



## Pandemic pains to Instagram gains! COVID-19 perceptions effects on behaviours towards fashion brands on Instagram in Sub-Saharan Africa: Tech-native vs non-native generations

Ali B. Mahmoud, Joan Ball, Daniel Rubin, Leonora Fuxman, Iris Mohr, Dieu Hack-Polay, Nicholas Grigoriou & Aziz Wakibi

To cite this article: Ali B. Mahmoud, Joan Ball, Daniel Rubin, Leonora Fuxman, Iris Mohr, Dieu Hack-Polay, Nicholas Grigoriou & Aziz Wakibi (2022) Pandemic pains to Instagram gains! COVID-19 perceptions effects on behaviours towards fashion brands on Instagram in Sub-Saharan Africa: Tech-native vs non-native generations, Journal of Marketing Communications, 28:8, 864-888, DOI: [10.1080/13527266.2021.1971282](https://doi.org/10.1080/13527266.2021.1971282)

To link to this article: <https://doi.org/10.1080/13527266.2021.1971282>



© 2021 Informa UK Limited, trading as Taylor & Francis Group



Published online: 09 Sep 2021.



Submit your article to this journal [↗](#)



Article views: 10430



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 15 View citing articles [↗](#)



# Pandemic pains to Instagram gains! COVID-19 perceptions effects on behaviours towards fashion brands on Instagram in Sub-Saharan Africa: Tech-native vs non-native generations

Ali B. Mahmoud <sup>a,b</sup>, Joan Ball<sup>a</sup>, Daniel Rubin <sup>a</sup>, Leonora Fuxman<sup>a</sup>, Iris Mohr<sup>a</sup>, Dieu Hack-Polay <sup>c,d</sup>, Nicholas Grigoriou <sup>e</sup> and Aziz Wakibif<sup>f</sup>

<sup>a</sup>The Peter J. Tobin College of Business, St. John's University, New York, NY, USA; <sup>b</sup>Business School, University of Wales Trinity Saint David, London, UK; <sup>c</sup>Management Department, Crandall University, Moncton, Canada; <sup>d</sup>Business School, University of Lincoln, Lincoln, UK; <sup>e</sup>Business School, Monash University, Victoria, Australia; <sup>f</sup>Business School, Makerere University, Kampala, Uganda

## ABSTRACT

This study represents a novel attempt to investigate the cascading effects of COVID-19 perceptions onto behavioural patterns towards fashion brands on Instagram and across two generations (tech-native vs tech non-native) in a Sub-Saharan African context. We drew our study on a sample of 338 Instagram users that experienced fashion brands on Instagram in two Sub-Saharan African countries: Uganda and Nigeria. We used partial least square structural equation modelling (PLS-SEM) to test the hypothetical model. We found that COVID-19 perception positively predicted enjoyment and usefulness, leading to more satisfaction with fashion brand accounts on Instagram and hence greater intention to follow and recommend those accounts. Finally, running a multigroup analysis (MGA), we found the effects of COVID-19 perceptions pronounced into both intentions to follow and intention to recommend via the sequence of mediators: enjoyment and satisfaction were only valid amongst the tech-native generational cohort. Our research suggested a new generational categorisation based on technology nativity – offering a new direction of generational studies in digital marketing communications.

## ARTICLE HISTORY

Received 5 January 2021  
Accepted 17 August 2021

## KEYWORDS

Social media marketing; Instagram; branding; fashion; attitudes; consumer behaviour; technology-based generational differences; Sub-Saharan Africa

## Introduction

As the COVID-19 pandemic ravaged communities across the globe, the amount of time people spent on social media sites and the ways in which they engaged with them were dramatically altered (Molla 2021; Togun 2020). While the proliferation of social media has been an ongoing trend for some time (e.g., Hutter et al. 2013; Mohr et al. 2021), people facing social distancing measures took to social media during lockdowns and quarantine as a means of gathering information and maintaining a connection with others in ways that may fundamentally change our relationships with these technologies (Molla 2021). Pandemics and other catastrophic disruptions are ever-present threats that are only expected to increase in frequency in the future (Gill 2021). Thus,

examining the generalizability of findings from extant research on social media use in the context of a catastrophic disruption is relevant to marketing communication theory and practice. Notably, the double enjoyment-usefulness approach that is regularly applied to the study of social networking sites (Casaló, Flavián, and Sergio 2017; Van der Heijden 2004; Mahmoud et al. 2021d) is worth revisiting in this extreme context that constitutes an unprecedented disruption to contemporary marketing (Mahmoud et al. 2020b, 2021d). Specifically, it is important to understand if individuals might be more perceptive of the usefulness of and/or the enjoyment they derive from branded social media accounts in the context of extreme disruption, given the evolution in the way social media has been used as a result of COVID-19. Moreover, given that use of social media (e.g., Instagram) tends to trend younger and established generational differences in motivations for using social media (e.g., Calvo-Porrá and Pesqueira-Sanchez 2019), it would be helpful to understand if generational cohort (digital native vs non-native) impacts these behaviours. We focus on Instagram as a context for this inquiry for several reasons.

Since its creation in 2010, Instagram has become a critical platform for businesses (Elliot 2014). Allowing brands to connect with consumers more rapidly and efficiently than traditional media channels (Hassan, Nadzim, and Shiratuddin 2015) and outpacing the growth of other social media sites (Djafarova and Rushworth 2017), Instagram has begun to supplant the influence of traditional media on consumers (Duffett 2017). Instagram is unique amongst social media platforms in that it is particularly visual in nature (Bianchi 2021; Casaló, Flavián, and Sergio 2017). This allows consumers to have more meaningful interactions with brands (Serafinelli 2018) and allows the promotion of brands to generate public awareness (Geurin-Eagleman and Burch 2016). Moreover, Instagram is popular with younger audiences, an important consideration given that more than half of the global population is under the age of 34 (Statista 2020).

Further, Instagram uses increased 40% during the COVID-19 pandemic (Kantar 2020), suggesting that it was a key social media tool for keeping informed and connected during the COVID-19 pandemic. Among peer platforms, Instagram was the only one to see an increase in incoming messages, with an increase of 6.4 comments per day (Arens 2020). Given the visual nature of Instagram, however, it is unclear how this increased attention affected behaviours toward fashion brands and whether it was experienced differently for tech-native vs non-native generations. This paper contributes to the marketing communication literature by exploring these relationships in the context of extreme disruption (e.g., COVID-19) as experienced in Sub-Saharan Africa.

Sub-Saharan Africa provides an interesting context to explore this research agenda for several reasons. Principally, the relationships between perceived features (i.e., usefulness and enjoyment), overall attitude (i.e., satisfaction), and behavioural intentions (i.e., intentions to follow and intentions to recommend) as well as the moderating role of generational cohorts, was established in Sub-Saharan Africa prior to the emergence of COVID-19 (Mahmoud et al. 2021d). This established baseline allows us to explore whether those recognized relationships are generalizable to the context of extreme disruptions (e.g., COVID-19 pandemic). Further, Instagram is already quite popular in the region as social media is a preferred means of communication in Sub-Saharan Africa due to the high costs associated with SMS and traditional phone calls (Gillwald et al. 2019). In Nigeria, for instance, Instagram has a penetration rate equal to 25% (Mahmoud et al. 2021d), and

usage of the platform in Sub-Saharan Africa appears to be poised for an uptick given the recent launch of Instagram Lite in the region in March of 2021 (Adejumoh 2021). Further, digital marketing is increasingly being used as part of business strategy in the region (Eze et al. 2020).

Given that Instagram users trend younger (Tankovska 2021), there has been a lacuna in the research regarding the engagement of older generational cohorts with the platform. This omission is surprising since this population often represents a sizeable portion of the consumer market these brands cater to and established generational differences in social media usage (Calvo-Porrall and Pesqueira-Sanchez 2019). The gap in the literature becomes particularly glaring in the context of the COVID-19 pandemic, which has seen these understudied generational cohorts adopt social media usage en masse (Togun 2020). While Mahmoud et al. (2021d) did find generational differences in Instagram usage in Sub-Saharan Africa, it is unclear whether these findings generalize to the context of COVID-19. This is important for marketing communication research and practice since attitudes towards and usage of social media networks have undergone a profound transformation during the pandemic (Togun 2020). Accordingly, the primary purpose of this study is to examine the moderating role of digital native vs non-native generational differences on a path model linking COVID-19 perceptions – defined as ones' subjective assessment of their personal concern with the negative effects of the pandemic – to intentions to follow and recommend Instagram accounts. We explore this via perceived usefulness, enjoyment of, and satisfaction with fashion brands' accounts amongst a sample of Instagram users in two Sub-Saharan countries: Nigeria and Uganda.

The present research makes several notable substantive and theoretical contributions. First, we heed calls to investigate consumer behaviours in non-idyllic contexts such as pandemics (e.g., Klein and Hill 2008; Mahmoud et al. 2021d) and in understudied populations (e.g., non-WEIRD samples; Henrich, Heine, and Norenzayan 2010), as prior findings may need to be evaluated in terms of their universality. Further, we add to the literature on the use of social media as a marketing tool (e.g., Alalwan, Rana, Dwivedi, & Algharabat, 2017) by exploring consumer behaviours on social media, rather than the more frequently studied nature of the content of social media posts (see Casaló, Flavián, and Sergio 2017).

## Literature review and hypotheses

### *COVID-19 and social network usage*

The COVID-19 pandemic has influenced the dynamics of social media usage in many ways. While an increasing share of communications has been taking place within social network environments even prior to the pandemic (Hutter et al. 2013), the social distancing measures put in place to combat the spread of the disease accelerated this ongoing trend (Molla 2021). Not only are people spending more time than ever on social media, but they are also forced to navigate an unprecedented amount of disinformation so severe that some have declared it an 'infodemic' (Raman 2020). Moreover, users are increasingly suffering from social media fatigue and are subsequently actively avoiding screen time (Fauville et al. 2021); adjusting the content of social media posts so as not to appear tone-deaf (Wold 2020); 'doomscrolling', or immersing themselves in an information environment on social media that is relentlessly negative (Watercutter 2020); and

building online communities to stave off the effects of social isolation – often around brands (Bishop 2020). Even populations that have not historically been well represented on social media (e.g., the elderly and those living in poverty) have had no choice but to engage with social networks (Togun 2020).

