convenience sample due to convenience

sampling and there being no treatment offered. Also, there was a selection bias due to non-

probability sampling techniques used, e.g., convenience snowball sample (Gliner, Morgan &

Leech, 2009, p. 125). This study did not leverage a random sample therefore the results cannot

be generalized.

Furthermore, considering the study was initiated before the existence of COVID-19, but

the data was collected during the pandemic and may have been a confound in the study. Also,

more COVID-19 specific qualitative questions could have been presented on the survey to gauge

the true effect of this phenomenon leading to a larger database for future research. The collection

of data occurred during a global pandemic, so the researcher was limited on face-to-face

interactions which lead to non-experimental convenience sampling. Since random sampling was

unable to occur during this study, there is a sampling bias present because not all demographics

were equally represented. Also, the longitudinal effects of time constraints limited the amount of

time available to collect more data. Although this was a piloted survey, there may have been

respondent bias, non-response bias, and a social desirability bias existent within the study, but

there were enough participants who completed the survey to minimize the amount of bias within

the data (Kreitchmann, Abad, Ponsoda, Nieto & Morillo, 2019).

Future Directions & Practical Implications

Additional research is needed to investigate the impact of COVID-19 online retail sales

and to determine if events-based purchases (e.g., birthdays, holidays, parties, vacations) will be

as significant as previous years due to this pandemic. It is practical to imply that if additional

research is conducted, and online sales subside following mass vaccinations within the United

States, the reduction of online spending may be attributed to an increase in brick and mortar in-

store sales. Furthermore, future research should investigate if online sales remain significant due

to a cognitive safety mindset, and a new-found practice of avoiding crowds.

Summary & General Conclusions

Notably married, white, women between the ages of 35-44 who have a bachelor's degree

and lives in the suburbs may be more inclined to participate in online surveys and purchase

online products as compared to other demographics (Table 2). Additionally, populations are

becoming more accustomed to online shopping due to the COVID-19 pandemic which has

increased their online spending rates within the last five months. Furthermore, Internal/External

factors are more prominent currently within online sales which is probable because consumers

are attempting to purchase more items online that sustain their daily life functions versus making

those purchases in person. If COVID-19 would not have occurred, it is an extraordinarily strong

possibility that Principles of Influence would have continued to supersede Internal/External

factors regarding significance of online sales. It is yet to be seen if Principles of Influence will

begin to impact online sales more than Internal/External factors once there has been a prominent

impact due to vaccinations released throughout the country.

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Table 1

Spearman-Brown Split-Halves Reliability Analysis

Cronbach's Alpha	Part 1	Value	.415
		N of Items	14^a
	Part 2	Value	.796
		N of Items	14^b
	Total N of Items		28
Correlation Between Forms			.538
Spearman-Brown	Equal Length		.699
Coefficient	Unequal Length		.699
Guttman Split-Half Coefficient			.637

Table 2

Frequency Demographics of Sample

		Value Label	N
Gender	1	Male	17%
	2	Female	83%
Ethnicity	1	White	85%
	2	Black	4%
	3	Hispanic	7%
	4	Asian	1%
	5	American Indian	1%
	6	Native Hawaiian/Pac Islander	1%
	7	Other	1%
Age	1	18-24	7%
	2	25-34	21%
	3	35-44	31%
	4	45-54	21%
	5	55-64	14%
	6	65+	6%
Marital Status	1	Married	75%
	2	Single	21%
	3	Engaged	2%
	4	Widowed	2%
Education	1	None	0%
	2	GED	2%
	3	High School	26%
	4	Associates	20%
	5	Bachelors	32%
	6	Masters	16%
	7	Doctorate	2%
Community	1	Rural	29%
	2	Suburban	60%

3	Urban	8%
4	Other	4%

Table 3

Principles of Influence Descriptives Table

	N	Mean Avg	Std. Deviation Avg
Principles of Influence Scale (a = .79)	13	3.16	.523
Q1: I know an item is rare, and I really want that item, and I would be willing to pay more for it.	381	3.44	.923
Q2: My supervisor recommended an item online that would make my work easier, I would purchase said item because I trust my supervisor.	381	3.39	.822
Q3: I would be willing to purchase an item online that I was undecided about if I were encouraged by a friend, coworker, or sales representative that I favored.	381	3.36	.868
Q4: I would purchase an item online if it were deemed to be the hottest trend.	381	2.27	.941
Q5: I am more willing to purchase an online from a brand that I have purchased before and liked.	381	4.33	.689
Q6: I am more willing to make an online purchase from a retailer if that retailer gave me a gift like an online credit to their product line, or a free item that I could redeem online.	381	3.32	1.087
Q13: I would be more willing to immediately purchase an item online if I favored the item and there were very few left in stock.	381	3.56	.986
Q14: If an acquaintance emailed me a redemption code and then asked if I would make a purchase on their site helping reach their sales goal, I would be inclined to purchase an item.	381	2.76	1.025
Q15: If my best friend emailed me a redemption code and then asked if I would make a purchase on their site helping reach their sales goal, I would be inclined to purchase an item.	381	3.43	1.109
Q16: I would be willing to purchase an online item if I had received an email from an associate stating most coworkers also purchased this low-cost item.	381	2.50	.863

