

**Managing disinformation and its impact on brand equity – a study of the impact
of fake news on motoring brand perceptions in South Africa**

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Abstract:

The rising use of social media has presented brand managers with a tool to connect with customers and build brands using new avenues beyond traditional media. However, rising incidents of fake news threaten these efforts as they enable a rapid dissemination of negative information about brands using these very social media platforms. Using an experimental design, this study seeks to understand how fake news impacts brand equity through a customer-based brand equity lens and how organisations should respond. While confirming previous work on managing brand crises and the use of social media, this study also finds that there are contradictions with our current understanding of the benefits of brand equity in times of crisis as relates to disinformation. Strong brands are more negatively impacted by disinformation in comparison to weak brands. The study also finds that where weak brands have been able to rely on user-generated content to promote their brand, this does not hold in the case of fake news. For brand managers, disinformation presents a new crisis that requires a mix of both traditional and new strategies to mitigate the impact this can have on brand equity.

Key words:

Disinformation, fake news, misinformation, brand equity, brand crisis

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.



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1 December 2020

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Chapter 1: Introduction to the research problem

1.1 Background

Marketers and researchers agree that one of the intangible assets an organisation can use to its benefit lies in its brand value (Kakati & Choudhury, 2013). As such, growing brand equity has become central to marketing practice (Valkokari, 2015; Veloutsou, Chatzipanagiotou, & Christodoulides, 2020). While various instruments exist for measuring brand equity, one of the main focal measures has been on consumer-based brand equity (Veloutsou et al., 2020). Researchers use this framework to not only understand how customers build relationships with brands but also gain insight into how these relationships translate into tangible benefits such as sales and returns to shareholders as well as how these relationships mitigate the negative impact of brand crises (Datta, Ailawadi, & Van Heerde, 2017; Jeon & Baeck, 2016; Veloutsou et al., 2020).

A burgeoning development in marketing research has been due to the prolific rise of social media and its impact on the way business operates by allowing organisations to reach billions of people around the world through platforms such as Facebook and Twitter (Appel, Grewal, Hadi, & Stephen, 2020). Not only have firms embraced this as a new channel to interact with their customers (Appel et al., 2020; Kannan & Li, 2017; Kumar, Bezawada, Rishika, Janakiraman, & Kannan, 2016), academia has also shown interest in explaining and testing the implications of this shift for marketing practice (Appel et al., 2020). Academic literature comprises work on the impact of user generated content (UGC) and electronic word-of-mouth (eWOM) (Hansen, Kupfer, & Hennig-Thurau, 2018; Kannan & Li, 2017) as well as the impact of firm or marketer generated content (MGC) on customer engagement and customer behaviour (Kumar et al., 2016; Meire, Hewett, Ballings, Kumar, & Van den Poel, 2019). Although it has not been based explicitly on the consumer-based brand equity framework, this social media research has sought to understand and develop theories on how social media assists in shaping

customer perceptions (J. E. Lee & Watkins, 2016; Luo & Gu, 2017) finding that, in general, social media is a useful tool for influencing brand perceptions.

A more sinister side of social media has, however, become more prevalent over the past four years as a result of a proliferation of fake news (Lewandowsky, Ecker, & Cook, 2017). At its worst, the spreading of fake news is an intentional act perpetuated by sources both inside and outside the organisation owing to the financial benefits that can be reaped from undertaking tasks such as creating traffic for dubious websites seeking to attract advertising revenue (Mills, Pitt, & Ferguson, 2019; Visentin, Pizzi, & Pichierri, 2019) or brands misrepresenting facts to enhance their desirability to customers (Ferreira, Robertson, & Kirsten, 2019; Vafeiadis, Bortree, Buckley, Diddi, & Xiao, 2019). Social media, due to its high reach and lack of sufficient controls, has exacerbated the spread of fake news by permitting users to share and spread incorrect information at the click of a button (X. Chen, Sin, Theng, & Lee, 2015; Lewandowsky et al., 2017). A preference for accessing news through social media has risen and while these sites have since moved towards regulating the news that is shared to ensure its veracity, progress in the area has lagged (Talwar, Dhir, Kaur, Zafar, & Alrasheedy, 2019; Visentin et al., 2019) which, together with the sheer volume of news shared, has made it difficult for users to determine what is true and what is not (Talwar et al., 2019), ultimately resulting in the perfect storm for the continued sharing of inaccurate information.

Research on misinformation, disinformation and fake news has gained traction over the past few years owing largely to the 2016 US presidential elections (Kim & Dennis, 2019). However, in its early years, this research focused largely on how misinformation can be identified in an attempt to curb its spread. Our understanding of this phenomenon has also largely been contained to its impact on politics, climate change and perceptions around vaccination (Lewandowsky et al., 2017). However, academics and marketing professionals have come to recognise the impact that the spread of fake news can have on brands and how this dark side of social media can contribute to creating brand firestorms (Talwar et al., 2019). As such, 2019 saw increasing marketing research focusing on the phenomenon of disinformation and its impact on brands and how brand

managers should attempt to navigate this territory. However, this research (Borges-Tiago, Tiago, Silva, Guaita Martínez, & Botella-Carrubi, 2020; Mills & Robson, 2019; Peterson, 2019) remains in its infancy. This paper seeks to contribute to the growing body of knowledge by advancing our understanding of the impact disinformation has on brands and suggesting remedies that marketing practitioners can use as they seek to respond to this crisis.

1.2 Purpose of the research

1.2.1 The theoretical case for the research

Research over the past few years has explored the impact social media has on brand perception, brand equity and subsequent purchase intention of luxury brands (Godey et al., 2016; J. E. Lee & Watkins, 2016). These studies have focused on how marketing professionals can leverage social media as a brand building tool by using experts and vloggers (Godey et al., 2016; J. E. Lee & Watkins, 2016; Luo & Gu, 2017) to influence perceptions of their brands with a specific focus on luxury brands as well as computer products. In addition to the numerous studies on brand crises and their impact on customer perceptions, Jeon & Baeck (2016) explored how customers assimilate negative information about a brand by paying attention to the interactions between the customer-brand relationship and the type of brand crisis.

Recently, the impact of product harm crises has been studied extensively with Cleeren, Dekimpe and van Heerde (2017) offering a review of these studies. They found that there had been 25 such cases since the year 2000. Hansen et al. (2018) extended this line of research into the social media landscape in a bid to determine the consequence of what they termed a “social media branding firestorm”. They found that the effect of these firestorms on brand perception is attributable to the volume of tweets around the branding crisis whether it relates to a product, service or communication failure. However, Cleeren, Dekimpe and van Heerde (2017) recognise that although product-harm crises have been studied extensively, the studies have been confined to the developed world and very little has been done in developing economies. Further

limitations to current studies in this field have been acknowledged by Jeon and Baeck (2016) who recognised the limitation in the generalisability of their study as it was conducted around franchise coffee and appealed for the application of their framework to other product categories

While literature has focused its understanding of the phenomenon of fake news on politics, climate change and perceptions around vaccination (Lewandowsky et al., 2017), brands have not been left out of the fray often finding themselves as victims of the spread of fake news. In the luxury goods sector, a prominent case has been that of Tommy Hilfiger (Mills et al., 2019) who continues to be quoted as having made racist remarks despite numerous efforts to dispel these rumours. Other instances include pizzerias that have been at the epicentre of rumours around child trafficking (Mills et al., 2019) and motor manufacturers being the subject of fake competitions, recalls and future product launches. In the wake of the misinformation scandals around the 2016 US presidential elections, both New Balance and PepsiCo became victims of fake news stories that affected not only the image of their brands but their share prices too (Di Domenico & Visentin, 2020) bringing to light the financial implications the spread of fake news can have if not managed appropriately and timeously. In cases where brands are not the subject of fake news, they remain susceptible to advertising campaigns that may feature on fake news sites (Mills et al., 2019) which, by association, may negatively impact brand perceptions.

In the field of marketing, research into fake news is in its infancy and has concentrated on defining and understanding what constitutes fake news (Berthon, Pehlivan, Yalcin, & Rabinovich, 2019; Ferreira et al., 2019), understanding what characteristics cause consumers to believe or share fake news (Borges-Tiago et al., 2020; Talwar et al., 2019) and the impact of news truthfulness on consumer intentions (Visentin et al., 2019). A few studies have delved into appropriate brand responses and brand management strategies in the era of fake news (Mills & Robson, 2019; Peterson, 2019; Vafeiadis et al., 2019) and fewer yet have sought to understand the processes which consumers undertake in responding to fake news stories about brands on social media (Chen &

Cheng, 2019). Noting the infancy of this body of literature and the gaps thereof, Di Domenico and Visentin (2020) call for further studies to grow the body of knowledge around this topic in the fields of branding, consumer behaviour and marketing.

The aim of this research is to expand the body of knowledge on the topic of misinformation by approaching it through the lens of consumer-based brand equity. Consumer-based brand equity and its benefits have formed the basis of brand research with the benefits of consumer-based brand equity being well understood by scholars and practitioners (Chatzipanagiotou, Christodoulides, & Veloutsou, 2019; Christodoulides & de Chernatony, 2010; Datta et al., 2017). While this theory has been applied to branding crises, it is still to be applied to studies looking into the concept of fake news. This study, therefore, extends our knowledge of fake news in the field of marketing by seeking to understand whether this phenomenon can be explained using existing theories of branding and product harm crises or whether it presents a new challenge for marketing professionals warranting a new approach to its management. Furthermore, the study will extend our understanding of the benefits of consumer-based brand equity by proving whether our previous understanding holds true even in the era of fake news.

In addition, most studies around brand crises have been confined to developed nations whereas Chatzipanagiotou et al's. (2019) work around brand equity finds that cultural context matters in building brand equity. South Africa differs from western context such as the United States not only in its economic status but also due to cultural contexts such as power distance and individualism (Hofstede Insights, n.d.) suggesting that South Africans in general accept unequal power distribution in society and while they are individualistic, they tend to be less so than Americans in general which could have different implications for consumer research than what has currently been studied. Therefore, this study will also provide some insights into consumer behaviour from a developing economy, high power distance perspective.

1.2.2 The business case for the research

With a population of approximately 58,7 million (Statistics South Africa, 2019), South African mobile internet and social media users are approximately between 22.9 million (Statista, n.d.) and 27 million (Gnuworld, n.d.). This represents usage of between 39% and 46% which accounts for a sizeable portion of the population that may interact with, and be exposed to, fake news about brands on social media. The findings of this study are, thus, important for South African marketing practitioners as they will offer insights on managing these potential branding crises in a manner that will be beneficial to the organisations within which they operate. Companies affected by instances of misinformation have reacted differently by using their own social media sites to correct the misinformation, their official company websites or in some cases, not making any means to correct this misinformation. The limitations of our understanding of this phenomenon has made it difficult to establish best practice for brand response; therefore, as a final contribution this research seeks to add to literature on how brands should respond to fake news.

Mills et al. (2019) recognise that in a world of post-truth, brands that are associated with fake news may suffer reputational damage which will affect their brand equity. Considering the contribution this study seeks to make to our understanding of misinformation, the following broad questions using a consumer-based brand equity theory lens (Chatzipanagiotou et al., 2019; Kakati & Choudhury, 2013; Keller, 1993) will be pursued:

- Whether or not the impacts of misinformation are similar to any brand or product harm crisis
- Whether or not brand strength mitigates the impact of misinformation on the brand
- Whether brand-customer relationship strength mitigates the impact of misinformation on brand equity
- What strategies should organisations employ to correct misinformation

Having established the need for this research as well as the questions this study seeks to answer, the balance of the document will look at the current pool of knowledge around fake news, brand equity, brand crises, brand-customer relationship as well as the impact of content source on social media in the literature review. From the literature review, hypotheses for the study will also be propose in the next chapter. Following that, the methodology of the study will be discussed followed by the results of the statistical tests conducted. These results will then be discussed and the paper will end off with implications of this study for marketing practitioners, outline the limitations of the study and propose areas for future research.

Chapter 2: Literature review and hypothesis development

2.1 Introduction

Based on the purpose outlined in section 1.3 above, this literature review aims to understand and consolidate the current understanding around the key constructs that form the focus of this study. The literature review begins by outlining the underlying theory on brand equity with specific attention paid to how consumer-based brand equity has been conceptualised.

The literature review will also engage the concept of fake news particularly to develop a working definition for fake news. With this field of study being in its infancy, a considerable amount of the literature over the past three years has sought to define fake news as well as how and why this phenomenon has become a topical subject for researchers. The literature review will present these typologies by highlighting areas of agreement and dissent on the definition with the aim of reaching a working definition for fake news that is used in this study.

Following this, the literature review will explore how brand crises have been defined and the impact thereof on brands to form a basis for the hypotheses that will be presented. Understanding brand crisis is imperative in achieving the research objective that seeks to determine whether fake news on social media affects brands in a similar manner to traditional brand or product crises as this will aid our grasp of whether current theories around brand crisis are adequate for dealing with the phenomenon of fake news. In further supporting the purpose of the research as well as developing hypotheses based on our current understanding, the literature review will also explore the interplays between brand equity and brand-customer relationships together with the underlying benefits to strong brands specifically with regard to how brand equity and strong brand-customer relationships can mitigate the negative impact of brand crises.

Lastly, this review draws on extant literature around the intersection of brand equity and source credibility on social media to aid our understanding of the implications marketer-generated content and user-generated content have on consumer behaviour and perceptions depending on the perceived strength of the brand in question. The relevant hypotheses are included after each section of this review. These hypotheses will be tested, and the results discussed in subsequent chapters of this report.

2.2 Underlying theory: Consumer-based brand equity

While varying measures for brand equity exist, consumer-based brand equity has been widely accepted as a reasonable measure for brand equity due to customers' stake in the success of any business (Chatzipanagiotou et al., 2019) and the embodied concept of market perceptions that results in financial successes that organisations enjoy (Christodoulides & de Chernatony, 2010). The theory of consumer-based brand equity is based on the work of Keller (1993) who defines brand equity as “the differential effect of the brand knowledge on the customer response to the marketing of the brand” (p. 1). Using this definition, Christodoulides and de Chernatony (2010) posited that where brand value is positive, customers will respond favourably to products of those brands in comparison to other brands.

Further to this, Christodoulides and de Chernatony (2010) took an economic view in trying to unpack the definition of brand equity by arguing that a brand with favourable equity served as a positive signal to the customer and lowered their level of involvement in the purchase process as it increased trust. Ultimately, Christodoulides and de Chernatony (2010) defined consumer-based brand equity as “a set of perceptions, knowledge and behaviours on the part of the customer that results in increased utility and allows a brand to earn greater volume or greater margins than it could without the brand name” (p.6) – a view supported by Chatzipanagiotou et al. (2019), Datta et al. (2017), and Veloutsou et al. (2020) who also surmised the benefits of positive brand equity as resulting in greater financial returns for the organisation.

Researchers have approached the measuring of consumer-based brand equity in varying ways including direct measures, which only account for factors directly linked to brand value as well as indirect measures, which encompass a broader scope of measurable element that affect brand perception (Christodoulides & de Chernatony, 2010). Each of these measurements are not without criticism such as the fact that they may not be culturally encompassing to disagreements on which constructs should be measured (Christodoulides & de Chernatony, 2010).

While previous conceptualisations of customer-based brand used broad categories of brand awareness and brand recall (Stocchi & Fuller, 2017), a recent study by Chatzipanagiotou et al. (2019) provided a comprehensive framework through which consumer-based brand equity could be measured and recognised as a complex process rather than a linear construct that integrates varying elements to ultimately define overall brand equity. In unpacking the process of consumer-based brand equity formation, Chatzipanagiotou et al. (2019) proposed a system consisting of three blocks: the brand building block, brand understanding block and brand relationship block. The brand building block comprises elements such as heritage and nostalgia as well as leadership and competitive advantage (Chatzipanagiotou et al., 2019; Veloutsou et al., 2020), while the brand understanding block speaks to how consumers respond to the brands including customer awareness of the brand as well as brand reputation. The brand relationship block speaks to the relationship customers enjoy with the brand (Chatzipanagiotou et al., 2019).

Chatzipanagiotou et al's. (2019) operationalisation of this framework stems from the early work of Aaker, Fournier and Brasel (2004) who, beyond brand equity, conceptualised brand-relationship strength as buyers' intention to remain committed to, and continue, purchasing a product while maintaining favourable perceptions about the product (Jeon & Baek, 2016). Aaker et al. (2004) proposed four comprehensive measures to determine customer-brand relationship qualities which encompass commitment, intimacy, satisfaction and self-connection. In addition to the theory of customer-based brand equity, Aaker et al's. (2004) conceptualisation is of interest to this

study as it allows for a comprehensive understanding not only of the constructs that constitute consumer-based brand equity but also allows us to understand how the customer-brand relationship impacts the relationship between brand equity and the exposure to disinformation.

2.3 Misinformation, disinformation and fake news

2.3.1 Understanding problematic information

While scholars have conceded that misinformation and fake news are not new phenomena (Ferreira et al., 2019; Mills & Robson, 2019; Talwar et al., 2019) there has been a consensus that the creation and dissemination of fake news reached new heights with the 2016 US election (Vafeiadis et al., 2019). Di Domenico and Visentin (2020) further posited that misinformation and fake news only represent one aspect of the crisis of problematic information which Jack (2017) defined as “inaccurate, misleading, inappropriately attributed or altogether fabricated information” (p. 409).

2.3.2 Types, sources and causes of fake news

Jack (2017) differentiated between misinformation and disinformation arguing that the main difference between these two concepts lies in the intent behind dissemination with misinformation being unintentionally untrue whereas disinformation is information intended to mislead audiences deliberately. Building on this work, Mills et al. (2019) differentiated between three levels of disinformation: inadvertent, ideological and exploitative disinformation. Inadvertent disinformation is described as content generally created by users and not intended to specifically mislead the reader but rather can be seen as information that is ambiguous or not entirely true (Buschman, 2019). Ideological disinformation is deliberately created in order to influence political opinion on a subject or person and lastly, exploitative disinformation which is untrue information intended for financial gain (Mills et al., 2019).

Mills et al. (2019) argued that it is perhaps exploitative disinformation which affects and is affected by advertising practice since it is directly linked to revenues with content

producers creating fake news websites that can be used as clickbait driving traffic to their fake news websites ergo maximising clicks and viewing traffic for advertising purposes (Nyilasy, 2019; Vafeiadis et al., 2019).

It is this relationship, which Mills et al. (2019) argued, that presents a dilemma for marketing practitioners where featured advertising on fake news websites may be seen as endorsement for the content by the company or may cause consumers to associate the brand with ethics and values that are contrary to its own brand values. Perhaps a more insidious impact is when the brand itself is the subject of a fake news story such as the alleged racism of Tommy Hilfiger (Mills et al., 2019; Strategic direction, 2019). These unchecked stories are easily and speedily circulated on the web driven in part by the volume of these fake stories but also by the apathy of social media users in checking the veracity of the content (Mills et al., 2019).

Ferreira et al. (2019) further aided the understanding of the phenomenon of fake news and posited that fake news is not necessarily absolute but rather that it included different degrees of truthiness existing on a continuum between information that is completely fabricated and can be proven to be false while the other end of the continuum represents information that is rooted in actual events. Similarly, the sources of fake news exist on a continuum with the different ends represented by fake news that comes from within the organisation versus fake news that is started by sources external to the organisation (Ferreira et al., 2019). This continuum is represented by Figure 1. Ferreira et al. (2019) argued that some organisations may be the source of fake news owing to the fact that in the short term, this fake news may lead consumers to purchase the products and services of the organisation thus resulting in some financial benefit.