Brands, too, have altered their social media habits during the pandemic, often taking a more empathetic approach to content creation and shifting away from more typical humorous posts deprecating competitors (CBS NEWS 2020). Rather than posting content meant to entertain or be useful, brands have regularly posted messages of solidarity; public service announcements urging consumers to comply with preventative measures like facemask wearing, hand washing, or social distancing; and announcements meant to raise awareness of their CSR efforts (Ragavan 2020). Brands that are successfully navigating the global health crisis are increasingly focussing on engagement with consumers and less on promotional efforts on social media platforms (Salzano 2020). It appears the brands that are in the strongest position to capitalize on social media are those with established relationships with consumers as they provide a trusted source of information (Salzano 2020) in an information environment chock-full of misinformation.

Taken together, the disruptions to both user and brand social media habits in the context of the COVID-19 pandemic reinforce the need to explore the generalizability of prior research that has explored consumer interactions on social media platforms. In particular, research has established a relationship between consumers' perceived usefulness and enjoyment of social media content on downstream intentions to follow and intentions to recommend the social media account (Casaló, Flavián, and Sergio 2017). Further, it is clear that attitudes regarding COVID-19 have real-world behavioural implications. Throughout the course of the pandemic, we have witnessed two extremes of behaviour; some downplay the seriousness of the disease, carrying on as though the pandemic did not exist (e.g., covidiot; Miller 2020) and others taking extreme precautions – sometimes to the point that such behaviours are maladaptive – to avoid exposure to the virus (e.g., coronaphobia; Arora et al. 2020).

### ***COVID-19 perceived usefulness and enjoyment***

Mahmoud et al. (2021a) define COVID-19 perceptions as one's perceived concern with the negative effects of the virus. Such perceptions have been shown in extant literature to impact a range of behaviours, including consumers' eating behaviours (Mahmoud et al. 2021a) and employees' customer orientations (BLINDED Mahmoud et al. 2020b). The negative impacts of social isolation and fear of contracting COVID-19 on mental wellbeing are well established and may lend to increased escapism through the use of social media (Eden et al. 2020). Given the motivation to restore personal wellbeing, anecdotal evidence suggests that people might be more eager to consume the Instagram posts of familiar, trusted brands as a method of coping or as a form of escapism (Tietjen 2020). We contend that the extreme context imposed by COVID-19 has made people more sensitive to and thus more likely to perceive the benefits of using and their enjoyment of online interactions. Formally, we predict:

**H1:** COVID-19 perception positively predicts the perceived usefulness of fashion brands accounts on Instagram.

**H2:** COVID-19 perception positively predicts perceived enjoyment of fashion brands accounts on Instagram.

### ***COVID-19 perceived usefulness and satisfaction with fashion brand account on Instagram***

Perceived usefulness is defined as the extent to which technology results in user goal achievement and positive affect towards the technology (see Davis 1989; Davis et al. 1992). According to Basak and Calisir (2015), perceived usefulness is related to the extent to which a social media account provides the information users need to make specific decisions. In the context of Instagram, the perceived usefulness of Instagram pages leads to user satisfaction with an Instagram account (Alhabash and Ma 2017; Huang and Su 2018). Therefore, we hypothesize that:

**H3:** Perceived usefulness of an Instagram account has a positive effect on users' satisfaction with using the platform during COVID-19

### ***COVID-19 perceived enjoyment and satisfaction with fashion brand account on Instagram***

In the context of social networking sites, perceived enjoyment refers to the degree of fun, relaxation, mental stimulation, and pleasure that people experience when interacting with social media (Casaló, Flavián, and Sergio 2017). This may derive from playing games, engaging with others and, in some cases, engaging with new technologies (Cheah et al. 2020; Nayal and Pandey 2020; Van der Heijden 2004) or a particular brand (Muntinga, Moorman, and Smit 2011). In the case of Instagram, fashion brands often post interesting and interactive content to drive attention and engagement. For example, they may post a poll or engage users in a contest that users may find enjoyable. This perceived enjoyment leads to a pleasant experience that creates a likelihood that the user will perceive their user experience as satisfactory. This leads us to hypothesize:

**H4:** Perceived enjoyment of an Instagram page has a positive effect on users' satisfaction from visiting that page during COVID-19

### ***COVID-19 satisfaction and behavioural intentions towards fashion brands' Instagram accounts***

The relationship between user satisfaction and positive intentions toward fashion brands has been well established (Casaló, Flavián, and Sergio 2017). According to Mazzarolo, Mainardes, and Innocencio (2021), satisfaction with the Instagram experience can lead

users to endorse brands and increase purchase intention. In the case of fashion brands, satisfied users often return to the brand's account when owners of the account share new content (Casaló, Flavián, and Sergio 2017). Since customers of fashion brands often follow the company's Instagram account and engage with it online (Casaló, Flavián, and Sergio 2017), likely, user satisfaction with a fashion brand's Instagram account will positively impact other user behaviours, such as intentions to follow the account and likelihood of positive word of mouth. We, therefore, hypothesise that:

**H5:** Users' satisfaction with an Instagram fashion account has a positive effect on users' intention to follow that account.

**H6:** Users' satisfaction with an Instagram fashion account has a positive effect on users' intention of recommending that page to other Instagram users.

### ***COVID-19 perception and behavioural intentions towards fashion brands' accounts on Instagram***

Users of an Instagram brand page have positive perceptions of the experience when the site is useful, enjoyable or some combination of the two (Casaló, Flavián, and Sergio 2017). This can be the result of satisfying content (Seol et al. 2016) that meets their expectations and inspires positive behaviours with and toward the brand on and off Instagram (Mahmoud et al. 2021d). Therefore, it is presumed that a positive indirect relationship exists between the user's perception of the brand page (e.g., perceived usefulness and perceived enjoyment), their intention to follow the brand Instagram account, and their intention to recommend the brand to others. Accordingly, we hypothesise that:

**H7:** COVID-19 perception indirectly and positively predicts users' intention to follow the brand and intention to recommend the brand to other consumers via two sequences of mediators:

**H7a:** Perceived usefulness of and satisfaction with fashion brands on Instagram

**H7b:** Perceived enjoyment of and satisfaction with fashion brands on Instagram.

### ***Technology nativity as generational categorisation***

Like the rest of the world, Sub-Saharan Africa has seen older people turning to social media in order to maintain connections with others (Togun 2020). Individuals in this region have also been forced to contend with massive amounts of disinformation disseminated through social media (Togun 2020). This onslaught may change their behaviours on the platforms – perhaps causing them to process incoming information more defensively on one hand while entrenching themselves with trusted brands on the other.

Inter-generational differences have been observed with respect to the motivations underlying technology usage by digital native (e.g., Generation Y and Generation Z) and non-native (e.g., Generation X) users. Specifically, digital natives have been shown to be motivated by the hedonic, entertainment value of technologies, whereas non-natives are

more utilitarian (Calvo-Porrall and Pesqueira-Sanchez 2019). It is well-established that ones' salient motives are capable of influencing consumer judgments (Wood and Hayes 2012) and perception (Ginn and Lickel 2020; Maner et al. 2005; Pusch et al. 2021). Importantly, motives direct attention and make people more sensitive to motive-related information (Schultheiss and Pang 2007). If generational cohorts are chronically predisposed to specific motivations when using social media, we should expect to see motivational biases in the perception of social media accounts. Given their divergent motivations for technology usage, it stands to reason that these generational cohorts may be asymmetrically sensitive to the usefulness of (i.e., utilitarian benefits) and enjoyment derived from (i.e., hedonic benefits) of Instagram accounts. That is, tech-natives will be attuned to enjoyment-related information, while non-natives will be attuned to information pertaining to the usefulness of social media accounts. Accordingly, we hypothesize that:

**H8:** Users' generation (tech-native vs tech-non-native) moderates the path from COVID-19 perception and intention to follow and intention to recommend through the usefulness of and satisfaction with fashion brands on Instagram

**H9:** Users' generation (tech-native vs tech-non-native) moderates the path from COVID-19 perception and intention to follow and intention to recommend through the enjoyment of and satisfaction with fashion brands on Instagram

## Methods

Our study took place in two Sub-Saharan African countries: Nigeria and Uganda, and data were gathered through an online survey in 2021. Due to the dispersion of the targeted population, we identified different Instagram users and specifically for generations (X, Y and Z) following accounts that are sharing fashion-related content on Instagram. That is, we purposively recruited participants who were Instagram users and had interactions with accounts of fashion brands on Instagram. In that regard, two screening questions were placed at the beginning of the survey. The two yes-no screening questions were: 'Do you have at least one account on Instagram?' and 'Do you follow any accounts sharing fashion-related content on Instagram?' This was aimed at selecting those individuals who are well conversant with Instagram and fashion-related content. We projected the questionnaire and guided first-time users on how to input their responses. After the demonstration, respondents were now able to complete and submit their responses. That was majorly for generation Y and generation Z. On generation X participants, we had rapporteurs to identify and guide participants to give their responses.

