

# **The Fear Appealing of COVID 19 and Experiences in Purchasing Behavior: Evidence of Online Purchasing in Jordan**

**Ruba Abdelaziz**

MBA-Marketing - University of Jordan  
Jalaad Center for Studies and Consultations  
[xoubi.ruba@gmail.com](mailto:xoubi.ruba@gmail.com)

**Abdallah Al Zoubi**

PhD Population and Demographics - University of Michigan  
Jalaad Center for Studies and Consultations  
[aazoubi@gmail.com](mailto:aazoubi@gmail.com)

## **Abstract**

This study investigates the fear appealing of COVID 19 and the experiences in purchasing behavior as an evidence of online purchasing in Jordan. The research population includes clients of pharmaceutical companies in Jordan who use the largest three online shopping sites. The research sample was randomly selected, and the study obtained 834 responses per day at 40 pharmacies. To understand the current market, we looked at Facebook and Facebook accounts of two pharmacies and ten pharmacies and then compared them. Comparing the sales pattern of apparel illustrates that the segment of goods has increased online sales. partial mediation effects of an increase in social presence, so that an increase in social presence results in an improvement in the fear appeal of COVID 19, which is correlated with an increase in purchasing behaviour. The study then explored the effect of e-loyalty on the relationship between customer fear and ad awareness. It is recommended that further exploration of the phenomenon is needed after several other months. Personal protective equipment is at the centre of attention and suffered from panic at the early stages of the spread of COVID-19.

**Keywords:** Appealing, Online Services, COVID 19, Pharmacy, PPEs.

## **Introduction**

The use of customer purchasing behaviour is well-known in marketing research. Much academic research has been conducted to identify the factors and promote it (Laato et al., 2020). Many studies show that both expected buying and impulsive buying actions were strongly affected by emotional and hedonic influences (Leverin&Liljander, 2004; Yu & Bastin, 2010). In many other studies, customers' values were affected by beliefs, behaviours, and motives (Güler and Abbasi, 2014). Present inquiries have studied the effect of hedonic and utilitarian shopping motivations on consumer behaviour (Haq& Abbasi, 2016; Koparal&Çalik, 2015). These other researchers analyzed these variables' direct and interactive impact on purchasing behaviour (Pöyry et al., 2013; Yu & Bastin, 2010). Other researchers look at the role of hedonic interactions as a single and double mediator explaining impulsive behaviour illustrated in the significance of these antecedents in purchasing. However, most of the studies cited examined the impact of the motivations on goods and did not consider external influences.

The product-based user experience informed the conception of hedonic consumption as linked to the "subjective, multi-sensory encounter with objects" (Hirschman, 1980; Laato et al., 2020). Satisfaction and peace of mind in making purchasing choices, shopping satisfaction from positive emotions played a crucial role in making selections. Other studies attempted to associate feelings with purchases (). However, the latest research suggests that the reverse is true, with lifesaving purchasing decisions being focused on fear and need (i.e., utilitarian) (Ozturk, 2020).

The availability of goods can be affected by unexpected increases in demand, such as panic buying and stockpiling (Haq& Abbasi, 2016). An excessive customer demand degree would intensify supply disruptions (Peels et al., 2009). High demand can lead to increased prices, transportation problems, and import restrictions. In response to COVID-19's rapid worsening, people infected, and the public raided medical supply stores are there. Countries like Singapore and Australia, among others, have seen panic-buying and stockpiling of food goods, and general household items due to a lack of obvious signs of an impending catastrophe. Panic buying leads people to panic about the lack of things, which drives even more panic buying (Allon&Bassamboo, 2011; Laato et al., 2020).

Health workers and the elderly are at risk of not having access to essential equipment and supplies necessary for everyday consumption (BBC, 2020). It is critical to understand and foresee when panic buying occurs in the

COVID-19 epidemic. The rising trend of online and social shopping needs more attention to combat the lack of offline stores and restrictions on humans' interactions (Ozturk, 2020).

The current research is among the first to focus on both hedonic and utilitarian motives in online purchasing during a crisis of COVID 19. It highlights the significant associations between the experiences (social presence, fear appeal, buying behaviour and e-loyalty) during the online purchasing. This study has brought back an almost-forgotten theory (fear appeal) to explain panic buying in social commerce: that includes social media which promotes social engagement and stakeholders' contributions to aid online marketing. Thus, this study investigates the complicated behavior and experiences in customer purchasing behaviours that people took in Jordan after the deadly novel coronavirus outbreak (COVID-19). Further, this study will serve as a future marketing research and e-commerce research model and act as a precedent for future research.

### **Background to COVID-19**

Coronavirus is a viral species belonging to Nidovirales and family Coronaviridae (Drosten et al., 2003; Ksiazek et al., 2003). Older forms of the Coronaviridae virus include but are not limited to severe acute respiratory syndrome coronavirus (SARS coronavirus), and Middle East respiratory syndrome coronavirus (MERS coronavirus) (Zaki et al., 2012). Even though this virus is recognized as a dangerous pathogen in humans, most infections are normal and mild. All the previous versions and the first version have claimed more than 1000 lives out of the 10000 cases reported, and the highest fatality was recorded in China. It seems that China is a restaurant favourite for the NCoV family (WHO, 2004).

Even though the SARS-CoV and the MERS-CoV were eventually contained, recent developments indicate that what was seen and historically known as just the smokes has tremendous fire underneath. Latest news reports on an outbreak of chronic pneumonia have become a focus of attention globally. The unknown virus was first identified in December 2019, and the findings of the laboratory test revealed it was officially named as the 2019 novel coronavirus (COVID-19) (Huang et al., 2020).