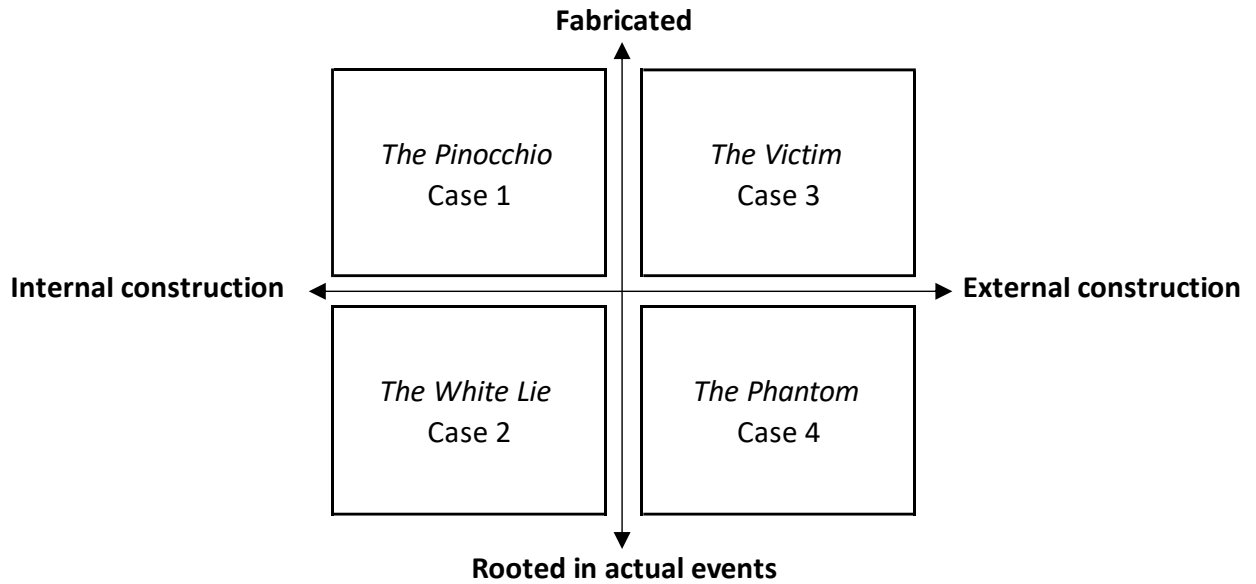


Figure 1: A typology of fake news

The Pinocchio, as in Case 1, represents a situation where the organisation itself fabricates and disseminates fake news such as the case of Tesco, that intentionally used fictitious farm names on their products in an effort to showcase their support for local farming communities. Case 2, The White Lie, is differentiated from Case 1 only by the fact that the distorted information is based on events that have occurred. Berthon et al. (2019) echoed the assertion that organisations can be the source of information that is untrue and argued that companies have long used this strategy in their brand communications to enhance sales.

On the other side of the spectrum, Ferreira et al. (2019) acknowledged that the source of the misinformation may be external to the organisation. The Phantom, as in Case 4, relates to information that is rooted in actual events stemming from a source outside the organisation such as was the case with accusations levelled by users' against Apple intentionally slowing down older models to drive sales towards new phone models (Ferreira et al., 2019). Of particular interest in the conceptualisation of fake news used for this study is Case 3, The Victim, is intended to depict a situation in which fabricated information originating outside the organisation is spread. In this case, the organisation

becomes a victim of attacks that negatively impact both the image and the financial performance of the brand or become victims of hoaxes carried out on social media created to portray these brands as having made statements that they have not (Peterson, 2019). The Victim was evidenced with New Balance and PepsiCo during the 2016 US elections (Di Domenico & Visentin, 2020). This typology not only built on the assertion Jack (2017) had made that the intent of this information is to deliberately mislead, but also attributed this misleading action to an entity which sits outside of the organisation itself.

Berthon et al. (2019) particularly supported Ferreira et al's. (2019) conceptualisation of Case 1, The Pinocchio by unpacking the different types of fake information disseminated by organisations.

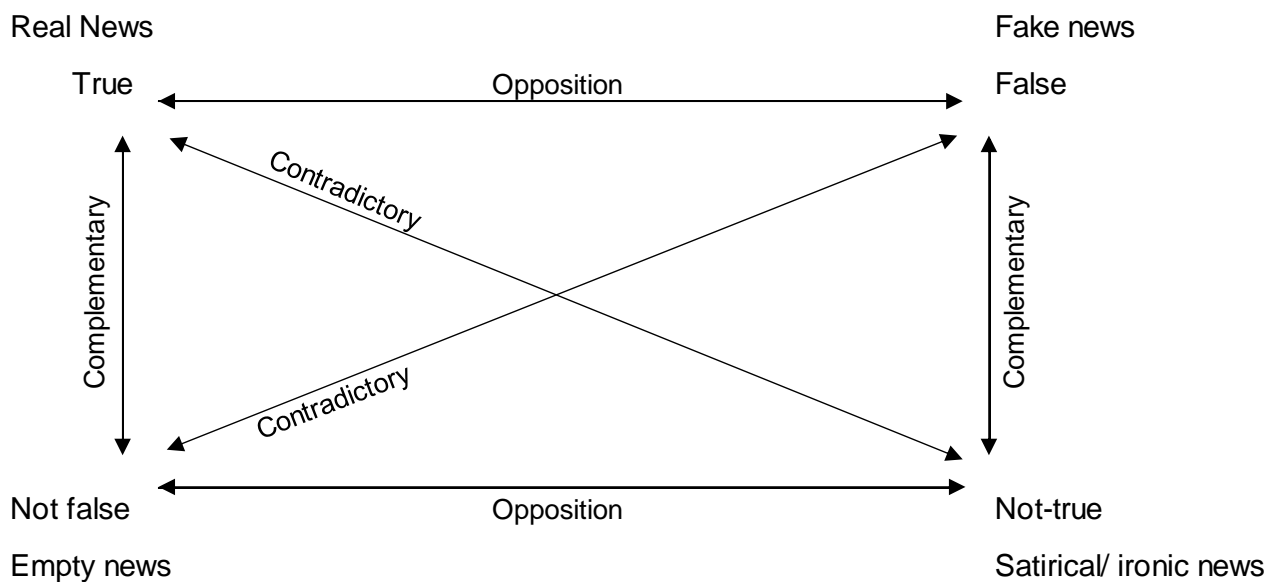


Figure 2: Semiotic square of mapping news types

Figure 2 depicts Berthon et al's. (2019) mapping of news types as it specifically relates to brand communications. On the side of truth, real news is information the brand communicates about itself that can be verified by independent sources while fake news

are statements communicated by the brand to achieve financial benefits by portraying the benefits that customers can gain while using the organisation's products and services (Berthon et al., 2019). Berthon et al. (2019) further argued that "statements such as Rockstar's 'scientifically formulated' may sound impressive but are not based on factual evidence and are in no way verifiable" (p.146); these claims have not been verified or tested by independent sources and are made deliberately to mislead audiences. These assertions align with previous arguments by Jack (2017) who posited that in engaging in various communications, brands themselves may dilute the accuracy of the information in order to persuade and evoke certain feelings among their audiences. While this mapping and the arguments around it are of interest to the larger pool of knowledge on fake news in marketing practice helping us to understand that there are multiple sources of fake news, this study is particularly interested in fake news emanating outside of the organisation.

Given the various definitions currently used for misinformation, disinformation and fake news, this paper will use an intersection of Jack (2017) and Ferreira et al's. (2019) definition to conceptualise disinformation as information that is deliberately inaccurate. This is not rooted in any previous events and is disseminated with the express intent to mislead the audiences to which it is delivered. This disinformation is harmful to the brand and is predominantly spread online, particularly on social media platforms due to limited monitoring and verification of information on these sites. The study does however note the interchangeable use of misinformation and disinformation as synonymous terms for fake news in extant literature.

2.4 Product-harm and branding crises and social media

2.4.1 Defining brand crises

Product-harm crises occur when an organisation, intentionally or unintentionally, places goods in the market whose usage may negatively impact customers or products which may not meet a set of predetermined standards (Cleeren et al., 2017). Zou & Li (2016) posited that a product-harm crisis represents one of the worst occurrences that befall

brands largely owing to the impact these crises have on customer perceptions, attitudes and beliefs (Jeon & Baeck, 2016; Singh, Crisafulli, & Quamina, 2020; Wu, Choi, & Park, 2020; Zou & Li, 2016). Although these crises are recurrent – (Singh et al., 2020; Zou & Li, 2016) most notably Toyota’s acceleration crisis (Liu & Shankar, 2015), Samsung’s crisis with the Galaxy Note 7 (Cleeren et al., 2017) and more recently, the Ford crisis with the Kuga’s spontaneous combustion – anticipating these crises remains challenging (Zou & Li, 2016) and choosing appropriate strategies to respond to these crises has been a far more difficult task for brands (Liu & Shankar, 2015; Zou & Li, 2016) giving rise to a body of literature intended to understand how organisations can best respond to these crises.

On the other hand, a brand crisis however does not necessarily stem from the organisation itself and is not necessarily linked to a product performance failure but represents a broader spectrum of corporate crisis which includes the perceptions of the organisation’s ability to produce quality products as in a product crisis (Jeon & Baeck, 2016; Zou & Li, 2016), an unsubstantiated brand positioning, a communication crisis (Hansen et al., 2018; Zou & Li, 2016) or a corporate social responsibility failure (Hansen et al., 2018; Jeon & Baeck, 2016).

2.4.2 The impact of brand crises on customer perceptions

While consumer responses to both brand and product-harm crises may differ, extant research has suggested that in general some of the variables that interact to determine consumer’s responses to the crises include familiarity with the brand (Jeon & Baeck, 2016) and the perceived seriousness of the crisis (Cleeren et al., 2017; Jeon & Baeck, 2016; Liu & Shankar, 2015). Singh et al. (2020) and Jeon and Baeck (2016) concurred that regarding the dimension of brand familiarity, these previously held views assist customers who are familiar with these brands to process this new negative information while Jeon and Baeck (2016) further posited that not only do the previously held beliefs help customers process the new information but in instances where customers are loyal to the brand, they may evaluate the information such that their favourable perceptions

of the brand remain intact. The notion of this brand-self relationship will be explored further in succeeding sections.

In determining the impact of brand crises on consumer perceptions Jeon and Baeck (2016) found that brand harm crises have effects similar to product-harm crises by eroding brand equity through negatively affecting customer attitudes towards the brand; however, social failures had a larger negative impact than product related failures. Hansen et al. (2018) who explicitly tested the difference in impact of product, communication and social failures conversely found that product failures had a tendency to have a higher recall for customers and a greater impact on how these customers formed brand perceptions while the significance of social failures lay predominantly with the fact that customers could more easily recall the reasons for the social failure. Regarding online activity in particular, both Cleeren et al. (2017) and Hansen et al. (2018) found that duration, volume and reach of the online chatter also work together in determining the severity of the impact to brands of a crisis. Hansen et al. (2018) further found that social media firestorms influence customer perceptions of the brand in both the short and the long term. These findings have corroborated previous insights on the role of social media in a product-harm crisis which indicate that the sustained prevalence of product-harm crisis chatter on social media compound the negative impact on sales of these brands following a recall (Cleeren et al., 2017). The nuances in the findings notwithstanding, these studies confirm the work of prior academics who find that brand crises negatively impacts brand equity by eroding the positive perceptions and attitudes of customers towards a brand (Cleeren et al., 2017; Hansen et al., 2018; Jeon & Baeck, 2016).

2.4.3 Hypothesis 1: The impact of disinformation on brand equity

Despite the contextual differences in these studies in terms of social media versus traditional media, Hansen et al. (2018) argued that the underlying interactions that lead to a brand crisis are the same. As such, much of the existing literature should provide insights on social media branding crises.

This study's conceptualisation, based on Mills et al. (2019) and Ferreira et al. (2019), positions disinformation as a phenomenon where information that is deliberately inaccurate is shared with the express intent to mislead audiences with the expectation is that this negative information would likely result in a branding crisis for the organisation. Therefore, in line with Cleeren et al. (2017), Hansen et al. (2018) and Jeon and Baeck (2016) determining that brand crises erode brand equity, this disinformation would negatively influence the attitudes and perceptions of customers towards the brand the study hypothesises that:

Hypothesis 1 – Disinformation has a negative influence on brand equity

2.5 Brand equity and brand strength

2.5.1 Building brand equity

Extending the work of Kotler (1991) who, as quoted in Keller (1993), defined a brand as “a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or a group of sellers and to differentiate them from those of competitors” (p. 2), Mühlbacher, Raies, Grohs and Koll, (2016) looked beyond physical manifestations and offered their own definition of a brand as “a shared desirable and exclusive idea embodied in products, services, places and/or experiences” (p. 2775) denoting and reiterating the idea of differentiation that is embodied by different brands. Keller (1993) posited that it is this differentiated experience that determines consumer attitudes and perceptions not only towards the brand itself but towards the promotional activities the brand undertakes and thus defined customer-based brand equity as “the differential effect of brand knowledge on consumer response to the marketing of the brand” (p. 1).

In order to aid our understanding of how customer-based brand equity is built, Keller (1993) posited a process that is founded in brand knowledge and proposed that brand knowledge, comprising brand awareness and brand image, is essential in building equity. Building brand knowledge allows customers to become familiar with the brand and makes it easier to recall this brand from memory. However, awareness on its own

is insufficient and requires that brands build an image resulting in brand associations that customers can also easily recall (Keller, 1993). Mühlbacher et al. (2016) further noted that not only must these brand associations be built but they also have a direct relationship with brand equity; this is, unique, positive and favourable attributes drive brand strength by creating positive associations with the brand.

2.5.2 The benefits of brand equity

Building brand equity is not an end in itself but it is rather the benefits associated with having a positive brand equity that marketers and organisations have striven to achieve. Brand equity has been a key measure for marketing practice as it allows marketing practitioners to understand the value of their brand relative to competitors while also bestowing companies with a stronger brand equity benefits such as increased sales and the ability to charge premium prices for their products or services (Chatzipanagiotou et al., 2019; Dalman, Chatterjee, & Min, 2020; Datta et al., 2017; Veloutsou et al., 2020) by increasing customer propensity to choose these stronger brands over those that are perceived to be weaker while building customer commitment and loyalty over the longer term (Keller, 1993). These benefits are demonstrated in the financial results of organisations with high brand equity as having stronger brands allows these organisations to charge premium prices while also enabling them to achieve higher market share resulting in better financial performance in comparison to their competitors (Ding et al., 2020; Mühlbacher et al., 2016; Stahl, Heitmann, Lehmann, & Neslin, 2012).

2.5.3 Hypothesis 2: The role of brand strength as a buffer

The positive effects of brand equity have extended beyond financial benefits to the organisation and have also been demonstrated in the ability to protect organisations in times of crisis. Cleeren et al., (2017) found that brand equity prior to a crisis plays a mitigating role in the extent of the damage suffered by brands with consumers generally being more forgiving of stronger brands. In reviewing literature around a similar topic, Jeon and Baeck (2016) presented similar findings and argued that commitment moderated consumer responses to brand crisis. While there have been other agreeing

views, Dalman et al. (2020) acknowledges that over the years there has been some dissension with this assertion that higher brand equity protects organisations primarily due to the shock effect created as customers do not expect such organisations to fail. Similarly Veloutsou et al. (2020) also posited that even strong brands can be negatively impacted by poor performance. Despite this, however, Dalman et al. (2020) proved that even in instances of innovation failure, companies with higher brand equity are not as negatively affected as organisations that are deemed average or weak. Based on these various findings as well as the current understanding of the benefits related to brand equity this study thus hypothesises that:

Hypothesis 2 – Strong brands are less negatively impacted by disinformation

2.6 Brand-customer relationships

2.6.1 The role of brand-customer relationships during a brand crisis

While our current understanding around brand equity seems to suggest that it can act as a buffer during times of brand crises (Cleeren et al., 2017; Dalman et al., 2020), at an individual level ,however, consumer responses to brand crises can be impacted by the relationships these customers have with the brand (Ma, 2020). This concept of brand-relationship strength was defined by Jeon and Baeck (2016) as “the extent to which customers’ continuous purchase intention or commitment with respect to a brand is retained with favorable attitudes and is a comprehensive concept covering brand loyalty” (p. 553). Ma (2020) offered further understanding of this concept positing that these relationships can exist on a purely dimensional capacity that delineates a non-identifying relationship or can be more complex incorporating aspects of belongingness as is the case with identifying relationships.

Extant literature around the reactions to a brand crisis and the brand-customer relationship suggests that there are opposing views which support both the assertion that brand-customer relationships act as buffers in times of crisis as well as the assertion that customers who exhibit strong loyalty may become the most aggrieved during a brand crisis (Ma, 2020). The argument for the buffering effect has centred on the idea

that consumers with a strong brand relationship already hold positive views and have positive associations with the brand and will thus use this as a reference point in processing new information (Jeon & Baeck, 2016). Where this new information conflicts with previously held positive associations, consumers will seek to minimise the impact of new negative information by drawing on the pre-established trust they have with the brand (Jeon & Baeck, 2016; Ma, 2020). Similarly, where individuals identify strongly with the brand, any wrongdoing on the part of the brand may be attributed as a negative blemish on the consumer's image of themselves (Jeon & Baeck, 2016; Ma, 2020) and they will thus seek to minimise this impact by re-enforcing their previously held positive beliefs (Cleeren et al., 2017; Jeon & Baeck, 2016). In understanding the role of misinformation in politics and parallel to this assertion, Lewandowsky et al. (2017) found through their study that supporters of a political figure are less likely to waiver in this support despite negative information around the object of their support.

On the other hand, however, consumers with a strong-identifying relationship may feel a greater sense of betrayal at a time of crisis and feel that their trust has been violated resulting in these customers reacting in anger towards to the brand (Ma, 2020). Cleeren et al. (2017) argued that these exceptional cases arise where customers who have exercised loyalty to the brand interpret any wrongdoing on the part of the brand as a breaking of the implicit trust relationship these customers have with the brand. While Ma (2020) acknowledged these differing viewpoints, their study found that both non-identifying relationships and identifying relationships acts as a buffer in times of crisis. Thus, despite the contrarian view, the argument can be made that disinformation would be similar to a brand crisis and therefore, brand-customer relationship should mitigate the impact of disinformation on the brand.

2.6.2 Hypothesis 3: Brand-customer relationship as a buffer in times of brand crisis

Therefore, based on Jeon and Baeck's (2016) findings on brand and self-identity which tie in strongly with Ma (2020) findings around the buffering effect of the brand-customer

relationship, this study hypothesises that brand-customer relationships prior to exposure to disinformation mitigate the impact of disinformation on overall brand equity and therefore:

Hypothesis 3 – Brand-customer relationships prior to exposure to disinformation are positively correlated with overall brand equity after exposure to disinformation

2.7 Marketer-generated content versus user-generated content

2.7.1 The influence of marketer-generated and user-generated content on brand building

Various studies have been conducted indicating the impact of user-generated and marketer-generated content on customer behaviour, engagement, profitability and customer value (Kannan & Li, 2017; Kumar et al., 2016; C. Lee, Ofek, & Steenburgh, 2018; Meire et al., 2019). The findings of these studies indicated that marketer-generated content enhanced customer-brand recall and can also positively impact customer sentiment (Meire et al., 2019). Further to this, not only did studies find that marketer-generated content improve customer spending but it also improved customer profitability with increasingly positive effects on technologically adept customers who have been loyal to the organisation (Kumar et al., 2016). Thus, a positive relationship has been demonstrated between marketer-generated content and consumer behaviour. Studies around user-generated content demonstrated similar findings to traditional word-of-mouth studies with Kannan and Li (2017) collating these findings over the past years to indicate a positive (negative) relationship between positive (negative) word of mouth and an increase (decrease) in sales promulgated by trust.

Rather than studying these impacts in isolation, Colicev, Kumar and O'Connor (2019) suggested that the impact of marketer-generated content and user-generated content also interacts with brand equity. In addition, they found that strong brands – those brands with a positive reputation – benefit from marketer-generated content as they already enjoy the trust of customers. In contrast to this, smaller firms do not necessarily enjoy the same levels of consumer corporate trust; therefore, user-generated content tends to

have more positive effects for these organisations (Colicev et al., 2019) – a finding echoed by Luo and Gu (2017), who argued that trailing firms tend to benefit more from the expert bloggers.

Mills and Robson (2019) and Vafeiadis et al. (2019) studied brand responses to fake news in order to build the literature around which responses organisations should employ in managing and refuting fake news levelled against them. While Vafeiadis et al. (2019) acknowledged that brands may choose to do nothing about fake news as they perceive that these stories will run their course and dissipate with time, the study also warned that such a strategy could have negative impacts on the organisation as, through repeated exposure to these stories, stakeholders may begin to accept these stories as being true. Therefore, Vafeiadis et al. (2019) argued that it is incumbent on brands to respond in some way to these crises.