At some time, a snowball method of sample selection was applied. In this case, for every recruited participant, we asked them to assist us in identifying other potential participants for the study. Out of a sample of 500 participants, we received a total of 389 responses (response rate = 78%), of which 338 were deemed valid as fifty-one responses were filtered out due to failing the challenge of the screening questions. The final sample ( $n = 338$ ) had a nearly equal representation of gender and age groups: 1) 18–22 years old; 2) 23–40 and 3) 41 or above and substantial size of each group (Malhotra et al. 2019). We utilised the work of Mahmoud et al. (2021a) and Mahmoud et al. (2020b)



**Table 1.** Measures used in the study.

Variable	Item	Assessment	Source
Perceived Enjoyment	Visiting this Instagram account is entertaining.	7-point Likert scale	Casaló, Flavián, and Sergio (2017) and current study
	This Instagram account is funny and pleasant.		
	Visiting this Instagram account stimulates my mind.		
Perceived Usefulness	I have great enjoyment when visiting this Instagram account.		Casaló, Flavián, and Sergio (2017)
	Visiting this Instagram account helps me get suggestions about clothing.		
Satisfaction	Visiting this Instagram account helps me get new ideas about fashion.		Casaló, Flavián, and Sergio (2017) and current study
	In general, visiting this Instagram account is useful.		
	Overall, I'm satisfied with my experience with this Instagram account		
Intention to Recommend	Overall, I think following this Instagram account is a good idea.		Casaló, Flavián, and Sergio (2017)
	Overall, this Instagram account is valuable.		
Intention to Follow	I would likely recommend this Instagram account to friends and relatives interested in fashion.		Mahmoud et al. (2021a); Mahmoud et al. (2020b)
	I would seldom miss an opportunity to tell others interested in fashion about this Instagram account on social networking sites.		
COVID-19 perception	I predict that I will keep following this Instagram account.		Mahmoud et al. (2021a); Mahmoud et al. (2020b)
	I will continue to look for new content published on this Instagram account.		
	I will probably look for new content published by this Instagram account.		
	I believe that the effect the coronavirus pandemic has had on people is		
	The coronavirus pandemic is making me feel discomfort		
	I feel worried about what could happen if any of my family or friends caught the virus		

to measure COVID-19 perception and Casaló, Flavián, and Sergio (2017) alongside items designed for this study to measure usefulness, enjoyment, satisfaction and intention to follow and intention to recommend fashion brand accounts on Instagram (see Table 1).

Consent to take part in the study was shown at the beginning of the survey. Due to the fact that the survey was carried out online, the signatures of the participants were not acquired (Mahmoud et al. 2021d). We told all participants that their responses would be kept confidential and anonymous. We marked all of the questions as 'Required' to avoid cases with missing data. However, all respondents were made aware of the research's purpose and processes during the surveying process. They were free to ask questions, raise concerns about the questionnaire, or leave the survey at any moment. As a result, rather than 'forcing' people to reply, the process tried to avoid missing data (Mahmoud et al. 2021d). Additionally, our study did not touch on personally sensitive questions (Sischka et al. 2020). As a result, we contend that the low dropout rate demonstrated by our survey's high response rate (78 per cent) implies that there was a slight bias related to the force answering (FA) in the current research (Stieger, Reips, and Voracek 2007; Mahmoud et al. 2021d). Conclusively, because participants do not have to disclose sensitive details in front of investigators, online surveys are less prone to socially desirable responses (Gnambs and Kaspar 2015). The majority of our sample were female (52%), millennials (42%), tech-native (71%), educated to a degree level (50%), based in Uganda (81%) and tech-native (71%).

### Measures and procedure

We present a new categorisation of generation in studying marketing communications, based on technology nativity (Prensky 2001), and, thus, our study focused on two generational groups: tech-native and tech-non-native. In that respect, we identified the cut-offs based on the description of later generations, i.e., the millennials and Generation Z, as tech-savvy or native compared to older generations, e.g., Generation X, in previous research (Chakrabarti and Makhija 2021; Kitchen and Wheeler 1997; Mahmoud et al. 2020b, 2020c, 2021c, 2021d; Mehra, Paul, and Kaurav 2020; Palfrey and Gasser 2011; Prensky 2001; Seemiller and Grace 2019; Windisch and Medman 2008). Since our data were collected in 2021, participants aged between 41–58 years were deemed Gen X, between 23–40 years, Gen Y and 18–22 years, Gen Z.

The measures employed in the current study were multi-item, reflective and assessed on a seven-point Likert scale. We calculated the Heterotrait-Monotrait Ratio of Correlations (HTMT) and had values lower than .9 (see Table 2). Table 3 shows that all the constructs had average variance extracted (AVEs) higher than 0.5, CRs between .7 and

**Table 2.** Discriminant validity test (HTMT).

	COVID-19 Perception	Enjoyment	Intention to Follow	Intention to Recommend	Satisfaction
Enjoyment	0.392				
Intention to Follow	0.298	0.837			
Intention to Recommend	0.282	0.838	0.845		
Satisfaction	0.436	0.838	0.873	0.828	
Usefulness	0.367	0.759	0.762	0.664	0.862

**Table 3.** Outer loadings, VIFs, construct reliability and validity and descriptive statistics.

	COVID-19 Perception	Enjoyment	Intention to Follow	Intention to Recommend	Satisfaction	Usefulness	VIF
COV1	0.570						1.519
COV2	0.978						1.68
COV3	0.656						1.716
ENJ1		0.709					1.738
ENJ2		0.674					1.795
ENJ3		0.739					1.719
ENJ4		0.845					2.23
IF1			0.838				2.043
IF2			0.852				2.043
IREC1				0.708			1.579
IREC2				0.855			1.579
SAT1					0.850		2.474
SAT2					0.860		2.887
SAT3					0.830		2.311
USE1						0.791	2.57
USE2						0.840	3.077
USE3						0.929	2.428
Cronbach's Alpha	0.782	0.830	0.834	0.754	0.884	0.891	
rho_A	0.853	0.838	0.834	0.773	0.884	0.896	
Composite Reliability	0.791	0.832	0.834	0.761	0.884	0.891	
Average Variance Extracted (AVE)	0.571	0.554	0.715	0.616	0.717	0.732	
Mean	5.948	5.772	5.821	5.321	5.966	6.178	
SD	1.429	1.069	1.141	1.336	1.091	1.040	
<i>t</i>	25.060	30.489	29.335	18.180	33.124	38.484	
<i>df</i>	337	337	337	337	337	337	

\*\*  $P < .001$

.9 (Hair et al. 2017), and Variance Inflation Factor (VIF) values less than 3. Our results, therefore, suggest all the measures utilised in the research were admitted to a sufficient class of the discriminant validity, construct reliability, and convergent validity quality criteria. Common-Method Bias (CMB) was also assessed and returned no concerning inner VIFs (see Table 4), as all were lower than 3.3 (Kock 2015). Finally, Table 5 shows the average scores for the whole sample as well as for each tech-nativity group.

## Results

The variance-based (or partial least square) method of structural equation modelling (PLS-SEM) is the primary statistical technique to test the research hypotheses. For that purpose, SmartPLS 3 (v. 3.3.3) is utilised (Ringle, Wende, and Becker 2015). Our choice of the PLS-SEM approach is based on previous research recommendations when assessing predictive models (Hair, Ringle, and Sarstedt 2014; Mahmoud et al. 2021b). Moreover, the literature (e.g., Mahmoud et al. 2020a) suggests that multivariate normality is likely to be contravened by most data. Additionally, an ever-increasing body of literature has endorsed PLS-SEM for empirical research investigations where data are prone to non-normality bewilderments. (Hair et al. 2017). Moreover, PLS-SEM is receiving more implementation and recognition in marketing communications research (e.g., Mahmoud et al. 2021d; Belanche, Flavián, and Pérez-Rueda 2020; Hussein, Mohamed, and Kais 2021; Picicchio and Toaldo 2020; Sarstedt et al. 2020; Zolkepli, Mukhiar, and Tan 2020).

**Table 4.** Inner VIFs values.

	COVID-19 Perception	Enjoyment	Intention to Follow	Intention to Recommend	Satisfaction	Usefulness
Enjoyment	2.555					
Intention to Follow	2.800					
Intention to Recommend	2.300					
Satisfaction	3.215					
Usefulness	2.493					
COVID-19 Perception		1.147				
Intention to Follow		2.647				
Intention to Recommend		2.093				
Satisfaction		3.247				
Usefulness		2.383				
COVID-19 Perception						1.168
Enjoyment						2.481
Intention to Follow						2.742
Intention to Recommend						2.284
Satisfaction						2.767
COVID-19 Perception					1.142	
Enjoyment					2.586	
Intention to Follow					2.586	
Intention to Recommend					2.155	
Usefulness					2.103	
COVID-19 Perception				1.174		
Enjoyment				2.385		
Intention to Follow				2.640		
Satisfaction				3.104		
Usefulness				2.503		
COVID-19 Perception			1.173			
Enjoyment			2.446			
Intention to Recommend			2.149			
Satisfaction			3.025			
Usefulness			2.437			

**Table 5.** Descriptive statistics.

Construct	Spilt based on generation (Tech-nativity)					
	Full sample (N = 338)		Tech-non-native (N = 98)		Tech-native (N = 240)	
	Mean	STDV	Mean	STDV	Mean	STDV
COVID-19 Perception	5.95	1.43	6.53	0.99	5.71	1.51
Enjoyment	5.77	1.07	5.89	0.84	5.73	1.15
Usefulness	6.18	1.04	6.23	0.83	6.16	1.11
Satisfaction	5.97	1.09	6.02	0.81	5.94	1.19
Intention to Recommend	5.32	1.34	5.18	1.29	5.38	1.35
Intention to Follow	5.82	1.14	5.72	1.04	5.86	1.18

We test our hypotheses by running a path analysis and multigroup analysis (MGA). This includes the use of standardised betas ( $\beta$ : for direct effects), unstandardised betas (B: for indirect effects) and t-values associated with these coefficients in a consistent-with-bootstrapping mode. Also, following the guidance by Hair et al. (2019), we use  $f^2$  to

determine effect sizes and PLSpredict to assess out-of-sample prediction. In order to assess the model fit to our data, standardised root mean square residual (SRMR) is calculated (Henseler et al. 2014).

We conduct Consistent-PLS with connections between all latent variables (LVs) activated, as suggested by Dijkstra and Henseler (2015) for the estimation of the latent variables scores, to obtain more stable results. We follow that with running a Consistent PLS Bootstrapping at 5,000 sub-samples (Preacher and Hayes 2008). We find that COVID-19 perception positively predicts both usefulness ( $\beta = .373, P < .001, f^2 > .15$ ) and enjoyment ( $\beta = .387, P < .001, f^2 > .15$ ). Further, both usefulness ( $\beta = .539, P < .001, f^2 > .35$ ) and enjoyment ( $\beta = .427, P < .001, f^2 > .35$ ) positively predict satisfaction that in turn positively predicts intentions to follow ( $\beta = .872, P < .001, f^2 > .35$ ) and intentions to recommend ( $\beta = .822, P < .001, f^2 > .35$ ). Building on our statistics, therefore, we judge H1, H2, H3, H4, H5 and H6 as valid. All of the additional paths are found associated with non-significant p-values and poor effect sizes, hence unsupported (see Table 6).