As of March 22nd, 2020, there were 32542 new cases of COVID-19, 253253 renewals, 89408 remedies, and 10431 deaths. Out of all the 157,540 cases of AIDS in China, there are 5566 active cases, 136 new suspected, 3276 deaths, 2622 existing severe cases, 81694 total cases, and 72852 cured cases. Europe had 16412 new diagnoses, 193337 new cases, 13427 new fixed cases, and 10364 deaths. Italy was the hardest hit. From other Asian nations, 1222, 44970, 12651, and 2154; from North America 653, 44895, 196, 541, from South America 0, 4186, 24, 53, and from elsewhere, 0, 4186, 24, 53, new diagnoses, cumulative, healed and death cases. There were 276, 1772, 163, 56 cases of the illness; in Oceania, there were 0, 1898, 88, 7, and in cruise ships, 0, 712, 551, and 10 cases respectively (Baidu, 2020).

Currently, besides the very few documented studies in areas of epidemiological, clinical features, care, and clinical outcomes of reported cases infected with COVID-19 (Cortegiani et al., 2020; Huang et al., 2020; Li et al., 2020), there are no known studies on the effect for marketing, and the socio-economic impacts of the human infection of the 2019 novel coronavirus (COVID-19).

### **Literature Review and Hypotheses Development**

#### **COVID-19 and Experiences in Purchasing Behavior Experiences**

This paper evaluates how COVID 19 has affected selected products' customer purchasing behaviour. They predicted a dramatic change in online consumer behaviour based on reported symptoms and preventive steps. Marketing firms also use this strategy to sell their products (Mcdaniel& Zeithaml, 1984; Ozturk, 2020).

The fear appeal can be split into fear reduction and fear management. Danger avoidance guides action to avoid danger, while fear-avoidance guides emotional responses resulting from the risk. In the current study and because there is no apparent indication of regulating or curing COVID-19, individuals must react to it. When a dominant individual warns a subordinate individual of the possible threat, the subordinate individual can become more afraid. Consequently, the parallel response paradigm is based on the Fear Appeal Theory which predicts that the more worried someone is, the greater their purpose is to avert the fear (Laros& Steenkamp, 2005; Laato et al., 2020).

Fear messages have been used to promote goods and services in commercials. It expanded into life insurance, road injury promotions, political lobbying, drug awareness ads, and in sections of public health issues, such as the COVID-19 and other general health-related issues. Some studies suggest that impulse buying correlates with fear (Lin & Chen, 2012; Laato et al., 2020).

Recent research has shown that buying decisions and choices are a function of the consumer's analysis of the advantages and drawbacks of the product and the positive and negative aspects (Consoli, 2009; ). Products considered to resolve a particular risk or risks, fomenting fear, and more effectively boost sales (Mcdaniel&

Zeithaml, 1984; Ozturk, 2020). This study researched masks, hand sanitizers, thermometers, disposable gloves, and alcohol-based cleaning wipes in Jordan. Two primary sources gave us factual data. We examined purchase data from a survey in many customer engagement platforms and the daily statistics of alleged, confirmed, and fatal cases to understand the relationship between features of social presence and user needs.

We based on this to predict that, in the wake of the continuous spread of the deadly COVID-19:

*H1: The fear appeal of COVID 19 will positively correlate with selected personal protective equipment's purchase behaviour.*

### **The Online Purchasing, Social Presence and Appealing Issue**

Social presence is more in online social contexts as online purchasing behaviour. The concept of social presence has been subject to incremental change, stressing the value of virtual reality and augmented reality. Therefore, social presence refers to when two people who talk with each other feel as though they are physically present. Face-to-face contact appears to have a higher social footprint than text messages, emails, and voice calls (Biocca et al., 2003; Patil & Patil, 2020).

In computer-mediated experiences, audiences will feel like they are a part of something greater when communicating with others through a computer. As a result, users turn to share in person with a person participating in a mediated environment. Social presence is two-dimensional, being a sensation of sight and being a means of being present. To be absent includes physical linkage in space and time while the latter uses the principle of perception and emotions (Nowak & Biocca, 2013; Patil & Patil, 2020).

This research followed the previous approach (the sense of being together in a mediated perception of an environment). The fear appeal of COVID 19 s and social presence may contribute to a lack of know-how. Information gathered by consumers is used to monitor, stop, deal with, or react to fear. People's apprehension of the COVID19 will lead customers to connect with the web, pushing social engagement in e-commerce platforms (Arnold & Reynolds, 2012; Patil & Patil, 2020). Consumers are known for being driven by the desire for fun to participate in social-interactive shopping for social knowledge (Arnold & Reynolds, 2003; Joo Park et al., 2006). The uncontrollability and infectious state of COVID-19.

The fear appeal of COVID 19 comes with the audience's emotional reactions. The expected outcome of fear appeals is that people are willing to embrace messages and relate them to relief (Khasawneh et al., 2010). It is understood that the decision to adopt a fear appeal recommendation is a function of the perceived utility of the request, how likely the advice is to be implemented, and the likelihood that the recommended actions will not happen or can be prevented if the recommendation is followed (Stauss et al., 2005).

*H2: The fear appeal of COVID 19 will positively correlate with the level of social presence in selected personal protective equipment's online purchasing behaviour.*

### **Online Purchasing and E-Loyalty**

A useful link with producers' and online products comes with some online retailers. Trust, confidence, and loyalty are required for different social processes to transpire. When trusting a system, a brand, or a vendor, this leads to belief. When developed over time, belief is the product of trust and encouragement (E-loyalty). Trust is due to the acts one takes (Demoulin & Zidda, 2009; ). Although confidence is based on emotion, trust is based on emotion. Therefore, trust is the feeling that one can have a sense of protection with others. If trust has been built, loyalty should be evident. Loyalty, rather than trust, is commonly thought to be appropriate for cooperation, but trust is also required before loyalty. Individuals may feel loyal to a person, a relationship, or an institution even when they lack confidence in their success (Demoulin & Zidda, 2009; Ozturk, 2020).

Trust and loyalty allow one to act with confidence and certainty concerning the future by providing protection and assurance to the unknowable and the feared (Prentice et al., 2020). The fear of the unknown is sufficient to create trust between a consumer and a product. This faith triggers the building of trust in medical devices and, causing customers who find solace in the development and brand to become loyal and eventually propagating positive word-of-mouth (e-WOM) (Patil & Patil, 2020).