Both studies positioned the affected brand or organisation as the source of the response with Vafeiadis et al. (2019) finding that for brands interacting with online users and refuting fake news claims, an aggressive posture that attacked the accuser seemed to resonate more with high-involvement customers whereas low-involvement customers found more subtle responses such as denial to be more effective. Mills and Robson (2019) however disagreed with this finding on the part of high-involvement customers arguing that an accusatory, attacking posture on the part of the organisation may be perceived as overcompensating. In combatting fake news, Mills and Robson (2019) posited that the best strategy for organisations to respond is through brand stories that are both authentic and emotionally engaging in order to dissuade customer inclination to believe fake stories.

2.7.2 Hypothesis 4: Source credibility of marketer-generated content and user-generated content for strong brands and weak brand

While Mills and Robson (2019) and Vafeiadis et al. (2019) both provide a good basis for understanding how brands should respond to disinformation, both these studies are

premised on the assumption that the brand is best positioned to respond to fake news claims against itself. However, extant literature around social media suggests that credibility of the source of information on social media differs depending on the brand equity of the focal brand. Thus, based on the argument Colicev et al. (2019) makes which is echoed by Luo and Gu (2017), through this research we can expect to find that brands with strong brand equity must address disinformation by generating their own content whereas firms that are not seen as leaders or as having strong brand equity should rather create communities that allow consumers to interact with each other thus relying on consumer advocacy to assist them navigate a disinformation crisis.

The study, thus, proposes that:

Hypothesis 4a: Marketer-generated corrective information is more credible for strong brands

Hypothesis 4b: User-generated corrective information is more credible for weak brands

2.8 Conclusion

The hypotheses presented in this chapter are rooted in extant literature and will be tested to confirm whether our current understanding of brand crises and brand equity can be applied to the phenomenon of disinformation. The variables for the constructs will be drawn from extant literature as these measures have been verified through previous studies however, the validity and reliability of the constructs will be tested for this study in particular. This will be discussed in chapter four. The following chapter, chapter three, will outline the methodology used in the data collection process of this study in order to support the testing of these hypotheses.

Chapter 3: Research methodology

3.1 Philosophy

The research philosophy for this study was positivist in nature. The focus was on understanding data that can be measured to explain the causal relationship (Saunders & Lewis, 2018) between disinformation and the correction thereof on consumer-based brand equity. Quantifiable data that lends itself to statistical analysis was collected using structured data collection methods (Saunders & Lewis, 2018). Using the consumer-based brand equity theory (Chatzipanagiotou et al., 2019; Christodoulides & de Chernatony, 2010; Veloutsou et al., 2020) as a conceptual framework and drawing from the current literature on social media and digital marketing, the hypotheses as developed and stated in the previous chapter were then tested using the data collected.

3.2 Approach and methodological choice

The study used a deductive research approach to test hypotheses that were developed through a review of the general literature in this field of study (Saunders & Lewis, 2018). Drawing from existing theory, constructs around consumer brand awareness, perceptions and behaviours were used to test the hypotheses developed (Vargas, Duff, & Faber, 2017). The data was analysed using statistical analysis techniques to determine whether it supported existing theory (Saunders & Lewis, 2018) on social media brand crises and its effect on consumer preference and thus consumer-based brand equity or whether the introduction of disinformation as a variable required the theory to be modified to account for variances in the findings. The methodological choice was a quantitative study.

3.3 Purpose of research design

Saunders and Lewis (2018) describe three types of research design purposes: exploratory, explanatory and descriptive. The aim of exploratory studies is to uncover information that is not yet understood and is generally used to explain a new

phenomenon. The phenomenon of social media usage is not new and does not necessarily warrant an exploratory study. Moreover, exploratory research lends itself particularly well to qualitative studies which this research will not undertake.

Descriptive studies aim to tell us more about events, people or situations (Saunders & Lewis, 2018). It employs structured methods of data collection to enable the researcher to answer questions such as “what”, “when”, “who”, “where” and “how” (Saunders & Lewis, 2018, p.116). Descriptive research is useful in providing the context through which relationships and phenomena can be explained (Saunders & Lewis, 2018). Explanatory studies add the fifth “w” to descriptive studies and address the question “why” (Saunders & Lewis, 2018). Through statistical testing, a relationship between variables can be understood. This study was descripto-explanatory in nature and sought not only to describe the data obtained through the research methods but also to use this data to understand and clarify the relationship between the variables explored.

3.4 Strategy and time horizon

While various research strategies exist, experiments are best suited to establishing causal relationships between variables (Reiss, 2011; Vargas et al., 2017). This research strategy allows the researcher to collect data in a controlled environment to prevent confounding behaviour by factors that may be outside of the study (Karahanna, Benbasat, Bapna, & Rai, 2018; Reiss, 2011; Vargas et al., 2017). Lab experiments occur in a controlled setting where participants are fully aware of their participation in the research (Karahanna et al., 2018; Morales, Amir, & Lee, 2017). Carefully constructed scenarios, commonly known as vignettes, are created to which participants can record their responses and provide insight into their real-world behaviour (Geuens & De Pelsmacker, 2017). In addition to explaining the causal relationship between disinformation and brand equity, this research aimed to understand how brand strength can impact the effects of disinformation; therefore, the research was designed such that respondents were assigned to a strong brand condition as in Group 1 or a weak brand condition denoted as Group 2. This method was used as exposing the same group to stimuli for both a strong and weak brand may have led to respondents manipulating their

responses in order to suit what they believed to be the researchers' expected outcome (Geuens & De Pelsmacker, 2017; Meyvis & Van Osselaer, 2018).

Each of the groups were exposed to a pre-test measuring how they perceived a self-selected motoring brand and following the stimuli they received, a post-test was administered to assess if any of their perceptions around the brands changed (Vargas et al., 2017). In using multiple groups, one of the issues that must be addressed is the comparability of the different groups; therefore, to ensure that both groups are similar, control for the influence of demographical and other characteristics on the responses must be maintained. As such, the two groups were not only selected randomly but were also made sufficiently large that they were, on average, nearly identical (Vargas et al., 2017). The research was cross-sectional, measuring responses at a single point in time (Saunders & Lewis, 2018).

3.5 Techniques and procedures

Online lab experiments provide access to an expanded sample and a diverse group of respondents (Karahanna et al., 2018) and because of this, the research was conducted online. Prior to undertaking the experiment, respondents were invited to establish how they attribute brand equity to a self-selected motor vehicle brand. They were divided into two groups with group one giving measures for a self-selected strong brand while the second group gave measures for a self-selected brand which respondents perceive as being weak. Following this pre-test, respondents were exposed to a fake news post about their self-selected brand after which a post test was administered to ascertain any changes in their perception of the brand equity of the tested brand. The final section of this research aimed to determine which response method was perceived as being most effective to this false information – either through the organisation correcting the disinformation or the brand relying on users and their online communities to correct the disinformation. The research used self-reporting surveys to collect responses for analysis.

3.6 Population and unit of analysis

Vargas et al. (2017) argue that it would make little sense to include students in a lab experiment regarding car purchase behaviour when these students may not be in the process of purchasing a vehicle and therefore lack any intrinsic motivation to undertake this process. As such, the population of this study although broad, only included individuals who had bought a vehicle in the past 12 months or were looking to buy a vehicle in the next 12 months. The constructs around the consumer-based brand equity model and variables related to this study focused on the individual consumer's perceptions and intentions. Therefore, the unit of analysis for this study was the individual consumer.

3.7 Sampling method and size

A sample represents a sub-group of the larger population (Saunders & Lewis, 2018). In the event that a full list of the population is available, a probability sampling method can be used; however, considering the vastness of the motor vehicle owner population in South Africa, it was unrealistic to expect a list of all the individuals to be readily available.

In the event that a full list of the population is unavailable, a non-probability sampling technique is used. The technique was termed as such because the researcher has no way of ensuring that any member of the population can be selected at random nor is there a way that probability of selection for a respondent can be determined (Saunders & Lewis, 2018). The non-probability sampling was purposive and only included individuals who had recently bought a motor vehicle or were looking to buy a vehicle in the near future as these customers would have had a higher intrinsic motivation to participate in this study (Vargas et al., 2017).

Geuens and De Pelsmacker (2017) warned that although sample sizes in an experimental design should be adequately large to enable effects that are statistically significant, these sample sizes should not be so big that their sheer size create statistically significant relationships that otherwise would not exist. The study further recommended the ideal sample size to be between 30 and 40 respondents for each

experimental condition (Geuens & De Pelsmacker, 2017). Similar experimental studies by Jeon and Baeck (2016), Visentin et al. (2019) and Wu et al. (2020) have used sample sizes of between 25 and 87 respondents per experimental condition. Therefore, this research targeted an average of 60 respondents per experimental condition. The targeted sample was overachieved. The survey was sent out to 40 000 potential respondents in total, 20 000 for each experimental condition and received 343 completed responses. These figures are presented in Table 1.

Table 1: Survey response rate

	Group 1 – Strong brand	Group 2 – Weak brand
Total people e-mailed	20 000	20 000
Started the survey	622	638
Completed the survey	1189	154

3.8 Measurement instrument

This research had a multi-method approach using an experiment and a survey questionnaire to collect responses to the stimuli provided. For each of the groups studied, the questionnaire contained the following sections:

- A preamble that introduced the research and provided respondents with any necessary instructions to consider in completing the survey. This was followed by a section that captured respondent’s demographics and social media usage.
- Section B of the questionnaire allowed the respondents to capture their brand perceptions relating to either a brand they perceived as being a strong brand in the motoring sector or a weak brand depending on which group the respondent was assigned. Thereafter, respondents were directed to read an online posting of fake news about Brand X, which represented the brand the respondent referenced in the previous section of the questionnaire. The use of an unidentifiable brand was to avoid confounding and thus minimised any other factors that could influence participant responses (Geuens & De Pelsmacker,

2017; Vargas et al., 2017). However, as part of this research seeks to understand how disinformation affects stronger versus weaker brands, customers were invited to assume the posting to have come from the brands about which they answered the preceding section. In addition, Morales et al. (2017) argued that to enhance the realism of an experiment may improve the results of the experiment. Therefore, the stimulus provided was as similar to an actual social media posting as possible to enhance the realism of the experiment. Further to this, the online nature of the survey mimicked components of the social media environment thus maximising realism.

Following this exposure, respondents were asked to answer the research questions using a Likert scale. Geuens and De Pelsmacker (2017) found that the most effective scales are between five to nine points with more points increasing the quality of the feedback from respondents. Conversely, too many points may cause complexities for the respondent as they have to differentiate between wider ranges of options. A seven point scale was, therefore, used as this was seen to be best practice (Geuens & De Pelsmacker, 2017) which included added advantages such as having a midpoint, the benefit of which was that respondents experienced less emotional distress as they are not forced to take sides. The scale was numbered from zero to six with zero being labelled as “strongly disagree” and six being “strongly agree”. Only the end points of the scale were labelled to minimise response bias (Geuens & De Pelsmacker, 2017).

The research questions were designed to gather responses on the variables to be measured before and after exposure to the disinformation based on the constructs on brand equity and brand relationship strength as well as to support the latter part of the questionnaire to understand effective responses and messenger credibility. These constructs included:

- Overall brand equity (Chatzipanagiotou et al., 2019; Veloutsou et al., 2020) which encompasses customers’ positive preferential bias towards a brand.

- Intimacy, Connection and Loyalty (Aaker et al., 2004) which represent the first-order constructs which make up the second-order construct of brand-customer relationship.
- Messenger credibility, trustworthiness and bias (Roberts, 2010)

The complete questionnaire indicating the variables included in the survey can be found in Appendix 1.

Key to ensuring construct validity is the ability to use research to clearly define the construct thoroughly thereby avoiding potential errors caused by poorly defined constructs (Geuens & De Pelsmacker, 2017). In addition, both Geuens and De Pelsmacker (2017) and Vargas et al. (2017) asserted that using multiple items to measure a construct ensures that the full construct is tested and further assists in ensuring the validity of the construct tested. The construct measures developed by consumer-based brand equity scholars satisfy both these points. Owing to the fact that these concepts have been studied over time, the constructs have been thoroughly tested (Geuens & De Pelsmacker, 2017; Vargas et al., 2017) and these operationalisations of constructs were used in this study. The messenger credibility measure developed by Robert (2010) was also tested over time and was used to measure the perception of respondents on the source of the corrective information.

The experimental stimulus was adapted from one of the biggest fake news stories of 2016 where Hillary Clinton was accused of having sold arms to terrorist formations (CNBC, n.d.). However, instead of a singular person as the focus of the fake news, the motor manufacturing brand was implicated as part of the wrongdoing.

Sweitzer and Shulman (2018) found that the use of language affected participants' responses with the relative ease of language creating a better experience for participants thereby allowing them to better engage with and respond to questions. As such, the questionnaire was designed such that easy language that avoids jargon is used. In order to test for, and thus avoid any possible, confounding behaviour and misunderstanding that may influence how participants answer the questions, a pre-test was conducted. The pre-test involved testing the survey questionnaire on a smaller

sample which consisted of eight individuals in total who completed the survey and gave feedback. These responses were not included in the total sample used for the study. Following the pre-test, one of the questions was reworded as the clarity of the question was unclear.

3.9 Data gathering process

Online panels increase the external validity of lab experiments due to the fact that they can include a larger, more heterogeneous sample of the population as they are not bounded by the constraints of time and space (Karahanna et al., 2018). Owing to this, the sample for this survey was sourced from Bataleur's online community in order to reach a larger geographical and demographical representation. A survey questionnaire was sent to the members of this online panel for self-completion in order to collect the relevant data.

3.10 Analysis approach

The data collected was analysed using the Statistical Package for Social Science (SPSS) software. To enable this analysis, the data was summarised according to the codes allocated in the questionnaire design. Quantitative studies using experiments and surveys lend themselves well to data analysis methods through inferential and descriptive statistics (Petzer, 2020). Descriptive statistics include elements of central tendency as well as dispersion of the data (Saunders & Lewis, 2018). These were used to analyse the respondents' demographics and understand the composition of the sample as well as explain trends that were gleaned from the data.

In order to understand the relationships between variables, inferential statistical analysis was conducted. The nature of the design of the experiment collected data prior to exposure to a stimulus and post the exposure from the same respondent enabling the use of a paired sample t-test to measure differences in mean scores owing to changes created by that stimulus (McCrum-Gardner, 2008). In addition, to compare measures that were only taken once per respondent, independent t-tests will be used as the data

is also continuous (Judd, Westfall, & Kenny, 2017; McCrum-Gardner, 2008). Hypothesis three specifically will be tested using a regression analysis to understand the relationship between the variables (Chiba, 2015; Schmidt & Finan, 2018; Uyanık & Güler, 2013). The statistical analysis was conducted at a 95% level of confidence.

3.11 Quality controls

The validity of a study relates to the researcher's confidence level in the causal relationship of the variables tested (Vargas et al., 2017). This is to say that there can be no other explanation outside of the findings of the research to explain this causality. In order to minimise confounding due to pre-held bias against a named brand which could account for variances in response, respondents were invited to self-select a strong or weak brand and consider that brand in all their responses to the survey (Geuens & De Pelsmacker, 2017; Vargas et al., 2017). Furthermore, the use of the experimental stimulus relied on both groups applying similar significance or interpretation to the stimulus, therefore, in addition to reliability and validity tests conducted on the scale measuring message credibility, an independent t-test was conducted between respondents in Group 1 and Group 2 to ensure that there was no significant difference in the credibility respondents assigned to the stimulus.

Secondly, the study considered the generalisability of the findings. In order to ensure that the sample used to obtain the data was representative, an online platform was used allowing the study access to a diverse group of members who are not confined to a convenience sample selected in a single geographical location (Karahanna et al., 2018; Vargas et al., 2017).

Reliability of this research rested of the reliability of the constructs that were used and as such, multiple items that were previously agreed in the research were used to measure constructs (Geuens & De Pelsmacker, 2017; Meyvis & Van Osselaer, 2018; Vargas et al., 2017). These constructs were tested to determine the internal validity for this survey in particular and Cronbach's Alpha which has been accepted in other fields

of study (Taber, 2018) was used as a measure for reliability of the constructs. The validity of the constructs was also tested using a Pearson's correlation and the constructs showed correlation at a p-value less than 0.05 indicating the validity of the constructs (Trockel et al., 2018).

3.12 Limitations

Geuens and De Pelsmacker (2017) described the phenomenon of desirable responding as a situation where participants refrain from giving honest answers to the research questionnaire due to the researcher's presence. Although this research was conducted online with limited exposure to the researcher, the exposure of the same group of respondents to the same stimuli may impact their responses as they begin to respond in ways that they believe will support what they believe to be the hypotheses of this research study (Meyvis & Van Osselaer, 2018). Another limitation presented by the online nature of the experiment and subsequent survey which were administered in the respondents' chosen location at their particular time under conditions that were not observable by the research which may affect the responses gathered (Vargas et al., 2017). In addition, this research was cross-sectional and only considered responses at a point in time. These responses were also susceptible to the emotional and psychological state that the respondents found themselves in at that point in time.

The use of language was also considered as another limitation to the study. While some respondents may not be first language speakers of English, the questionnaire was prepared and administered in English. Although the use of the questionnaire was tested to determine the ease of language, this may have presented a barrier to respondents who do not use English as their primary communication language. The research tested responses using a stimulus; however, there may have been some differences in how respondents reacted to a hypothetical stimulus versus how they would react in a real life setting. As such, this research could have been enhanced by an empirical study that analysed the responses of social media users to real instances of misinformation and

how brand equity and the intention of customers had changed resulting possible in diminishing sales.

Lastly, the research methodology did not include a control group which could have served as a comparison tool as this group would not be exposed to any of the experimental stimuli (Geuens & De Pelsmacker, 2017). The results from this group could have provided comparability and aid in understanding if there may be other explanations for the variation between the pre-exposure and post-exposure tests.

Chapter 4: Results

4.1 Introduction

This chapter presents the statistical results of the research study. A short description of the sample is discussed in order to understand the similarities and the differences between participants. This will be followed by the results of the reliability and validity tests conducted in order to ensure that the measurement instrument was valid for this test. Lastly, the results of the statistical tests conducted are illustrated in order to test the hypotheses set out in chapter two. The results will further aid the discussion in chapter five as well as the conclusions drawn in chapter six. All tests were conducted at a 95% level of confidence.

4.2 Description of the sample

The following section outlines the response rate as well as the demographics of the respondents for both experimental groups.

4.2.1 Inclusion criteria, sample size and response rates

In line with similar previous studies conducted by Jeon and Baeck (2016); Visentin et al. (2019) and Wu et al. (2020), the study targeted an average of 60 respondents per condition. The study exceeded these sample sizes and achieved a total of 343 completed responses indicating a completion rate of 1% as it was sent out to a large group of potential participants. Group 1, the experimental grouping focusing on a strong brand, accounted for 189 completed responses whereas Group 2, accounted for 154 of the responses relating to a weak brand. In order to be included in the survey the respondents had to either have purchased a vehicle in the past 12 months before receiving the survey or be on the market with the intention to purchase a vehicle in the coming 12 months.

4.2.2 Demographics of the respondents

The survey included demographic questions for gender and age.

Table 2: Gender profile of respondents

	Total sample		Group 1		Group 2	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Female	140	40.8	77	40.7	63	40.9
Male	203	59.2	112	59.3	91	59.1
Total	343	100	189	100	154	100

The majority of the total respondents were male accounting for 59.2% of completed responses as indicated in Table 2. Between the groups this gender split was almost identical. Group 1 consisted of 59.3% male respondents and 40.7% female respondents while Group 2 consisted of 59.1% male respondents and 40.9% female respondents.

Table 3: Age profile of respondents

	Total sample		Group 1		Group 2	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
18 – 24	3	0.9	2	1.1	1	0.6
25 – 34	55	15.9	32	16.9	23	14.9
35 – 49	150	43.2	92	48.7	58	37.7
50+	135	40.1	63	33.3	72	46.8
Total	343	100	189	100	154	100

The age profile of respondents was skewed towards an older age group with respondents above 35 years old accounting for 83.3% of respondents. This age profile carried through in the two experimental groups with a majority of the respondents being older than 35 years old for both groups. This is illustrated in Table 3. For Group 1 and Group 2, 82% and 84.5% of respondents respectively were over the age of 35. Specific differences, however, can be observed among respondents within the older age categories. The majority of respondents in Group 1 were aged between 35 and 49 years old, which accounted for 48.7% of the group's respondents whereas respondents in Group 2 who were 50 years and older accounted for 46.8% of group's respondents.