Furthermore, Table 7 demonstrates that all unstandardised betas are positive and significant at a probability value less than .001. Based on that, we conclude that H7a and H7b are fully supported. Given that the paths additionally hypothesised are not valid as concluded above, this finding means that all of the mediators (i.e., usefulness, enjoyment and satisfaction) are full transmitters of COVID-19 positive effects onto the participants' intention to follow and intention to recommend – meaning that Instagram users

**Table 6.** Hypotheses testing – direct effects.

Hypothesis	Path	$\beta$	t	$f^2$	Decision
H1	COVID-19 Perception -> Enjoyment	0.387**	4.647**	>0.15	Supported
H2	COVID-19 Perception -> Usefulness	0.373**	4.701**	>0.15	Supported
H3	Enjoyment -> Satisfaction	0.427**	5.098**	>0.35	Supported
H4	Usefulness -> Satisfaction	0.539**	6.63**	>0.35	Supported
H5	Satisfaction -> Intention to Follow	0.872**	25.556**	>0.35	Supported
H6	Satisfaction -> Intention to Recommend	0.822**	20.215**	>0.35	Supported
Additional path	COVID-19 Perception -> Intention to Follow	-0.101 <sup>NS</sup>	1.793 <sup>NS</sup>	>0.02	Unsupported
Additional path	COVID-19 Perception -> Intention to Recommend	-0.095 <sup>NS</sup>	1.202 <sup>NS</sup>	>0.02	Unsupported
Additional path	COVID-19 Perception -> Satisfaction	0.096 <sup>NS</sup>	1.883 <sup>NS</sup>	>0.02	Unsupported
Additional path	Enjoyment -> Intention to Follow	0.114 <sup>NS</sup>	1.921 <sup>NS</sup>	>0.02	Unsupported
Additional path	Enjoyment -> Intention to Recommend	0.111 <sup>NS</sup>	1.444 <sup>NS</sup>	>0.02	Unsupported
Additional path	Usefulness -> Intention to Follow	-0.045 <sup>NS</sup>	0.120 <sup>NS</sup>	>0.02	Unsupported
Additional path	Usefulness -> Intention to Recommend	-0.265 <sup>NS</sup>	1.536 <sup>NS</sup>	>0.02	Unsupported

\*\*  $P < .001$ ; \*  $P < .05$ ; NS = Non-significant.

**Table 7.** Hypotheses 7a & 7b testing – indirect effects.

Path	B	STDEV	t
Enjoyment -> Satisfaction -> Intention to Follow	0.373**	0.077	4.872**
COVID-19 Perception -> Enjoyment -> Satisfaction -> Intention to Follow	0.145**	0.045	3.191**
COVID-19 Perception -> Usefulness -> Satisfaction -> Intention to Recommend	0.166**	0.049	3.378**
COVID-19 Perception -> Enjoyment -> Satisfaction -> Intention to Recommend	0.136**	0.042	3.213**
COVID-19 Perception -> Enjoyment -> Satisfaction	0.165**	0.05	3.302**
COVID-19 Perception -> Usefulness -> Satisfaction	0.202**	0.056	3.559**
Usefulness -> Satisfaction -> Intention to Recommend	0.443**	0.071	6.191**
COVID-19 Perception -> Usefulness -> Satisfaction -> Intention to Follow	0.176**	0.051	3.433**
Usefulness -> Satisfaction -> Intention to Follow	0.47**	0.073	6.393**
Enjoyment -> Satisfaction -> Intention to Recommend	0.351**	0.071	4.959**

\*\*  $P < .001$ .

**Table 8.** Predictive performance of the PLS model vs Benchmark LM.

Indicator	PLS		LM	
	RMSE	MAE	RMSE	MAE
ENJ1	1.254	0.975	1.259	0.980
ENJ2	1.278	0.993	1.289	0.993
ENJ3	1.314	1.053	1.326	1.055
ENJ4	1.263	0.987	1.273	0.993
IF1	1.180	0.919	1.182	0.915
IF2	1.233	0.972	1.227	0.964
IREC1	1.530	1.263	1.536	1.273
IREC2	1.405	1.175	1.406	1.169
SAT1	1.149	0.908	1.155	0.915
SAT2	1.122	0.891	1.129	0.895
SAT3	1.158	0.898	1.175	0.915
USE1	1.080	0.856	1.081	0.859
USE2	1.085	0.853	1.086	0.855
USE3	1.157	0.889	1.164	0.900

can develop stronger intentions to follow and intentions to recommend fashion brands' account on Instagram because the pandemic experience makes this virtual space feel more useful and pleasing, hence satisfying.

Based on Hu and Bentler (1999), our calculations show that the SRMR value equals  $.044 < .08$ , implying that our hypothetical model is a good fit for our data. Finally, Table 8 shows that the vast majority of the observed variables in the PLS-SEM analysis have lower scores of the mean absolute error (MAE) and the root mean square error (RMSE) as compared to the naïve LM benchmark (Hair et al. 2019). This suggests that our model has medium predictive power (Shmueli et al. 2019).

Henseler, Ringle, and Sarstedt (2016) contend that performing multigroup analyses (MGAs) through PLS-SEM can be unmeaningful and posing the risk of obtaining 'misleading' results unless their measures invariance is proved. This criterion can be achieved using the measurement invariance of the composite models (MICOM) technique (Henseler, Ringle, and Sarstedt 2016). Accordingly, at least (in this instance: with no data pooling), both configural invariance and compositional invariance ought to be verified and established before performing any multigroup comparisons (Hair et al. 2019). Because we use a PLS-SEM approach, the measurement configural invariance is, by default, accomplished (Hair et al. 2018). Therefore, we proceed with examining whether the second criterion, i.e., compositional invariance, is established. In this regard, we run a permutation test. Table 9 shows that all of the variates have their 'Permutation P-values' above 0.05. Therefore, we judge the null

**Table 9.** Compositional invariance assessment.

	Original Correlation	Correlation Permutation Mean	5.00%	Permutation p-Values
COVID-19 Perception	0.967	0.943	0.823	0.446
Enjoyment	0.999	0.998	0.995	0.647
Intention to Follow	1	1	0.998	0.375
Intention to Recommend	1	0.999	0.997	0.837
Satisfaction	0.969	0.98	0.942	0.193
Usefulness	1	1	0.999	0.286

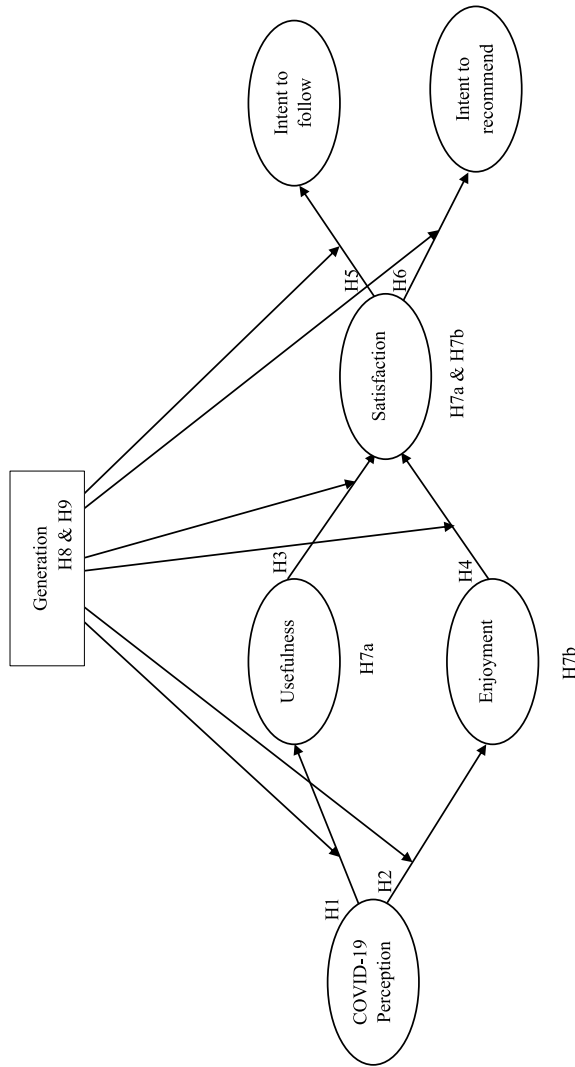


Figure 1. Conceptual model.

**Table 10.** Hypotheses 8 & 9 testing – multigroup invariance analysis (Direct effects).

Path	$\beta$ (Tech-non-native)	$\beta$ (Tech-native)	t-Value ( Tech-non-native vs -native Generations )
COVID-19 Perception -> Enjoyment	0.018 <sup>NS</sup>	0.384**	2.079*
COVID-19 Perception -> Usefulness	0.157*	0.364**	1.194 <sup>NS</sup>
Enjoyment -> Satisfaction	0.236*	0.406**	1.563 <sup>NS</sup>
Satisfaction -> Intention to Follow	0.650**	0.782**	1.617 <sup>NS</sup>
Satisfaction -> Intention to Recommend	0.623**	0.709**	1.088 <sup>NS</sup>
Usefulness -> Satisfaction	0.661**	0.492**	1.683 <sup>NS</sup>

\*  $P < .05$ ; \*\*  $P < .01$ ; NS = Non-significant.