It is important to remember that live streaming offers a shared forum for users and streamers to exchange ideas, learn, and connect. The high social presence characteristics used in a live-streaming strategy provides shoppers with a reduction in their psychological distance and sense of confusion in their purchase (Zhang et al., 2019).

### **Social Presence and E-Loyalty**

Social presence is a feature of a medium that determines how many people engage with it (Prentice et al., 2020). From an emotional point of view, social involvement is synonymous with the positive feelings humans have for other humans conveyed by non-verbal cues (Prentice et al., 2020).

Favourable consumer contact is associated with e-loyalty and positive purchasing conduct (Patil & Patil, 2020). Confidence and loyalty are strengthened by electronic messaging, enhancing social presence in computer-mediated environments (Prentice et al., 2020). Visual signals are often recognized as a good measure of social reality because they concentrate on the consumer's real, practical, and emotional needs by highlighting its features and benefits (Kahn, 2017).

When customers have a convincing and engaging experience in an online platform, they are more interested. Increased website interactivity is regarded as beneficial to growing website visitors' online flow experience and adding to their social presence. This experience contributes to positive results in the context of favourable attitudes towards the website and the brand, an increased number of product-relevant emotions, and beneficial behavioural intention like eWOM, and purchasing ().

Trust is mainly built from social experiences and environments, and therefore trust is a prerequisite for loyalty. When selling to customers, seller-buyer interactions generate more social knowledge on which consumers form their naive beliefs and establish their loyalty (Lu et al., 2016). As the infection rate of the COVID-19 continues to increase, we expect that:

*H3: The social presence of online purchase will positively associate with customer e-loyalty.*

### **Social Presence and Purchasing Behaviour**

Social presence is a generally recognized influencer in consuming products and services. The user base is mostly affected by the number of social interactions and the social networks they are a member of (Godes et al., 2005; Zhang et al., 2019).

Marketplace-based e-commerce sites like Amazon, eBay and Alibaba have begun integrating social applications that allow users to communicate with their friends and family (Marsden, 2010). Evolution in technology introduced the opportunity to share quickly and in person. The streaming service has provided customers with a sense of social interaction with online streamers (Stever, 2011). Through this link, viewers can conclude that the streamers are present and not absent from their lives. These streamers' ads on social media affect consumers' purchasing decisions (Bergel & Brock, 2019; Marsden, 2010). Previous research has shown that brand trust and brand loyalty play intermediate roles in the effect commercials have on buying decision (He & Qu, 2018; Yang et al., 2015).

In a social sense, it was proposed that promotional appeals directed at the emotions may have positive effects on consumers (Yuan et al., 2010). Thus, we will say that.

*H4: Social presence will positively associate with consumers' purchase behaviour.*

### **E-loyalty and Customer Purchasing Behaviour**

An integral component of commerce, comparable to social media, is followership. As a vital part of rewarding loyalty, customer involvement has been a commonly used innovation technique in recent years (Bergel & Brock, 2019). The number of users, which is an indicator of the network size and popularity, is a significant factor in determining social impact (Badashian & Stroulia, 2016; De Veirman et al., 2017).

As a result, many followers indicate more widespread coverage of a commercial, market, loyal customers, and the degree to which a social post will encourage e-WOM. Throughout the world, businesses harness the power of this particular form of eWOM at scale, to elevate their influence and increase their presence (De Veirman et al., 2017). New technologies are employed to recognize and monitor relevant influencers for brands and communicate with them. Therefore, adherents are brand loyalists (Stroulia, 2016; Cha et al., 2010; De Veerman et al., 2017).

Loyalty and excitement from consumers will decide a product's design and service quality. Readers' use of likes shows satisfaction with the interaction and that the reader meets their needs. It acts as a strong driver for eWOM, buy, and referrer words (Leek et al., 2019; Sashi, 2012). The effect of loyalty and confidence on the use of e-commerce is examined through previous studies. Trust, loyalty and 'stickiness' were the key factors influencing consumers' enhancing social presence and buying intention (Gao et al., 2018; Lu et al., 2016).

Loyalty remains an important social component, even in the digital age. Winnie, et al. (2019). In the virtual world, committing to a business improves its profitability and long-term profitability. Social presence activation is essential but not sufficient for loyalty in e-commerce. The rate of customer retention is a primary source of revenue growth in a range of 25 percent to 95 percent (Gallo, 2014).

*H5: Customer e-loyalty will have a positive association with purchase behaviour.*

## **Methodology**

### **Population and Sample**

The research population includes clients of pharmaceutical companies in Jordan who use the largest three online shopping sites. The research sample was randomly selected, and the study obtained 834 measurements per day at 40 pharmacies. To understand the current market, we looked at Facebook and Facebook accounts of two pharmacies and ten pharmacies and then compared them. Comparing the sales pattern of apparel illustrates that the segment of goods has increased online sales. The paper will provide a detailed summary of the existing discussions.

### **Variables Measurement**

The survey was released and circulated via social media channels. It was produced in collaboration with Kahn, 2017. The fear appeal of COVID 19 was assessed as presented in the Lin & Chen report. The official WHO statistics are only updated at the end of the day and are not available until then. We believe that customers will make purchasing decisions based on the most recent news as the purchase is online and can have almost an immediate impact. In that scenario, we feel that our findings from COVID will impact the consumer's shopping behaviour the next day (Li et al., 2020).