4.2.3 Social media usage

The survey further tested for the frequency of social media usage and the type of social media platforms used by the respondents. These results are illustrated in Table 4 and Table 5 below.

Table 4: Frequency of social media usage

	Total sample		Group 1		Group 2	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Never	14	4.1	8	4.2	6	3.9
Less than once a day	24	7.1	12	6.3	12	7.8
Once a day	65	19.3	31	16.4	34	22.1
More than once a day	240	69.6	138	73	102	66.2
Total	343	100	189	100	154	100

Table 5: Social media platforms used

	Total	Group 1	Group 2
WhatsApp	324	178	146
Facebook	252	137	115
Twitter	95	55	40
Instagram	149	86	63
Snapchat	18	11	7
Other	31	14	17

The frequency of social media usage was high for the sample with 69.6% of respondents indicating that they used social media more than once a day. However, 4.1% of respondents indicated that they do not use social media. WhatsApp and Facebook tended to have the highest usage among respondents while Snapchat was at the lower end of the spectrum with only 18 respondents in total indicating that they used this particular platform. Other social media platforms used included LinkedIn, YouTube, TikTok, Telegram and Reddit.

4.3 Data validity and reliability

4.3.1 Construct validity testing

Consumer research is oftentimes interested in the measurement of variables that are not directly measurable more commonly known as constructs (Mochon & Schwartz, 2020). Due to the abstract nature of these constructs, the importance of construct validity lies in ensuring that the variables measured which are the tangible manifestations, feelings, beliefs and attitudes related to the construct can in fact serve as a measure of the construct itself (Bamberger, 2017; Mochon & Schwartz, 2020). In order to establish validity of the constructs used, a bivariate correlation of each construct was conducted and compared to the total item score. This test was conducted for both the pre and post-tests to establish validity throughout the study the results of which are illustrated in Table 6 and Table 7.

The focal point of this study centres on consumer reaction towards disinformation. As such, the constructs used focused on overall brand equity and brand-consumer relationship strength as well as message and messenger credibility. Using a bivariate correlation, the correlation between each variable within the construct was measured against the total construct score. The p-value for the variables related to overall brand equity, brand associations and brand reputation is less than 0.05 thereby indicating validity of these constructs (Trockel et al., 2018).

Table 6: Consumer brand perceptions construct validity

	Sig (2-tailed) vs. Total Item score	
	Pre-test	Post-test
1. Overall brand equity (Chatzipanagiotou et al., 2019; Veloutsou et al., 2020)		
It makes sense to buy Brand X instead of other brands even if they are the same	0.000	0.000
Even if another brand has the same features as this, I would prefer to buy Brand X	0.000	0.000
If there is a brand as good as this, I prefer to buy Brand X	0.000	0.000
If another brand is not different from this in any way, it seems smarter to purchase Brand X	0.000	0.000
2. Brand-customer relationship (Aaker, Fournier, & Brasel, 2004)		
2.1 Brand loyalty		
Brand X would be my first choice when purchasing a motor vehicle	0.000	0.000
I will not buy other brands if Brand X is available at the dealership	0.000	0.000
I am very loyal to Brand X	0.000	0.000
I am willing to make small sacrifices in order to purchase Brand X	0.000	0.000
I would be willing to postpone my purchase if Brand X's products were temporarily unavailable	0.000	0.000
I would stick with Brand X even if it let me down once or twice	0.000	0.000
I am so loyal to Brand X that I do not feel the need to shop around for other alternatives	0.000	0.000
2.2 Brand Intimacy		
Brand X understands my motoring needs	0.000	0.000
I would feel comfortable describing Brand X to someone who was not familiar with it	0.000	0.000
I am familiar with the range of products Brand X offers	0.000	0.000
2.3 Brand Connection		
Brand X and I have lots in common	0.000	0.000
Brand X reminds me of who I am	0.000	0.000
Using Brand X makes me feel like I am part of a community of like-minded consumers	0.000	0.000

Brand-customer relationship was treated as a second-order construct made up of the first-order constructs of brand loyalty, brand intimacy and brand connection. A bivariate correlation was conducted for each first-order construct and, having validated these constructs, a bivariate correlation was conducted for the second-order construct. The p-value for each of the variables in comparison to the total score for brand-customer relationship is less than 0.05 therefore indicating validity of the superordinate construct in addition to the validity of each first-order construct. The messenger and message credibility constructs were used only once for both groups. The variables within these constructs also return a p-value less than 0.05 when compared to the item total scores thus these constructs are deemed to be valid (Trockel et al., 2018).

Table 7: Messenger and message credibility construct validity

	Sig (2-tailed) vs. Total Item score
Message and messenger credibility (Roberts, 2010)	
1. Source credibility - Corporate	
Corporate - This source can be trusted	0.000
Corporate - This source is accurate	0.000
Corporate - This source is fair	0.000
Corporate - This source tells the whole story	0.000
Corporate - This source is not biased	0.000
2. Source credibility - Social media user	
User - This source can be trusted	0.000
User - This source is accurate	0.000
User - This source is fair	0.000
User - This source tells the whole story	0.000
User - This source is not biased	0.000
3. Message credibility (Disinformation)	
I find this message believable	0.000
The information in this message seems accurate	0.000
The information in this message seems trustworthy	0.000
The information in this message seems biased	0.000
The information in this message seems to be complete	0.000

4.3.2 Reliability testing

Subsequent to establishing the validity of the constructs, reliability of the constructs was assessed using the reliability analysis function in SPSS. Similar to the validity test, the reliability test was conducted for both the pre and post-exposure scores in order to ascertain internal consistency throughout the questionnaire. Table 8 lists the Cronbach's Alpha for each construct pre and post-exposure to the experimental stimuli while the Cronbach's Alpha for message and messenger credibility are illustrated in Table 9.

Table 8: Consumer brand perceptions Cronbach's Alpha

	N of items	Cronbach's Alpha	
		Pre-test	Post-test
1. Overall brand equity	4	0.974	0.976
2. Brand-customer relationship	13	0.979	0.984
2.1 Brand loyalty	7	0.966	0.982
2.2 Brand Intimacy	3	0.911	0.912
2.3 Brand Connection	3	0.959	0.965

Table 9: Messenger and message credibility Cronbach's Alpha

		Cronbach's Alpha
	N of items	
1. Source credibility - Corporate	5	0.954
2. Source credibility - Social media user	5	0.975
3. Message credibility (Disinformation)	5	0.780

For the brand perception constructs, the Cronbach's Alpha ranges between 0.911 at the lower end and 0.984 at the upper end. Similar to the validity testing, the first-order constructs within brand-customer relationship were tested both separately and at a second-order construct level with the second-order construct indicating a Cronbach's alpha of 0.979 for the pre-exposure scale and 0.984 for the post exposure scale. The message and messenger credibility scales indicate a Cronbach's alpha between 0.780 and 0.954 at the higher end. In order to accurately compute the Cronbach's alpha for message credibility specifically, the scale for one negatively worded variable was transformed in order to align to the wording and scale of the other variables within this construct. Cronbach's alpha scores upwards of 0.7 have been regarded in previous studies as being desirable (Taber, 2018) therefore, based on this previous work, the Cronbach's alpha measurements in this study which are all greater than 0.7 are considered as desirable and therefore the scales used are considered to be reliable.

4.4 Hypothesis testing

Chapter 3 proposes five hypotheses for this study. In order to test these hypotheses, statistical tests were conducted using the data collected. The following section will present these tests and the results thereof per hypothesis unpacking the purpose for each statistical test used and commenting on the results produced by each test.

4.4.1 Experimental stimulus perceived credibility

This study used an experimental stimulus on respondents assigned to two different conditions in order to understand how perceptions were altered before and after exposure to the stimulus which was disinformation about the brand. Some of the hypotheses in the study assumed differences in impact for the two experimental

conditions. Thus, to test that the stimulus used did not have proportionately larger effects on one group when compared to another based on the perceived credibility of the experimental stimulus thus accounting for additional variation in the results, the study measured credibility of the message for both experimental conditions. This question was asked only once of respondents and is thus not a repeated measure. Considering this, an independent samples t-test was used to understand whether or not there were significant differences in how respondents in both groups perceived the credibility of the disinformation (McCrum-Gardner, 2008).

In addition to independence of data and the data being interval in nature, the independent samples t-test also assumes approximate normality in the distribution and equal variances (Uttley, 2019) however, Uttley (2019) also suggests that for samples where $N > 30$, the assumption for normality does not apply as strictly as it would to smaller sample sizes. Nonetheless, this assumption was checked using the histogram produced in Figure 3 which indicated approximate normal distribution of the data.

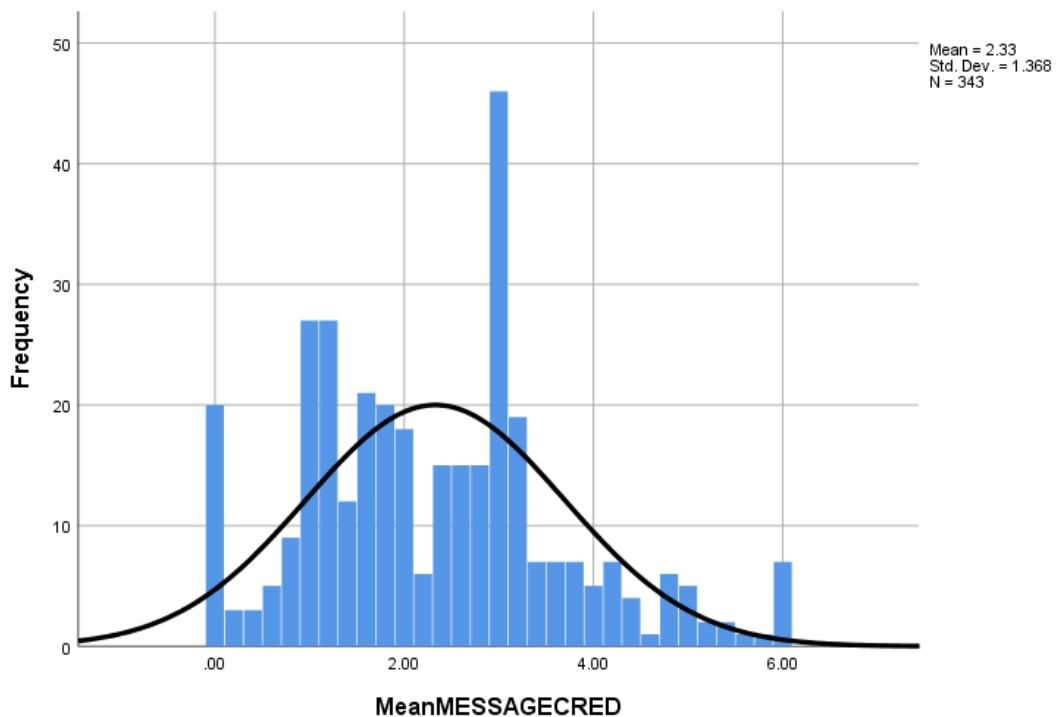


Figure 3: Message credibility distribution histogram

In addition, a test for homogeneity of variance was conducted. Levene's statistic for the mean as indicated in Table 10 does not indicate significance as $p > 0.05$ ($p = 0.094$) therefore the data meets the assumption for equal variances.

Table 10: Message credibility homogeneity of variance

		Levene Statistic	df1	df2	Sig.
MeanMESSAGECRED	Based on Mean	2.825	1	341	.094
	Based on Median	2.175	1	341	.141
	Based on Median and with adjusted df	2.175	1	326.226	.141
	Based on trimmed mean	2.556	1	341	.111

Having met these assumptions, an independent samples t-test was conducted to understand whether there were significant differences between the perceptions of message credibility by the two groups.

Table 11: Message credibility group statistics

Group Statistics					
	GROUP	N	Mean	Std. Deviation	Std. Error Mean
MeanMESSAGECRED	1	189	2.2836	1.45016	.10548
	2	154	2.3818	1.26271	.10175

Table 12: Message credibility independent samples test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Mean MESS	Equal variances assumed	2.825	.094	-.661	341	.509	-.09822	.14864	-.39059	.19415
AGEC RED	Equal variances not assumed			-.670	339.477	.503	-.09822	.14656	-.38650	.19006

Table 11 indicates the mean score for messenger credibility for Group 1, the strong brand experimental condition was 2.284 with a standard deviation of 1.450. For Group 2, the weak brand experimental condition, the mean score for messenger credibility was 2.382 with a standard deviation of 1.263. The study used a seven point Likert scale to measure responses with strongly disagree denoted by zero and strongly agree denoted by a measure of six. Considering the Likert scale used, the mean scores for credibility for both conditions was below the mid-point. Levene’s statistic in Table 12 verified the outcome of the test for variance with the p-value not indicating significance as it was greater than 0.05 ($p=0.094$) thus equal variances were assumed. The mean difference between the two groups for message credibility was -0.098. The p-value for the equality of means indicated a value greater than 0.05 ($p=0.509$) therefore the difference in means is not significant at a 95% level of confidence. Based on this, the study finds that between the two experimental conditions, there was no significant difference in how the credibility of the experimental stimulus was perceived and thus this cannot be used to explain variations between the two group differences in mean scores prior to and post exposure to the experimental stimulus.

4.4.2 Hypothesis 1: The impact of disinformation on brand equity

Based on extant literature, the study hypothesised that:

H1 - Disinformation has a negative impact on brand equity

The nature of the data collected was such that each respondent was asked to measure constructs before being exposed to an experimental stimulus and after being exposed to the experimental stimulus. The data collected was attributable to the unit analysed which in this case was the individual while adhering to anonymity. The nature of the data collected allowed for a paired samples t-test to be conducted. The paired sample t-test is fitting as it tests for differences in mean scores when measures are repeated (McCrum-Gardner, 2008). In this case, the measures for overall brand equity were repeated in the pre-test as well as the post test. This variable was tested on a seven point Likert scale thus meeting the assumption for a dependent variable measured at a continuous level. In addition, normal distribution of the data was checked using the histograms in Figure 4 and Figure 5. Although the sample does not meet the criteria for approximate normality, based on Uttley (2019) and considering the sample size as well as the nature of the question asked in the experimental condition, this violation was noted however the parametric test was believed to be appropriate. The results of the paired samples t-test are indicated in Table 13 and Table 14 below.

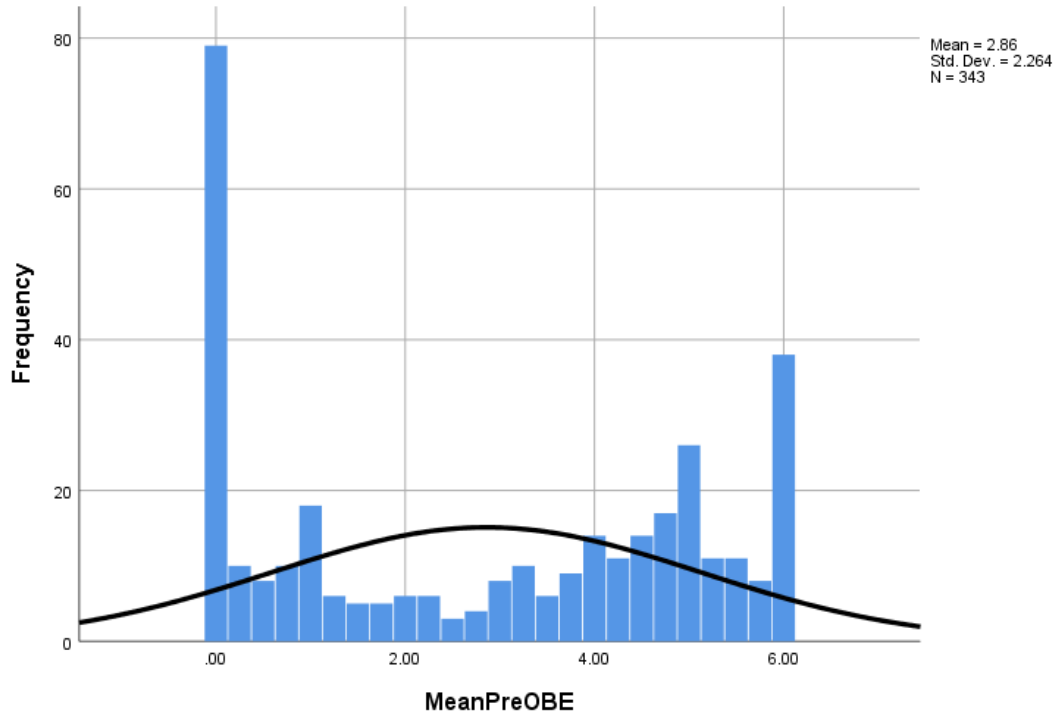


Figure 4: Mean pre-test overall brand equity distribution

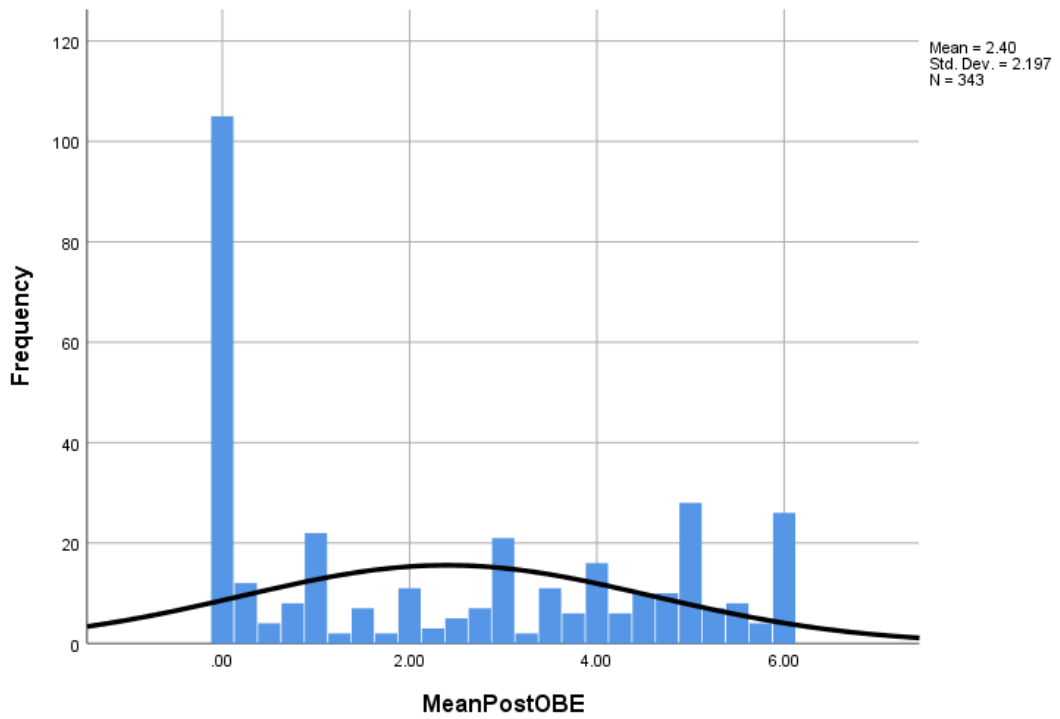


Figure 5: Mean post-test overall brand equity distribution

Table 13: Overall brand equity paired samples statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	MeanPostOBE	2.3972	343	2.19678	.11862
	MeanPreOBE	2.8564	343	2.26392	.12224

Table 14: Overall brand equity paired samples test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair					Lower	Upper			
1	MeanPostOBE - MeanPreOBE	-.45918	1.22675	.06624	-.58947	-.32890	-6.932	342	.000

The paired sample statistic indicates that there is a difference between the means for overall brand equity before and after exposure to disinformation. The pre-test indicates an average mean score of 2.856 while the mean following the exposure is 2.397. The paired sample test indicates that the mean difference between the two measures is -0.459 with a standard deviation of 1.227. The differences range from -0.589 at the lower end and -0.329 at the upper end of the 95% confidence interval. The paired samples test p-value is less than 0.05 ($p=0.000$), therefore indicating that the differences are significant at a 95% level of confidence. As a result of this statistical test, hypothesis one is supported.