**Table 11.** Hypotheses 8 & 9 testing – multigroup invariance analysis (Indirect effects).

Path	B (Tech-non-native)	B (Tech-native)	STDEV (Tech-non-native)	STDEV (Tech-native)	t-Value( Tech-non-native vs -native Generations )
Enjoyment -> Satisfaction -> Intention to Follow	0.156*	0.318**	0.066	0.051	1.777 <sup>NS</sup>
COVID-19 Perception -> Enjoyment -> Satisfaction -> Intention to Follow	0.006 <sup>NS</sup>	0.122**	0.033	0.032	2.102*
COVID-19 Perception -> Usefulness -> Satisfaction -> Intention to Recommend	0.068*	0.129**	0.077	0.037	0.735 <sup>NS</sup>
COVID-19 Perception -> Enjoyment -> Satisfaction -> Intention to Recommend	0.006 <sup>NS</sup>	0.111**	0.031	0.029	2.098*
COVID-19 Perception -> Enjoyment -> Satisfaction	0.007 <sup>NS</sup>	0.156**	0.048	0.038	2.168*
COVID-19 Perception -> Usefulness -> Satisfaction	0.105*	0.181**	0.119	0.047	0.622 <sup>NS</sup>
Usefulness -> Satisfaction -> Intention to Recommend	0.411**	0.35**	0.065	0.048	0.773 <sup>NS</sup>
COVID-19 Perception -> Usefulness -> Satisfaction -> Intention to Follow	0.072*	0.142**	0.081	0.039	0.808 <sup>NS</sup>
Usefulness -> Satisfaction -> Intention to Follow	0.43**	0.385**	0.074	0.049	0.575 <sup>NS</sup>
Enjoyment -> Satisfaction -> Intention to Recommend	0.149*	0.288**	0.063	0.044	1.736 <sup>NS</sup>

hypothesis as supported, implying that the variates’ original correlations are non-significantly different from 1, hence establishing compositional invariance (Hair et al. 2018).

We run a multigroup analysis (MGA) to assess the hypothetical model invariance across tech-native and tech-non-native groups and detect if the technology nativity based generational differences moderate the hypothesised path postulated by Figure 1. We use t-values that are related to the comparisons stated in the parametric tests. The results (see Tables 10 and 11 and Figure 2) show that the direct path from COVID-19 perception to enjoyment is not invariant between the two generational groups leading to non-invariance of the indirect effects of COVID-19 perceptions onto satisfaction and hence behavioural intentions through enjoyment between tech-native and tech-non-native participants. In other words, more intense COVID-19 perception leads to higher levels of perceived enjoyment only amongst tech-native generation ( $\beta_{\text{tech-native}} = .384, P < .001$ ;  $\beta_{\text{tech-non-native}} = .018, P = .853$ ;  $t_{\text{tech-non-native vs -native Generations}} = 2.079$ ) and thus, tech-native participants are



substantially more likely to be satisfied with ( $B_{\text{tech-native}} = .156, P < .001, SD = .038$ ;  $B_{\text{tech-non-native}} = .007, SD = .048, P = .861$ ;  $t_{\text{tech-non-native vs -native Generations}} = 2.168$ ), follow ( $B_{\text{tech-native}} = .122, P < .001, SD = .032$ ;  $B_{\text{tech-non-native}} = .006, SD = .033, P = .865$ ;  $t_{\text{tech-non-native vs -native Generations}} = 2.102$ ), and recommend ( $B_{\text{tech-native}} = .111, P < .001, SD = .029$ ;  $B_{\text{tech-non-native}} = .006, SD = .031, P = .867$ ;  $t_{\text{tech-non-native vs -native Generations}} = 2.098$ ) fashion brands' accounts on Instagram because they find more enjoyment during the current pandemic than participants from tech-non-native generation. Therefore, we judge H8 as unsupported whilst H9 as supported.

## Discussion

In scanning the literature, no data was found on the effects of COVID-19 perception on social media users' behaviours towards brand accounts on Instagram. Furthermore, very little was found in the literature on the tech nativity or non-nativity-based generational differences in attitudinal and behavioural patterns of Instagram users towards brands presence on the visually rich social media platform. Therefore, the primary purpose of this research was to examine the effects of COVID-19 perceptions – defined as ones' subjective assessment of their personal concern with the negative effects of the pandemic – on behavioural intentions towards fashion brands on Instagram through usefulness, enjoyment and satisfaction that are the *raison d'être* of Instagram users' intentions to follow and intentions to recommend as suggested by previous research (e.g., Casaló, Flavián, and Sergio 2017). Also, we aimed to assess the model invariance across two generations (tech-native vs tech non-native) in a Sub-Saharan African context. We analysed a path model where COVID-19 perception is hypothesised to indirectly predict Instagram users' intentions to follow and intentions to recommend apparel brands on Instagram via a sequence of mediators comprised of perceived usefulness, perceived enjoyment, and satisfaction with those accounts on Instagram. We did so by utilising already validated measures to assess a sample of Instagram users' COVID-19 perception, perceived usefulness, enjoyment, overall satisfaction, intentions to follow and intentions to recommend as a result of their experience with such accounts in two Sub-Saharan African countries, specifically Nigeria and Uganda. We found that COVID-19 perception positively predicted usefulness (supporting H1) and enjoyment (supporting H2). Further, both perceived usefulness (supporting H3) and enjoyment (supporting H4) positively predicted satisfaction that in its turn positively predicted intentions to follow (supporting H5) and intentions to recommend (supporting H6). Also, the indirect effects of COVID-19 perception on intentions to follow and intentions to recommend were found to be positive and significant through two sequences of mediators: usefulness => satisfaction (supporting H7a) and enjoyment => satisfaction (supporting H7b). Finally, the effects of COVID-19 perception on enjoyment as well as indirect effects on behavioural intentions via the sequence: enjoyment => satisfaction were not invariant between tech- and non-native users offering support of H9. H8 was rejected as the path: COVID-19 perception => usefulness => satisfaction => intentions to follow and intentions to recommend was invariant between the two generational groups.

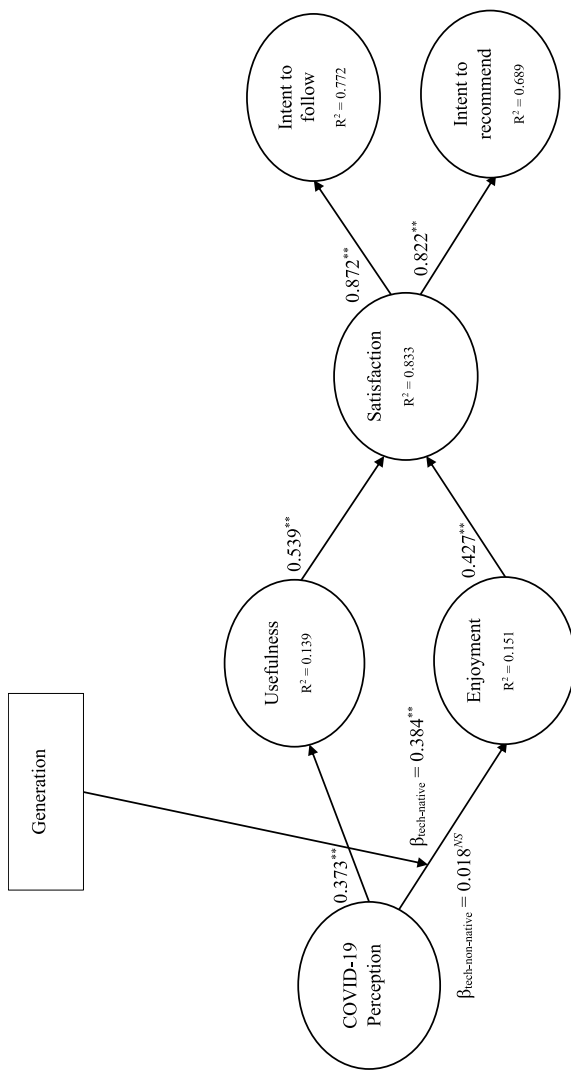


Figure 2. Results of path model analysis.

### ***Practical implications***

The analysis concluded that more strongly negative perceptions of COVID-19 translate indirectly into stronger intentions to follow and intentions to recommend fashion brands' accounts on Instagram. Put another way, those who are more worried by COVID-19 and perceive its negative personal impact are likely to turn to social media and its utilitarian and hedonic value to relieve their personal distress. The pandemic context leads Instagram users to be more attuned to and thus likely to perceive features consistent with their chronically salient motives for using social media; specifically, the usefulness of (if utilitarian motives are salient) and the enjoyment they derive from (if hedonic motives are salient) fashion brands' Instagram accounts. Such motivated perception subsequently leads to positive satisfaction levels, hence more favourable behavioural intentions towards these Instagram accounts. We also found that tech-nativity-based generational differences moderate the path from COVID-19 perception to behavioural intentions towards fashion brands accounts on Instagram via perceived enjoyment and satisfaction (H9). Specifically, our results suggest that the relationship between COVID-19 perception and the enjoyment of fashion brands' accounts on Instagram is only valid amongst tech-native Instagram users, as are the COVID-19 perception indirect effects on intentions to follow and intention to recommend transmitted via enjoyment. On the other hand, one interesting finding is that COVID-19 perceptions indirect effects on behavioural intentions are transitioned via perceived usefulness for both tech-native and tech-non-native generations – meaning that both generations are likely to act favourably towards the brands they perceive as providing them benefits on a visually rich social media platform like Instagram. However, employing hedonic stimuli in the content shared by fashion brands on Instagram will be instrumental in driving engagement with tech-native generations as they are chronically motivated to use social media for its entertainment value, particularly in the context of a global health crisis and the pervasive negativity associated with it. This discovery has practical implications for marketers concerning their endeavours on social media, primarily when they aim to encourage the spread of positive word of mouth behaviours regarding their brands in the virtual spaces – activities that are especially needed given the downturn in economic activity brought by pandemics. Online word of mouth recommendations have been evidenced by previous research (e.g., Roy, Datta, and Mukherjee 2019) to have a strong influence on purchase intentions, hence actual buys. Also, favourable user-generated content on social media contributes positively to brand equity and brand attitude (Schivinski and Dabrowski 2016), especially in the fashion industry where the choice of social media channels for marketing communications would be highly critical (Anselmsson and Tunca 2019). Therefore, targeting younger generations who are tech-native can be more effective if fashion brands supplement the content shared with a proper blend of entertaining elements like music, games, riddles, etc., which are already doable given the fast-growing set of rich-media features within the Instagram environment. This is in line with the depiction of the region where youth is the majority (e.g., Ngwainmbi 2019), opening up great opportunities for fashion brands interested in the promising market, especially in a pandemic or post-pandemic context.

