**Gordon Institute
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Investigating the role and application of blockchain technology on digital marketing in building trust to enhance customer-centric relationships.

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ABSTRACT

With the notable influence, new and emerging technologies such as BCT have changed organisational structures, shifted operations, and re-evaluated the value creation process. As such, there has been increased pressure placed on marketers to understand these technologies and the extent to which they can be applied to marketing activities to ensure organisational competitive advantage and value exchange for the customer.

The objective of this study was to investigate the role and application of BCT in digital marketing to enhance trust in customer-centric relationships. To achieve this, a qualitative research methodology was selected with an exploratory approach to generate new insights that would contribute to business and academia since the phenomenon is not widely understood or applied in the marketing and advertising industry. A total of 12 semi-structured interviews were conducted, which included subject matter experts.

The research highlighted trust and transparency as key drivers in promoting customer-centric relationships in online marketing environments. Similarly, the study also revealed that the attributes of BCT were suitable for a vast range of applications within digital marketing that promotes trust and fosters customer-centric relationships. Furthermore, the study found that education, knowledge, and changes to the organisational business model were some of the barriers that impacted the adoption and implementation of BCT in marketing and advertising. Due to the inductive nature of the research, the findings from this study can contribute to development of theory and propositions related to BCT and marketing.

KEYWORDS

Blockchain technology, digital marketing, relationship marketing, customer-centric relationships, trust, transparency

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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Terniell Ramlah   Date

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ABBREVIATIONS

BCT	Blockchain Technology
BC	Blockchain
MarTech	Marketing Technology
IoT	Internet of Things
AI	Artificial Intelligence
ROI	Return on Investment
CTT	Commitment-Trust Theory
RM	Relationship Marketing
BMTL	Blockchain Marketing Technology Landscape
DSP	Demand Side Platform
SSP	Supply Side Platform
DMP	Data Management Platform
NFT	Non-fungible Token
POPIA	Protection of Personal Information Act, 2013

1   INTRODUCTION

1.1   BACKGROUND TO THE RESEARCH

Technology has become an integral part of any organisation to drive change and innovation (Kumar et al., 2021). New and emerging technologies include big data, the internet of things (IoT), artificial intelligence (AI), and blockchain technology (BCT) are viewed as marketing technologies that have reformed organisational structures, altered operations, and re-evaluated the value generation process (Shaphali Gupta et al., 2020; Rejeb et al., 2020). MarTech has significantly impacted the way marketing strategies and activities are conducted (Brock, 2021; Hoffman et al., 2022; Varadarajan et al., 2020). Cvitanović (2018), Sunil Gupta and Davin (2016), and Hoffman et al. (2022) assert that MarTech can supply new data and analytic methods that enable marketers to better understand their consumers' choice and purchasing path, hence enabling data-driven marketing and decision making.

As of April 2022, 63% of the world's population, or more than five billion people, were connected to the internet (Internet Users in the World 2022, 2022). The internet has become one of the most integral communication tools for brands to connect with their customers (Stallone et al., 2021). Online advertising allows firms to directly reach and advertise their products and services to consumers (Boukis, 2020; Rejeb et al., 2020). However, the growth of the internet has also led to the rise of fraudulent activities in online advertising (Jain et al., 2021) which cost marketers and organisations millions of dollars each year from advertising fraud due to automated bots and click fraud (Ghose, 2018; Harvey et al., 2018). Now, more than ever, digital marketers must ensure that their communication is delivered to the intended recipient (Ghose, 2018). Emerging technologies like BCT are significant in digital marketing in that it has the potential to mitigate some of these problems through its features by building trust between organisations and customers (Luo, 2002; Rejeb et al., 2020).

The internet has gained thousands of intermediaries who collect customer data through cookie tracking through a few third parties such as Facebook and Google (Boukis, 2020; Sunil Gupta & Davin, 2016; Pärssinnen et al., 2018). This has led to a lack of visibility of data (Ghose, 2018).

BCT can enable marketers to effectively leverage transparent data-driven marketing by analysing, verifying and controlling where and to whom it is delivered (Ghose, 2018). BCT can be defined as a distributed public ledger where all transactions are stored in a secure chain of blocks across a peer-to-peer network (Boukis, 2020; Clohessy & Acton, 2019; Ertemel, 2018; Zheng et al., 2018).

BCT is anchored in peer-to-peer communication, which disrupts traditional market structures by promoting disintermediation, which will remove third parties who process data (Boukis, 2020; Brock, 2021). This will ensure greater data transparency and verification, higher accuracy of advertising tracking for return on investment (ROI), and reduce the cost of advertising fraud (Boukis, 2020; Ghose, 2018; Stallone et al., 2021). Also, Rejeb et al. (2020) say that BCT can improve customer relationships by making data more transparent and improving privacy and security.

It can be noted that by improving data privacy and security through strengthening BCT, it can build trust and customer relationships (Rejeb et al., 2020). Trust is the underpinning of the commitment-trust theory of relationship marketing (Buttle, 1996; Hunt et al., 2006; Lewin & Johnston, 1997; Luo, 2002; Luo & Donthu, 2007; Möller & Halinen, 2000; R. M. Morgan & Hunt, 1994; Mukherjee & Nath, 2007), which is also the essence of BCT through its feature of distributed trust (Ertemel, 2018; Rejeb et al., 2020).

Furthermore, literature demonstrates that BCT is the trust layer that is missing in online marketing activities (Ertemel, 2018). Hunt et al. (2006) and Luo (2002) further note that trust is the cornerstone of building relationships in the digital age. This is particularly relevant in the marketing environment where trust is a challenge due to digital disruptions, interconnectedness (Kannan & Hongshuang, 2017; Shankar et al., 2022), the increase in the amount of customer data collected via the internet, resulting in ad fraud (Boukis, 2020; Ertemel, 2018; Ghose, 2018; Luo, 2002).

1.2 RESEARCH PROBLEM

With the significant impact that new and emerging technologies have on various disciplines, such as marketing and advertising, marketers are under increased pressure to understand these technologies and the extent to which they can be

utilised to build trust and customer-centric relationships (Gleim & Stevens, 2021; Hoffman et al., 2022).

More attention in the literature must be devoted to the potential applications of technologies, such as BCT, in support of marketing strategies and activities (Hoffman et al., 2022). The majority of articles published to date consist of systemic reviews and a few conceptual papers. The problem is there is a lack of empirical evidence to demonstrate the application of BCT in digital marketing (Boukis, 2020; Gleim & Stevens, 2021; Jain et al., 2021; Rejeb et al., 2020).

This topic has received scant attention, leaving a gap in the published literature regarding BCT in marketing and its subsequent application (Jain et al., 2021; Stallone et al., 2021).

For this study, the problem statement is summarised as follows: there is a limited amount of research examining the impact and application of BCT in digital marketing and advertising industries (Jain et al., 2021).

Furthermore, the aim of this research study is to:
- Examine the levels of understanding in marketing and advertising industries.
- Understand the factors that influence digital marketing and BCT trustworthiness.
- Identify the factors that foster and enhance customer-centric relationships.
- Understand the barriers affecting the adoption and implementation of BCT within the marketing and advertising industry.

1.3 PURPOSE STATEMENT

New and emerging technologies have significantly impacted the way in which brands reach and engage with customers, posing a challenge for marketers to understand, adopt, and implement these technologies (Gleim & Stevens, 2021; Rejeb et al., 2020). Due to their attributes of transparency, trust, privacy, accountability, and immutability, the applications of new technologies such as BCT have begun to spread to numerous industries (Stallone et al., 2021). It has been observed that the

application of BCT in marketing creates a foundation for marketing activities that foster security, trustworthiness, and customer-centric relationships (Gleim & Stevens, 2021; Hoffman et al., 2022; Luo, 2002).

Current literature pertaining to new technologies such BCT is extensive. To support marketing activities, however, the literature concerning the potential application of BCT requires additional scholarly attention (Rejeb et al., 2020). According to Jain et al. (2021), the presence of BCT in marketing literature has not been thoroughly investigated. A majority of articles published to date have been limited to a few systemic reviews and conceptual papers, highlighting the fact that this topic has received little attention, thus presenting a gap in the published literature regarding BCT in marketing and its subsequent application (Brock, 2021; Hoffman et al., 2022; Jain et al., 2021; Stallone et al., 2021).

The study aims to contribute to the understanding of BCT within the context of digital marketing and advertising by expanding upon existing theory.

Consequently, the objective of this study is to investigate the role and application of BCT in digital marketing to enhance trust in customer-centric relationships.

1.4 SIGNIFICANCE

1.4.1 Significance of blockchain technology for business

The unrivalled growth of the internet has expedited the development of new and emerging technologies has transformed the value exchange between organisations and customers (Cvitanović, 2018; Shaphali Gupta et al., 2020; Kannan & Hongshuang, 2017). Extensive literature demonstrates that technology and its adoption within organisations is indispensable for performance and competitive advantage (Jain et al., 2021; Rudman & Bruwer, 2016).

Stallone et al. (2021) define BCT as a decentralised ledger in which interconnected timestamped blocks of data are stored by maintaining integrity in a distributed peer-to-peer system. BCT is rapidly evolving into the next generation of digital technologies underlying MarTech (Brock, 2021; Orji et al., 2020). BCT has existed

for over a decade with various definitions in academic research. Immutability, transparency, programmability, decentralization, consensus, and distributed trust have identified as the most crucial traits based on many evaluations and exploratory study (p. 2). These attributes provide a new model in which transactions are performed and the value it is able to provide in an online environment (Rejeb et al., 2020). Given these attributes, BCT can alter the way organisations interact with their customers (Hoffman et al., 2022). BCT can influence how organisations penetrate existing markets, create new marketplaces, and create value through the exchange products and services (Luo & Donthu, 2007; Varadarajan et al., 2020), resulting in increased efficiency, performance and long-term competitive advantage (Cvitanović, 2018; Hoffman et al., 2022).

Due to its secure nature and digital infrastructure of BCT, researchers have demonstrated its potential for integration across multiple disciplines such as marketing, supply chain, copyright management and financial services (Risius & Spohrer, 2017; Tang et al., 2020).

1.4.2 SIGNIFICANCE OF BLOCKCHAIN TECHNOLOGY FOR ACADEMIA

This research can make substantial contributions to the academic body of knowledge, both from a theory-building and an application standpoint, in the context of digital marketing and advertising.

This study aims to build onto existing theory development and propositions of commitment-trust theory of relationship marketing by contextualising the attributes of BCT of immutability, trust, transparency, decentralisation, privacy, and security as factors that build trust and fosters long-term customer-centric relationships.
Within the existing literature pertaining to BCT and its application to digital marketing, it demonstrates that there is a vast gap whereby most of the research available on this subject matter is limited to a few conceptual papers and systematic reviews (Brock, 2021; Hoffman et al., 2022; Jain et al., 2021; Stallone et al., 2021).

This study aims to close the research gap by first investigating the literature to better understand BCT and its transferability to other industries such as marketing. Thereafter, looking at the role and application of the technology and its potential to

foster trust and build customer-centric relationships. In doing so, the insights and analysis obtained from the literature review as well as the field study will further advance the subject matter and more importantly provide a benchmark for future research to be explored.

1.5 STRUCTURE OF THE RESEARCH REPORT

Figure 1 illustrates the report structure and what the reader can expect in the chapters to follow:

Chapter 1 sets the background and purpose for the research undertaking. It includes the research objective and the research question the reports aims to answer.