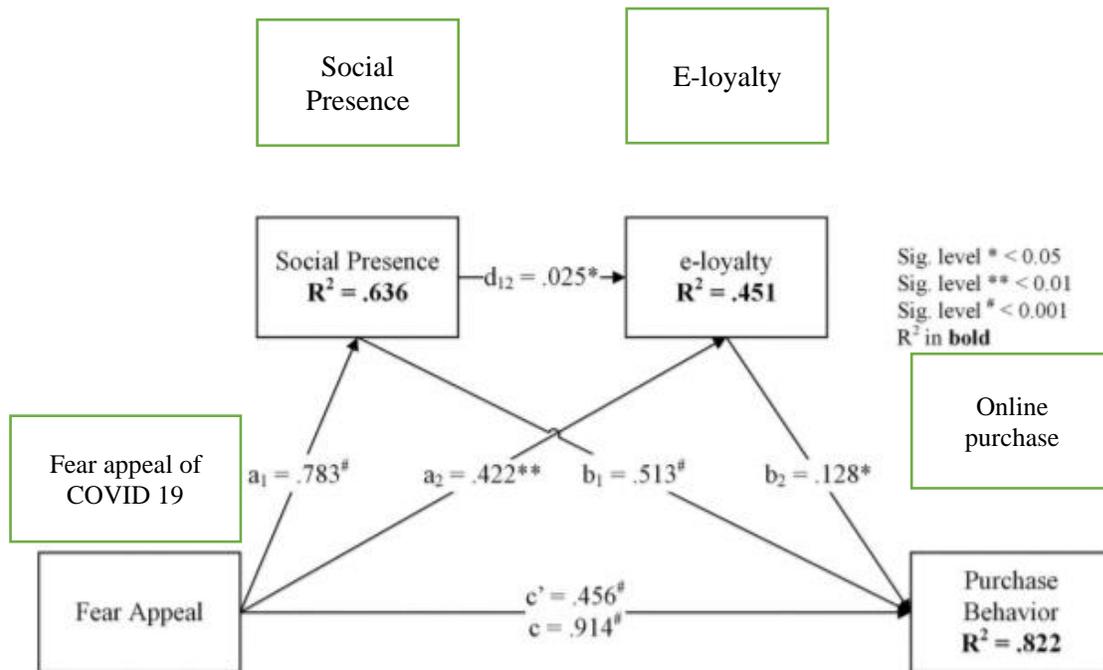
## **Results**

To create the relationship between fear appearance and consumer sales behaviour, this researcher conducted a model study. We recorded all values in the logarithmic form to avoid data misrepresentation, typical of continuous and group activity datasets (Bründl & Thomas, 2006; Feng et al., 2014), and to smooth-edge high values (Feng et al., 2014).

The fear appeal of COVID 19 accounted for 63.6% of the variability in social presence enjoyed by sellers with customers participating in online transactions. The findings show that those who fear electric shock are more likely to suggest suitable solutions. While they are both positively associated with the model ( $\beta = 113$ ,  $p = n.s.$ ;  $\beta = 010$ ,  $p = n.s.$ ), their effects are not statistically important due to their relatively low magnitudes. This finding suggested a falsification of H1. Fear appeal of COVID 19 ( $\beta = .422$ ,  $p = 0.01$ ), and social presence ( $\beta = .025$ ,  $p = 0.05$ ) affected consumer loyalty by a 45% shift. The findings support the hypotheses H3 and H5. E-loyalty is positively related to purchasing behavior ( $\beta = .128$ ,  $p = 0.01$ ) and is partly mediated by social presence ( $\beta = .513$ ,  $p = 0.001$ ) and fear Appeal of COVID 19 ( $\beta = .456$ ,  $p = 0.001$ ), explaining 82% of variation in purchase behavior.

This achievement shows that consumer loyalty is positively related to purchasing behaviour, social presence is positively related to purchasing behaviour, and the fear appeal of COVID 19 was positively related to purchasing behaviour. The study also tested other ways in which fear appeals of COVID 19 could lead to consumption behaviours.

The analysis presented the requisite verifiable evidence to support our hypothesis. First, we tested the partial mediation effects of an increase in social presence, so that an increase in social presence results in an improvement in the fear appeal of COVID 19, which is correlated with an increase in purchasing behaviour. The study then explored the effect of e-loyalty on the relationship between customer fear and ad awareness (H4). Based on this result, this statistical test is important ( $\beta = .128$ ;  $SE = .0281$ ;  $LL = .051$ ;  $UL = .091$ ). a rise in e-loyalty impacts purchasing activity, which is a consequence of COVID 19's fear appeal.



**Discussion**

**Key findings**

The outbreak of the COVID-19 virus has caused worldwide terror, with China, Italy, Spain, the U.S., France, Germany, Iran, the UK, and others fearing their health. The paper explores the complex essence of the fear appeal in the aftermath of the deadly 2019 novel coronavirus in Wuhan, China, known as the COVID-19. First, we established that personal protective equipment’s purchasing pattern followed the trend of suspected, confirmed, and death cases related to the COVID-19 while the usual trend of high purchase of apparels (Kim & Forsythe, 2010) fell significantly.

The findings indicate that consumers need the information to monitor, escape, deal with, or react to fear, leading to high interactivity and social presence in e-commerce platforms (Arnold & Reynolds, 2012). We thought this argument would be significant, mainly since there is no cure for the escalating COVID-19 outbreak.

Several other researchers have also shown that cynical hedonic motivations (fear) lead people to seek social interactive in shopping as a way of finding approval, affection and fellowship (Arnold & Reynolds, 2003; Joo Park et al., 2006). Internet presence is known to contribute to loyalty between customers. This is mainly characterized in terms of positive feelings. This study expanded this understanding to a negative direction and verified that when customers are engaged with an online motivating, involving, and interactive experience, they engage more intensely. The social presence is enhanced by live-streaming, and it serves as a deterrent in the building of loyalty (Gefen & Straub, 2004; Lu et al., 2016). Besides the shreds of evidence in the existing literature on how fear appeal affects purchasing behavior (Laros& Steenkamp, 2005; Lin & Chen, 2012; Mcdaniel& Zeithaml, 1984), which are equally supported by the current findings, we found the mediating role of social presence and loyalty in explaining this concept.

**Limitations and suggestions for future work**

It is essential to note that the constructs and variables used in this study, even though they are the only available variables in the platforms investigated, may not be conclusive and comprehensive enough. Even though the outbreak of the COVID-19 is not expected to be everlasting, the duration of the data collection is a possible limitation to the current study.