## **Research limitations and implications**

The present study was devised to explore the effects of Instagram users' COVID-19 perception on their perceptions of the usefulness and enjoyment of fashion brands' accounts on Instagram and how these perceptions are translated into satisfaction and behavioural intentions towards those accounts in a Sub-Saharan context. Also, this study sought to determine whether tech-nativity-based generational differences can moderate those relationships. We built upon a cross-sectional sample response to the measures of the variables under investigation, meaning all data were gathered at one point in time. Though cross-sectional research has been blamed for the limited ability for establishing causal relationships (e.g., Langdridge 2004), it also has been argued (Spector 2019) that the ability of longitudinally designed investigations to mirror causation has been embellished and that it only offers limited advantages over the cross-sectionally designed studies in most cases in which it is utilized (Spector 2019). Furthermore, cross-sectional research findings might still be interpretable and valid if conducted based on a robust theoretical premise (Tharenou, Donohue, and Cooper 2007; Mahmoud et al. 2020b). Yet, we endorse further replications with a longitudinal design employed. Besides that, utilising force answering (FA) to limit the amount of missing data may introduce bias into the forced responses. As a result, we propose that future studies consider alternatives to FA. For example, employing 'soft reminders' (Sischka et al. 2020) in conjunction with a 'Prefer not to answer' option (Mahmoud et al. 2021d).

Though focusing our study on an understudied context (i.e., Sub-Saharan Africa) contributes to the novelty of our study; however, this makes our findings less generalisable to other contexts. Therefore, future research might consider replicating our study in other regions or culturally different contexts. Moreover, replicating our study in the Sub-Saharan context with more countries sampled would be warranted for future research. Relatedly, while limiting the present research to fashion brands was consistent with previous research employing the double enjoyment-usefulness approach as the industry's reliance on visuals is congruent with the visually rich nature of Instagram, future research might look to replicate our findings using social media accounts for brands in other industries that are decidedly less visual in nature – like financial services.

Our study was based on an appropriately sized sample; however, it could be deemed relatively small when investigating generational (or any other demographic) differences. With larger sample sizes, future research can investigate more complex multigroup comparisons. That would be, for instance, through generating groups based on crossing more than one demographic variable together (e.g., gender X generation).

Finally, we measured tech-nativity-based generational groups based on the classic categorisation of generational groups. While the literature backed our approach, we suggest that future research develops and employs multi-item (or even multi-dimensional) measures to assess tech-nativity. That would offer, especially if paired with age groups, a more realistic premise for generational categorisations based on tech-nativity.

## **Disclosure statement**

No potential conflict of interest was reported by the author(s).

## Ethical approval

This research obtained ethics approval from Crandall University, Canada.

## ORCID

Ali B. Mahmoud  <http://orcid.org/0000-0002-3790-1107>

Daniel Rubin  <http://orcid.org/0000-0002-2878-3727>

Dieu Hack-Polay  <http://orcid.org/0000-0002-1038-5018>

Nicholas Grigoriou  <http://orcid.org/0000-0003-4163-7852>

## Notes on contributors

**Ali B. Mahmoud**, PhD (Marketing), PhD (HRM), MRes (Management), MSc (Finance), BSc (Economics), FCIM, MABP, FHEA researches in the area of business psychology from an interdisciplinary angle (like digital consumer behaviour and people analytics) and has published over 50 journal articles, books, book chapters, and conference papers. His work has appeared in outlets like the Journal of Brand Management, Journal of Strategic Marketing, BMC Public Health, BMC Psychology, International Journal of Manpower, International Sociology, Scandinavian Journal of Psychology, Journal of Research in Interactive Marketing, Journal of Fashion Marketing and Management and many others. In addition, Ali serves as an academic editor at PLOS ONE, associate editor at the International Journal of Public Sociology and Socioterapy and a member of the editorial advisory board at Quality Assurance in Education.

**Joan Ball** is an Associate Professor of Marketing and Founder of the WOMB Service Design Lab, participatory action research and service design consultancy for small business owners and social entrepreneurs based in New York. Joan earned her PhD in international business management, an M.S. in Organizational Leadership and a B.A. in Economics. She has extensive professional experience in public relations and marketing communications, working directly with and consulting for professional services firms including PricewaterhouseCoopers, Standard and Poors, Zurich North America and others. Her research has been published in a variety of international peer-reviewed journals, including the Journal of Service Management, the Journal of Service Marketing, the Journal of Service Theory and Practice, Touchpoint, Advances in Consumer Research, Journal of Creating Value, the International Journal of Bank Marketing and Global Economics and Management Review.

**Daniel Rubin** is an Assistant Professor of Marketing in the Peter J. Tobin College of Business at St. John's University. Dan holds a PhD in Marketing from the City University of New York Baruch College. His research focusing on consumer behaviour has been published in leading academic journals, including the Journal of Consumer Psychology and the Journal of Business Research.

**Leonora Fuxman** received her PhD in Operations Management from Wharton School, University of Pennsylvania. Right from the start of her academic career, she joined the Management Department at St. John's University in New York, where she was able to ascend through the ranks from Assistant Professor to a full professor position through a dedication to research as well as teaching. Leonora was voted a Teacher of the Year by the student body, one of her proudest achievements in teaching. While her research interests and agendas have undergone quite a few transformations over the course of the last 25 years, she has always remained committed to pursuing rigorous research on highly relevant and timely topics.

**Iris Mohr** is Chair of Marketing and earned a PhD in Business Administration in Marketing/Strategy from the City University of New York. She also holds an MBA from the City University of New York, a Master's in Communications from Hebrew University in Israel, a professional degree in Screenwriting from the University of California in Los Angeles, and a New York Film Academy certificate in Documentary Filmmaking. Her articles appeared in publications such as Journal of

Internet Commerce, Harvard Press, Interfaces, Human Resource Management, Quality Management Journal, Industrial Marketing Management, Journal of Marketing Theory and Practice, European Journal of Marketing, Business Horizon, Journal of Product Innovation Management, Society, International Journal of Manpower, International Sociology, Marketing Management as well as in other professional publications. Currently, she is pursuing research and writing articles that relate to fashion and sustainability. Iris has also provided interviews with various media outlets relating to her retailing, fashion, and sustainability expertise. Iris is a member of the following organizations: Association of Consumer Research, American Marketing Association, and Fashion Group International.

**Dieu Hack-Polay**, PhD, is a Professor of Management at Crandall University. His research centres on Organizational Studies, Human Resource Management and Migration.

**Nicholas Grigoriou**, PhD (Marketing), is a Lecturer in Marketing at Monash University, Australia. Nicholas has a blend of both industrial and academic experience. In academia, he has held senior administrative roles for Monash College in China and teaching and academic research roles for Monash University in Malaysia and Australia. However, his primary academic focus is in the field of Marketing.

**Aziz Wakibi** is a doctoral student in the Marketing and International Business Department at Makerere University Business School, Uganda.

## References

- Adejumoh, J. 2021. "Facebook Rolls Out Instagram Lite To Sub-Saharan Africa, Others." *MSN Africa*, June 29. <https://www.msn.com/en-xl/africa/other/facebook-rolls-out-instagram-lite-to-sub-saharan-africa-others/ar-BB1f2zsA>
- Alalwan, A. A., N. P. Rana, Y. K. Dwivedi, and R. Algharabat. 2017. "Social Media in Marketing: A Review and Analysis of the Existing Literature." *Telematics and Informatics* 34 (7): 1177–1190. doi:10.1016/j.tele.2017.05.008.
- Alhabash, S., and M. Ma. 2017. "A Tale of Four Platforms: Motivations and Uses of Facebook, Twitter, Instagram, and Snapchat among College Students?" *Social Media+ Society* 3 (1): 2056305117691544.
- Anselmsson, J., and B. Tunca. 2019. "Exciting on Facebook or Competent in the Newspaper? Media Effects on Consumers' Perceptions of Brands in the Fashion Category." *Journal of Marketing Communications* 25 (7): 720–737. doi:10.1080/13527266.2017.1392337.
- Arens, E. 2020. "How COVID-19 Has Changed Social Media Engagement." Sprout Social, June 29. <https://sproutsocial.com/insights/covid19-social-media-changes/>.
- Arora, A., A. K. Jha, P. Alat, P., and S. S. Das. 2020. "Understanding Coronaphobia." *Asian Journal of Psychiatry* 54: 102384. doi:10.1016/j.ajp.2020.102384.
- Basak, E., and F. Calisir. 2015. "An Empirical Study on Factors Affecting Continuance Intention of Using Facebook." *Computers in Human Behavior* 48: 181–189. doi:10.1016/j.chb.2015.01.055.
- Belanche, D., C. Flavián, and A. Pérez-Rueda. 2020. "Consumer Empowerment in Interactive Advertising and eWOM Consequences: The PITRE Model." *Journal of Marketing Communications* 26 (1): 1–20. doi:10.1080/13527266.2019.1610028.
- Bianchi, A. 2021. *Driving Consumer Engagement in Social Media: Influencing Electronic Word of Mouth*. 1st ed. Oxon: Routledge.
- Bishop, K. 2020. "How COVID-19 Has Changed Social Media Trends." Classy. June 29. <https://www.classy.org/blog/how-covid-19-changed-social-media-trends/>.
- Calvo-Porrá, C., and R. Pesqueira-Sanchez. 2019. "Generational Differences in Technology Behaviour: Comparing Millennials and Generation X." *Kybernetes* 49 (11): 2755–2772. doi:10.1108/k-09-2019-0598.
- Casaló, L. V., C. Flavián, and I. Sergio. 2017. "Antecedents of Consumer Intention to Follow and Recommend an Instagram Account." *Online Information Review* 41 (7): 1046–1063. doi:10.1108/OIR-09-2016-0253.