- **Chapter 2** is the literature view, which provides the reader with insight into what literature existing, what doesn't and where are the potential gaps that could be filled which could contribute to the academic literature. This section also grounds the research in a theoretical framework to guide the research.

Chapter 3 provides an overview of the research questions that have been derived from the literature review.

- **Chapter 4** gives and overview of the research methodology and analysis approach.

- **Chapter 5** analyses of the research findings.

- **Chapter 6** discusses the findings.

- **Chapter 7** synthesis the evidence by providing a conclusion and recommendation for future research.

Chapter 1	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6	Chapter 7
•Introduction to research problem •Overarching research question	•Literature review •Theoretical framework	•Research Questions	•Research methodology	•Research findings	•Discussion of results	•Conclusion and recommendations
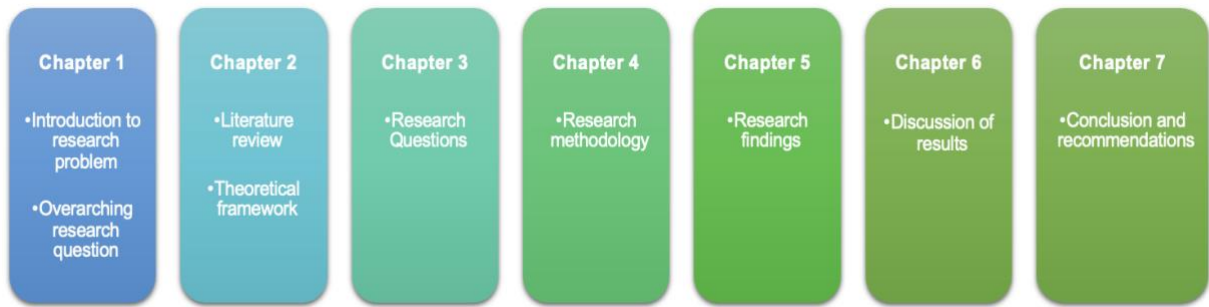
FIGURE 1: STRUCTURE OF RESEARCH REPORT

The next chapter gives an overview into the academic literature pertaining to the research study, the context of where it fits in as well as insights that have shaped and informed the research questions.

2 LITERATURE REVIEW

2.1 INTRODUCTION

The literature review chapter aims to cover various aspects of existing literature relating to marketing technologies key insights which influence organisation agility and competitive advantage by first looking at the role of marketing within organisations. Then how it has shifted from traditional ways of doings things to one that is more digital, and technology enabled. Secondly, the literature view will delve a bit deeper into the evolution of the World Wide Web to provide context on this has played a fundamental role in how organisations and brands engage and communicate.

Moreover, the literature review will be looking at BCT regarding its attributes and relevance in digital marketing. Lastly, the literature will aim to contextualise the role and application of BCT in building trust to enhance customer-centric relationships. Furthermore, the purpose of the literature review is to provide the reader with insights regarding the benefits and shortfalls of BCT within digital marketing. The researcher will briefly examine commitment-trust theory (CTT) of relationship marketing (RM) as the anchor to the study, looking at trust and commitment as the two key constructs.

2.2 THE ROLE OF MARKETING

The role of marketing is one that is dynamic, complex and multi-layered (Möller, 2013). It is interlinked across various functions within the organisation to drive business performance (N. A. Morgan, 2012). Marketing is synonymous with strategic decision making that is integral for creating, attaining and sustaining competitive market advantage as well as stakeholder value (Gök & Hacioglu, 2010; Gummesson et al., 2014; N. A. Morgan, 2012).

Kotler (2000) defines marketing as a "societal process by which individuals and groups obtain what they need and want through creating, offering, and exchanging products and services of value freely with others" (p. 4). Notwithstanding, with the change in the marketing environment due to technological breakthroughs Payne and

Frow (2017) highlight that the perception of value as shifted from "value creation from exchange" to "value creation through use" (p. 13).

Furthermore, it is the role of marketing to understand where the value will be derived from, and develop appropriate marketing strategies to effectively communicate this value to customers through relevant marketing activities such as advertising through digital and traditional communication mediums (N. A. Morgan, 2012; Shankar et al., 2022).

As a consequence, organisations are putting more pressure on marketers to justify their budgets against marketing activities, ROI and demonstrate link to business performance (Gök & Hacioglu, 2010; N. A. Morgan, 2012).

Similarly, a critical component within the role of marketing is relationships with regard to building trust and commitment (Brown et al., 2019). Buttle (1996) says that "marketing is to establish, maintain, an enhance relationships with customers." Murphy et al. (2005) further supports this by adding that the "goal is to deliver long-term value to customers, and the measure of success is long-term customer satisfaction" (p. 1050). If this is done correctly, it has demonstrated a link to financial performance and return on business investment (Murphy et al., 2005).

2.3   THE SHIFT FROM TRADITIONAL TO DIGITAL MARKETING

The rapid growth of the internet over the last quarter century coupled with the 4th industrial revolution which introduced new and emerging technologies such as web 3, IoT, AI, big data, 5G internet speed and BCT has fundamentally changed the way customers behave and how marketers communicate (Faruk et al., 2021; Kannan & Hongshuang, 2017). These technologies have also brought about disruption by altering the environment and marketing structures in brand marketing. Thus, resulting in considerable impact to the traditional marketing mix i.e. product, place, price and promotion (Rejeb et al., 2020; Zimand Sheiner & Earon, 2019).

For example, technology such as big data analytics have given marketers the ability to collect large and complex data sets and synthesise the information into useful customer insights. These data-driven insights are then used for more accurate

campaigning on product, price, place, promotion of goods and services as well appropriate distribution channels (Rejeb et al., 2020).

In addition, the environment today has also necessitated change from marketers to adjust their approach from traditional one-way communication to get their messages across from mediums such as radio, tv and print (Nyström & Mickelsson, 2019) to one that responds to the technological agility of the marketing environment and its customers (Stallone et al., 2021). Digital or technology enablement has allowed digital marketing to leverage new channels and mediums such as social media and programmatic display banners to engage with customers in effective, efficient, and innovative ways. Allowing marketers to inform, personalise targeting, generate new demand and penetrate existing markets (Faruk et al., 2021; Rejeb et al., 2020).

To this end digital disruption has accelerated its adoption in many organisations, as they understand the significance of creating and maintaining digital relationships with customers, especially in a highly connected world (Kannan & Hongshuang, 2017; Shankar et al., 2022). Digital adoption and communication has also been expedited due to COVID-19 (Shankar et al., 2022).

Digital disruption has generated opportunities for organisations to utilise advertising mediums that allow organisations to have greater customer reach and access new markets. However, on the inverse it has also presented itself as a threat to customers in terms of security, privacy and data concerns (Nyström & Mickelsson, 2019; Rejeb et al., 2020; Zimand Sheiner & Earon, 2019).

Kannan and Hongshuang (2017) highlight that the "term digital marketing has evolved over the years from describing the marketing of products and services using digital channels – to an umbrella term describing the process of using digital technologies to acquire customers and build customer preferences, promote brands, retain customers and increase sales" (p. 23). Shankar et al. (2022) further adds that "unlike traditional marketing communication, digital marketing communication facilitates greater interactions or dialogs between the source and the recipient." (p. 542).

Literature demonstrates that disruptive technologies cause significant shifts in organisational structures and marketing behaviours (Zimand Sheiner & Earon, 2019) it has also changed customers' expectations and the relationship they have with organisations (Rejeb et al., 2020). These technologies have brought attention to the opportunities that can be created in providing value to customers and stakeholders (Kannan & Hongshuang, 2017) while still keeping the organisation competitive (Gök & Hacioglu, 2010; Varadarajan et al., 2020). However, the transformation effects is still a growing body of research (Varadarajan et al., 2020).

2.4   DIGITAL MARKETING AND MEDIA

Digital technology has allowed organisations to better understand their customers, their behaviour and decision making journeys. Digital marketing uses the information collected to inform targeting and link marketing activities to marketing performance (Sunil Gupta & Davin, 2016; Rejeb et al., 2020).

Figure 2 below provides a simple view for digital marketing. The framework aims to explain the four elements in digital marketing. The first element is *outbound marketing*, which are the various ways in which organisations target their customers i.e. search, display and online advertising. The second element is *inbound marketing*, where organisations ensure they have a digital presence which can be found by customers when they search for a product or service. The third element is *social media*, which consist of digital platforms where customers engage and create content i.e. webpages, blogs, Facebook, Twitter, Instagram etc. These platforms have the ability for organisations to influence customers' purchasing decisions as well as customers to influence other customers. Lastly, the fourth element is *mobile technology* which allows customers to stay connected anywhere, anytime when they need to search for goods and services (Sunil Gupta & Davin, 2016).
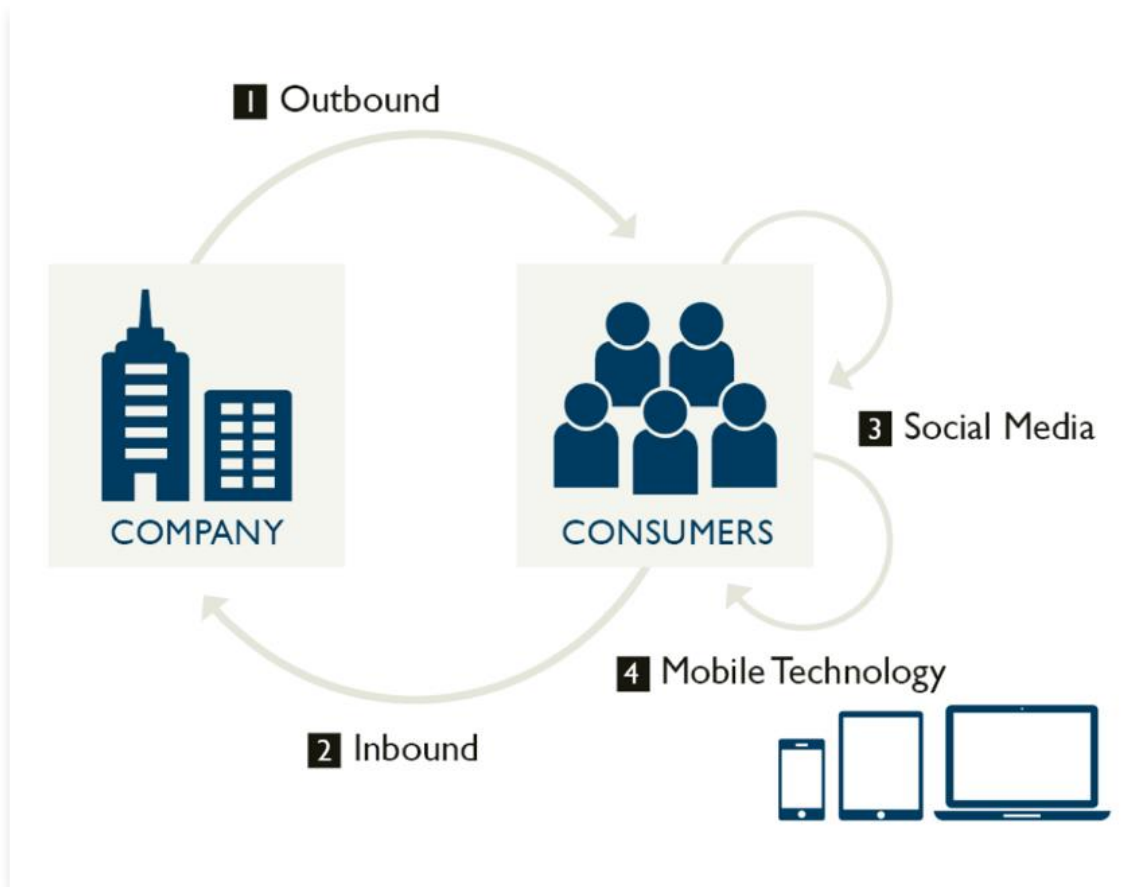
Figure 2: A framework for digital marketing (Sunil Gupta & Davin, 2016)

To further contextualise digital marketing, it is also important to understand the media landscape in which digital marketing operates, especially with the unprecedented growth of the internet and social media which has altered media practices (Macnamara et al., 2016). The PESO (paid, earned, shared, owned) model shown in Figure 3, is used by digital and advertising agencies as part of their integrated marketing plans as a means to reach and communicate in an efficient and effective manner (Xie et al., 2018).