It is recommended that further exploration of the phenomenon is needed after several other months. Personal protective equipment is at the centre of attention and suffered from panic at the early stages of the spread of COVID-19. However, there are many reports of stockpiling, price spikes, and shortage of general merchandise in anticipation of lockdowns. Therefore, it is vital to extend the current framework to other products and from different parts of the world. Since the time-series approach was not considered in the current work, there might be possible inflations in the number of R-squares or betas. Further studies should consider other approaches, including the time-series approach.

### **Conclusion**

Drawing inspiration from the theory of fear appeal, the current study examined the swings in purchase behaviour in the wake of the deadly 2019 novel coronavirus in Wuhan, China, and across the world. The study demonstrated that the association between fear appeal, social presence, e-loyalty, and online purchase behaviour as far as personal protective equipment are concerned. While these might not necessarily be the first work with these characteristics, we are confident it is one of the very few studies with these characteristics focusing on the COVID-19.

Finally, we introduced a framework that needs further investigation for the adoption and uses in live-streaming and e-commerce in general.

### **Biography**

ABC News. (2020). China food prices spike as anti-virus effort disrupts supply. Retrieved March 19, 2020, from <https://abcnews.go.com/International/wireStory/china-food-prices-spike-anti-virus-effort-disrupts-69498150>.

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474. [https://doi.org/10.1016/0022-1031\(86\)90045-4](https://doi.org/10.1016/0022-1031(86)90045-4)

Allon, G., & Bassamboo, A. (2011). Buying from the babbling retailer? The impact of availability information on customer behavior. *Management Science*. <https://doi.org/10.1287/mnsc.1100.1306>.

Arnold, M. J., & Reynolds, K. E. (2003). Hedonic shopping motivations. *Journal of Retailing*, 79(2), 77–95. [https://doi.org/10.1016/S0022-4359\(03\)00007-1](https://doi.org/10.1016/S0022-4359(03)00007-1)

Arnold, M. J., & Reynolds, K. E. (2012). Approach and Avoidance motivation: Investigating hedonic consumption in a retail Setting. *Journal of Retailing*, 88(3), 399–411. <https://doi.org/10.1016/j.jretai.2011.12.004>

Badashian, A. S., & Stroulia, E. (2016). Measuring user influence in Github: The million follower fallacy. *Proceedings - 3rd International Workshop on CrowdSourcing in Software Engineering, CSI-SE 2016*, <https://doi.org/10.1145/2897659.2897663>

Baidu. (2020). New coronavirus pneumonia: Outbreak notification. Retrieved January 27, 2020, from <https://voice.baidu.com/act/newpneumonia/newpneumonia> THE SERVICE INDUSTRIES JOURNAL 485

Barnes, N. G. (2014). Social commerce Emerges As Big brands Position Themselves to turn “follows”, “likes” and “pins” into sales. *American Journal of Management*, 14(4), 11–18. [http://www.digitalcommons.www.na-businesspress.com/AJM/BarnesNG\\_Web14\\_4\\_.pdf](http://www.digitalcommons.www.na-businesspress.com/AJM/BarnesNG_Web14_4_.pdf)

BBC. (2020). Coronavirus: Panic buying Australians clear supermarket shelves. Retrieved March 3, 2020, from [https://www.bbc.com/news/av/world-australia-51702409/coronavirus-panic-buying-australians-clear-supermarketshelves?at\\_medium=custom7&at\\_custom3=BBC+News&at\\_campaign=64&at\\_custom1=%5Bpost+type%5D&at\\_custom4=2898192E-5CD7-11EA-B4C0-5BE5FCA12A29&at\\_custom2=](https://www.bbc.com/news/av/world-australia-51702409/coronavirus-panic-buying-australians-clear-supermarketshelves?at_medium=custom7&at_custom3=BBC+News&at_campaign=64&at_custom1=%5Bpost+type%5D&at_custom4=2898192E-5CD7-11EA-B4C0-5BE5FCA12A29&at_custom2=)

Bergel, M., & Brock, C. (2019). Visitors’ loyalty and price perceptions: The role of customer engagement. *Service Industries Journal*, 39(7–8), 575–589. <https://doi.org/10.1080/02642069.2019.1579798>

Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a More Robust Theory and Measure of Social Presence: Review and Suggested Criteria. In *Presence: Teleoperators and Virtual Environments* (Vol. 12, pp. 456–480). <https://doi.org/10.1162/105474603322761270>

Boutsouki, C. (2019). Impulse behavior in economic crisis: A data driven market segmentation. *International Journal of Retail & Distribution Management*, 47(9), 974–996. <https://doi.org/10.1108/IJRDM-08-2018-0165>

Bründl, S., & Thomas, H. (2006). Why Do Users Broadcast? Examining Individual Motives and Social Capital on Social Live Streaming Platforms. In *PACIS 2006* (pp. 332–140). <https://aisel.aisnet.org/pacis2016/332/>