Q17: If I received an email from my boss asking if I would purchase a low-cost item from their online account to help them reach their sales goals, I would feel inclined to purchase said item.	381	2.67	1.069
Q18: I have previously purchased several online items from a popular brand and the company recently sent me a message thanking me for being a valued customer and asks if I would be interested in purchasing more merchandise from their inventory.	381	2.96	.897
Q12: DV: During the last 5 months I have purchased an online item this many times.	381	3.47	1.441
Cronbach's Alpha: .775			

Table 4

Internal/External Descriptives Table

	N	Mean Avg	Std. Deviation Avg
Internal/External Factors Scale (a = .72)	9	3.92	.472
Q7: I am more willing to make an online purchase if I believe the quality of that item was highly favored.	381	4.17	.658
Q8: I am more willing to make an online purchase if I value the brand that marketed the item.	381	4.04	.728
Q9: I am more willing to make a purchase of an online item that I have had a positive attitude towards.	381	4.18	.639
Q10: If I had a situation come up (e.g. birthday, wedding, anniversary, holiday) I would be more willing to make an online purchase for said items needed for the event.	381	4.02	.844
Q19: I made a pledge to purchase an item online monthly which partially benefits a nonprofit organization. A month has gone by since my last purchase, and the company reaches out to me asking for my monthly purchase to honor the pledge. I believe I should follow through and purchase said item.	381	3.48	1.158
Q20: I receive a notification about a product that I want. This item just recently came on	381	4.16	.782

sale but is only available at that price online. I am more willing to purchase this item online.			
Q21: I receive an online notification regarding a brand that I have used in the past. I value the quality of this product, and it is cheaper online, so I go ahead and purchase this item.	381	4.08	.812
Q22: I have a positive attitude towards a company that assists a cause that I am passionate about. The company has sent me an online message asking if I am interested in purchasing a similar product that I have purchased in the past. I am inclined to purchase this item.	381	3.29	.919
Q12: DV: During the last 5 months I have purchased an online item this many times.	381	3.47	1.441
Cronbach's Alpha: .722	Mean: 2.554[a]		

Table 5
Qualitative Thematic Analysis
Q23: What influences you to purchase an item online?

Selected Category	Count	%
Price	155	41%
Convenience	128	34%
Need	89	23%
Quality	61	16%
Ease	47	12%
Availability	45	12%
Time	44	12%
Customer Reviews	41	11%
Shipping Costs	39	10%
Sales	25	7%
Want	23	6%
Value	17	4%
Variety	12	3%
COVID	11	3%
Trust	11	3%
Good Customer Service	11	3%
Referred	6	2%
Scarcity	5	1%
Appeal	4	1%
N/A	3	1%

Table 6

Qualitative Thematic Analysis

Q24: Why do you see yourself purchasing more or fewer items online in the future?

Selected Category	Count	%
More	202	53%
Convenience	131	34%
COVID	82	22%
Ease	63	16%
Price	35	9%
Availability	31	8%
Time	27	8%
Same	27	7%
Less	25	7%
Need	18	5%
Variety	16	4%
N/A	14	4%
Sales	9	2%
Quality	6	2%
Want	5	1%
Shipping Costs	4	1%
Customer Reviews	4	1%

Table 7

T-Test Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Online Purchases Prior to COVID-19	Male	64	3.69	1.006	.126
	Female	317	4.12	1.102	.062
Online Purchases During COVID-19	Male	64	2.61	1.399	.175
	Female	317	3.64	1.388	.078

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

Online Purchases Prior to COVID-19	Equal variances assumed	.152	.696	-2.905	379	.004	-.432	.149	-.725	-.140
	Equal variances not assumed			-3.085	96.075	.003	-.432	.140	-.711	-.154
Online Purchases During COVID-19	Equal variances assumed	.226	.635	-5.413	379	.000	-1.031	.190	-1.406	-.656
	Equal variances not assumed			-5.386	89.847	.000	-1.031	.191	-1.411	-.651