The PESO model for media strategy is categorised into four main parts. The first part is *paid media*, which according to Xie et al. (2018) is the "traditional advertising and other forms of content commercially contracted between organizations and mass media" (p. 164). This media is the most prominent use of media as the organisation pays a publisher attract potential customers. The second part is *owned media*, where media or channels are established and controlled by the organisation or brand, these

include newsletters, reports, website and official social media pages i.e. Facebook (Sunil Gupta & Davin, 2016; Macnamara et al., 2016).

Following this is *earned media*, this is generated through public relations and media activities whereby the organisations content is shared or discussed i.e. interviews (Sunil Gupta & Davin, 2016; Macnamara et al., 2016; Xie et al., 2018). The final part is *shared media* or also known as social media which has grown significantly in the last couple years. Shared media is defined as "open for followers, friends, and subscribers to contribute and comment" (Macnamara et al., 2016)(p. 378).

The bricks illustrated below in Figure 3 is the data layer that underpins all the media categories customers (at the centre) exchange and engage with (Stallone et al., 2021).
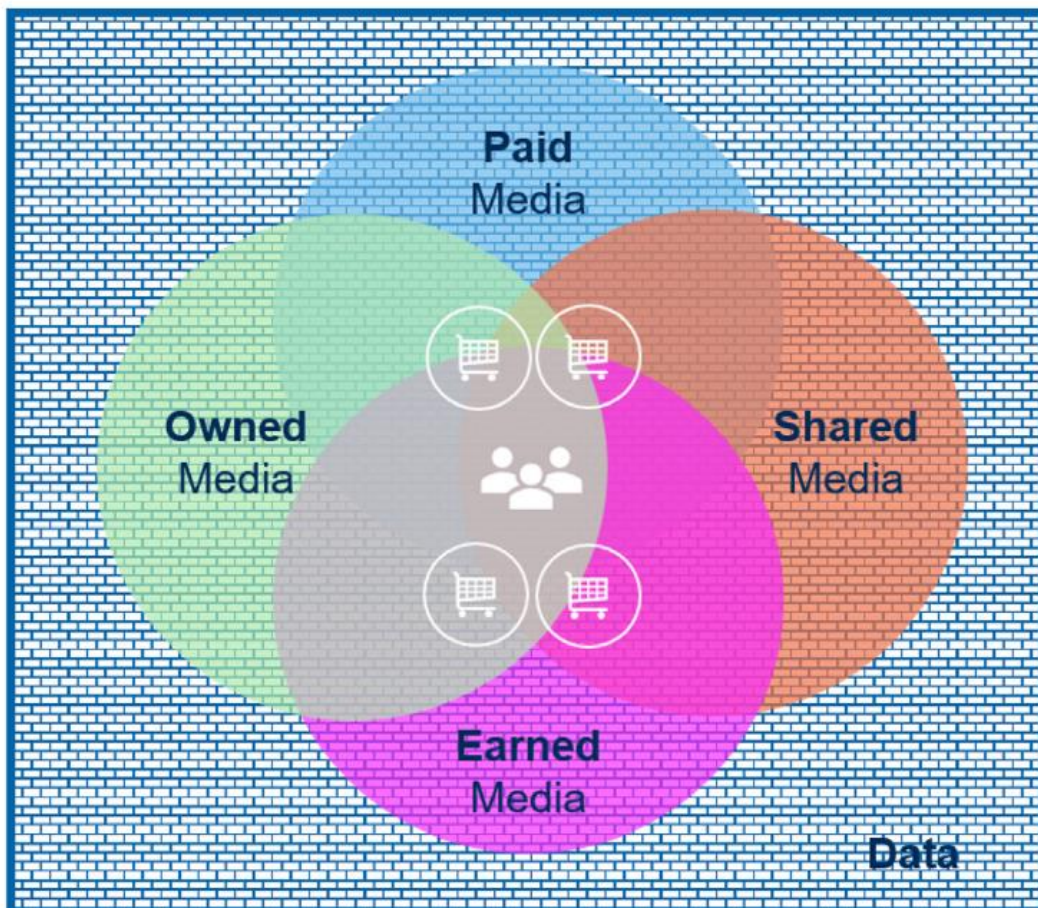
Figure 3: Extended PESO model (Stallone et al., 2021)

2.5 THE EVOLUTION OF THE WORLD WIDE WEB (WEB 1.0, 2.0 AND 3.0)

To better understand how new and emerging technologies are changing the way we operate, it is essential to first understand the unrivalled evolution of the World Wide Web (Kim, 2018; Neokosmidis et al., 2015). The academic literature of this evolution has been examined quite extensively (Miranda & Lima, 2012). The World Wide Web has become a medium for mass communication with an unprecedent amount of information being exchanged and stored on the internet (Buchwitz, 2018; Kim, 2018; Neokosmidis et al., 2015; Rudman & Bruwer, 2016). According to Rudman and Bruwer (2016) it is "the fastest growing publication medium of all time" (p. 132). Buchwitz (2018) further adds that "When Tim Berners-Lee conceived of the World Wide Web, it was a hyperlinked publishing system whereby anyone could broadcast their words so that others who were interested might read them" (p. 138).

Similarly, the World Wide Web also became an enabler for technology advances (Rudman & Bruwer, 2016). The World Wide Web could not have been as successful as it is today without preceding technologies. The invention of the internet browser subsequently introduced marketing applications such as online banner advertising. According to Brock (2021) "Technology and marketing co-evolve" (p. 373).

2.5.1 WEB 1.0

The first iteration of the World Wide Web was classified as Web 1.0 which according to Joint, (2009) was about "connecting computers and making information available" (p. 168). The information published was static with designed texts and images. There was no interaction between the information from providers and the end user (Hwang et al., 2009; Rudman & Bruwer, 2016).

2.5.2 WEB 2.0

The next phase of the evolution was Web 2.0, which shifted from static information to connecting, sharing and fostering greater collaboration between service providers, organisations and customers (Hwang et al., 2009; Joint, 2009; Newman et al., 2016; Orehovački et al., 2013; Rudman & Bruwer, 2016). Web 2.0 is where interaction and

enhanced customer experience began to emerge through technologies such as Google and Facebook (Sibicky & Carlson, 2021).

Moreover, Web 2.0 has transformed the way customers consume information and their habits of how they use the internet. It has also become a platform for brands to engage and promote their goods and services (Vasan, 2021). Furthermore, various web applications have allowed service providers, organisations, and customers to create and share content though networking sites (Facebook, Twitter, Google, Instagram), personal blogs, virtual worlds and online office suites to name a few (Orehovački et al., 2013; Sibicky & Carlson, 2021).

2.5.3   WEB 3.0

The latest revolution of the World Wide Web is Web 3.0 which has taken connecting, experience, sharing and communication to the next level. Which will also have significant impact on business drivers and change the way customers interact with information (Jaung, 2022; Rudman & Bruwer, 2016). According to Belk et al. (2022) "some predict that web 3.0 will be the next disruptive technology shift" (p. 198).

Web 3.0 is an all-encompassing and integrated web experience (Rudman & Bruwer, 2016). It is built on core idea of decentralisation and openness and moves away from web 2.0's centralised platforms like Facebook, Google and Twitter (Belk et al., 2022). In addition, web 3.0 has also given rise to the Metaverse, which is a three dimensional (3D) world that merges the physical and virtual world (Zhao et al., 2022).

The Metaverse is built on blockchain technology (Hollensen et al., 2022) and first originated from the sci-fi novel "Snow Crash" written by Neal Stephenson which referred to three dimensional worlds that are interactive, immersive, and collaborative. It is a world where anyone can create an avatar of themselves and interact with others in a virtual world (Hollensen et al., 2022; Jaung, 2022; Zhao et al., 2022).

Hollensen et al. (2022) further states that the Metaverse is where "business, information and communication tools are immersive and interoperable" (p. 1). They also argue that the Metaverse will revolutionize almost very industry by creating

experiences that amplify the functionality of goods and services (Hollensen et al., 2022).

Therefore, it is vital for organisations to acknowledge its potential of how it will transform communication as we know it. The value of the Metaverse is around value exchange and ownership. Whereby allowing the customer or end user to generate content or chose how they want to interact with an organisations' content (Belk et al., 2022; Hollensen et al., 2022). This also provides an opportunity for organisations and brands to build customer-centric relationships that can be measured by sales, payments or tracked engagements (Hollensen et al., 2022).

At this stage, the concept of the Metaverse is still ambiguous and in its infancy regarding its practical application to organisations in the real world. The limited understanding around web 3.0 and the Metaverse is consequently limiting its potential (Jaung, 2022; Zhao et al., 2022).

2.6   MARKETING TECHNOLOGIES "MARTECH"

The business environment is constantly changing, which often results in disruption whereby organisations have to reassess their competitive position within an industry (Capon & Glazer, 1987; Rejeb et al., 2020). The reason for disruption may arise from several factors. A major influence is the rapid change and introduction of new and emerging technologies into the business environment (Capon & Glazer, 1987). As stated by Cvitanović (2018) and Hoffman et al. (2021) adoption and integration of new technology within an organisation is fundamental for agility, financial performance and long-term competitive advantage.

New and emerging technologies such as big data, the internet of things (IoT), artificial intelligence (AI) and blockchain technology (BCT) are seen as marketing technologies which have reshaped organisational structures, shifted operations and re-evaluated the value creation process (Cvitanović, 2018; Shaphali Gupta et al., 2020; Kannan & Hongshuang, 2017). Marketing technology, also known as MarTech consists of a mix between marketing automation and technology (Rejeb et al., 2020). It is a tool mainly used in digital marketing to assist marketers with engaging with customers to ensure that organisations remain efficient and effective (Brock, 2021;

Hoffman et al., 2022). MarTech has significantly impacted the way marketing strategies and activities are conducted (Cvitanović, 2018; Rejeb et al., 2020; Varadarajan et al., 2020). One benefit of MarTech is that provides insights into the return on investment (ROI) of marketing strategies and activities (Brock, 2021).

This enables organisations to gain an improved understanding of their markets for broader reach and personalise the way they create value, engage customers, communicate and deliver solutions (Rejeb et al., 2020; Varadarajan et al., 2020). Sunil Gupta and Davin (2016) further argue that having information from digital technologies such as BCT make it possible for organisations to understand their customer's decision journey, which can result in building customer-centric relationships and creating customer lifetime value.

Gleim and Stevens (2021) highlight the fact that "marketers are faced with understanding and implementing new technologies at a greater rate than ever before" (p. 123). Marketing activities underpinned by MarTech contributes to organisations meeting their needs profitability (Kotler, 2000). Existing literature continues to indicate that marketing is a vital component for developing and supporting commerce (Jain et al., 2021).