4.4.3 Hypothesis 2: The role of brand strength as a buffer

Based on the current understanding garnered from the literature of the benefits of having stronger brand equity relative to competitors, this study hypothesised that:

H2 - Strong brands are less negatively impacted by disinformation

The study was designed such that respondents in Group 1 were instructed to consider a strong brand when responding to the questionnaire whereas Group 2 respondents were instructed to consider a weak brand in their responses. The questionnaire for both groups as well as the stimulus however was kept consistent in order to minimise variations within the data as a result of the collection instrument. Given the nature of the experiment as well as the data collected, in order to test the second hypothesis a paired samples t-test was used however, Group 1 and Group 2 responses were considered separately to understand how disinformation affected strong brands and how it affected weak brands. Similar to the assumptions for testing hypothesis one, the dependent variable used for hypothesis two was overall brand equity and the assumption for continuous measurement was satisfied as a Likert scale was used. The results of the paired samples t-tests are indicated in Table 15 to Table 18 below.

Table 15: Group 1 overall brand equity paired samples statistic

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	MeanPostOBE	3.7765	189	1.75776	.12786
	MeanPreOBE	4.5198	189	1.27734	.09291

a. GROUP = 1

Table 16: Group 1 overall brand equity paired samples test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair					Lower	Upper			
1	MeanPostOBE - MeanPreOBE	-.74339	1.48338	.10790	-.95624	-.53054	-6.890	188	.000

a. GROUP = 1

The study used a seven point Likert scale to measure responses with strongly disagree denoted by zero and strongly agree denoted by a measure of six. For Group 1, the mean

measure for overall brand equity is 4.520. Post exposure to the experimental stimulus, the mean measure for overall brand equity shows a decline to 3.777. The mean difference between the two measures is -0.743 ranging from -0.956 at the lower end to -0.530 at the upper end of the 95% confidence interval of difference. The paired samples test indicates a p-value less than 0.05 ($p=0.000$) indicating a significant difference between the mean scores at a 95% level of confidence.

Table 17: Group 2 overall brand equity paired samples statistics

Paired Samples Statistics ^a					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	MeanPostOBE	.7045	154	1.32548	.10681
	MeanPreOBE	.8149	154	1.35606	.10927

a. GROUP = 2

Table 18: Group overall brand equity paired samples test

Paired Samples Test ^a									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Mean	Lower			
Pair 1	MeanPostOBE - MeanPreOBE	-.11039	.66174	.05332	-.21574	-.00504	-2.070	153	.040

a. GROUP = 2

Prior to exposure to the experimental stimulus, the mean score for overall brand equity for the weak brand is 0.815. Considering the scale as well as the labels used, this score indicates that respondents generally rated the brand equity of the weak brands low. Post exposure, the mean score for overall brand equity shows a decline to 0.705. The mean difference between the two scores is -0.110 ranging from -0.216 at the lower end of the 95% confidence interval difference to -0.005 at the upper end. The p-value for the paired samples test is less than 0.05 ($p=0.040$) at a 95% level of confidence indicating a significant difference between the two mean scores.

In order to further understand the differences between Group 1 and Group 2 pre-exposure and post-exposure mean scores, independent samples t-tests were conducted to draw direct comparisons between the scores and understand whether the differences were significant. In this case, the independent sample t-test was used instead on the paired samples t-test as the measurement was not for repeated measures but rather a single measure observed between the two groups (McCrum-Gardner, 2008). Table 19, Table 20, Table 21 and Table 22 illustrate the results of these tests.

Table 19: Between group pre-exposure overall brand equity statistics

Group Statistics					
GROUP		N	Mean	Std. Deviation	Std. Error Mean
MeanPreOBE	1	189	4.5198	1.27734	.09291
	2	154	.8149	1.35606	.10927

Table 20: Between group pre-exposure overall brand equity independent samples statistic

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
MeanPre OBE	Equal variances assumed	.381	.537	25.988	341	.000	3.70491	.14256	3.42450	3.98532
	Equal variances not assumed			25.830	318.651	.000	3.70491	.14343	3.42271	3.98711

Prior exposure to disinformation, the mean overall brand equity score for strong brands indicates a value of 4.520 while for weak brands this score is 0.815 with a standard deviation of 1.356. Levene's test statistic p-value is greater than 0.05 (p=0.537) thus indicating that the assumption for equal variances is not violated. The p-value with equal

variances assumed is less than 0.05 ($p=0.000$) indicating that there is a significant difference between mean scores for Group 1 and Group 2 with Group 1, the strong brand experimental condition indicating a 3.705 higher mean measure in comparison to Group 2, the weak equity experimental condition.

Table 21: Between group post-exposure overall brand equity statistics

Group Statistics					
	GROUP	N	Mean	Std. Deviation	Std. Error Mean
MeanPostOBE	1	189	3.7765	1.75776	.12786
	2	154	.7045	1.32548	.10681

Table 22: Between group post-exposure overall brand equity independent samples test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
MeanPo stOBE	Equal variances assumed	24.978	.000	17.927	341	.000	3.07191	.17136	2.73486	3.40896
	Equal variances not assumed			18.439	339.056	.000	3.07191	.16660	2.74421	3.39961

Exposure to disinformation reduces the mean brand equity score for strong brands to 3.777 with a standard deviation of 1.758 and that of weak brands to 0.705 with a standard deviation of 1.325. The p-value for Levene's test however indicates that equal variances cannot be assumed as it is less than 0.05 ($p=0.000$) thus violating the assumption for homogeneity of variances. The output, not assuming equal variances, shows that there is a significant difference between the two group means as p is less than 0.05 ($p=0.000$) with the strong brand mean score being 3.072 higher than the weak

brand post exposure to the disinformation. Due to the violation of the assumption for homogeneity of variances, a non-parametric difference test was conducted.

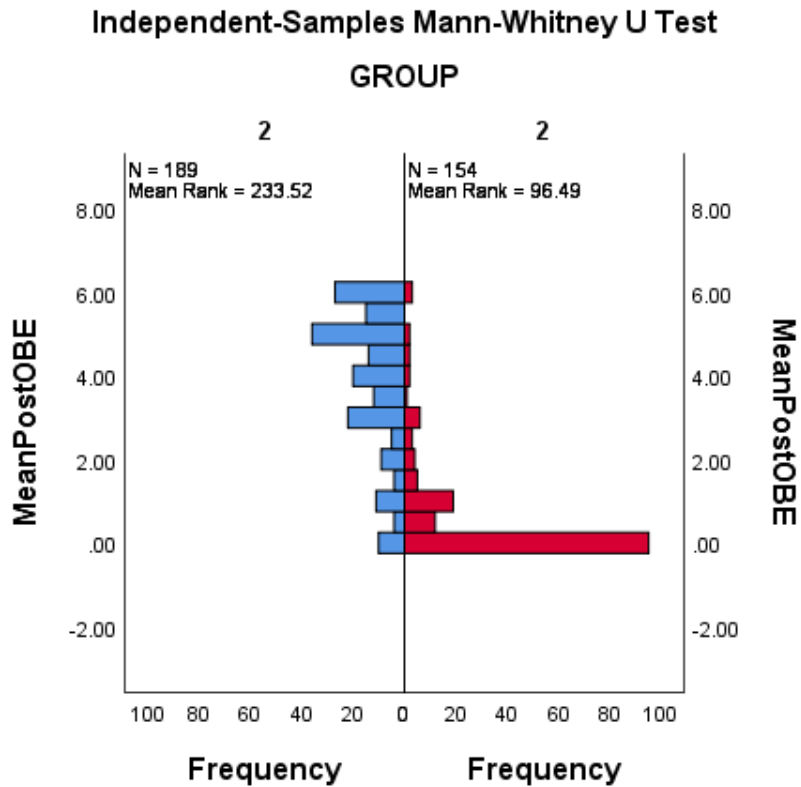


Figure 4: Between group post exposure overall brand equity distribution

Table 23: Post-exposure overall brand equity Mann-Whitney test ranks

		Ranks		
GROUP		N	Mean Rank	Sum of Ranks
MeanPostOBE	1	189	233.52	44136.00
	2	154	96.49	14860.00
Total		343		

Table 24: Post-exposure overall brand equity Mann-Whitney test statistics

Test Statistics ^a	
	MeanPostOBE
Mann-Whitney U	2925.000
Wilcoxon W	14860.000
Z	-12.928
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: GROUP

The data for mean post overall brand equity is not similarly distributed for the two groups as per Figure 6. The results of the Mann-Whitney test shown in Table 23 indicate that there is a difference in the mean ranks for strong brands. The mean rank for Group 1 is 233.52 while the mean for Group 2 is 96.49. Table 24 indicates the p-value is less than 0.05 ($p=0.000$) indicating that these differences are significantly different.

Finally, an independent samples t-test was conducted between the mean score for the difference in overall brand equity for Group 1 and Group 2 to understand if these means were statistically different in order to answer the second hypothesis of the study. The mean difference in overall brand equity was calculated as the difference between the mean score for overall brand equity post exposure to the disinformation and the mean score for overall brand equity prior the exposure. The distribution of the differences was checked using the histograms indicated in Figure 7 and Figure 8 and met the assumption for approximate normality for both groups.

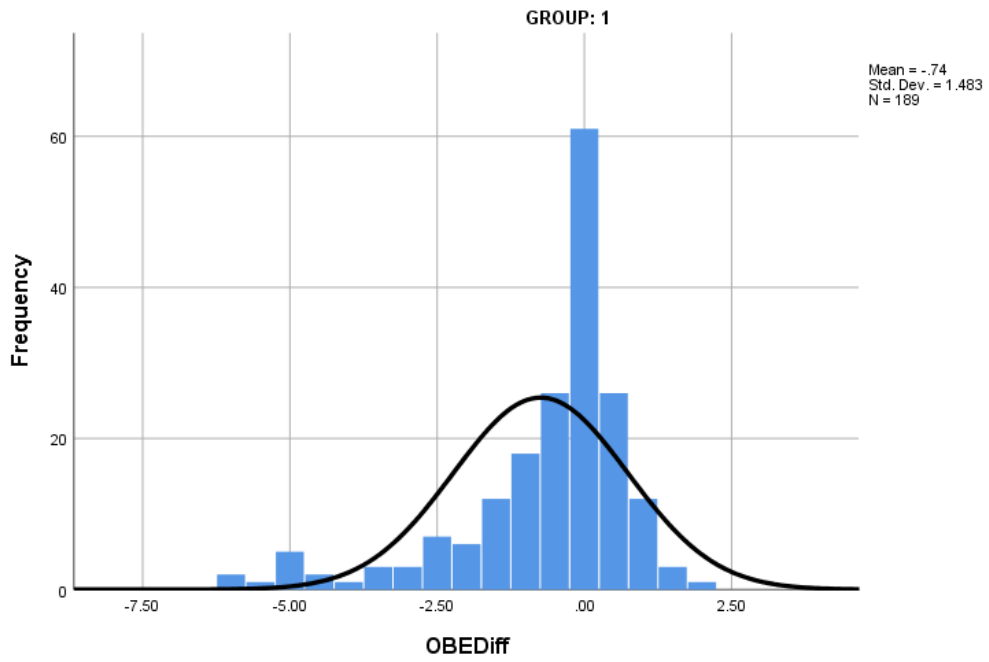


Figure 6: Group 1 overall brand equity difference distribution

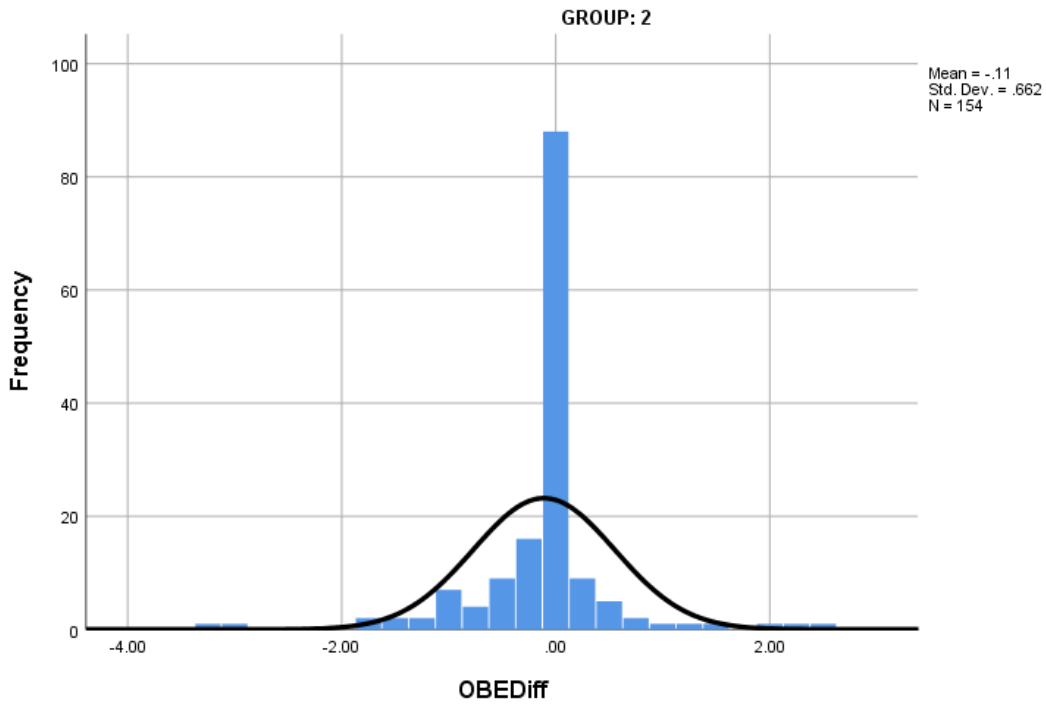


Figure 5: Group 2 overall brand equity difference distribution

Table 25: Between group overall brand equity difference statistics

Group Statistics					
	GROUP	N	Mean	Std. Deviation	Std. Error Mean
OBEDiff	1	189	-.7434	1.48338	.10790
	2	154	-.1104	.66174	.05332

Table 26: Between group overall brand equity differences samples test

Independent Samples Test										
		Levene's Test for Equality of Variances			t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
OBEDiff	Equal variances assumed	59.310	.000	-4.911	341	.000	-.63300	.12889	-.88651	-.37949
	Equal variances not assumed			-5.259	271.171	.000	-.63300	.12036	-.86995	-.39604

The absolute mean difference for the overall brand equity measure is higher for Group 1 than for Group 2 with Group 1 indicating a mean of -0.723 and Group 2 indicating a mean of -0.110 as shown in Table 25. The p-value for Levene's test contained in Table 26 was less than 0.05 ($p=0.000$) indicating that the test violated the assumption of homogeneity of variances. The p-score not assuming equal variances indicates that there is a significant difference in the mean difference measure for Group 1 and Group 2 ($p=0.000$) with the mean difference for Group 1 being 0.633 higher than that of Group 2. Having violated the assumption for homogeneity, a Mann-Whitney test was conducted to ensure veracity of the independent samples t-test outcome using a non-parametric measure.

Independent-Samples Mann-Whitney U Test

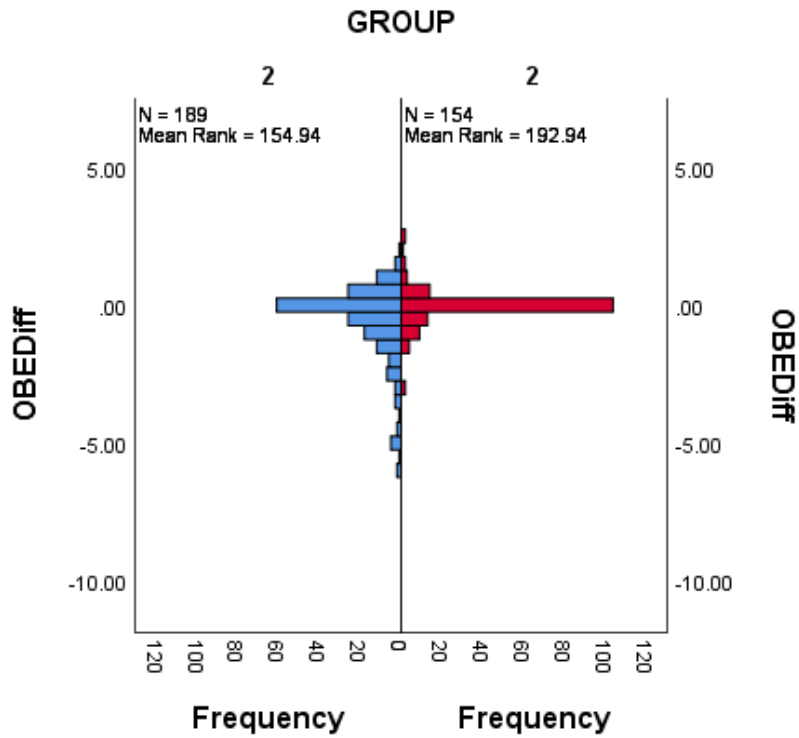


Figure 7: Between group overall brand equity difference distribution

Table 27: Overall brand equity Mann-Whitney test report

Report

Median

GROUP	OBEDiff
1	-.2500
2	.0000
Total	.0000

Table 28: Overall brand equity difference Mann-Whitney test summary

**Independent-Samples Mann-Whitney U Test
Summary**

Total N	343
Mann-Whitney U	17778.000
Wilcoxon W	29713.000
Test Statistic	17778.000
Standard Error	885.558
Standardized Test Statistic	3.642
Asymptotic Sig.(2-sided test)	.000

As indicated in Table 27, the Mann-Whitney test indicates that the differences are similarly distributed and therefore the study used the median scores to determine differences. The median scores for Group 1 (-0.250) and Group 2 (0.000) are statistically different as the p-value is less than 0.05 ($p = 0.000$). Thus the findings do not support hypothesis two finding rather that disinformation has a larger impact on overall brand equity for strong brands than it does for weak brands.

4.4.4 Hypothesis 3: Brand-customer relationship as a buffer

The third hypothesis of this study based on previous studies looking at the impact of brand-customer relationship strength during brand crises held that:

H3: Brand-customer relationships prior to exposure to disinformation are positively correlated with overall brand equity after exposure to disinformation

This hypothesis was tested using linear regression analysis as it seeks to understand the relationship between brand-customer relationship prior to disinformation and brand equity after the exposure to disinformation. Linear regression tests are used to understand relationships among variables with univariate linear analysis seeking to understand the relationship between one dependent variable and one independent variable and whereas multilinear regression models seek to understand the relationship

between one dependent variable and multiple independent variables (Schmidt & Finan, 2018; Uyanık & Güler, 2013).

Based on Aaker et al. (2004) the study conceptualised brand-customer relationship as a second-order construct composed of three first-order constructs namely brand loyalty, brand intimacy and brand connection. The validity and reliability tests conducted indicated that the second-order construct of brand-customer relationship was both valid and reliable therefore, a mean score for this construct was computed from the respondents' responses. This mean score will be used as the independent variable while the mean score for brand equity post the exposure to disinformation will be used as the dependent variable.