- Cha, M., Haddadi, H., Benevenuto, F., & Gummadi, K. P. (2010). Measuring user influence in twitter: The million follower fallacy. *ICWSM 2010 - Proceedings of the 4th International AAAI Conference on Weblogs and social media*. <https://doi.org/10.1145/2897659.2897663>
- Cho, Y. C., & Sagynov, E. (2015). Exploring factors that affect Usefulness, Ease Of Use, trust, And purchase intention In The online environment. *International Journal of Management & Information Systems (IJMIS)*, 19(1), 21–36. <https://doi.org/10.19030/ijmis.v19i1.9086>
- Consoli, D. (2009). Emotions that influence purchase decisions And their electronic Processing. *Annales Universitatis Apulensis Series Oeconomica*, 2(11), 1–45. [https://econpapers.repec.org/article/alujournal/v\\_3a2\\_3ay\\_3a2009\\_3ai\\_3a11\\_3ap\\_3a45.htm](https://econpapers.repec.org/article/alujournal/v_3a2_3ay_3a2009_3ai_3a11_3ap_3a45.htm)
- Cortegiani, A., Ingoglia, G., Ippolito, M., Giarratano, A., & Einav, S. (2020). A systematic review on the ef fi cacy and safety of chloroquine for the treatment of COVID-19. *Journal of Critical Care*, 3–7. <https://doi.org/10.1016/j.jcrc.2020.03.005>
- Cyr, D., Hassanein, K., Head, M., & Ivanov, A. (2007). The role of social presence in establishing loyalty in e-service environments. *Interacting with Computers*, 19(1), 43–56. <https://doi.org/10.1016/j.intcom.2006.07.010>
- Demming, C. L., Jahn, S., & Boztug, Y. (2017). Conducting mediation analysis in marketing research. *Marketing ZFP*, 39(3), 76–98. <https://doi.org/10.15358/0344-1369-2017-3-76>
- Demoulin, N. T. M., & Zidda, P. (2009). Drivers of customers' adoption and adoption Timing of a New loyalty Card in the Grocery retail market. *Journal of Retailing*, 85(3), 391–405. <https://doi.org/10.1016/j.jretai.2009.05.007>
- De Veirman, M., Cauberghe, V., & Hudders, L. (2017). Marketing through instagram influencers: The impact of number of followers and product divergence on brand attitude. *International Journal of Advertising*, 36(5), 798–828. <https://doi.org/10.1080/02650487.2017.1348035>
- Drosten, C., Günther, S., Preiser, W., Van Der Werf, S., Brodt, H. R., Becker, S., Rabenau, H., Panning, M., Kolesnikova, L., Fouchier, R. A., & Berger, A. (2003). Identification of a novel coronavirus in patients with severe acute respiratory syndrome. *New England Journal of Medicine*, <https://doi.org/10.1056/NEJMoa030747>
- El Dief, M., & Font, X. (2010). The determinants of hotels' marketing managers' green marketing behaviour. *Journal of Sustainable Tourism*, 18(2), 157–174. <https://doi.org/10.1080/09669580903464232>
- Feng, C., Wang, H., Lu, N., Chen, T., He, H., Lu, Y., & Tu, X. M. (2014). Log-transformation and its implications for data analysis. *Shanghai Archives of Psychiatry*, 26(2), 105. <https://doi.org/10.3969/j.issn.1002-0829.2014.02.009486>
- P. C. ADDO ET AL. Foroughi, A., Buang, N. A., Che Senik, Z., & Sadat Hajmisadeghi, R. (2013). Impulse buying Behaviour and Moderating role of gender among Iranian Shoppers. *Journal of Basic and Applied Scientific Research*, 3(4), 760–769.
- Gallo, A. (2014). The Value of Keeping the Right Customers. Retrieved March 23, 2020, from <https://hbr.org/2014/10/the-value-of-keeping-the-right-customers>
- Gao, W., Liu, Y., Liu, Z., & Li, J. (2018). How does presence influence purchase intention in online shopping markets? An explanation based on self-determination theory. *Behaviour & Information Technology*, 37(8), 786–799. <https://doi.org/10.1080/0144929X.2018.1484514>
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Inexperience and experience with online stores: The importance of tam and trust. *IEEE Transactions on Engineering Management*, 50(3), 307–321. <https://doi.org/10.1109/TEM.2003.817277>
- Gefen, D., & Straub, D. W. (2003). Managing user trust in B2C e-services. *E-Service Journal*, 2(2), 7. <https://doi.org/10.2979/esj.2003.2.2.7>
- Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-commerce and the importance of social presence: Experiments in e-products and e-services. *Omega*, 32(6), 407–424. <https://doi.org/10.1016/j.omega.2004.01.006>
- Godes, D., Mayzlin, D., Chen, Y., Das, S., Dellarocas, C., Pfeiffer, B., Libai, B., Sen, S., Shi, M., & Verlegh, P. (2005). The firm's management of social interactions. *Marketing Letters*, 16(3–4), 415–428. <https://doi.org/10.1007/s11002-005-5902-4>
- Güler, Y. B. (2014). Values and hedonic consumption behavior : A field research in Kirikkale. *Asian Journal of Empirical Research*, 23(3-4), 167–180. <https://doi.org/10.1080/08961530.2011.578056>
- Haq, M., & Abbasi, S. (2016). Indirect impact of hedonic consumption and emotions on impulse purchase behavior: A double mediation model. *Journal of Management Sciences*, 3(2), 108–122. <https://doi.org/10.20547/jms.2014.1603202>