Literature pertaining to new and emerging technologies have demonstrated the significance in its adoption for competitive advantage, organisational efficiency, personalisation and its ability to influence customer behaviour and purchasing patterns (Cvitanović, 2018; Shaphali Gupta et al., 2020; Jain et al., 2021; Varadarajan et al., 2020). However, it has also raised potential challenges as to why enthusiasm for implementation is low. Cost to implement new technologies are not always cost-effective when considering IT equipment, software and back-office infrastructure which is essential for marketing operations (Cvitanović, 2018). New technologies like BCT may have technical issues in terms of scalability and energy efficiency (Pärssinnen et al., 2018; Zheng et al., 2018). In fact, there is insufficient published literature to adequately argue the rationale for low BCT implementation within marketing and advertising (Stallone et al., 2021; Zheng et al., 2018). Further research would be required.

2.7 BACKGROUND FEATURES OF BLOCKCHAIN TECHNOLOGY

BCT was initially put forward by Satoshi Nakamoto in 2008, where he showcased the first application of Bitcoin as a digital currency in a peer-to-peer electronic cash system (Jain et al., 2021; Nakamoto, 2008; Rejeb et al., 2020; Stallone et al., 2021). Since then, academic literature has provided multiple definitions of BCT. Stallone et al. (2021) defines BCT as a "decentralized ledger in which interconnected timestamped blocks of data are stored by maintaining integrity in a distributed peer-to-peer system" (p. 2).

BCT can further be explained as a cryptographic technology or distributed digital database (Ertemel, 2018) where all transactions without intermediaries are stored in a secure chain of blocks (Ertemel, 2018; Zheng et al., 2018). The distributed database or ledger is shared through a peer-to-peer network (Boukis, 2020; Clohessy & Acton, 2019; Ertemel, 2018). Every transaction in the block chain is recorded and timestamped, which is then widely distributed to the peer-to-peer network which maintains the integrity of the data (Nakamoto, 2008; Stallone et al., 2021). Nakamoto (2008) explains that "each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp reinforcing the ones before it" (p. 2), this is demonstrated in Figure 4 which highlights the blockchain structure. Once a transaction is added and timestamped on the blockchain it cannot be altered, further emphasising on the reliability and immutability of the data (Boukis, 2020).
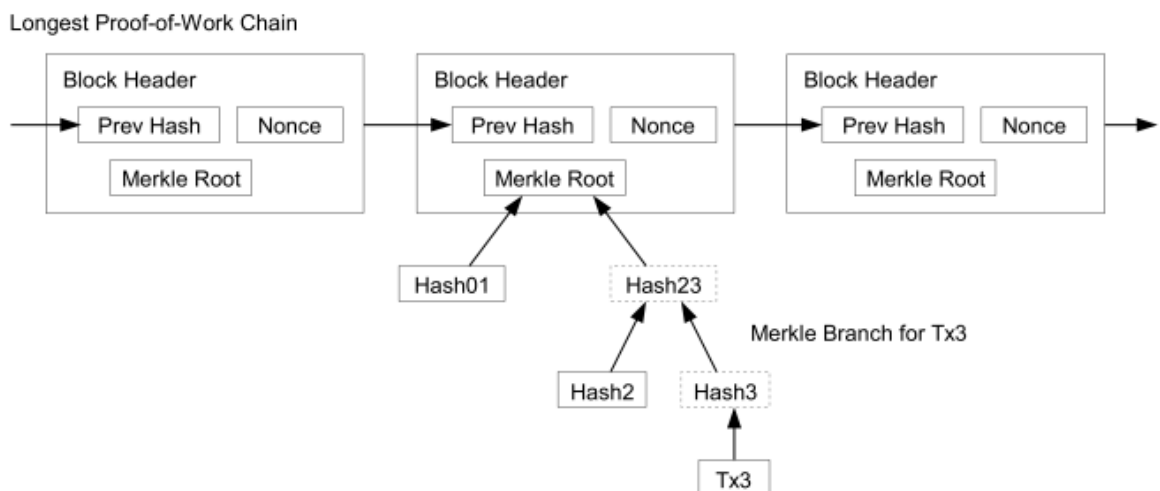
Figure 4 : Blockchain structure (Nakamoto, 2008)

The most important characteristics that emerged from different reviews and exploratory research on BCT are immutability, transparency, programmability, decentralization, consensus, and distributed trust." Given these attributes, BCT has provided a new model in which transactions are performed and value in an online environment is provided (Rejeb et al., 2020). Similarly, Harvey et al. (2018) and Rejeb et al. (2020) add that, due to BCT properties related to security, privacy, reliability, transparency and trust, it has the potential to be implemented across various industries such as marketing, logistics and finance to mention a few.

Although BCT has been spotlighted over the last quarter-century for its wide range of attributes and applications in multiple areas (Gleim & Stevens, 2021; Varadarajan et al., 2020). Stallone et al. (2021) says that "practitioners are moving faster than academia" (p. 7). Literature relating to BCT has been growing, however, it has exposed a challenge in that BCT has not been fully embraced in marketing activities. It requires more rigour in terms of its potential application in marketing activities which will provide a foundation for enhanced transparency which can help build customer trust (Ghose, 2018; Gleim & Stevens, 2021; Harvey et al., 2018; Rejeb et al., 2020). Notwithstanding, increased importance has been placed on marketers to understand the extent of new technologies and how it can be utilised to build trust and customer-centric relationships (Gleim & Stevens, 2021; Hoffman et al., 2022).

2.8   RELEVANCE OF BLOCKCHAIN TECHNOLOGY IN DIGITAL MARKETING

With the shift from physical structures to digital platforms, organisations are increasingly looking at new technologies as a means to interact with the customers (Shaphali Gupta et al., 2020; Jain et al., 2021). Subsequently, BCT has been seen as a fundamental technology for marketing and advertising to achieve this (Brock, 2021). The rise of the internet and the move to new technologies, has changed the way customers behave, how they search for information and engage with organisations (Sunil Gupta & Davin, 2016). Online advertising and digital channels have become an integral medium for brands to reach and promote their goods and services directly to their customer (Boukis, 2020; Rejeb et al., 2020). Similarly, digital channels can aid in the effective amplification of traditional marketing efforts of word of mouth, radio and television (Sunil Gupta & Davin, 2016).

Although online advertising can be seen as an effective communication tool that allows brands to connect and build relationships in a contextual manner (Ghose, 2018; Stallone et al., 2021). The internet has led to the rise of fraudulent activities in online advertising (Jain et al., 2021; Pärssinnen et al., 2018) and trust has become a challenge in the marketing environment (Boukis, 2020; Ertemel, 2018; Ghose, 2018).

Advertising fraud is becoming more prevalent whereby digital advertisements or communication is not being delivered to the audience it is intended for due to automated bots and click fraud (Boukis, 2020; Ghose, 2018). As of 2021 the global cost of online advertising fraud was estimated at 65 billion dollars, which is a significant cost to marketers and organisations (*Ad Fraud - Statistics & Facts*, 2021; Boukis, 2020; Ghose, 2018; Harvey et al., 2018). Consumer information is collected via cookie tracking, the internet and is often accessed through a few intermediaries such as Facebook and Google (Boukis, 2020; Sunil Gupta & Davin, 2016; Harvey et al., 2018; Luo, 2002). BCT is anchored in peer-to-peer communication which disrupts traditional market structures by promoting disintermediation, which will remove third parties who process data (Boukis, 2020; Ghose, 2018) which will result in the reduction of cost, unsolicited information such as spam and will reinforce privacy and transparency (Brock, 2021; Luo, 2002; Rejeb et al., 2020).

Through the removal of intermediates and more visibility of data, BCT can enable marketers to effectively leverage data-driven marketing by analysing, verifying, and controlling where and to whom advertisements are delivered (Ghose, 2018). This will ensure a higher accuracy of advert tracking for ROI, reduce the cost of advertising fraud from automated bots and click fraud (Boukis, 2020; Stallone et al., 2021). The insights gained from understanding the data analytics and customer journey, marketers can develop effective marketing strategies and personalised customer engagement (Shaphali Gupta et al., 2020) which can lead to a organisations competitive advantage (Hoffman et al., 2022).

Also, by improving privacy and security through strengthening data transparency BCT can improve customer relationships (Rejeb et al., 2020). At a foundational level, literature shows that BCT is the trust layer that is missing in online marketing activities (Ertemel, 2018).

Figure 5 below demonstrates how BCT can impact marketing activities by disrupting market structures. Greater transparency can be achieved by removing intermediaries who collect and process data at a cost. The immutable blocks created in the block chain can be shared via the peer-to-peer network which can promote data quality, privacy and security. Subsequently, the enhancement of data quality, can prevent click fraud as the intended audience can be analysed and verified before advertising communication is sent. Improving data quality, transparency, privacy and security can enhance trust in customer relationships (Rejeb et al., 2020).

FIGURE 2 | Impact of blockchain on marketing.
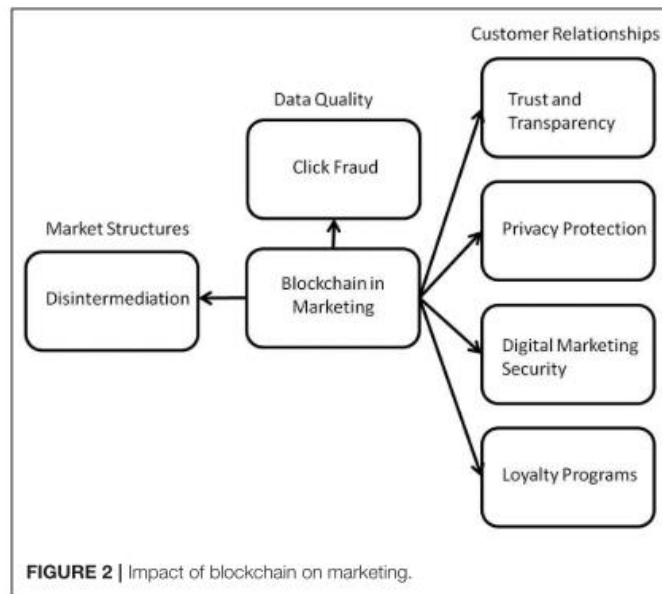
Figure 5 : BCT marketing structure (Rejeb et al., 2020).

2.9 THEORETICAL FRAMEWORK

To better understand the phenomenon of BCT within the digital marketing context, this research will be approached through the theoretical framing of commitment-trust theory (CTT) of relationship marketing (RM). RM has become one of the most significant theoretical foundations for management-related disciplines and business strategy (Eiriz & Wilson, 2006; Palmatier et al., 2006).

This theory aims to contextualise the role of BCT in building trust and fostering customer-centric relationships. The intent is to provide a holistic approach to the

study in terms of understanding but more so to contribute to the development of RM theory pertaining to trust and customer relationships in BCT and digital marketing.

In their seminal paper of CTT, Morgan and Hunt (1994) define relationship marketing as "all marketing activities directed towards establishing, developing and maintaining successful relational exchanges" (p. 22). Trust and commitment are core to RM in building and maintaining successful long-term relationships (Brown et al., 2019; R. M. Morgan & Hunt, 1994; Mukherjee & Nath, 2007; Palmatier et al., 2006). Apart from trust, relationship commitment is one of the key constructs in RM. Morgan and Hunt (1994) define relationship commitment as an "enduring desire to maintain a valued relationship" (p. 23). The premise is that trust influences relationship commitment (Mukherjee & Nath, 2007).