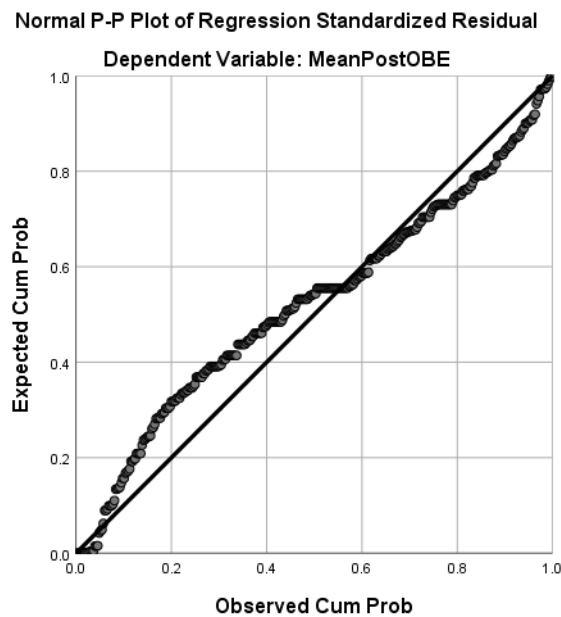


Figure 8: Linear regression model P-P plot

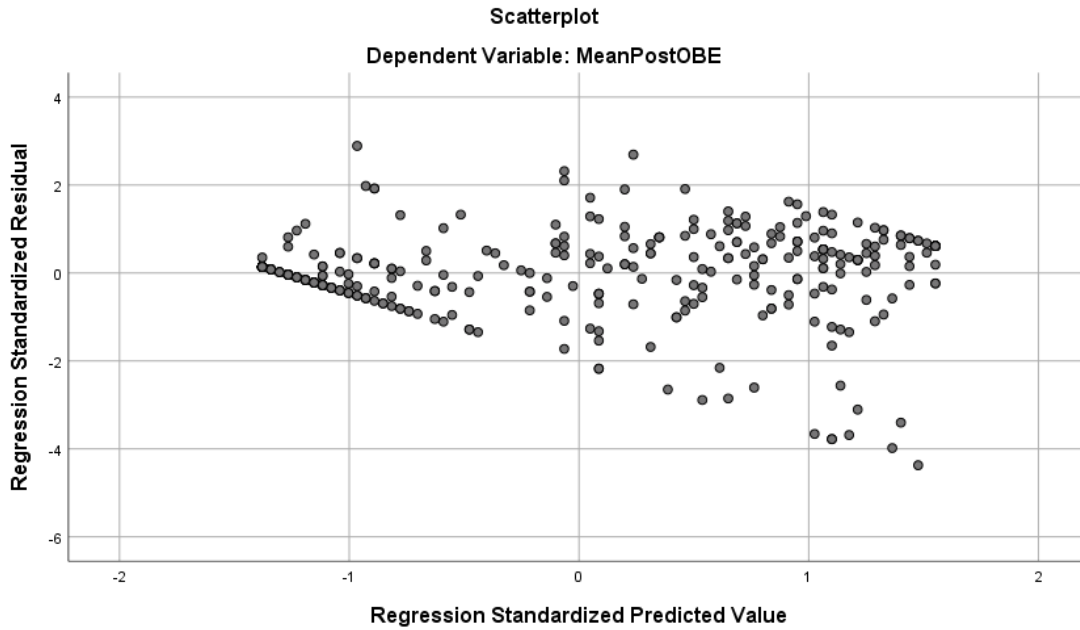


Figure 9: Linear regression model scatterplot

The assumptions for the linear regression model were tested using a P-P plot as well as the scatter plot illustrated in Figure 10 and Figure 11. The P-P plot indicated that distribution was approximately normal while the scatter plot indicated homoscedasticity. The VIF indicated a value less than 10 therefore the linear regression model was deemed appropriate for the data.

Table 29: Linear regression model summary

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845 ^a	.715	.714	1.17524

a. Predictors: (Constant), MeanBranCust

b. Dependent Variable: MeanPostOBE

Table 30: Linear regression ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1179.453	1	1179.453	853.937	.000 ^b
	Residual	470.987	341	1.381		
	Total	1650.440	342			

- a. Dependent Variable: MeanPostOBE
 b. Predictors: (Constant), MeanBranCust

Table 31: Linear regression coefficients

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.163	.108		-1.511	.132		
	MeanBranCust	.907	.031	.845	29.222	.000	1.000	1.000

- a. Dependent Variable: MeanPostOBE

The adjusted R square in Table 29 indicates a value of 0.714 indicating that brand-customer relationship can explain 71.4% of the variability in the mean score for overall brand equity post the exposure to disinformation. The analysis of variance (ANOVA) table, Table 30, indicates a p-value less than 0.05 (p=0.000) thus indicating that the model is a good fit. The coefficient indicated in Table 31 is 0.907 thus indicating that an increase in the brand-customer relationship will result in an increase in overall brand equity after exposure to disinformation. These results thus support the third hypothesis of the study.

In order to further understand the interaction between the first-order constructs and overall brand equity after the exposure to disinformation, a multiple regression was conducted using the first-order constructs as independent variables. The assumptions for the multiple regression were tested with the p-p plot in Figure 12 indicating approximately normal distribution and the scatterplot in Figure 13 indicating homoscedasticity.

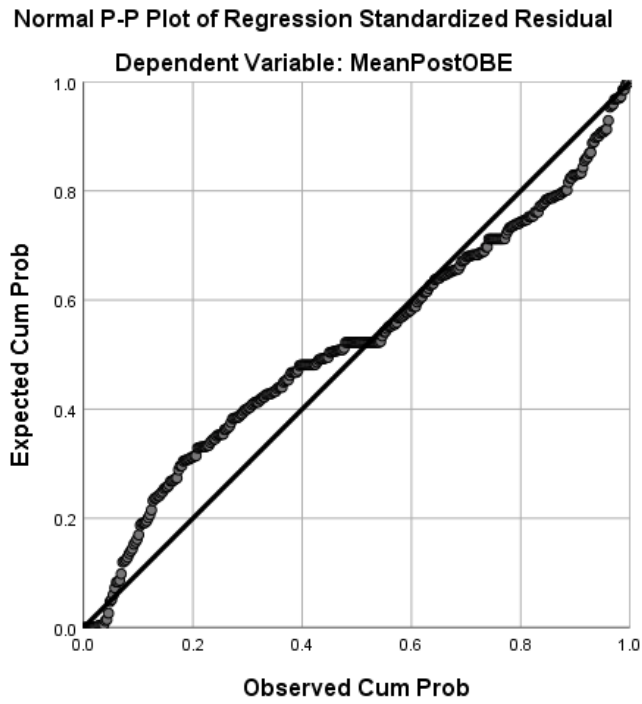


Figure 10: Multiple regression model P-P plot

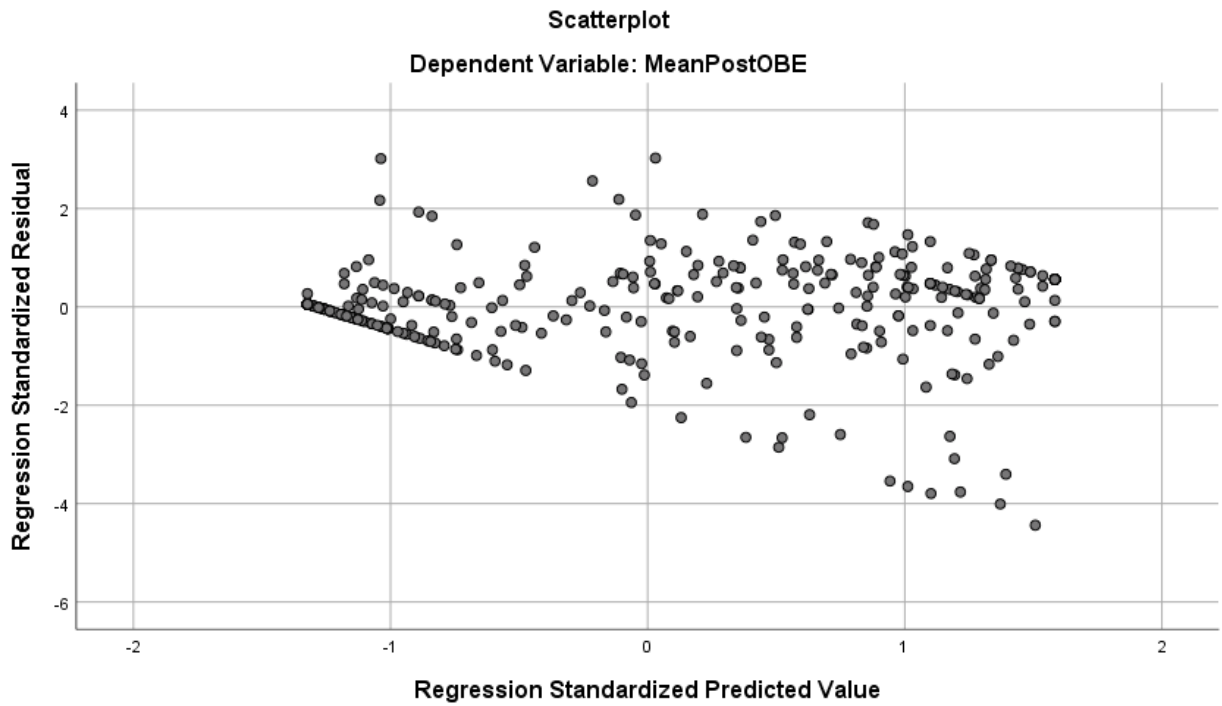


Figure 11: Multiple regression model scatterplot

Table 32: Multiple linear regression model summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.847 ^a	.718	.715	1.17216

a. Predictors: (Constant), MeanConnection, MeanIntimacy, MeanLoyalty

b. Dependent Variable: MeanPostOBE

Table 33: Multiple linear regression ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1184.665	3	394.888	287.408	.000 ^b
	Residual	465.774	339	1.374		
	Total	1650.440	342			

a. Dependent Variable: MeanPostOBE

b. Predictors: (Constant), MeanConnection, MeanIntimacy, MeanLoyalty

Table 34: Multiple regression coefficients

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.066	.128		-.512	.609		
	MeanLoyalty	.621	.080	.595	7.803	.000	.143	6.996
	MeanIntimacy	.121	.069	.114	1.768	.078	.201	4.978
	MeanConnection	.159	.087	.160	1.842	.066	.110	9.106

a. Dependent Variable: MeanPostOBE

The adjusted R squared in Table 32 indicates a value of 0.715 thus indicating that the model accounts for 71.5% of the variability in the mean score for overall brand equity post the exposure to disinformation. The ANOVA table, Table 33, indicates a p-value less than 0.05 thus indicating that the model is a good fit. An analysis of the coefficients

however indicates that only loyalty has a significant correlation with the p-value less than 0.05 ($p=0.000$). Intimacy and connection do not show significant correlation with the p-values being greater than 0.05.

4.4.5 Hypothesis 4: Source credibility of marketer-generated content and user-generated content for strong brands and weak brand

Owing to the extant literature which argues that stronger brands enjoy a greater level of consumer trust, this study hypothesised that:

H4a: Marketer-generated corrective information is more credible for strong brands.

Contrary to findings for strong brands, the literature has found that weak brands do not enjoy the same levels of trust. Therefore, in times of crisis weaker brands depend on the trust that exists among fellow social media users and thus benefit more from user generated content. Thus this study hypothesised that:

H4b: User-generated corrective information is more credible for weak brands

These hypotheses were tested using an independent samples t-test. Although the measurement tool was similar for both sources of corrective information, there was no pre-measure or intervention therefore a paired samples t-test would be inappropriate and the independent t-test would be more relevant based on the data collected (McCrum-Gardner, 2008). For both iterations of the independent samples t-test the experimental group was treated as the independent variable and the source of the corrective information as the dependent variables. Meeting the assumption for the type of data collected and the independence thereof, approximate normality was also assumed to have been met using the histograms in Figure 14 and Figure 15.

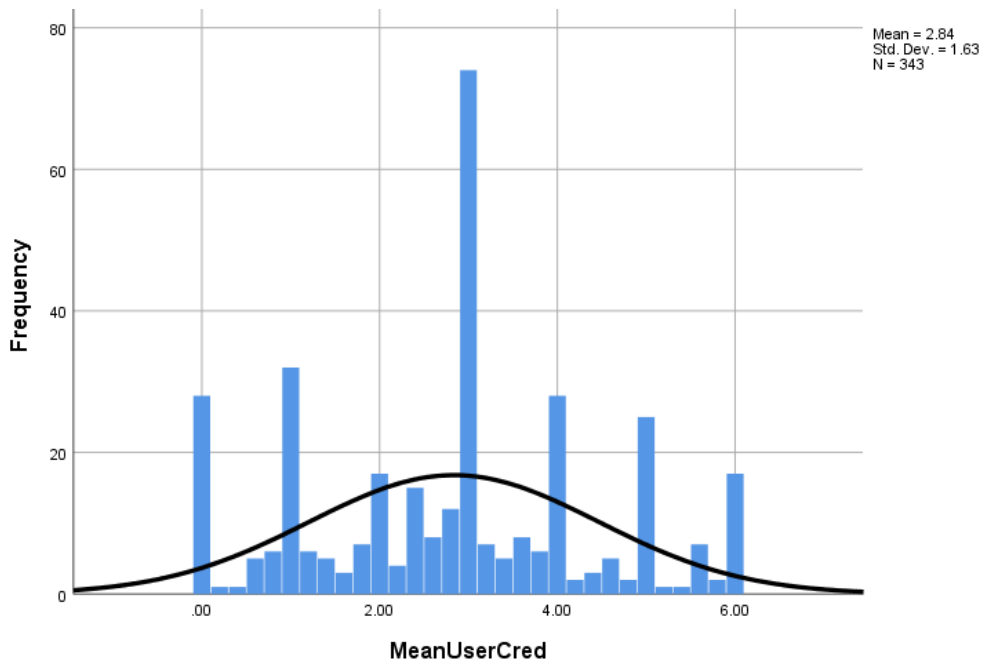


Figure 12: Mean corporate source credibility distribution

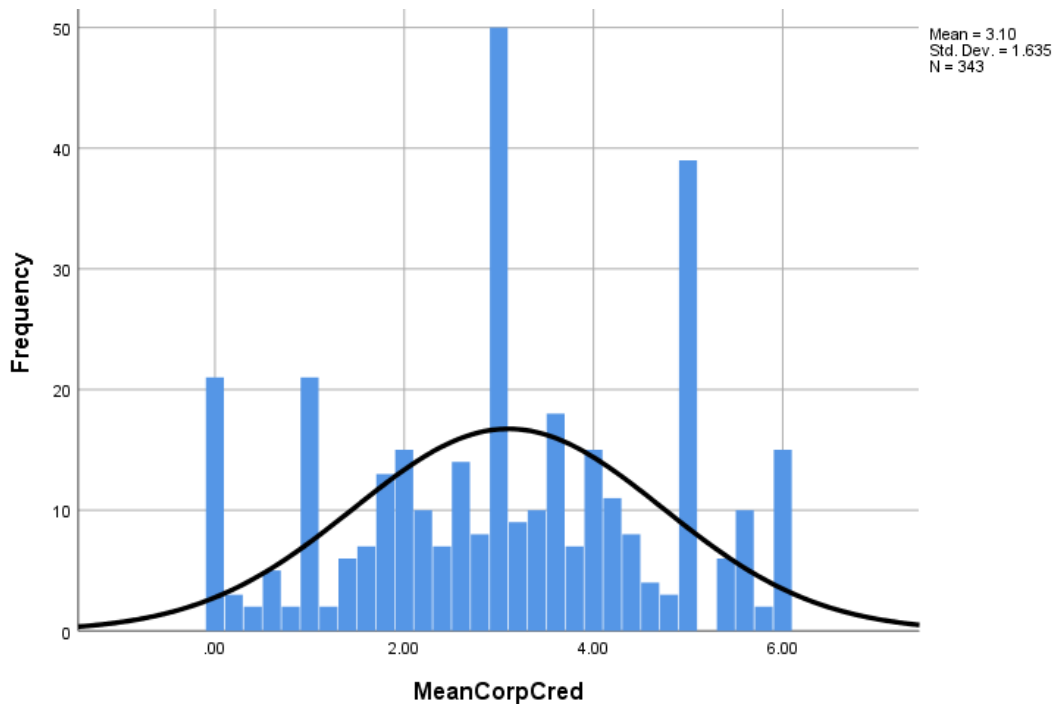


Figure 13: Mean social media source credibility distribution

Table 35: Corporate source credibility group statistics

Group Statistics				
GROUP	N	Mean	Std. Deviation	Std. Error
				Mean
MeanCorpCred	1	3.4529	1.70872	.12429
	2	2.6675	1.42988	.11522

Table 36: Corporate source credibility independent samples test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
MeanCorpCred	Equal variances assumed	7.710	.006	4.551	341	.000	.78538	.17257	.44594	1.12481
	Equal variances not assumed			4.634	340.748	.000	.78538	.16948	.45201	1.11874

Table 35 indicates the mean score for perceived credibility of marketer-generated corrective content is higher for Group 1 at 3.453 than it is for Group 2 at 2.668 with Group 1 showing a higher standard deviation of 1.709. Levene's p-value in Table 36 however, indicates that the assumption of homogeneity of variances is violated as p-value is less than 0.05 ($p=0.006$). The t-test p-value not assuming equal variances is less than 0.05 ($p=0.000$) indicating that there is a significant difference between the mean scores for Group 1 and Group 2 with Group 1 score being 0.785 higher than Group 2. Having violated the assumption for homogeneity, a non-parametric test was conducted.

Independent-Samples Mann-Whitney U Test

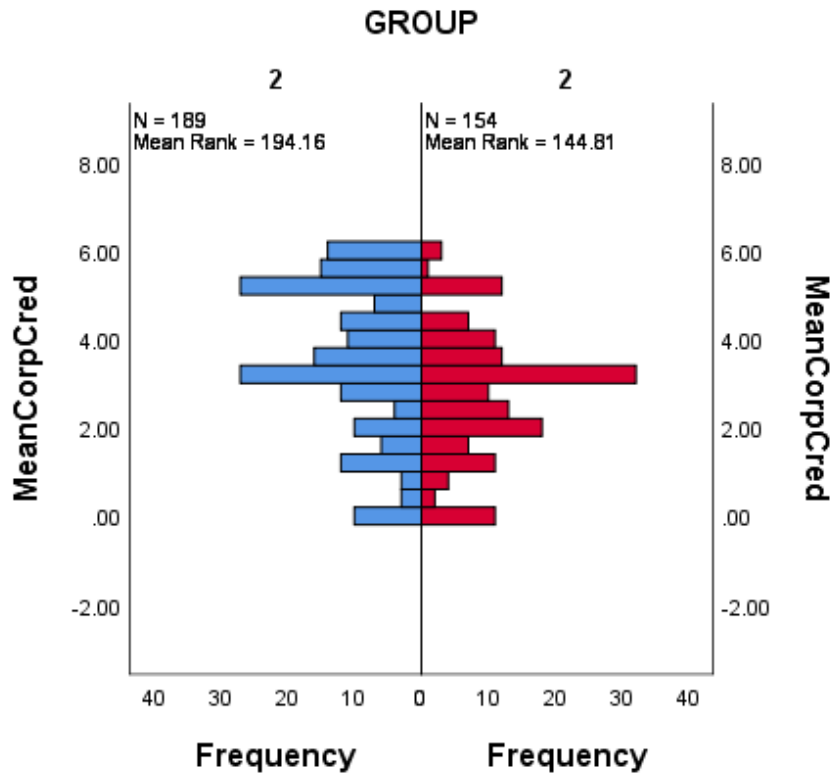


Figure 14: Between group corporate source credibility distribution

Table 37: Corporate source credibility Mann-Whitney test report

Report

Median

GROUP	MeanCorpCred
1	3.6000
2	3.0000
Total	3.0000

Table 38: Corporate source credibility Mann-Whitney test summary

**Independent-Samples Mann-Whitney U
Test Summary**

Total N	343
Mann-Whitney U	10365.500
Wilcoxon W	22300.500
Test Statistic	10365.500
Standard Error	910.819
Standardized Test Statistic	-4.598
Asymptotic Sig.(2-sided test)	.000

The results of the Mann-Whitney test indicated in Table 37 show that there is a difference in the median credibility score between Group 1 and Group 2 respondents. The similar distribution of the two groups indicates that the median credibility scores are significantly different as the p-value is less than 0.05 ($p=0.000$) as indicated in Table 38. Therefore, based on these results hypothesis 4a is supported.