- Hassanein, K., & Head, M. (2005). The impact of infusing social presence in the web interface: An investigation across product types. *International Journal of Electronic Commerce*, 10(2), 31–55. <https://doi.org/10.2753/JEC1086-4415100202>
- Hassanein, K., Head, M., & Ju, C. (2009). A cross-cultural comparison of the impact of social presence on website trust, usefulness and enjoyment. *International Journal of Electronic Business*, 7(6), 625. <https://doi.org/10.1504/IJEB.2009.029050>
- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy*, 98, 39–57. <https://doi.org/10.1016/j.brat.2016.11.001>
- He, Q., & Qu, H. (2018). The impact of advertising appeals on purchase intention in social media environment—analysis of intermediary effect based on brand attitude. *Journal of Business Administration Research*, 7(2), 17. <https://doi.org/10.5430/jbar.v7n2p17>
- Hirschman, E. C. (1980). Innovativeness, Novelty seeking, and consumer Creativity. *Journal of Consumer Research*, 7(3), 283. <https://doi.org/10.1086/208816>
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., & Cheng, Z. (2020). Articles clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*, 6736(20), 1–10. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5)
- INSEAD. (2020). The Psychology Behind coronavirus panic buying. <https://knowledge.insead.edu/node/13451/pdf>
- Laato, S., Islam, A. N., Farooq, A., & Dhir, A. (2020). Unusual purchasing behavior during the early stages of the COVID-19 pandemic: The stimulus-organism-response approach. *Journal of Retailing and Consumer Services*, 57, 102224.
- Joo Park, E., Young Kim, E., & Cardona Forney, J. (2006). A structural model of fashion-oriented impulse buying behavior. *Journal of Fashion Marketing and Management: An International Journal*, 10(4), 433–446. <https://doi.org/10.1108/13612020610701965>
- Kahn, B. E. (2017). Using visual design to Improve customer perceptions of online Assortments. *Journal of Retailing*, 93(1), 29–42. <https://doi.org/10.1016/j.jretai.2016.11.004>
- Keen, P., Balance, C., Chan, S., & Schrupp, S. (2000). Electronic commerce relationships: Trust by design. *CMA Management*, 74(9), 6. <http://www.worldcat.org/oclc/42389605>
- Khasawneh, A., Bsoul, M., Obeidat, I., & Al Azzam, I. (2010). Technology Fears. *International Journal of Information Systems in the Service Sector*, 2(2), 70–77. <https://doi.org/10.4018/jiss.2010040105>
- THE SERVICE INDUSTRIES JOURNAL 487
- Kim, J., & Forsythe, S. (2010). Factors affecting adoption of product virtualization technology for online consumer electronics shopping. *International Journal of Retail and Distribution Management*, 38(3), 190–204. <https://doi.org/10.1108/09590551011027122>
- Köhler, C. F., Rohm, A. J., de Ruyter, K., & Wetzels, M. (2011). Return on interactivity: The impact of online agents on newcomer adjustment. *Journal of Marketing*, 75(2), 93–108. <https://doi.org/10.1509/jm.75.2.93>
- Koparal, C., & Çalik, N. (2015). Hedonic consumption characteristics related to products and services where Fashion Involvement Plays an important role, A Field study from Eskisehir, Turkey. *International Journal of Social Sciences*, IV(1), 14–39. <https://doi.org/10.20472/SS2015.4.1.002>
- Ksiazek, T. G., Erdman, D., Goldsmith, C. S., Zaki, S. R., Peret, T., Emery, S., ... Anderson, L. J. (2003). A novel coronavirus associated with severe acute respiratory syndrome. *New England Journal of Medicine*, <https://doi.org/10.1056/NEJMoa030781>
- Laros, F. J. M., & Steenkamp, J. B. E. M. (2005). Emotions in consumer behavior: A hierarchical approach. *Journal of Business Research*, 58(10), 1437–1445. <https://doi.org/10.1016/j.jbusres.2003.09.013>
- Latour, M. S., & Rotfeld, H. J. (1997). There are threats and (maybe) fear-caused arousal: Theory and confusions of appeals to fear and fear arousal itself. *Journal of Advertising*, 26(3), 45–59. <https://doi.org/10.1080/00913367.1997.10673528>
- Latour, M. S., & Zahra, S. A. (1988). Fear appeals as advertising strategy: Should they be used? *Journal of Services Marketing*, 2(4), 5–14. <https://doi.org/10.1108/eb024737>
- Leek, S., Houghton, D., & Canning, L. (2019). Twitter and behavioral engagement in the healthcare sector: An examination of product and service companies. *Industrial Marketing Management*, 81, 115–129. <https://doi.org/10.1016/j.indmarman.2017.10.009>
- Leverin, A., & Liljander, V. (2004). Journal of business & Industrial marketing. *Journal of Business & Industrial Marketing Management Decision International Journal of Bank Marketing Iss Journal of Product & Brand Management*, 19(11), 5–14. <http://dx.doi.org/10.1108/>

- 08858620410523981%5Cnhttp://dx.doi.org/10.1108/00251749610113613%5Cnhttp://dx.doi.org/10.1108/02652320610671333%5Cnhttp://dx.doi.org/10.1108/10610421111108067%5Cnwww.emeraldinsight.com/researchregister%5Cnwww.emeraldinsight.com/0
- Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., ... Feng, Z. (2020). Early Transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *The New England Journal of Medicine*, 1– 9. <https://doi.org/10.1056/NEJMoa2001316>
- Lin, Y. H., & Chen, C. Y. (2012). Adolescents' impulse buying: Susceptibility to interpersonal influence and fear of negative evaluation. *Social Behavior and Personality: an International Journal*, 40(3), 353–358. <https://doi.org/10.2224/sbp.2012.40.3.353>
- Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The effects of shopping Orientations, online trust and Prior online purchase experience toward customers' online purchase intention. *International Business Research*, 3(3), 63. <https://doi.org/10.5539/ibr.v3n3p63>
- Lu, B., Fan, W., & Zhou, M. (2016). Social presence, trust, and social commerce purchase intention: An empirical research. *Computers in Human Behavior*, 56, 225–237. <https://doi.org/10.1016/j.chb.2015.11.057>
- Mäntymäki, M., & Salo, J. (2010, June 20–23). Trust, social presence and customer loyalty in social virtual worlds. 23rd Bled eConference Trust: Implications for the Individual, Enterprises and Society - Proceedings, (pp. 49–64).
- Marsden, P. (2010). Monetizing social media. In *Social commerce* (english). Grin Verlag.
- Mcdaniel, S. W., & Zeithaml, V. A. (1984). The effect of fear on purchase intentions. *Psychology & Marketing*, 1(3–4), 73–82. <https://doi.org/10.1002/mar.4220010308>
- Mogilner, C., Aaker, J., & Kamvar, S. D. (2012). How Happiness affects Choice. *Journal of Consumer Research*, 39(2), 429–443. <https://doi.org/10.1086/663774>
- Ndubisi, O. N. (2006). Effect of gender on customer loyalty: A relationship marketing approach. *Marketing Intelligence & Planning*, 24(1), 48–61. <https://doi.org/10.1108/02634500610641552>
- NHC. (2020). Data key to staying ahead of pneumonia. Retrieved January 27, 2020, from <http://en.nhc.gov.cn/488>
- P. C. ADDO ET AL.
- Nowak, K. L., & Biocca, F. (2013). The effect of the agency and Anthropomorphism on users' sense of Telepresence, Copresence, and social presence in virtual environments. *Presence: Teleoperators & Virtual Environments*, 12(5), 481–494. <https://doi.org/10.1162/105474603322761289>
- Oakley, J. G. (2000). Gender-based barriers to senior management positions: Understanding the scarcity of female CEOs. *Journal of Business Ethics*, 27(4), 321–334. <https://doi.org/10.1023/A:1006226129868>
- Ozturk, R. (2020). Health or Death? The Online Purchase Intentions of Consumers during the COVID-19 Pandemic. *Transnational Marketing Journal (TMJ)*, 8(2), 219-241.
- Pan, M. C., Kuo, C. Y., Pan, C. T., & Tu, W. (2013). Antecedent of purchase intention: Online seller reputation, product category and surcharge. *Internet Research*, 23(4), 507–522. <https://doi.org/10.1108/IntR-09-2012-0175>
- Passyn, K., & Sujun, M. (2006). Self-accountability emotions and fear appeals: Motivating behavior. *Journal of Consumer Research*, 32(4), 583–589. <https://doi.org/10.1086/500488>.
- Patil, B., & Patil, N. (2020). Impact of Covid 19 Pandemic on CosnumerBehaviour. *MuktShabd Journal*, IX (V).
- Peels, R., Udenio, M., Fransoo, J. C., Wolfs, M., Hendrikx, T., NeoResins, D. S. M., & Fransoo, J. C. (2009). Responding to the Lehman wave: Sales forecasting and supply management during the credit crisis. *Dec*, 5(2697), 1–20.
- Prentice, C., Chen, J., & Stantic, B. (2020). Timed intervention in COVID-19 and panic buying. *Journal of Retailing and Consumer Services*, 57, 102203.
- Powell, M., & Ansic, D. (1997). Gender differences in risk behaviour in financial decision-making: An experimental analysis. *Journal of Economic Psychology*, 18(6), 605–628. [https://doi.org/10.1016/S0167-4870\(97\)00026-3](https://doi.org/10.1016/S0167-4870(97)00026-3)
- Pöyry, E., Parvinen, P., & Malmivaara, T. (2013). Can we get from liking to buying? Behavioral differences in hedonic and utilitarian Facebook usage. *Electronic Commerce Research and Applications*, 12(4), 224–235. <https://doi.org/10.1016/j.eleap.2013.01.003>
- Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. *Management Decision*, 50(2), 253–272. <https://doi.org/10.1108/00251741211203551>
- Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunication* Wiley.
- Stauss, B., Schmidt, M., & Schoeler, A. (2005). Customer frustration in loyalty programs. *International Journal of Service Industry Management*, 16(3), 229–252. <https://doi.org/10.1108/09564230510601387>
- Stever, G. S. (2011). Fan behavior and Lifespan development theory: Explaining Para-social and social Attachment to Celebrities. *Journal of Adult Development*, 18(1), 1–7. <https://doi.org/10.1007/s10804-010-9100-0>