Fundamentally, the underpinning of RM is trust, commitment, communication and successful long-term relationships (Buttle, 1996; Hunt et al., 2006; Lewin & Johnston, 1997; Luo, 2002; Luo & Donthu, 2007; Möller & Halinen, 2000; R. M. Morgan & Hunt, 1994; Mukherjee & Nath, 2007). This is also the essence of BCT through its feature of distributed trust (Ertemel, 2018; Rejeb et al., 2020).

Hunt et al. (2006) and Luo, (2002) further note that trust is the cornerstone in building relationships in the digital age. RM is particularly relevant in the marketing environment where trust is a challenge due the increase of consumer data collected via the internet, resulting in advertising fraud (Boukis, 2020; Ertemel, 2018; Ghose, 2018; Luo, 2002).

2.10 CONCLUSION

The intent of the literature review is to examine all the existing research regarding the role and application of BCT in digital marketing.

The research indicates that there is substantial conceptual literature highlighting BCT as an indispensable technology in MarTech, with a fundamental requirement placed on marketers to understand this technology to develop data-driven marketing activities which can result in competitive advantage.

Little attention has been given to its practical application in the digital marketing context (Cvitanović, 2018; Gleim & Stevens, 2021; Shaphali Gupta et al., 2022; Hoffman et al., 2022; Varadarajan et al., 2020). Therefore, highlighting a gap and the need to further develop and contribute to the body of knowledge.

In addition, the literature also highlights the important role marketing has in not only helping organisations communicate and engage with customers but is imperative for building trust, entrenching relationships and providing a competitive advantage (Brown et ., 2019; urphy et al., 2005).

3 RESEARCH QUESTIONS

The research questions set out in this study has been informed by the research problem, objective as well as available literature pertaining to the subject matter. The intent of the research study was to answer three specific questions linked to the overarching research objective. The research questions and following interview guide are derived from the literature.

The overarching research question for this study is **what role does the application of BCT have in digital marketing in building trust to enhance customer-centric relationships?**

Linked to overarching question and objective of the study, the following research questions were formulated to explore the objective of the research.

Research question one: **What role does BCT play in digital marketing?**
According to the literature, new and emerging technologies including MarTech is seen as ambiguous and not widely understood by marketers (Gleim & Stevens, 2021; Rejeb et al., 2020). BCT is not fully embraced in marketing activities (Stallone et al., 2021). Therefore, the aim of this research question was to gain a deeper understanding of BCT, its role and potential factors that influence its adoption and implementation within digital marketing and advertising.

Research question two: **How can BCT be applied in digital marketing?**
There is limited empirical evidence to showcase the application if BCT in digital marketing activities. Articles published to date are limited to a few systematic reviews and conceptual papers (Boukis, 2020; Gleim & Stevens, 2021; Jain et al., 2021; Rejeb et al., 2020). The objective of research question two is to establish where and how BCT can be applied to digital marketing. This is intended to build veracity which can be used to close the academic gap from being less conceptual and more practical.

Research question three: **What are the factors that build trust and enhance customer-centric relationships?**

The objective of research question three is to understand the various factors that build trust and enhance customer-centric relationships in relation to the attributes of BCT and CTT. Moreover, the secondary objective is to understand the value BCT could provide customers, organisations, the industry and to a greater extend, academia

The chapter to follow will unpack the research methodology which includes the research strategy, design, sampling, collection instrument, analysis, and ethical considerations.

4 RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter discusses the research methodology, design and approach used in this study. The study applied a qualitative methodology with an exploratory approach to the design, sampling, data gathering and analysis. Primary data was collected through a semi-structured interview conducted virtually with top level management and subject matter experts.

Furthermore, at the end of this chapter the quality controls, limitations and ethical considerations will be presented.

4.2 RESEARCH METHODOLOGY AND DESIGN

The application of BCT within marketing has mainly taken place through academic conceptual papers and systematic reviews which have not provided sufficient insights into its practical implementation (Jain et al., 2021; Stallone et al., 2021). The research problem eludes to a limitation in the availability of literature related to the application of BCT within the marketing and advertising industries, therefore an exploratory research design was the most suitable for the purposes of this study (Salkind, 2010).

Exploratory research is commonly defined as an approach that is concerned with social inquiries in which the objective is to build or generate theory when there is very little existing knowledge on a specific subject matter (Davies, 2006). According to Saunders and Lewis (2018), an advantage of an exploratory research design is that it is flexible and adaptable to change depending on the data results and insights that occur. Based on the research objective, these arguments are in support of the researcher's approach to utilise an exploratory research design.

The research study does not consist of any hypotheses or numerical testing, which rules out of the possibility of adopting a quantitative methodology (Cassell et al., 2018). By selecting a qualitative methodology in conjunction with an exploratory research design, the researcher was able to gather data in a non-numerical format,

which allowed for greater opportunity to ask open-ended questions to find clues that would provide better insights and clarity on the research problem (Given, 2008; Saunders & Lewis, 2018). The selection of a qualitative research methodology is also further supported by it suitability for the interpretivist nature of the research question (Kankam, 2019).

4.3 PHILOSOPHY

From the research problem and literature review outlined thus far regarding the multiple facets that fall within the BCT concept, it was assumed that the solution cannot be derived from a singular approach. Therefore, from a philosophy perspective, an epistemological view was applied (Saunders & Lewis, 2018).

Aligned to this, an interpretivist paradigm was the most suitable for this study as it focused on meaning associated with various social phenomena from events, places, behaviours, and interactions (Given, 2008). Similarly, due to the practical nature of the interpretivist paradigm, it allowed for understanding of the subject matter within the BCT and digital marketing context (Kankam, 2019).

Over the years BCT has been receiving increased attention, however, it is still not well understood, especially within the marketing and advertising industries (Harvey et al., 2018; Jain et al., 2021). Therefore, through open-ended questions, the researcher is able to gain insights that would provide clarity on how the phenomena of BCT is understood and can be applied in digital marketing (Given, 2008; Saunders & Lewis, 2018).

4.4 APPROACH SELECTED

An inductive approach to theory building was selected as the intent was to gain an understanding from the meanings attach to certain social phenomena. The insight obtained from this, the researcher was able to contribute the findings to building and developing theory propositions (Saunders & Lewis, 2018).

Furthermore, inductive reasoning was used in the qualitative research to understand and gain knowledge to establish a relationship between empirical data and theory (Given, 2008). The generalisations derived from observations or empirical data was able to produce reliable and valid findings which were used to develop theory (Given, 2008; Thomas, 2006). Given (2008) also states that "Inductive reasoning is of particular relevance in qualitative approaches that are used to extend existing theory into a new setting" (p. 2).

Subsequently, there has been an increased requirement to add to the body of knowledge with regard to the application of BCT in marketing and how it can be utilised to enhance customer-centric relationships (Rejeb et al., 2020).

Through the research analysis, the researcher was able to further build onto the theory of relationship marketing by means of observation an empirical data gathered through research and analysis of this academic report.

4.5 METHODOLOGICAL CHOICES

A single technique or mono method approach whereby the researcher made use of one type of research method. Within the boundaries of qualitative research, this was in a textual form (Molina-Azorin et al., 2010). The benefit of a qualitative mono method, such as a semi-structured questionnaire which was used for this study allowed the researcher to focus the study to ensure that the research objectives were met (Saunders & Lewis, 2018).

In addition, semi-structured interviews provided the ability to gather data about the specific topic of the role and application of BCT within digital marketing and generated empirical data which contributed to theory building (Saunders & Lewis, 2018).

This was particularly pertinent within BCT as its application in marketing was limited to conceptual papers and systematic reviews (Jain et al., 2021; Stallone et al., 2021).

4.6 RESEARCH STRATEGY

Aligned to a qualitative research methodology and interpretivist paradigm, a phenomenological approach was the most appropriate research strategy. Phenomenology aims to gather the views of several participants with the objective to understand their common experiences as it is lived (Creswell et al., 2007; Laverty, 2003). There are two main types of phenomenology, namely, descriptive (transcendental phenomenology) and interpretative (hermeneutic phenomenology) (Creswell et al., 2007; Dibley et al., 2020; Sloan & Bowe, 2014; Usher & Jackson, 2014).

For this study, the researcher employed a hermeneutic phenomenology research approach. The researcher was interested in the context, various influencing factors and experiences lived by the participants (Dibley et al., 2020; Sloan & Bowe, 2014). This was fundamental to the research as there is no overarching view of BCT within digital marketing and advertising.

Moreover, hermeneutic phenomenology required the application of an interpretive process whereby contextual experiences were interpreted for the researcher to understand their meaning and what gave rise to particular actions (Creswell et al., 2007; Eatough & Smith, 2017). This assisted the researcher in solving the research problem within the context of this study.

4.7 TIME HORIZON

As a result of the given time constraints, a cross-sectional time horizon was selected. This allowed the researcher to study the phenomena of BCT at a specific point in time (Saunders & Lewis, 2018).

4.8 POPULATION

Saunders and Lewis (2018) defines the population of a study as "the complete set of group members" (p. 138). The initial sample population for this study was all advertising and marketing agencies in South Africa. However, due to the limited

exposure of BCT within the South African context, the researcher had to extend the parameters of the population to include global advertising and marketing agencies.

Due to the sheer size of the industry and factors related to various specialisations, the population was narrowed down to focus on agencies that specifically specialise in digital advertising and marketing agencies. The rationale behind this selection was that digital advertising and marketing agencies work with a diverse range of organisations and brands who employ them to develop and execute campaigns that make use of digital media methods to inform, communicate and engage customers about their goods and services (Sunil Gupta & Davin, 2016). In addition, digital marketing is fast becoming the preferred channel over traditional marketing as it has more targeted approach and has the ability to reach a wider audience (Shankar et al., 2022; Stallone et al., 2021).

4.9   UNIT OF ANALYSIS

The unit of analysis for this research study was the perception of top-level management and leads within digital advertising and marketing agencies, as they were in a position to provide valuable and unique insights based of their role and experiences working in an ever changing and competitive digital environment (Kannan & Hongshuang, 2017). Subject matter experts who specialise in MarTech were also utilised for the purpose of data validity and triangulation of the research findings. Furthermore, subject matter experts were also utilised as a means of enriching the research findings (Saunders & Lewis, 2018).

4.10 SAMPLING METHOD AND SIZE

Given (2008) states that making decisions about the sample is central to the study's methodological considerations. Due to the fact that there was no sampling frame whereby a list could be obtained from the population, a purposive non-probability sampling technique was utilised (Saunders & Lewis, 2018).

According to Saunders and Lewis (2018) purposive sampling is used when you need to interpret a sampling context so you can make logical generalisations that can

represent a cross-section of the population. Digital advertising and marketing agencies vary in size and capabilities which therefore required the researcher to apply expert knowledge of the population to identify the characteristics and criteria which needed to be represented in the sample (Lavrakas, 2008)

The sample was obtained through the researcher's network as well as the use of social media platforms such as LinkedIn. As the research developed, the researcher also employed a snowballing sampling technique due to the challenges faced in finding suitable participants with relevant expertise to interview. These participants were identified and recommended by participants the researcher previously interviewed which was aligned to the sampling criteria (Saunders & Lewis, 2018).