Table 39: Social media user credibility group statistics

		Group Statistics			
		N	Mean	Std. Deviation	Std. Error Mean
MeanUserCred	1	189	3.2190	1.66544	.12114
	2	154	2.3662	1.45841	.11752

Table 400: Social media user source credibility independent samples test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
MeanUser Cred	Equal variances assumed	1.603	.206	4.985	341	.000	.85281	.17108	.51632	1.18931
	Equal variances not assumed			5.053	339.208	.000	.85281	.16878	.52083	1.18480

The perceived credibility of fellow social media users as a source of corrective content indicated mean scores of 3.219 for Group 1 and 2.366 for Group 2 with Group 1 showing a higher standard deviation of 1.665 in comparison to that of Group 2 which is 1.458. The p-value for Levene's statistic is greater than 0.05 ($p=0.206$) therefore equal variances are assumed. The t-test p-value is less than 0.05 ($p=0.000$) thus indicating that the mean differences between the two groups were significant with Group 1 mean scores being 0.853 higher than the mean score for Group 2. These results do not support hypothesis 4b and it is therefore rejected.

4.4.6 Conclusion

The results of the statistical tests conducted thus support three of the hypotheses proposed which are that (i) exposure to disinformation negatively impacts brand equity, (ii) brand-customer relationship strength before exposure to disinformation has a positive relationship with brand equity following exposure to disinformation and (iii) corporate generated corrective information is deemed to be more credible for brands with strong brand equity. Two of the hypotheses were not supported by the results of the analysis and were therefore rejected. These are that (i) strong brands are less negatively affected by exposure to disinformation and (ii) user-generated content is

deemed to be more credible in correcting disinformation for weak brands. These results and the implications thereof will be further discussed in Chapter 5 and Chapter 6.

Chapter 5: Discussion of results

5.1 Introduction

After conducting the statistical tests, the findings of this study supported three of the five hypotheses. The study found that disinformation does in fact negatively affect brand equity in support of the first hypothesis. The second hypothesis which suggested that stronger brand were less negatively affected by disinformation was not supported. The third hypothesis which posited that there was a positive relationship between brand-customer relationships and brand equity following exposure to disinformation was also supported. Lastly, hypothesis 4a was supported with marketer-generated corrective information being found to be more credible for strong brands whereas hypothesis 4b which put forward that user-generated corrective information was more credible for weak brands was not supported. This chapter discusses the results of the tests conducted synthesising the findings with the current literature highlighting where contradiction, confirmations and extensions current understanding of these constructs and how they interact with one another. The section has been organised by hypothesis, allowing for the discussion of each construct and draws conclusions from each of the discussions.

5.2 Hypothesis 1: Hypothesis 1: The impact of disinformation on brand equity

5.2.1 Summary of results

Based on extant literature around brand crises as well as the conceptualisation of disinformation used in this study, the study hypothesised that disinformation negatively impacts brand equity. The nature of the study allowed for this hypothesis to be tested by comparing mean scores for overall brand equity prior the exposure to disinformation to the mean scores after the exposure. The results of the paired sample t-test indicated that there was a difference in means scores pre-exposure and post exposure to the stimulus and that these differences were significant thus this hypothesis was supported. Further implications of these findings are discussed.

5.2.2 Discussion of research results

The impacts of brand crises on brand equity have been studied through a consumer response lens focusing on the perceived seriousness (Cleeren et al., 2017; Jeon & Baeck, 2016; Liu & Shankar, 2015) and customer familiarity with the brand (Jeon & Baeck, 2016) as the main drivers of these consumer responses. Through the extant literature and these studies, the general understanding of the impact of brand crises has been that they have a negative impact on brand equity as they erode the positive perceptions and preferential attitudes of customers towards these brands (Cleeren et al., 2017; Hansen et al., 2018; Jeon & Baeck, 2016).

Overall brand equity as measured by this study focusses on the positive preference attributed to brands by customers despite being similar to other brands (Chatzipanagiotou et al., 2019; Veloutsou et al., 2020). These measures thus serve as an indication of customer preferences towards a brand with all other things such as features and performance being equal thus encapsulating the notions of preference, desirability and differentiated response which brand equity represents as captured by Kotler (1991), Keller (1993) and Mühlbacher, Raies, Grohs, and Koll, (2016) in defining brand equity. This measure proved to be both reliable and valid and the average was therefore used as a proxy for overall brand equity. These measures are illustrated in Figure 17 below.

Overall brand equity (Chatzipanagiotou et al., 2019; Veloutsou et al., 2020)	It makes sense to buy Brand X instead of other brands even if they are the same
	Even if another brand has the same features as this, I would prefer to buy Brand X
	If there is a brand as good as this, I would prefer to buy Brand X
	If another brand is not different from this in any way, it seems smarter to purchase Brand X

Figure 15: Overall brand equity measures

The results for the differences in the mean scores prior to the exposure to the disinformation and post exposure indicated that there is a difference in the two conditions with scores prior the experiment averaging 2.856 and scores following the exposure averaging 2.397. The mean difference between the two experimental conditions indicated a decrease of -0.459 and this difference was proved to be significant at a 95% level of confidence thus indicating that disinformation affects brand equity negatively. The perception of the credibility of the message which served as the experimental stimulus was also assessed. These result indicated that in general, the respondents did not necessarily find the message credible with the mean score for credibility recorded as 2.284 for Group 1 and 2.381 for Group 2. Despite this lack of credibility, customers still indicated that a message such as this impacted their preference and thus overall brand equity for the brand in question.

Based on these results, it can be concluded that, in fact, disinformation displays characteristics of traditional brand crises in the way it impacts brand equity. Conceptually, parallels can be drawn between the phenomenon of disinformation and that of brand crisis which explain why disinformation interacts in a similar manner to brand crisis when it comes to brand equity. Based on recent studies by Jack (2017) and

Ferreira et al. (2019) this study conceptualised disinformation as information which is intentionally untrue and is disseminated with the explicit intention to harm the focal brand. On the other hand, brand crises are characterised by failure on the side of the brand whether related to a product, communication and positioning or a breach of social expectations (Hansen et al., 2018; Jeon & Baeck, 2016; Zou & Li, 2016). Thus, central to these two phenomenon is the idea that the organisation has behaved in a way that is contrary to what is expected whether this is in fact true, as is the case with traditional brand crises, or fabricated as is the case with disinformation (Ferreira et al., 2019; Jack, 2017; Mills & Robson, 2019). It is this perceived breach in expectation that creates the similar interaction between brand crises as well as disinformation with brand equity. In both cases, consumers respond to the perceived bad behaviour by withdrawing their differential preference for the brands in question. Thus the study aligns itself to the understanding in the current literature that the negative impact of brand crises is due to the erosion of preference and positive brand perceptions (Cleeren et al., 2017; Hansen et al., 2018; Jeon & Baeck, 2016).

Lending further credence to the fact that the truthfulness of the actual breach or failure is not necessarily material in creating the negative impact on brand equity is the result of the credibility check of the experimental stimulus which, in the case of this study, was the exposure to disinformation. Despite a low perception of credibility, customers still indicated that a message such as this impacted their preference and thus overall brand equity. This finding affirms and extends Vafeiadis et al. (2019) who argued that enough exposure to a fake news story would eventually result in negative outcomes for the brand as stakeholders begin to believe the fake story. The finding of this study seems to suggest however, that long-term or repeated exposure is not a necessary condition and that even a once-off interaction with disinformation about the organisation can have negative impacts. Although it may seem counter intuitive that news with no credibility can alter perceptions around a brand, an explanation for this observation lies in the argument Talwar et al. (2019) made in positing that the sheer volume of fake news has made it difficult for social media user to differentiate the real from the fake and it is perhaps this fatigue that makes social media users err towards skepticism.

The first hypothesis of this study sought to understand whether or not disinformation behaves similarly to brand crises as it interacts with customer perceptions and thus overall brand equity. The interactions shown between the pre-exposure and post-exposure test scores following exposure to disinformation prove hypothesis one indicating that disinformation does in fact impact brand equity in similar ways that a brand crisis would in that it erodes brand equity (Cleeren et al., 2017; Hansen et al., 2018; Jeon & Baeck, 2016). This confirmation creates a basis upon which academia can begin to conceptualise disinformation as a brand crisis and extend the literature around brand equity and brand crisis to include disinformation. The credibility perceptions around the message further imply that unlike with product, communication or social harm crises, organisations may fall victim to unfounded stories which will nonetheless have negative impacts on these organisations and therefore cannot simply be ignored because they are perceived as being far fetched.

5.3 Hypothesis 2: The role of brand strength as a buffer

5.3.1 Research findings

Extant literature posited that brand strength acted as a buffer in times of crisis (Cleeren et al., 2017) and therefore, the study hypothesised that strong brands would be less negatively impacted by disinformation when compared to weak brands. The study found that for both strong and weak brands, the mean scores for brand equity were different prior to the exposure to the disinformation and post the exposure to the disinformation. The study further found that these mean differences were significant within the groups. In comparing the difference of the mean scores however, expressed by the difference between the mean score for brand equity after the exposure to the disinformation and before the exposure to the disinformation, the study found that the absolute mean difference score was significantly higher for brands with strong equity than it was for weak brand. As a result of this, the study rejected the second hypothesis.

5.3.2 Discussion of research results

The findings related to the second hypothesis build on the preceding discussion regarding brand equity. Beyond the financial benefits organisations with strong brand equity have been able to reap by being able to charge premium prices for their products and services (Chatzipanagiotou et al., 2019; Dalman et al., 2020; Datta et al., 2017; Veloutsou et al., 2020), extant literature found that brand equity prior to crises protected these types of organisations in times of crises (Cleeren et al., 2017). Dalman et al., (2020) acknowledged contradictory views in their study postulating in a review of the literature that there had been views which suggested that in fact, stronger brands may be more negatively affected by crisis. Their study however disproved this thus compelling Dalman et al. (2020) to hold the view that strong brands do in fact experience less negative impact. Despite these assertions, Veloutsou et al., (2020) counter-argued that stronger brands can be negatively affected by brand crises.

The results of this study support the contradictory view by finding that strong brands experienced the biggest differences when the mean scores prior to exposure were compared to scores after the exposure to disinformation. In reviewing literature on this subject, one reason Dalman et al. (2020) offered for this unexpected impact on stronger brands is what they termed the shock effect. From previous experience and an established trust relationship with strong brands, customers do not expect strong brands to fail thus, when they do, this trust relationship is ruined (Dalman et al., 2020). Consequently, when crises happen and this trust is subsequently broken, it has a disproportionate negative impact on stronger brands than it does on weaker brands.

In spite of this acknowledgement, Dalman et al. (2020) concluded that strong organisations were less negatively affected by innovation failure than their weaker counterparts. However, an argument can be postulated that the different type of harm explored by Dalman et al. (2020) can in itself be a reason for the difference in the findings. Dalman et al. (2020) position their study with a focus on innovation while this study and the experiment used focused on a social failure by the organisation. Hansen

et al. (2018) found that not all harm crises have the same impacts. Perhaps then, consumers are more forgiving of innovation crises as they represent acceptable risks businesses undertake in building competitive advantages and keeping abreast of market trends whereas social harm is judged more highly stemming from the expectation on large organisations to have the capacity to avoid failure Dalman et al. (2020).

A notable result however remains the fact that despite stronger brands being more negatively impacted as measured by the difference in the post-exposure and pre-exposure scores, strong brands still maintained higher ratings overall when compared to weak brands. Thus, although the mean overall brand equity scores for strong brands dropped more substantially, the strong brands still maintained a superior position in the minds of customers relative to weaker brands. Therefore, strong brands still enjoyed a higher propensity for preference and positive perception (Keller, 1993) and thus, all other things remaining equal, these strong brands would maintain their premium position in the market relative to weak brands allowing these brands to reap the benefits of better brand equity such as higher market share (Stahl et al., 2012) in comparison to their weak counterparts.

5.4 Hypothesis 3: Brand-customer relationship as a buffer

5.4.1 Research findings

Extant literature suggests that brand-customer relationship strength buffers the impact of brand crisis (Jeon & Baeck, 2016; Ma, 2020) therefore this study hypothesised that there was a positive relationship between brand-customer relationship prior to exposure to disinformation and overall brand equity following the exposure to disinformation. The study found that there was a significant relationship between brand-relationship strength and the post exposure evaluation of brand equity. This relationship was positive and accounted for 71.5% variation in the mean score for overall brand equity following the exposure to disinformation.

5.4.2 Discussion of research results

The literature review found that there were arguments for both the benefit and the drawback of customer-relationship strength and its interaction in buffering the impact of brand crises in the extant literature. On the one hand, to which the literature skews, the argument supporting this buffering effect was based on the fact that customers with strong brand-customer relationships already held distinctly positive views about the brands and would rely on these previously held beliefs as a yard stick against which to measure any negative information about the brand (Jeon & Baeck, 2016). Similarly, the research posited that customers will seek to minimise the impact of this negative information on their pre-held beliefs thus reinforcing their positive perceptions of the brand (Cleeren et al., 2017; Jeon & Baeck, 2016; Lewandowsky et al., 2017).

On the other end of the argument, research suggested that customers who had been loyal to brands may feel that their commitment has been violated and would feel a greater degree of betrayal (Ma, 2020). As a result, the customer-brand relationship would have the opposite effect in this case and consumers with stronger brand relationships would develop resentment towards their respected brands.

The definition of brand-customer relationships for this study centres on the definition offered by Jeon and Baeck, (2016) which defines brand-customer relationships as “the extent to which customers’ continuous purchase intention or commitment with respect to a brand is retained with favorable attitudes and is a comprehensive concept covering brand loyalty” (p. 553). Based on this concept and drawing from extant literature as well as Ma (2020), this study measured brand-customer relationships on three first-order constructs: brand loyalty, brand intimacy and brand connectedness. The variables for each constructs stem from Aaker et al. (2004) and are indicated in Figure 18.

Brand-customer relationship (Aaker et al., 2004)	<p>Brand Loyalty</p> <ul style="list-style-type: none"> - Brand X would be my first choice when purchasing a motor vehicle - I will not buy other brands if Brand X is available at the dealership - I am very loyal to Brand X - I am willing to make small sacrifices in order to purchase Brand X - I would be willing to postpone my purchase if Brand X's products were temporarily unavailable - I would stick with Brand X even if it let me down - I am so loyal to Brand X that I do not feel the need to shop around for other alternatives
	<p>Brand Intimacy</p> <ul style="list-style-type: none"> - Brand X understands my motoring needs - I would feel comfortable describing Brand X to someone who was not familiar with it - I am familiar with the range of products of Brand X
	<p>Connection</p> <ul style="list-style-type: none"> - Brand X and I have lots in common - Brand X reminds me of who I am - Using Brand X makes me feel like I am part of a community of like-minded consumers

Figure 16: Brand-customer relationship

The results of the study found that brand-customer relationships prior to exposure to disinformation had a positive correlation to brand equity after exposure to the disinformation. The strength of this correlation was significant and showed a high correlation at 0.907. The operation of this brand-customer relationship dynamic however seems to manifest differently in this study when compared to some of the findings made by extant literature.

Firstly, the literature suggested that brand-self connection played an integral role in mitigating the impacts of brand crises on brand equity as customers perceive any negative information about the brand as being negative information about themselves (Jeon & Baeck, 2016; Ma, 2020). Secondly, Jeon & Baeck (2016) posited that intimacy with the brand also had a buffering effect in times of crisis as customers who have positive regard for, and familiarity with, the brand would use these pre-held positive reference points in assimilating new information about the brand. The results of the multiple regression however, contradicted these two assertions. Brand intimacy and brand connection did not show a significant relationship relative to overall brand equity following exposure to the disinformation.

Regarding loyalty, Cleeren et al. (2017) posited that in some exceptional cases, loyal customers had been found to be most aggrieved by brand crises feeling that their trust and commitment had been violated and thus punishing brands more severely. The findings of this study seem to indicate that this is indeed the exception and not the norm. Of the three first-order constructs used as indicators of brand-customer relationships, only loyalty was found to have a significant correlation with overall brand equity following disinformation. Overall, the results of this study seem to support those of Ma (2020) who finds that both identifying and non-identifying relationships act as a buffer in times of crisis and, in addition to this, the findings seem to indicate that loyalty is a significant lever for brands in the mitigation of the impacts of false information against the brand.

5.5 Hypothesis 4: Source credibility of marketer-generated content and user-generated content for strong brands and weak brand

5.5.1 Research findings

Through reviewing the literature, the study hypothesised that strong brands would benefit more from marketer-generated content in correcting disinformation whereas weak brand would find user-generated content to be more beneficial. In order to test this hypothesis the study conducted two separate independent t-tests to measure how Group 1 and Group 2 respondents rated the credibility of either a corporate source of

correction or the credibility of having a fellow social media user correct the information. The independent variable was maintained as the group in both tests while the dependent variable changed from corporate corrective source credibility in the first test to user source credibility in the second test. The results of the statistical test indicated that with regards to corporate credibility Group 1, the strong brand condition, rated corporate source credibility higher than Group 2, the weak brand condition. The differences in means was significant thus, this study supports hypothesis 4a.

In the case of the social media user credibility, the mean score for Group 1 was higher than the mean score for Group 2. Furthermore, the independent t-test p-value indicated that this difference in means was significant. Given this result, hypothesis 4b was not supported.

5.5.2 Discussion of research results

Kannan and Li (2017) argued that the differences between the use and benefits of marketer-generated content versus user-generated content related mainly to issues of consumer trust. Colicev et al. (2019) suggested that the impact of marketer-generated content and user-generated content also interacts with brand equity positing that firms with stronger brand equity enjoy higher levels of consumer trust due to their positive reputation. As such the extant literature has argued that these organisations can, and should, rely on their own content to communicate with customers as the trust they enjoyed produced positive results for these brands.

On the other hand however, extant literature suggested that firms with lower brand equity did not enjoy the same levels of trust. Therefore these trailing firms should rather rely on the inferred trust that exists among fellow social media users and leverage this implicit network relationship to reap positive rewards for their organisations (Luo & Gu, 2017; Colicev et al., 2019).

Using this understanding of trust, this study sought to measure the credibility of the source of the corrective information and not necessarily the information shared in and of itself. In the case of marketer-generated content, the findings of this study were aligned to the current literature indicating that the credibility of the corporation enjoyed a higher level of credibility among Group 1, the strong brand experiment. The interaction between this credibility and the mean scores for brand equity for Group 1 prior to the exposure to disinformation reaffirmed the finding by Colicev et al. (2019) that indeed brands with strong brand equity benefit more from marketer generated content.

Contrary to extant literature however, user-generated corrective content was also more favoured by customers in Group 1, the strong brand experimental condition than the customers in Group 2, the weak brand condition. While this study did not delve into the interactions that resulted in this finding, both Luo and Gu (2017) and Colicev et al. (2019) proposition of the role of trust could hold true in this circumstance as well thus implying that in general, strong brands enjoy a higher level of trust when compared to weak brands and it is this implied trust the organisation enjoys that allows strong brands to benefit from corrective action by fellow social media users as well.

In addition, looking at the mean scores for Group 2 in both iterations of the independent samples t-test around messenger credibility indicated that respondents in Group 2 generally rated corrective action by fellow social media users lower than they rated the correction by the corporate source itself therefore, the argument by Luo and Gu (2017) that trailing firms benefit more from user-generated or expert blogs does not hold in the case of correcting disinformation around the brand.

The study posits two possible explanations for this finding. Firstly the studies by Mills & Robson (2019 and Vafeiadis et al. (2019) implied that in responding to misinformation, it is the firm that must take the focal position in defending itself either through employing attacking tactics that vilify the source of the fake news or employing softer measures such as brand storytelling to connect with customers on an emotional level appealing

with their connection to the brand in order to dissuade these customers from believing fake news stories about the organisation. These studies seem to suggest that the efficacy of these tactics is premised on the brand being the source of these types of defence strategies.

The second explanation relates to the context of the study. Extant literature stems from studies conducted in developed western contexts which are not only developed communities and thus economically different from the context of this study, but also display cultural differences when compared to the context of this study. One such dimension is power distance (Hofstede, 2020) with South Africans in general accepting unequal power distribution in society. Although not explicitly tested in this study, the interplay of power distance and source credibility could provide varying interactions in comparison to western contexts thus providing explanations for the differences in credibility attributed to fellow social media users versus the credibility attributed to corporate communication on social media.

5.6 Conclusion

The results of this study both confirmed and contradicted some of the findings in the current literature. Firstly, the study finds that disinformation does have a negative impact on brand equity signalling that disinformation can be conceptualised as a form of brand crisis. Secondly, the study confirms that brand-customer relationships prior to disinformation relate positively with overall brand equity following exposure to disinformation. The study also confirms the relationship between the use of marketer-generated content for brands with strong equity finding that the organisation is deemed to be more credible than social media users as a source for the correction of disinformation.