- CBS NEWS. 2020. "Burger King's Instagram Urges People to Get Takeout — From Other Restaurants." CBS Interactive. June 29. <https://www.cbsnews.com/news/burger-king-offers-instagram-feed-to-independent-restaurants-struggling-with-covid-lockdowns/>.
- Chakrabarti, S., and M. Makhija. 2021. "Exploratory Study on Variables Impacting Display Advertising Spend of Leading Advertisers in the USA." *Journal of Marketing Communications* 27 (2): 176–206. doi:10.1080/13527266.2019.1646306.
- Cheah, I., A. S. Shimul, J. Liang, and I. Phau. 2020. "Consumer Attitude and Intention toward Ridesharing." *Journal of Strategic Marketing* 1–22. doi:10.1080/0965254x.2020.1733050.
- Davis, F. D. 1989. "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology." *MIS Quarterly* 13 (3): 319–340. doi:10.2307/249008.
- Davis, F. D., R. P. Bagozzi, and P. R. Warshaw. 1992. "Extrinsic and Intrinsic Motivation to Use Computers in the Workplace." *Journal of Applied Social Psychology* 22 (14): 1111–1132. doi:10.1111/j.1559-1816.1992.tb00945.x.
- Dijkstra, T. K., and J. Henseler. 2015. "Consistent and Asymptotically Normal PLS Estimators for Linear Structural Equations." *Computational Statistics & Data Analysis* 81: 10–23. doi:10.1016/j.csda.2014.07.008.
- Djafarova, E., and C. Rushworth. 2017. "Exploring the Credibility of Online Celebrities Instagram Profiles in Influencing the Purchase Decisions of Young Female Users." *Computers in Human Behavior* 68: 1–7. doi:10.1016/j.chb.2016.11.009.
- Duffett, R. G. 2017. "Influence of Social Media Marketing Communications on Young Consumers' Attitudes." *Young Consumers* 18 (1): 19–39. doi:10.1108/yc-07-2016-00622.
- Eden, A. L., B. K. Johnson, L. Reinecke, and S. M. Grady. 2020. "Media for Coping during COVID-19 Social Distancing: Stress, Anxiety, and Psychological Well-Being [Original Research]." *Frontiers in Psychology* 11: 3388. doi:10.3389/fpsyg.2020.577639.
- Elliot, N. 2014. "Instagram Is the King of Social Engagement." *Forrester Blogs*, available at: *is the king of social engagement*, August 30. <https://go.forrester.com/blogs/14-04-29-instagram>
- Eze, S. C., V. C. A. Chinedu-Eze, C. K. Okike, and A. O. Bello. 2020. "Critical Factors Influencing the Adoption of Digital Marketing Devices by Service-oriented Micro-businesses in Nigeria: A Thematic Analysis Approach." *Humanities and Social Sciences Communications* 7 (1): 90. doi:10.1057/s41599-020-00580-1.
- Fauville, G., M. Luo, A. C. M. Queiroz, J. N. Bailenson, and J. Hancock. 2021. "Zoom Exhaustion & Fatigue Scale." *Computers in Human Behavior Reports* 4: 100119. doi:10.1016/j.chbr.2021.100119.
- Geurin-Eagleman, A. N., and L. M. Burch. 2016. "Communicating via Photographs: A Gendered Analysis of Olympic Athletes Visual Self-presentation on Instagram." *Sport Management Review* 19 (2): 133–145. doi:10.1016/j.smr.2015.03.002.
- Gill, V. 2021. "AI Used to 'Predict the Next Coronavirus'." *BBC*, June 29. <https://www.bbc.co.uk/news/science-environment-56076716>.
- Gillwald, A., O. Mothobi, A. Ndiwalana, and T. Tusubira. 2019. "The State of ICT in Uganda." *Research ICT Africa*, June 29. [https://researchictafrica.net/wp/wp-content/uploads/2019/05/2019\\_After-Access-The-State-of-ICT-in-Uganda.pdf](https://researchictafrica.net/wp/wp-content/uploads/2019/05/2019_After-Access-The-State-of-ICT-in-Uganda.pdf).
- Ginn, J., and B. Lickel. 2020. "A Motivated Defense of Meat: Biased Perceptions of Meat's Environmental Impact." *Journal of Social Issues* 76 (1): 54–69. doi:10.1111/josi.12362.
- Gnambis, T., and K. Kaspar. 2015. "Disclosure of Sensitive Behaviors across Self-administered Survey Modes: A Meta-analysis." *Behavior Research Methods* 47 (4): 1237–1259. doi:10.3758/s13428-014-0533-4.
- Hair, J. F., C. M. Ringle, and M. Sarstedt. 2014. "PLS-SEM: Indeed a Silver Bullet." *Journal of Marketing Theory and Practice* 19 (2): 139–152. doi:10.2753/mtp1069-6679190202.
- Hair, J. F., G. T. M. Hult, C. Ringle, and M. Sarstedt. 2017. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. London: Sage Publications.
- Hair, J. F., J. J. Risher, M. Sarstedt, and C. M. Ringle. 2019. "When to Use and How to Report the Results of PLS-SEM." *European Business Review* 31 (1): 2–24. doi:10.1108/eb-11-2018-0203.
- Hair, J. F., Jr, M. Sarstedt, C. M. Ringle, and S. P. Gudergan. 2018. *Advanced Issues in Partial Least Squares Structural Equation Modeling*. London: SAGE publications.

- Hassan, S., S. Z. A. Nadzim, and N. Shiratuddin. 2015. "Strategic Use of Social Media for Small Business Based on the AIDA Model." *Procedia - Social and Behavioral Sciences* 172: 262–269. doi:10.1016/j.sbspro.2015.01.363.
- Henrich, J., S. J. Heine, and A. Norenzayan. 2010. "Beyond WEIRD: Towards a Broad-based Behavioral Science." *Behavioral and Brain Sciences* 33 (2–3): 111–135. doi:10.1017/S0140525X10000725.
- Henseler, J., C. M. Ringle, and M. Sarstedt. 2016. "Testing Measurement Invariance of Composites Using Partial Least Squares." *International Marketing Review* 33 (3): 405–431. doi:10.1108/imr-09-2014-0304.
- Henseler, J., T. K. Dijkstra, M. Sarstedt, A. Diamantopoulos, D. W. Straub, D. J. Ketchen, J. F. Hair, G. T. M. Hult, and R. J. Calantone. 2014. "Common Beliefs and Reality about Partial Least Squares: Comments . Rönkkö & Evermann (2013)." *Organizational Research Methods* 17 (2): 182–209. doi:10.1177/1094428114526928.
- Hu, L.-T., and P. M. Bentler. 1999. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives." *Structural Equation Modeling: A Multidisciplinary Journal* 6 (1): 1–55. doi:10.1080/10705519909540118.
- Huang, Y.-T., and S.-F. Su. 2018. "Motives for Instagram Use and Topics of Interest among Young Adults." *Future Internet* 10 (8): 77. doi:10.3390/fi10080077.
- Hussein, R. S., H. Mohamed, and A. Kais. 2021. "Antecedents of Level of Social Media Use: Exploring the Mediating Effect of Usefulness, Attitude and Satisfaction." *Journal of Marketing Communications* 1–22. doi:10.1080/13527266.2021.1936125.
- Hutter, K., J. Hautz, S. Dennhardt, and J. Füller. 2013. "The Impact of User Interactions in Social Media on Brand Awareness and Purchase Intention: The Case of MINI on Facebook." *Journal of Product & Brand Management* 22 (5/6): 342–351. doi:10.1108/JPBM-05-2013-0299.
- Kantar. 2020. "COVID-19 Barometer: Consumer Attitudes, Media Habits and Expectations." Kantar. June 29. <https://www.kantar.com/Inspiration/Coronavirus/COVID-19-Barometer-Consumer-attitudes-media-habits-and-expectations>.
- Kitchen, P. J., and C. Wheeler. 1997. "Issues Influencing Marcoms in a Global Context." *Journal of Marketing Communications* 3 (4): 243–259. doi:10.1080/135272697345925.
- Klein, J. G., and R. P. Hill. 2008. "Rethinking Macro-level Theories of Consumption: Research Findings from Nazi Concentration Camps." *Journal of Macromarketing* 28 (3): 228–242. doi:10.1177/0276146708320449.
- Kock, N. 2015. "Common Method Bias in PLS-SEM: A Full Collinearity Assessment Approach." *International Journal of e-Collaboration (Ijec)* 11 (4): 1–10.
- Langdridge, D. 2004. *Introduction to Research Methods and Data Analysis in Psychology*. Essex: Pearson Education Limited.
- Mahmoud, A. B., N. Grigoriou, L. Fuxman, W. D. Reisel, D. Hack-Polay, and I. Mohr. 2020a. "A Generational Study of Employees' Customer Orientation: A Motivational Viewpoint in Pandemic Time." *Journal of Strategic Marketing* 1–18. doi:10.1080/0965254x.2020.1844785.
- Mahmoud, A. B., D. Hack-Polay, L. Fuxman, B. Massetti, and A. Z. Al Samarh. 2020b. "Developing and Validating a New Multi-Dimensional Scale for Anti-Social Behavior in a Higher Education Setting." *Scandinavian Journal of Psychology* 61 (4): 502–512. doi:10.1111/sjop.12635.
- Mahmoud, A. B., W. D. Reisel, N. Grigoriou, L. Fuxman, and I. Mohr. 2020c. "The Reincarnation of Work Motivation: Millennials vs Older Generations." *International Sociology* 35 (4): 393–414. doi:10.1177/0268580920912970.
- Mahmoud, A. B., D. Hack-Polay, L. Fuxman and M. Nicoletti. 2021a. "The Janus-Faced Effects of COVID-19 Perceptions on Family Healthy Eating Behavior: Parent's Negative Experience as a Mediator and Gender as a Moderator." *Scandinavian Journal of Psychology* 62 (4): 586–595. doi:10.1111/sjop.12742.
- Mahmoud, A. B., D. Hack-Polay, N. Grigoriou, I. Mohr, and L. Fuxman. 2021b. "A Generational Investigation and Sentiment and Emotion Analyses of Female Fashion Brand Users on Instagram in Sub-Saharan Africa." *Journal of Brand Management* 28 (5): 526–544. doi:10.1057/s41262-021-00244-8.
- Mahmoud, A. B., L. Fuxman, I. Mohr, W. D. Reisel, and N. Grigoriou. 2021c. "We Aren't Your Reincarnation! Workplace Motivation Across X, Y and Z Generations." *International Journal of Manpower* 42 (1): 193–209. doi:10.1108/ijm-09-2019-0448.