Furthermore, the researcher approached both digital marketing agencies and subject matter experts in this research study. The criteria consists of the researcher approaching digital marketing and advertising agencies who specialised in one or more of the following types of digital marketing activities:

- Digital and content strategy
- Outbound/Inbound marketing
- Search engine optimisation (SEO)
- Pay-per-click (PPC)
- Social media marketing
- Content marketing
- Email marketing
- Mobile marketing
- Marketing analytics
- Affiliate marketing
- Web 3.0

Similarly, for subject matter experts the criteria will be those with MarTech and working experience and digital marketing.

The general consensus in academia is that data should be collected to point of saturation whereby no new data or themes can be observed (Guest et al., 2006).

According to Boddy (2016) and Creswell et al. (2007), if the sample population is comparative, then data saturation will occur with a sample size between 12-18. This is also aligned to the appropriate sample size within a Phenomenology research design (Creswell et al., 2007).

To this end, the researcher reached saturation at 12 interviews which consisted of four subject matter experts and 8 participants.

4.11 MEASUREMENT INSTRUMENT

Warren (2016) argues that qualitative interviewing is derived from conversation, it is about the researchers' asking questions and listening with the motivation to derive interpretations from participants.

To gather insights to better understand the phenomenon set out in the research problem in a manner that will allow participants to speak candidly, the researcher made use of an interview guide as the measurement instrument. The questions were open-ended which led participants to tell their own stories about their perception of BCT within the digital and marketing context (Warren, 2016). The researcher also emphasised importance that the interview guide be framed in a way that is logical and sets out to meet the research objectives and the answers research question (Saunders & Lewis, 2018).

The interview guide in Appendix 9 was designed in a semi-structured format for the purpose of gathering insights aligned to a set of themes (Saunders & Lewis, 2018) which was derived from the literature review in chapter 3 as means to respond to the overarching question set out in chapter 1.

Aligned to the exploratory nature of the research study, the questions were open-ended to allow the participants to share their reality and perception of the role and application of BCT within digital marketing. Through this, the researcher was able to deepen the conversation and subsequently the insights uncovered.

To test the interview guide and questions set out in Appendix 9 , the researcher conducted pilot interviews with digital marketing leads and a few subject matter

experts with the aim of testing the interview guide to ensure understanding, relevance of the questions to answer the overarching research problem as well as validity and reliability is present (Saunders & Lewis, 2018). The researcher found that the initial guide designed was sufficient to continue with the remainder of the data gathering process without any adjustments.

4.12 DATA GATHERING PROCESS

Data collected was through two methods, the primary method of collection was in the form of semi-structured interviews and the second method was through the collection of secondary data from Stats SA, Statista, industry marketing and advertising reports.

Saunders and Lewis (2018) highlight that semi-structured interview is a method of collecting data in which the researcher asks about predetermined questions aligned to specific themes. The researcher may choose to exclude some topics and questions and ask additional questions where relevant. Semi-structured interviews as a primary collection method was beneficial as it allowed the researcher to gather data for theory development and gain insights to a participants' experience (Saunders & Lewis, 2018).

The primary data collected was through 12 virtual interviews via online platforms such as Zoom and Microsoft Teams. The researcher did provide the option of conducting the interviews face-to-face, however due the location of some participants and comfort level protocols when it comes to COVID-19, virtual interviews was the most appropriate method for collecting primary data. The benefit of conducting the interviews via an online platform that it allowed the researcher to record and transcribe the interviews at the same time with the aid of a purchased software called Otter.ai. This provided a measurement of quality and control.

Furthermore, consent was requested from the participants to record the interview prior to asking any questions from the guide. The researcher was explicit in stating that the recording will be for the purpose of data analysis only. The average interview time frame ranged from 30 – 60 minutes.

In addition, due to the ambiguous concept of the subject matter, the researcher ensured that the research guide was shared with the participants prior to interview which provided the background, context, research objective as well as research questions. This allowed the participants to familiarise and prepare themselves for the interview. The researcher found that this provided the participants with a level of comfort that then allowed them to share their views and experiences honestly.

The collection of the data for participants and subject matter experts reached saturation at 12 interviews, where no new themes and insights were observed in the data (Guest et al., 2006).

Moreover, a secondary data collection method was employed by using pre-existing data (Given, 2008) from sources such as Stats SA, Statista, industry marketing and advertising reports from the CMO survey and GWI to name a few. These were used to enrich and support the primary data and arguments within the research report (Saunders & Lewis, 2018).

Finally, from a storage perspective, all documentation was password protected and saved onto an online google drive. All documentation has been saved without any name or organisation identifiers to ensure confidentiality of participants.

4.13 ANALYSIS APPROACH

The audio recordings were transcribed via a software tool, Otter.ai. The data received from the interviews underwent an inductive analysis approach which aimed to transcribe and sort the data into codes, categories and reoccurring themes (Given, 2008).

In addition, a thematic analysis was applied as part of the inductive approach to identify, organise and analyse re-occurring patterns in the qualitative data set with the aim of discovering key themes and patterns across the data (Braun & Clarke, 2006, 2012). Furthermore, thematic analysis allows the researcher to make sense of the shared meanings and experiences from the participants in order to answer the overarching research question (Braun & Clarke, 2012). To ensure a systematic process was followed, the researcher made use of the Braun and Clark six step

framework for thematic analysis (Maguire & Delahunt, 2017) which included the following:

- **Step 1:** becoming familiar with the data
- **Step 2:** Generating of codes
- **Step 3:** Generating themes
- **Step 4**: Reviewing themes
- **Step 5:** Naming and defining themes
- **Step 6:** Writing up on findings

It must also be noted that the data analysis has been an iterative process, whereby the researcher made a set of initial codes and themes, then went back to review to clean and define the final themes that were the most suitable to answer the research question.

Lastly, a qualitative data analysis software (CAQDAS) ATLAS.ti was used to ensure the consistent analysis of the data (Saunders & Lewis, 2018). This process included listening to the audio recordings while reading the transcriptions for the purpose of editing the data to guarantee consistency, which is critical in qualitative analysis (Saunders & Lewis, 2018). Once the researcher was satisfied with the quality of the transcriptions, the researcher extracted codes and assigned them to participant responses. The codes were organised into categories and then into re-occurring themes based on shared meaning and patterns (Saunders & Lewis, 2018).

As part of the data analysis, the researcher made use of in vivo coding to ensure that the concepts and essence of the participants own words was captured. These included short paragraphs and phrases from the transcribed data (Gibbs, 2018; Given, 2008).

4.14 QUALITY CONTROLS

Morse et al. (2002) asserts that without rigour, research is worthless and loses its utility. That is why was critical to ensure reliability and trustworthiness in all search methods. The criteria to demonstrate qualitative rigour can be assessed through four

aspects of dependability, credibility, transferability and confirmability/authenticity (Morse et al., 2002; Saunders & Lewis, 2018). Computing software such as ATLAS.ti assured that dependability was attained within the interpretivist approach in that all changes in the research was recorded (Saunders & Lewis, 2018).

To guarantee validity and credibility of the search findings, data triangulation through primary and secondary data as well as subject-matter expects within BCT was implemented (Saunders & Lewis, 2018). The researcher also ensured to adhere to strict protocols set out in the research approach.

Moreover, the researcher was mindful of any preconceived biases and research expectations that could have hindered the credibility of the study.

To further ensure data quality, the researcher exercised the following:
- Obtained ethical clearance from the Gordon Institute of Business Science (GIBS) prior to data collection.

- Requested signed consent prior to the interview from all participants.

- Shared the interviewed guide prior to the interview to ensure that participants had the time to prepare and ensure reliability of the data received.

- Interviews were recorded and transcribed verbatim with the use of Otter.ai.

- The researcher was intentional to ensure that all participants, including subject matter experts had a working knowledge of MarTech and digital marketing. This ensured reliability and credibility of the data collected.

4.14 ETHICAL CONSIDERATIONS

Various ethical considerations was taken into account during the course of the research study. The researcher ensured to obtain ethical clearance from the Gordon Institute of Business Science (GIBS), see Appendix 12 prior to data collection. Similarly, the researcher obtained signed consent from participants prior to the

interview as well as assure participants that confidentially of the interview will be maintained with no name and company identifiers revealed at any point.

4.15 RESEARCH LIMITATIONS

Due to the constraints of the research topic and BCT still being a relatively new technology with its application outside of crypto currencies the found the following limitations within the research study:

- Some participants had limited or no first-hand experience with BCT within digital marketing apart from conceptual and theoretical engagements.

- Due to the researcher sharing the interview guide prior to the interview, expectancy bias could have been introduced on the part of the participant in that they could have provided answers they thought the researcher wanted to hear, this is similar to the Hawthorne effect (James & Vo, 2010).

- Inherent researcher bias in qualitative research (Saunders & Lewis, 2018).

- Sampling bias due to the parameters of the research only focusing on digital marketing and advising agencies. This could affect the validity and transferability of the search to the broader industry specialisations

- The size of the data collected could not be sufficient to apply transferability to the larger context of BCT within digital marketing and its ability to enhance trust within customer-centric relationships (Given, 2008).

- One of the key limitations of the study was unintentional gender bias due to the employment of a snowballing sampling technique. All the participants in the research study were male. This could potentially impact the study with regard to an alternative perspective and experience.

The next chapter in the research report will unpack the research findings and insights acquired based on the data analysis which was conducted.

5 RESEARCH FINDINGS

5.1 INTRODUCTION

In chapter 5, the researcher will present the key findings from the data collected using semi-structured interviews and analysed via a thematic analysis. The 57 unique codes related to the overarching research question was generated from the 12 interviews analysed, which was then categorised into themes (see Appendix 10). From the categories, emerging themes were then developed aligned to the overarching research question, which will be discussed in this findings chapter.

In addition, a description of the population sample will be presented along with overview of the sampling criteria to give the reader context on who the data relates too.

5.2 PRESENTATION OF FINDINGS

Marketing technologies such as BCT are reimagining the way brands and customers interact with one another along with the perceived value exchange. This has left marketers with the challenge of understanding, adopting and implementing these technologies (Gleim & Stevens, 2021; Rejeb et al., 2020).

To this end, the research questions sought to gain a better understanding of role BCT plays in digital marketing, how can it be applied, what barriers are influencing low adoption and implementation and more importantly understand the factors that build trust to enhance customer-centric relationships.

From the thematic analysis which was applied as part the inductive approach to identify, organise and analyse the re-occurring patterns in the qualitative data set (Braun & Clarke, 2006, 2012).The findings from this analysis aim to close this gap by discussing the emerging themes that have occurred from codes and categories to answer the research questions. Linking to the overarching research question of "what role does the application of BCT have in digital marketing in building trust to enhance customer-centric relationships."

The researcher aligned the themes derived from the categories to the three main research questions:

RQ 1: What role does BCT play in digital marketing?

RQ 2: How can BCT be applied digital marketing?

RQ 3: What are the factors that build trust and enhance customer-centric relationships?