On the contrary, the study finds that unlike the premise of our current understanding of the benefits of brand equity, strong brand equity does not protect brand from the negative impact of disinformation. Moreover, strong brands are affected more negatively

by the spread of fake news. Despite this however, these strong brands ultimately continue to enjoy higher levels of brand equity even after a perceived breach of trust. Lastly, the study finds that user-generated content is not more beneficial for stronger brands therefore casting doubt on the assertion that in the case of disinformation, weak brands can take advantage of the inferred trust relationships that exist among social media users to correct this disinformation.

The final chapter of this study will discuss the implications of these findings especially for brand managers and marketing practitioners. In addition, the limitations of this study will be discussed and areas for future research suggested in order to continue growing this body of knowledge.

Chapter 6: Conclusions and Recommendations

6.1 Principal conclusions

The proliferation of social media usage, which allowed marketing managers an additional channel through which to connect and interact with customers, has gained popularity as a brand building tool (Godey et al., 2016; J. E. Lee & Watkins, 2016; Luo & Gu, 2017). The rising incidence of disinformation, however, directly threatens these brand building efforts placing brands at risk of being victims of fake news stories created and disseminated across the same social media platforms. The fake news stories are created with the intention to negatively impact brands in a manner that leads to financial and reputational losses for these organisations (Mills et al., 2019; Di Domenico & Visentin, 2020).

Given the proliferation of fake news, the aim of this research was to further our current understanding of brand crises using a customer-based brand equity lens to understand whether disinformation exhibits similar characteristics as brand crises and to determine whether current literature sufficiently encapsulates the implications of disinformation on brands or if it is necessary to continue developing literature on managing brand crises that emanate from disinformation.

The first area of interest for this study centred on disinformation as a brand crisis. This study supports the findings of Cleeren et al. (2017), Hansen et al. (2018) as well as Jeon and Baeck (2016) who found that brand crises erode brand equity by negatively affecting customer perceptions. In addition, this study finds that message credibility was not a necessary condition for this negative impact to occur thus corroborating and extending the argument by Vafeiadis et al. (2019) that although brands may choose not to respond to fake news owing to brand managers' beliefs that they firestorm will eventually die down, these crises will ultimately impact the organisation negatively as stakeholders begin to believe the truthiness of such stories. The results of this study suggest that it

is not only the long-term impact of repeated exposure that organisations must worry about but also once-off exposure to fake news.

The second area of interest for this study was the buffering effect of positive brand equity. The study contradicted our current understanding of the buffering impact of brand equity. Extant literature suggested that brands with stronger brand equity enjoyed financial benefits and non-financial benefits in the form of insulation in times of crisis (Cleeren et al., 2017). Dalman et al. (2020) supported this view finding that in instances of innovation failure, stronger brands were not as negatively affected as weaker brands. On the contrary, this study finds that stronger brands are more inclined to being negatively affected by disinformation in comparison to their weaker counterparts. The study attributes this contradiction to the shock effect postulated by Dalman et al. (2020). Customers have higher expectations of stronger brands and when these expectations are not upheld, customers punish these brands more harshly that leads to a loss of trust which ultimately minimises their preferential positive perceptions of these brands.

Thirdly, this research was interested in understanding the impact of brand-customer relationships as a buffer in times of crisis. In this regard, this study supported the findings of Ma (2020) who found that both identifying and non-identifying relationships acted as a buffer in times of crisis. In understanding which lever interacted most significantly, the study found that brand loyalty had the significant positive correlation with disinformation.

Lastly, this study was interested in determining which was the most advantageous source for organisations trying to correct disinformation. Previous studies found that both marketer-generated and user-generated content resulted in positive outcomes for organisations; however, these sources interacted differently depending on the brand equity (Colicev, Kumar, and O'Connor, 2019). Stronger brands enjoy the benefits of having a good reputation and their customers trust the brands (Colicev et al., 2019) whereas weaker brands borrow trust from fellow social media users and benefit more from user-generated content (Luo & Gu, 2017). While this study reinforces our

understanding of the benefit of marketer-generated content as a credible source for brands with strong brand equity, it disproves our understanding of how weaker organisations should react by finding that fellow social media users did not present weak brands with the necessary credibility association to benefit these weak brands. The study suggested possible reasons for this outcome.

Firstly, the study posits that there is a general trust deficit (Colicev et al., 2019; Luo & Gu, 2017) between customers and weak brands such that even the communications of fellow social media users advocating for weak brands who have fallen prey to disinformation are not believed. Secondly, the study posits that the nature of the crisis and the strategies related to counteracting disinformation can primarily only be driven from within the organisation. Lastly, the study posits that the cultural context of the study may account for variances in participants' responses (Hofstede, n.d.). The context of the study is one in which the power distance is high resulting in a possible perception that brands are the final authority on issues pertaining to them.

This study expands our understanding of disinformation by drawing similarities between disinformation and brand crisis but also contradicts extant literature by suggesting that in some ways, disinformation is more harmful to brands, especially stronger brands. This threat towards stronger brands is also supported by the fact that despite customers of both weak and strong brands not finding the information credible, it nonetheless affects their affection towards stronger brands disproportionately and causes them to judge these brands more harshly. The study also finds that in cases of disinformation, brands cannot rely on fellow social media users to correct information. Instead, brands must take a proactive approach in correcting these instances of fake news.

6.2 Implications for management and other stakeholders

The findings of this study carry implications for marketing and brand managers in how they manage brand equity, brand relationships and incidents of disinformation that the organisation faces.

Companies strive to build strong brands by managing brand equity (Keller, 1993; Mühlbacher et al., 2016). Although this study finds that strong brands are more impacted by disinformation, it does not mean that brand managers relinquish this quest of building strong brands in the era of fake news because despite being significantly more impacted by disinformation, stronger brands continue to enjoy a more favourable position in terms of brand equity as opposed to weaker brands. Therefore, brand managers must continue to build stronger brands such that when they are faced with incidents of brand crises as a result of disinformation, they are still considered relatively more favourably than weaker brands and are still able to benefit financially from having a better equity position in the market (Ding et al., 2020; Mühlbacher et al., 2016; Stahl et al., 2012).

Secondly, similar to conventional brand crises (Cleeren et al., 2017; Jeon & Baeck, 2016; Ma, 2020) brand-customer relationships are beneficial to brands as buffers when disinformation and in particular, brand loyalty prior to the disinformation crisis significantly affects brand equity post the crisis. Therefore, parallel to building brand equity, marketing and brand managers must also build customer loyalty as this will assist in protecting the brand from the negative impact of disinformation. Customers must feel a sense of commitment and belonging to a brand such that when they receive fake news, they are able to access these feelings of loyalty in order to mitigate the harsh feelings created by the fake news stories (Cleeren et al., 2017; Jeon & Baeck, 2016).

Lastly, brand managers cannot outsource the work of correcting disinformation to social media users (Mills & Robson, 2019; Vafeiadis et al., 2019). In a time when fake news abounds and stories are spread far and wide using social media, brand managers must be on the lookout for negative fake news about their brands. Brand managers must also be ready to respond to fake news by issuing the necessary communication themselves to defend the organisation from the undue impact of this fake news. Brand managers must also recognise that no matter how untrue a story seems, it could have negative implications for their brands (Vafeiadis et al., 2019). Therefore, taking a laissez-faire

approach to responding to fake news in the hope that customers will not believe these stories is not a viable option.

6.3 Limitations of the research

6.3.1 Sample and context

This study focused specifically on the motoring sector. Motor vehicles are high-value purchases and the equity of this category may have underlying mechanisms that would not necessarily be replicable for industries such as fast-moving consumer goods or other low-involvement purchases. This sample only included respondents within a South African context. The cultural dimensions and considerations of other contexts may impact the generalisability of the findings of this study. The sample also focused specifically on perceptions around the motoring industry which is generally a high –value and thus high-involvement purchase. Studies in low-involvement purchases could produce different results.

6.3.2 Time horizon

The study undertook a cross sectional approach and therefore did not assess the long-term implications of disinformation on brand equity. Brands are built over time and, it would be beneficial to understand the long-term implications of fake news on brands over time.

6.3.3 Respondent intentions

Respondents were asked to complete a self-administered survey. Although they did not have prior knowledge of the nature of the experiment, some may have behaved in a way that they perceived would benefit the study.

6.4 Suggestions for future research

With the increasing incidents of disinformation, some dating back to 2016, literature may benefit from longitudinal studies to understand how disinformation has affected brands and brand equity over longer periods of time. Future research should also seek to understand how cultural dimensions affect not only how brand equity is built but also how it impacts customer responses to brand crises. Beyond looking at which sources brand managers must use to correct information, researchers and marketing practitioners could benefit from specifically looking at the content which brand managers are best poised to respond with and seek to understand how this impacts customer forgiveness. Lastly, the literature on disinformation and brands could also benefit from qualitative studies that are aimed at understanding how customers reconcile fake news and assimilate or discard this news as they continually rebuild brand images and associations.

6.5 Conclusion

Social media continues to be a useful tool that brands can use to connect with customers and build brands. However, the proliferation of fake news requires brand managers to constantly be aware of what is being disseminated about their brands and respond promptly to this news. It also necessitates the building of strong brands that will be resilient in times of crisis as well as strong brand-customer relationships that will act as buffers as brands navigate through disinformation crises.

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APPENDIX 1: SURVEY QUESTIONNAIRE

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA. I am conducting research on the impact of social media on motor vehicle brands.

To that end, you are asked to consider the scenarios laid out in the questionnaire below and complete a survey about your brand perceptions and social media usage. This will help us better understand how brand perceptions may be impacted by information shared on social media and should take no more than 20 minutes of your time. Your participation in this survey is appreciated however, it remains voluntary therefore you can withdraw at any time without penalty. Your participation is also anonymous and responses cannot be traced back to an individual respondent. Only aggregated data will be reported. By completing the survey, you indicate that you voluntarily participate in this research.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: Amohelang Ledwaba

Research Supervisor: Silas Matlala

Email: 04411471@mygibs.co.za

Email: matlalas@gibs.co.za

SECTION A: Demographics

To help us understand the composition of respondents better, please complete the following information about yourself:

1. Demographics
 - 1.1 Age
 - a. <18 (Thank and end survey)
 - b. 18 – 24
 - c. 25 – 34
 - d. 35 -49
 - e. 50+
 - 1.2 Gender
 - a. Female
 - b. Male
 - c. Prefer not to say
2. How would you describe the frequency of your social media usage?
 - a. Never
 - b. Less than once a day
 - c. Once a day
 - d. More than once a day
3. Which social media platforms do you use regularly? Please choose all that apply
 - a. Whatsapp
 - b. Facebook
 - c. Twitter
 - d. Instagram
 - e. Snapchat
 - f. Other (please specify)
4. Have you bought a car in the past 12 months or are you intending to purchase a car in the next 12 months? (Qualifying question)
 - a. Yes
 - b. No

SECTION B: Pre-test brand perceptions

Please help us better understand your brand perception of a motor vehicle brand by answering the questions below. Please note that throughout the questionnaire, the brand you have identified will be referred to as Brand X therefore, please keep this brand at the top of your mind as you answer the sections that follow:

- a. Please identify a motoring brand that you believe is a strong (weak) brand
Brand name_text box
1. Please rate the motoring brand you believe as being a weak brand on the following items using a scale of 0 to 6 where 0 = strongly disagree and 6 = strongly agree

The likely quality of Brand X is extremely high	0	1	2	3	4	5	6
Brand X offers reliable products	0	1	2	3	4	5	6
The products offered by Brand X are consistent in their quality	0	1	2	3	4	5	6
Brand X would be my first choice when purchasing a motor vehicle	0	1	2	3	4	5	6
I will not buy other brands if Brand X is available at the dealership	0	1	2	3	4	5	6
I can recognise Brand X among other competing brands	0	1	2	3	4	5	6
When I think of motoring brands, Brand X comes to mind	0	1	2	3	4	5	6
Brand X has strong brand associations	0	1	2	3	4	5	6

Brand X has favourable associations	0	1	2	3	4	5	6
It is clear what Brand X stands for	0	1	2	3	4	5	6
Brand X is highly regarded	0	1	2	3	4	5	6
Brand X has status	0	1	2	3	4	5	6
Brand X has a good reputation	0	1	2	3	4	5	6
I am very loyal to Brand X	0	1	2	3	4	5	6
I am willing to make small sacrifices in order to purchase Brand X	0	1	2	3	4	5	6
I would be willing to postpone my purchase if Brand X's products were temporarily unavailable	0	1	2	3	4	5	6
I would stick with Brand X even if it let me down once or twice	0	1	2	3	4	5	6
I am so loyal to Brand X that I do not feel the need to shop around for other alternatives	0	1	2	3	4	5	6
Brand X understands my motoring needs	0	1	2	3	4	5	6
I would feel comfortable describing Brand X to someone who was not familiar with it	0	1	2	3	4	5	6
I am familiar with the range of products Brand X offers	0	1	2	3	4	5	6
Brand X and I have lots in common	0	1	2	3	4	5	6
Brand X reminds me of who I am	0	1	2	3	4	5	6

Using Brand X makes me feel like I am part of a community of like-minded consumers	0	1	2	3	4	5	6
I can always count on Brand X to do what is best	0	1	2	3	4	5	6
I know I can hold Brand X accountable for its actions	0	1	2	3	4	5	6
Given my image of Brand X, letting me down would surprise me	0	1	2	3	4	5	6
It makes sense to buy this brand instead of other brands even if they are the same	0	1	2	3	4	5	6
Even if another brand has the same features as this, I would prefer to buy Brand X	0	1	2	3	4	5	6
If there is a brand as good as this, I prefer to buy Brand X	0	1	2	3	4	5	6
If another brand is not different from this in any way, it seems smarter to purchase Brand X	0	1	2	3	4	5	6

SECTION C: Post-test brand perception

Please consider the scenario as well as the article below. This article makes reference to Brand X which, in this case is the brand which you have selected as a weak motoring brand. Please consider the article carefully as you will be asked to rank your brand perception of Brand X based on your perceptions after reading this article.

As you are scrolling through your social media, you come across the following link to an article that has been shared and liked multiple times by users on your timeline:



Jane Doe

Big brands at it again. Check out this story

Mzansinews24.com.co

Brand X funding terror in West Africa

An unnamed source has alleged that the esteemed motor manufacturer Brand X has actively been involved in funding terrorist activity in the war-torn region of West Africa. This source claims to have a docket of emails exposing authorisations of the sale of vehicles to Boko Haram, a militant group with ties to the Islamic militia, at substantial discounts - an act that directly supports the continuing violence in the region. Our sources allege that this is all part of a plot to increase market share in this region and demonstrate the strength and durability of their vehicles in the local market. The CEO of the company has denied these claims however our sources are confident that the information at their disposal can prove their allegation. This is a developing story and we will continue publishing updates as they are received

Given the new information in the article, please provide a rating for your perceptions of Brand X using a scale of 0 to 6 where 0 = strongly disagree and 6 = strongly agree:

Brand X would be my first choice when purchasing a motor vehicle	0	1	2	3	4	5	6
I will not buy other brands if Brand X is available at the dealership	0	1	2	3	4	5	6
Brand X has strong brand associations	0	1	2	3	4	5	6
Brand X has favourable associations	0	1	2	3	4	5	6
It is clear what Brand X stands for	0	1	2	3	4	5	6
Brand X is highly regarded	0	1	2	3	4	5	6
Brand X has status	0	1	2	3	4	5	6
Brand X has a good reputation	0	1	2	3	4	5	6
I am very loyal to Brand X	0	1	2	3	4	5	6
I am willing to make small sacrifices in order to purchase Brand X	0	1	2	3	4	5	6
I would be willing to postpone my purchase if Brand X's products were temporarily unavailable	0	1	2	3	4	5	6
I would stick with Brand X even if it let me down once or twice	0	1	2	3	4	5	6
I am so loyal to Brand X that I do not feel the need to shop around for other alternatives	0	1	2	3	4	5	6
Brand X understands my motoring needs	0	1	2	3	4	5	6
I would feel comfortable describing Brand X to someone who was not familiar with it	0	1	2	3	4	5	6

I am familiar with the range of products Brand X offers	0	1	2	3	4	5	6
Brand X and I have lots in common	0	1	2	3	4	5	6
Brand X reminds me of who I am	0	1	2	3	4	5	6
Using Brand X makes me feel like I am part of a community of like-minded consumers	0	1	2	3	4	5	6
I can always count on Brand X to do what is best	0	1	2	3	4	5	6
I know I can hold Brand X accountable for its actions	0	1	2	3	4	5	6
Given my image of Brand X, letting me down would surprise me	0	1	2	3	4	5	6
It makes sense to buy this brand instead of other brands even if they are the same	0	1	2	3	4	5	6
Even if another brand has the same features as this, I would prefer to buy this brand	0	1	2	3	4	5	6
If there is a brand as good as this, I prefer to buy this brand	0	1	2	3	4	5	6
If another brand is not different from this in any way, it seems smarter to purchase this one	0	1	2	3	4	5	6

Please rate your initial perception of the credibility of the article you have read using a scale of 0 to 6 where 0 = strongly disagree and 6 = strongly agree:

I find this message believable	0	1	2	3	4	5	6
The information in this message seems accurate	0	1	2	3	4	5	6

The information in this message seems trustworthy	0	1	2	3	4	5	6
The information in this message seems biased	0	1	2	3	4	5	6
The information in this message seems to be complete	0	1	2	3	4	5	6

SECTION D: Firm approaches to correction of misinformation

Misinformation can generally be defined as the spreading of information that is ambiguous or partially untrue. Oftentimes this information is meant to deceive readers and change their perception around a situation, person or brand. In correcting misinformation, companies can either issue corporate statements to correct the misinformation or they can rely on users who are part of their social media networks to correct this misinformation.

On a scale of 0 to 6 where 0 = strongly disagree and 6 = strongly agree, please rate how you would perceive Brand X using **their own corporate communication** to correct the misinformation:

This source can be trusted	0	1	2	3	4	5	6
This source is accurate	0	1	2	3	4	5	6
This source is fair	0	1	2	3	4	5	6
This source tells the whole story	0	1	2	3	4	5	6
This source is not biased	0	1	2	3	4	5	6

On a scale of 0 to 6 where 0 = strongly disagree and 6 = strongly agree, please rate how you would perceive correction of the misinformation impacting Brand X **through fellow social media users**:

This source can be trusted	0	1	2	3	4	5	6
This source is accurate	0	1	2	3	4	5	6
This source is fair	0	1	2	3	4	5	6
This source tells the whole story	0	1	2	3	4	5	6
This source is not biased	0	1	2	3	4	5	6

SECTION E: Debriefing

Please note that the social media post shared was a fictional post exemplifying misinformation and is intended purely for the purposes of this research to understand how such misinformation can affect brand perceptions. To the best of the researcher's knowledge, no motor vehicle brand has been implicated in any acts that support terrorism. Thank you for your participation in this survey

APPENDIX 2: CODE BOOK

Q.1 How old are you?

Younger than 18	1
18 - 24	2
25 - 34	3
35 -49	4
50+	5

Q.2 What is your gender?

Female	1
Male	2
Prefer not to say	3

Q.3 How would you describe the frequency of your social media usage?

Never	1
Less than once a day	2
Once a day	3
More than once a day	4

Q.4 Which social media platforms do you use regularly? Please select all that apply.

WhatsApp	1
Facebook	2
Twitter	3
Instagram	4
Snapchat	5
Other	6

Q.6 Within the last 12 months have you purchased a vehicle?

Yes 1
No 2

Q.7 Are you intending to purchase a vehicle within the next 12 months?

Yes 1
No 2

All other brand perception and credibility questions are coded on a 7-point Likert scale as per below

0.Strongly disagree	1.Disagree	2.Slightly disagree	3.Unsure	4.Slightly agree	5.Agree	6.Strongly agree
0	1	2	3	4	5	6

APPENDIX 3: ETHICAL CLEARANCE LETTER

**Gordon Institute
of Business Science**
University of Pretoria

Ethical Clearance
Approved

Dear Amohelang Ledwaba,

Please be advised that your application for **Ethical Clearance** has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.