- Tomek, W. G. (2000). Commodity prices Revisited. *Agricultural and Resource Economics Review*, 29(2), 125–137. <https://doi.org/10.1017/S106828050000527X>
- Upton, E., & Nuttall, W. J. (2014). Fuel Panics: Insights from Spatial Agent-based Simulation. *IEEE Transactions on Intelligent Transportation Systems*, 15(4), 1499–1509. <https://doi.org/10.1109/TITS.2014.2302358>
- The Wall Street Journal. (2020). Coronavirus Sends Food Prices Soaring in China, as Producer Prices Slump. Retrieved March 19, 2020, from <https://www.wsj.com/articles/coronavirus-sends-foodprices-soaring-in-china-as-producer-prices-slump-11583823262>
- WHO. (2004). Summary of probable SARS cases with onset of illness from 1 November 2002 to 31 July 2003. Online 2004, 2, 1–3. [https://www.who.int/csr/sars/country/table2004\\_04\\_21/en/](https://www.who.int/csr/sars/country/table2004_04_21/en/)
- Winnie, P.-M. W., Tan, K.-L., Inkgo, A. I., & Lim, C.-Y. (2019). The effect of technology trust on customer E-loyalty in online shopping and The mediating effect of Trustworthiness. *Journal of Marketing Advances and Practice*, 1(2), 39–52. <https://doi.org/10.6007/ijarbss/v4-i3/718>.
- Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs*, 59(4), 329–349. <https://doi.org/10.1080/03637759209376276>
- Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education and Behavior*, 27(5), 591–615. <https://doi.org/10.1177/109019810002700506>
- Yang, D., Lu, Y., Zhu, W., & Su, C. (2015). Going green: How different advertising appeals impact green consumption behavior. *Journal of Business Research*, 68(12), 2663–2675. <https://doi.org/10.1016/j.jbusres.2015.04.004>
- Yoo, Y., & Alavi, M. (2001). Media and group cohesion: Relative influences on social presence, task participation, and group consensus. *MIS Quarterly: Management Information Systems*, 25(3), 371–390. <https://doi.org/10.2307/3250922> THE SERVICE INDUSTRIES JOURNAL 489
- Yu, C., & Bastin, M. (2010). Hedonic shopping value and impulse buying behavior in transitional economies: A symbiosis in the Mainland China marketplace. *Journal of Brand Management*, 18(2), 105–114. <https://doi.org/10.1057/bm.2010.32>
- Yuan, D., Luo, S., Fu, C. J., & Xie, Y. Q. (2010). Impact of advertising Intervention on consumer's brand attitude and trust. *Journal of Psychology*, 42(6), 715–726. <https://doi.org/10.3724/sp.j.1041.2010.00715>
- Zaki, A. M., Van Boheemen, S., Bestebroer, T. M., Osterhaus, A. D. M. E., & Fouchier, R. A. M. (2012). Isolation of a novel coronavirus from a man with pneumonia in Saudi Arabia. *New England Journal of Medicine*, <https://doi.org/10.1056/NEJMoa1211721>
- Zhang, M., Qin, F., Wang, G. A., & Luo, C. (2019). The impact of live video streaming on online purchase intention. *Service Industries Journal*, 0(0), 1–26. <https://doi.org/10.1080/02642069.2019.1576642>
- Zhao, S. (2002). Reconceptualizing presence: Differentiating between mode of presence and sense of presence. *Proceedings of PRESENCE 2002*, (pp. 260–273). <https://astro.temple.edu/~lombard/ISPR/Proceedings/2002/Zhao.pdf>