Each research question will be analysed according to the emergent themes that have occurred from the codes and categories. Figure 6 below provides an outline of how the categories and themes have been mapped back to the research questions.
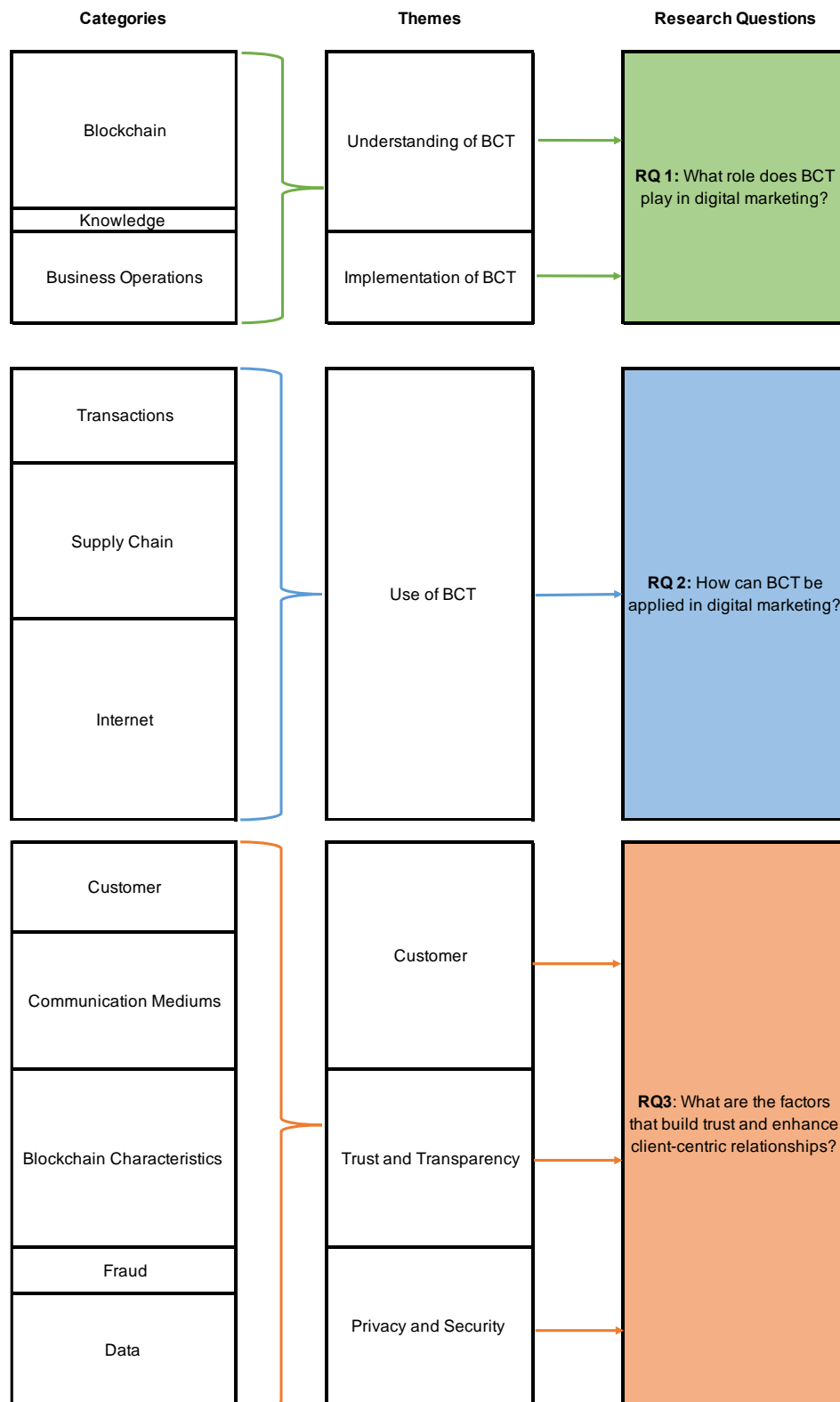
Figure 6: Categories and themes derived from codes and linked to research questions.

5.3 SAMPLE DESCRIPTION

Table 1 gives and overview of the sample which was interviewed in the research study. To protect the confidentiality of the participants the researcher has given each of the participants their own unique code and company details have been omitted. To demonstrate that the sample has met the criteria set out in chapter 4, the researcher has provided the titles and industry in which the participants operate in. This intention of this was to highlight validity and credibility of the sample and subsequent data collected.

It must be noted that global participants who were interviewed were also posed questions to bring the relevance of the study back to a South African context where possible.

Moreover, as the research progressed, the researcher experienced challenges of gathering sufficient data samples, therefore the researcher had to employ a snowball sampling technique to identify and gather additional participants to be interviewed in the study. Consequently, an unintentional gender bias emerged in that the entire research sample consisted of male participants. This could potentially impact the study regarding an alternative perspective and experience. As a mitigating factor, the composition of the interview questions was designed in such a way that did not lend itself to any gender viewpoint on the subject matter.

While the researcher attempted to obtain some level of heterogeneity within the sample to gather diverse characteristics Saunders and Lewis, (2018); Creswell et al. (2007), Given (2008), and Laverty (2003) argued that it was more important understand relevance and their common experiences as it is lived.

Table 1 also provides a view of the subject matter experts interviewed which formed part of the data validity and triangulation analysis (Saunders & Lewis, 2018).

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Table 1: Description of research participants and subject matter experts

	Paricipant code	Industry	Location	Title	Age	Gender
Interviewees	P001	Advertising	Africa and Middle East	South African Head of Regional Data	Aged between 32 - 45	Male
	P002	Advertising	South Africa	Digital and Technology Lead		
	P003	Advertising	South Africa	Group Executive Director		
	P004	Advertising	Netherlands	Regional Director		
	P005	Digital Marekting	South Africa	Head of Business Intelligence		
	P006	Advertising	South Africa	Head of Creative Technology		
	P007	Advertising	South Africa	Founder and CEO		
	P008	Advertising	South Africa	Managing Director		
Subject Matter Experts	P009	MarTech	South Africa	Blockchain Expert		
	P010	Media	South Africa	New Business Development Lead for South Africa		
	P011	FinTech	South Africa	Director		
	P012	Media	South Africa	Data Science Head		

5.4 DATA SATURATION

According to Creswell et al. (2007), Guest et al. (2006), Saunders and Lewis (2018), data saturation is reached when no new themes or data can be observed during the data collection process. Any data furthered collected would be of little to no value. The graph in Figure 7 demonstrates that most of the codes were generated within the first four interview analysis and data saturation being reached by interview nine.
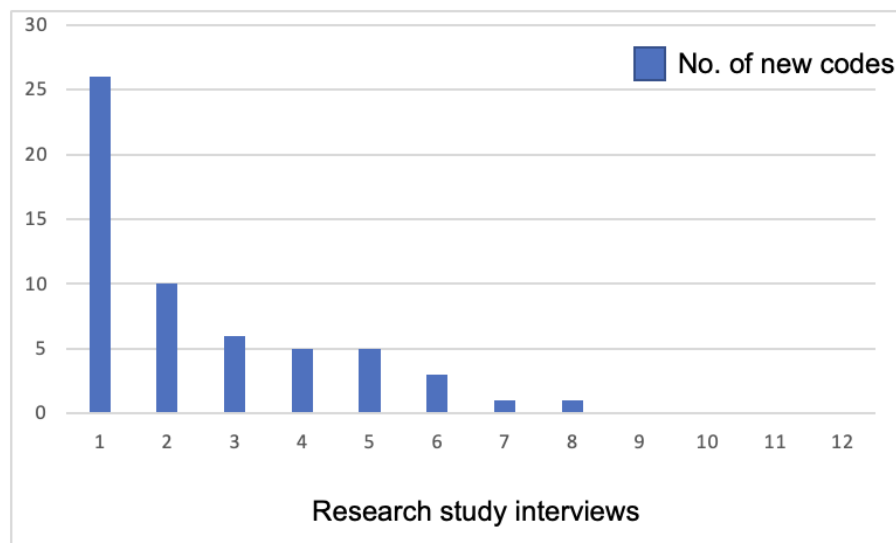
Figure 7: Data saturation graph

5.5 FREQUENCY TABLE

Table 2 in appendix 11 highlights frequency analysis containing codes which informed the emerging categories and themes. A summary of the word frequency is shown in the word cloud below in Figure 8.

Figure 8: Word cloud frequency of mentions aligned to frequency table 2.

5.6 RESULTS FOR RESEARCH QUESTION ONE

RQ 1: what role does BCT play in digital marketing?
The aim of this research question was to gain a deeper understanding of BCT, its role and potential factors that influence its adoption and implementation within digital marketing and advertising. Due to new and emerging technologies being ambiguous, it was essential for the researcher to first gauge the participants comprehension levels of the subject matter. Once this was established, the researcher could then deep drive into the extent the role BCT could have in digital marketing and advertising.

Since the study was exploratory with an inductive approach, the researcher asked participants open-ended questions that could provide meanings and insights that could be used to extend and further develop theory (Given, 2008; Saunders & Lewis, 2018).

Table 3 below presents an overview of the results related to research question one, presenting categories and subsequent themes.

Table 3: Category mapping to themes, linked to research question one

Category	Theme	Sub- Theme
Blockchain Knowledge	Understanding of BCT	
Business operation	Implementation of BCT	Adoption of BCT
		Changes to Business Operations

The results that have emerged from the data was that participants had a good comprehension of BCT which enabled them to provide contextual insights of BCT within the marketing and advertising industry. This also included the barriers for adoption and implementation. The data revealed that even though participants were aware of the rationale behind the low adoption and implementation, none provided recommendations on how these barriers could be overcome.

5.6.1 UNDERSTANDING OF BCT

All participants were asked to provide their understanding of BCT to gauge their level of knowledge on the subject matter. The findings demonstrated that all the participants had a significantly good understanding of the subject matter. Although the participants provided various interpretations of BCT, the overarching view was that BCT is a ledger that allows for the storing of data in a decentralised manner across a peer-to-peer network.

> *P010: "My understanding of blockchain is a standard decentralised ledger. Instead of having all your data on one server, owned by one person, it's now across multiple servers and owned by no one or owned by everyone in the*

blockchain. And what that does is that it makes it completely transparent. But on top of that, it's also immutable. It cannot be manipulated, because as soon as it does, everyone can see that someone has tried to manipulate the data."

P09: "Blockchain technology really is just very simple technology that is now used to be applied to enhancing and innovating the centralised internet. Blockchain allows internet to be decentralised, which means there could be many, many players creating their own communities, and having their own what I call walled gardens."

P004: "Blockchain is a technology that allows us to process data in a decentralised way."

P011: "Blockchain technology is storing of data, in a decentralised fashion."

P007: "Blockchain is essentially just a public register of transactions that are secured by a network of computers."

P012: "It's a system where it's holding the information, the transaction at a unique transaction, distributed level. So each and every transaction has got a unique code. And that unique code can't be duplicated."

P006: "It's a shared cloud and computing process that decentralises whatever engagements, activities or experienced people would have, which is pretty awesome, because as soon as it becomes decentralized, it's not limited to one individual monopoly."

5.6.2   IMPLEMENTATION OF BCT

It was evident in the data analysis that the implementation of BCT within digital marketing and advertising agencies in South Africa is quite far behind compared to other countries. Participant P003 stated:

P003: "We're adopting slower. And we're generally adopting global players that have got some experience. So, it's not being adopted very quickly."

Some participants and subject matter experts suggested that the reason for low implementation is due to various factors, such as education or understanding of the technology.

> *P007: "The main reason I think is that clients are not ready to do it yet. And agencies are not bold enough to push the ideas, but I also say that I don't think they're bold enough because I don't think they necessarily have built up the knowledge that they need to have."*
>
> *P009: "They don't know what to do with it."*

A few participants highlighted that there was no first-hand exposure of its use. Furthermore, P004 raised that BCT has not penetrated the adverting industry.

> *P004 "As of yet, blockchain hasn't infiltrated the advertising space that I'm aware of."*

Also, changes to the business model and resourcing were also seen as a barrier for implementation.