- Mahmoud, A. B., W. D. Reisel, L. Fuxman, and I. Mohr. 2021d. "A Motivational Standpoint of Job Insecurity Effects on Organizational Citizenship Behaviors: A Generational Study." *Scandinavian Journal of Psychology* 62 (2): 267–275. doi:10.1111/sjop.12689.
- Malhotra, N. K., D. Nunan, D. F. Birks, and P. Wills. 2017. *Marketing Research: An Applied Orientation*. Pearson Education Limited.
- Maner, J. K., D. T. Kenrick, D. V. Becker, T. E. Robertson, B. Hofer, S. L. Neuberg, A. W. Delton, J. Butner, and M. Schaller. 2005. *Functional projection: How fundamental social motives can bias interpersonal perception*. doi:10.1037/0022-3514.88.1.63.
- Mazzarolo, A. H., E. W. Mainardes, and F. A. Innocencio. 2021. "Antecedents and Consequents of User Satisfaction on Instagram." *Marketing Intelligence & Planning* ahead-of-print (ahead-of-print). doi:10.1108/MIP-08-2020-0370.
- Mehra, A., J. Paul, and R. P. S. Kaurav. 2020. "Determinants of Mobile Apps Adoption among Young Adults: Theoretical Extension and Analysis." *Journal of Marketing Communications* 1–29. doi:10.1080/13527266.2020.1725780.
- Miller, K. 2020. "What Does 'Covidiot' Mean, and Who Qualifies as One?" Meredith Health Group. June 29. <https://www.health.com/condition/infectious-diseases/coronavirus/can-covid-19-cause-diabetes>.
- Mohr, I., L. Fuxman, and A. B. Mahmoud. 2021. "A Triple-Trickle Theory for Sustainable Fashion Adoption: The Rise of a Luxury Trend." *Journal of Fashion Marketing and Management*. doi:10.1108/JFMM-03-2021-0060.
- Molla, R. 2021. "Posting Less, Posting More, and Tired of It All: How the Pandemic Has Changed Social Media." Vox. June 29. <https://www.vox.com/recode/22295131/social-media-use-pandemic-covid-19-instagram-tiktok>.
- Muntinga, D. G., M. Moorman, and E. G. Smit. 2011. "Introducing COBRAs." *International Journal of Advertising* 30 (1): 13–46. doi:10.2501/IJA-30-1-013-046.
- Nayal, P., and N. Pandey. 2020. "Framework for Measuring Usage Intention of Digital Coupons: A SPADM Approach." *Journal of Strategic Marketing* 1–21. doi:10.1080/0965254x.2020.1777460.
- Ngwainmbi, E. K. 2019. "Social Media Use among the Youth and Working Class: Conditions for Remediating Globalization and Cultural Space." In *Media in the Global Context*, 49–93. Cham: Springer.
- Palfrey, J., and U. Gasser. 2011. *Born Digital: Understanding the First Generation of Digital Natives*. ReadHowYouWant.com.
- Pisicchio, A. C., and A. M. M. Toaldo. 2020. "Integrated Marketing Communication in Hospitality SMEs: Analyzing the Antecedent Role of Innovation Orientation and the Effect on Market Performance." *Journal of Marketing Communications* 1–20. doi:10.1080/13527266.2020.1759121.
- Preacher, K. J., and A. F. Hayes. 2008. "Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models." *Behavior Research Methods* 40 (3): 879–891. doi:10.3758/brm.40.3.879.
- Prensky, M. 2001. "Digital Natives, Digital Immigrants Part 1." *On the Horizon* 9 (5): 1–6. doi:10.1108/10748120110424816.
- Pusch, S., F. D. Schönbrodt, C. Zygar-Hoffmann, and B. Hagemeyer. 2021. "Perception of Communal Motives in Couples: Accuracy, Bias, and Their Associations with Relationship Length." *Journal of Research in Personality* 91: 104060. doi:10.1016/j.jrp.2020.104060.
- Ragavan, S. 2020. "How Brands are Positioning Their Messages during COVID-19." PRWEEK. June 29. <https://www.prweek.com/article/1678186/brands-positioning-messages-during-covid-19>.
- Raman, S. 2020. "Public Health Experts Worry about Spread of COVID-19 Misinformation." CQ Roll Call. June 29. <https://www.rollcall.com/2020/03/18/public-health-experts-worry-about-spread-of-covid-19-misinformation/>.
- Ringle, C. M., S. Wende, and J.-M. Becker. 2015. "SmartPLS 3." (Version 3.2.8) SmartPLS GmbH. <http://www.smartpls.com>.
- Roy, G., B. Datta, and S. Mukherjee. 2019. "Role of Electronic Word-of-mouth Content and Valence in Influencing Online Purchase Behavior." *Journal of Marketing Communications* 25 (6): 661–684. doi:10.1080/13527266.2018.1497681.
- Salzano, M. 2020. "Using Instagram to Build Business in the Age of COVID-19." *Floor Covering News*, June 29. <https://www.fcnews.net/2020/04/fcnews-exclusive-using-instagram-to-build-business-in-the-age-of-covid-19/>.

- Sarstedt, M., J. F. Hair, C. Nitzl, C. M. Ringle, and M. C. Howard. 2020. "Beyond a Tandem Analysis of SEM and PROCESS: Use of PLS-SEM for Mediation Analyses!" *International Journal of Market Research* 62 (3): 288–299. doi:10.1177/1470785320915686.
- Schivinski, B., and D. Dabrowski. 2016. "The Effect of Social Media Communication on Consumer Perceptions of Brands." *Journal of Marketing Communications* 22 (2): 189–214. doi:10.1080/13527266.2013.871323.
- Schultheiss, O. C., and J. S. Pang. 2007. "Measuring Implicit Motives." In *Handbook of Research Methods in Personality Psychology*, edited by R. W. Robins, R. C. Fraley, and R. F. Krueger, 322–344. New York: Guilford Press.
- Seemiller, C., and M. Grace. 2019. *Generation Z: A Century in the Making*. Oxon: Routledge.
- Seol, S., H. Lee, J. Yu, and H. Zo. 2016. "Continuance Usage of Corporate SNS Pages: A Communicative Ecology Perspective." *Information & Management* 53 (6): 740–751. doi:10.1016/j.im.2016.02.010.
- Serafinelli, E. 2018. *Digital Life on Instagram: New Social Communication of Photography*. Bingley: Emerald Group Publishing.
- Shmueli, G., M. Sarstedt, J. F. Hair, J.-H. Cheah, H. Ting, S. Vaithilingam, and C. M. Ringle. 2019. "Predictive Model Assessment in PLS-SEM: Guidelines for Using PLSpredict." *European Journal of Marketing* 53 (11): 2322–2347. doi:10.1108/ejm-02-2019-0189.
- Sischka, P. E., J. P. Décieux, A. Mergener, K. M. Neufang, and A. F. Schmidt. 2020. "The Impact of Forced Answering and Reactance on Answering Behavior in Online Surveys." *Social Science Computer Review* 0894439320907067. doi:10.1177/0894439320907067.
- Spector, P. E. 2019. "Do Not Cross Me: Optimizing the Use of Cross-Sectional Designs." *Journal of Business and Psychology* 34 (2): 125–137. doi:10.1007/s10869-018-09613-8.
- Statista. 2020. "Distribution of Instagram Users Worldwide as of April 2020, by Age and Gender." June 19. <https://www.statista.com/statistics/248769/age-distribution-of-worldwide-instagram-users/>.
- Stieger, S., U.-D. Reips, and M. Voracek. 2007. "Forced-response in Online Surveys: Bias from Reactance and an Increase in Sex-specific Dropout." *Journal of the American Society for Information Science and Technology* 58 (11): 1653–1660. doi:10.1002/asi.20651.
- Tankovska, H. 2021. "Instagram: Distribution of Global Audiences 2021, by Age Group." Statista. June 29. <https://www.statista.com/statistics/325587/instagram-global-age-group/>.
- Tharenou, P., R. Donohue, and B. Cooper. 2007. *Management Research Methods*. Cambridge: Cambridge University Press.
- Tietjen, A. 2020. "Are Influencers the Escape Social Media Wants during Coronavirus?" Penske Media Corporation. June 29. <https://wwd.com/business-news/media/influencers-coronavirus-escape-social-media-1203550224/>.
- Togun, E. 2020. "Social Media and the Spread of COVID-19 in Nigeria." *BMJ Blogs*, June 29. <https://blogs.bmj.com/covid-19/2020/08/26/social-media-and-the-spread-of-covid-19-in-nigeria/>.
- Van der Heijden, H. 2004. "User Acceptance of Hedonic Information Systems." *MIS Quarterly* 28 (4): 695–704. doi:10.2307/25148660.
- Watercutter, A. 2020. "Doomscrolling Is Slowly Eroding Your Mental Health." *Wired*. June 29. <https://www.wired.com/story/stop-doomscrolling/>.
- Windisch, E., and N. Medman. 2008. "Understanding the Digital Natives." *Ericsson Business Review* 1 (2008): 36–39.
- Wold, S. 2020. "COVID-19 Is Changing How, Why and How Much We're Using Social Media." *Digital Commerce* 360. June 29. <https://www.digitalcommerce360.com/2020/09/16/covid-19-is-changing-how-why-and-how-much-were-using-social-media/>.
- Wood, W., and T. Hayes. 2012. "Social Influence on Consumer Decisions: Motives, Modes, and Consequences." *Journal of Consumer Psychology* 22 (3): 324–328. doi:10.1016/j.jcps.2012.05.003.
- Zolkepli, I. A., S. N. S. Mukhiar, and C. Tan. 2020. "Mobile Consumer Behaviour on Apps Usage: The Effects of Perceived Values, Rating, and Cost." *Journal of Marketing Communications* 1–23. doi:10.1080/13527266.2020.1749108.