> *P003: "Whether you're a client resourcing this within your own business, or whether you're an agency, you need to factor in that resource and the time to be able to do it. So, work with the tools, adopt them, make the optimisations across the organisation, that all takes time and money. We're not there yet. And I'm not aware of any media marketing agency, that is."*

5.6.2.1 ADOPTION OF BCT

Furthermore, participants acknowledged that there is definite potential for BCT to be implemented in digital marketing and advertising agencies.

> *P001: "Blockchain is going to allow us to do better, be a little more transparent and be more attributable."*

However, it was clear from the data analysis that education and knowledge was a significant barrier for both agencies and the clients to adopt BCT.

> *P003: "There's a few barriers, technology understanding. And I do think that it's largely education as well that is probably the biggest barrier at this point. Even for people in the agency."*
>
> *P008: "Lack of knowledge."*

P003: "There's a few barriers, technology understanding. And I do think that it's largely education as well that is probably the biggest barrier at this point. Even for people in the agency."

P010: "Clients weren't educated."

P002: "Education is a big thing. It's education, and application."

P012: "We must confess our ignorance, in most instances, that there is this uninformed resistance. In other words, people are against it, but they're not necessarily well versed with intricacies of what it entails."

P006: "It's also very much about understanding and so education."

Another participant made a point to raise that infrastructure was not a main reason for low adoption and supported previous participants who mentioned that education was biggest determinant.

P001: "So it's not a matter of infrastructure. It is a matter of knowledge an education."

Although, education and knowledge demonstrate a major influence on the adoption of BCT within digital marketing and advertising, one of the participants who attempted to implement BCT within digital marketing argued that education was not the only problem. People did not see the value in implementing the technology.

P010: "The tech worked; the tech solved the problem. But people were not incentivised to use the tech. And I think for a number of reasons. One is, as I said that there wasn't a huge financial incentive to do it."

5.6.2.2 CHANGES TO BUSINESS OPERATIONS

Another noteworthy insight which has emerged to support the findings of low BCT implementation is its impact to business operation.

P003: "So what will happen ultimately, is that you need to redesign the way that you do business and the way that you then process these things, because

it's a new layer you didn't have before. Whether you're a client resourcing this within your own business, or whether you're an agency, you need to factor in that resource and the time to be able to do it. So, work with the tools, adopt them, make the optimizations across the organisation, that all takes time and money.

Participants noted that digital transformation requires money, a restructure to the current business model and upskilling of capabilities.

P007: "All old business models are very hard things to kind of to get away from."

P005: "Combination of unsure and hesitant to flip the switch on that model, because I think there's a direct impact to their bottom line."

P004: "My experience of businesses and not just clients, just any business, including agencies is we're battling we're battling to transform with the technology."

Most agencies are not willing to invest in digital transformation now. Two participants said it will just take too much energy and resourcing.

P002: "Education and resource."

P012: "It requires a lot of energy."

5.7 SUMMARY FINDINGS FROM RESEARCH ONE

The main findings which were revealed in research question one, was that all participants had a good understanding of BCT which allowed them to delve deep and engage with subject matter in a meaningful way. This also enabled for rich insights as the participants came from a perspective of knowledge and expertise which could then be applied to the industry specific questions and the subsequent data analysis.

Moreover, the data analysis highlighted that the adoption and implementation of BCT in digital marketing, advertising as well as with brands encountered various barriers. This was largely attributed to the education and knowledge on the subject matter,

limited exposure to BCT outside of cryptocurrency and ultimately changes to the business operation which agencies are not equipped for the digital transformation yet. Resourcing and capabilities are still to be developed.

The insights gained from this question demonstrated that the participants were able to identify the barriers affecting adoption and implementation, however, they did not vocalise how these barriers could be overcome to accelerate change. Nor was there enough interest or incentive for marketers to accelerate the digital transformation process.

5.8 RESULTS FOR RESEARCH QUESTION TWO

RQ 2: How can BCT be applied in digital marketing?
The objective of research question two serves to establish where and how BCT can be applied to digital marketing. This is intended to build credibility which can be used to close the academic gap from being less conceptual and more practical.
Table 4 below presents an overview of the results related to research question two, presenting categories and subsequent themes.

Table 4: Category mapping to themes, linked to research question two.

Category	Theme
Transactions	The Use of BCT
Supply Chain	
Internet	

The data from the research findings found that the application of BCT within marketing and advertising has many use cases which can be applied across the entire adverting supply chain. Moreover, the data revealed that the exposure to and use of BCT was not widely implemented in the South African context and predominantly featured globally.

5.8.1 THE USE OF BCT

BCT and its associated attributes have been cited in academia to have the potential to be integrated and applied across various industries (Risius & Spohrer, 2017; Tang et al., 2020). Almost all the participants expressed strong views surrounding the use of BCT in digital marketing and advertising. Participants provided views on both their first hand-experience using BCT within digital marketing and advertising, and theoretical perspectives concerning the possible applications of BCT, based on their knowledge and industry expertise.

The results that have emerged from the data analysis brought attention to the use of BCT across several areas which have the potential to disrupt the industry.

> *P003: "Blockchain technology itself, has the scope the use is really wide. And I think slowly, industry, by industry, people are finding as we go the use cases for it."*

Two of the participants mentioned BCT's application in the advertising supply chain, where data storage, authentication, and verification is required.

> **P003**: "This kind of application could be applied across anywhere where you need to start surface multiple data points that are sitting in a fragmented environment, and then able to say, okay, what's blockchains role to verify it, make it in a situation where it can't be manipulated."

> **P002**: "So where blockchain has come into play quite nicely is that it creates log level data on the decentralised system. So we can actually vet every single impression at any granular level."

> **P002**: "Data is the product, where blockchain helps us accelerate is authentication of that data."

One of the participants supported P002's views on where he has experienced the application of BCT.

> **P010**: "This is the only application where I've seen blockchain has been applied."

BCT is identified as a technology that strengthens and verifies data ownership.

P006: "Within the marketing context would be intellectual property. So, if you consider the fact that using blockchain and a public ledger, you can lock down and publicise the ownership and authenticity of intellectual property, like who owns an idea that ends up becoming a new product."

P007: "Blockchain represents the biggest change in ownership that we've ever we've seen in our lifetimes."

P009: "Proof of ownership.. A brand create a limited edition kit, and NFT it, sell the NFT and people go in store and collect the item. There are so many applications."

One of the more notable applications surrounding data security and the control it provides the customer, which has further explored in research question three.

P004: "If we follow the thought that more people become a lot more data savvy, we understand what their personal data means to them, and how it's being utilised and wanting to understand how it's being utilised. Then all of a sudden, I think it's feasible that in a future where blockchain enables me to not only control my data but also then its distribution… I think from a personal perspective, it starts putting a lot of the control in the consumers hand."

One of the participants mentioned that security can significantly shift the way data is collected, processed, and verified.

P005: "The auditability of the data is a game changer."

However, it requires someone who understands both the industry and the technology to build a platform that can be scaled for wider use.

P004: "I can definitely see applications for blockchain in buying data security etc. But you need someone to build a platform that can scale and is widely adapted."

Data analytics based on transactions can enable organisations and brands to contextualise and target their marketing campaigns.

P012: "Marketing analytics based on transactions. Because transactions inform the marketing strategy based on the behaviour of a customer. The

blockchains relevance in that context is that it identifies the who the customers are. And it's able to form a unique relationship between the company and the employer. They are able to do a targeted campaign based on the transaction because it exposes the behaviour of that customer."

P009: "You can apply that into campaigns, trying to know more about your customer. So blockchain and all of that from a KYC perspective."

Finally, BCT in marketing is further propelled within the context of Web 3.0 and its future application.

P004: "I think the web 3.0 stuff is generally where I see a lot of the applications"

P005: "I think definitely the investigation of blockchain from a public and consumer perspective, is, I believe, very integrated in web 3.0. I think web 3.0 is the application that we will most likely see of it.

The majority of the participants mentioned that emerging BCT applications will be in the Metaverse, the minting of digital assets (such as NFTs), and transactions across eCommerce.

P006: "Blockchain technology then has application within smart contracts. Web 3.0, Metaverse, and NFTs."

P001: "I think when blockchain meets Metaverse, which is one of the things that you will see, that's going to be a new way of experience. Where transacting is going to be virtual, and it's going to be without intermediaries, and it's going to be 100% secure."

P006: "Huge amount of potential within the eCommerce space. I think if you are talking in terms of media buying, media strategy and media distribution, smart contracts changed the industry completely."

P004: "If you think about eCommerce, then that takes it even further. All of a sudden, my wallet is sitting within my browser, my ability to transact is far better."

Several participants provide examples of first-hand experiences using BCT in the marketing and advertising industry.

> *P004: "We've worked on the Heineken brand. We did a bit of a tongue in cheek campaign for the launch of a new Heineken variants in Europe, where we created an experience within the Metaverse."*

> *P006: "We received a really successful campaign for VW come out of the Cape Town office, and it was more in the Metaverse. There were collectible NFTs throughout the ad."*

Or some were able to provide examples that they have encountered online.

> *P009: "Another example is the NBA Basketball in America. There's a website called NBA shot and, on that website, you can buy NFTs clips of awesome shots that have been videoed from a phone. The more user generated the content is, the more valuable it is. The NBA now is making 27% of its revenue selling NFTS."*

Evidently, most of the applications applied to big international brands and not many use cases exist in South Africa.

> *P007: "Not phenomenal use cases in South Africa [there's] been some really interesting use cases out of the US and lots of really interesting stuff happening in Asia."*

However, in spite of all the use cases that participants have highlighted, it must be noted that one of the participants was of the strong option that the industry is far off from obtaining that reality.

> *P001: "Still is really not our reality, the actual application of it, in an industry like advertising and marketing, it's not really there."*

5.9 SUMMARY OF FINDINGS FOR RESEARCH QUESTION TWO

Interesting insights emerged from the findings of research question two regarding the use and application of BCT within digital marketing and advertising.
Participants provided both first-hand experiences with practical and theoretical perspectives on the use of BCT in the industry. It was evident from the analysis that

there is a viable argument for the implementation of BCT within the industry. The apparent areas for application are:

- Advertising supply chain
- Data ownership
- Data security and verification
- Data and marketing analytics
- Web 3.0, the Metaverse, NFTs and eCommerce

Furthermore, the applications and subsequent examples provided from participants showcase that the use of BCT within the industry is not widespread in South Africa. BCT's application and use are still largely led from a global perspective by international brands being at the forefront.

5.10 RESULTS FOR RESEARCH QUESTION THREE

RQ 3: What are the factors that build trust and enhance customer-centric relationships?

The objective of research question three seeks to explore the various factors that build trust and enhance customer-centric relationships in relation to the attributes of BCT and CTT. Moreover, the secondary objective was to understand the value BCT could provide customers, organisations, the industry and to a greater extend academia.

The data demonstrates that the key themes that assist in answering this question are associated with the customer: trust, transparency, privacy and security.

Table 5 below presents an overview of the results related to research question three, presenting categories and subsequent themes.

Table 5: Category mapping to themes, linked to research question three.

Category	Theme
Customer	The Customer
Communication Mediums	
Blockchain Characteristics	Trust and Transparency
Fraud	Privacy and Security
Data	

The findings from this research question three have revealed that data and the transparency thereof were the building blocks that influence trust and built relationships. The attributes of BCT for the customer and organisation allowed for the reimagination of customer experience and value exchange.

5.10.1 THE CUSTOMER

As the targeted audience of marketing messaging and campaigns, the customer is an important part of the advertising supply chain. Data analysis demonstrates that technology integration across the advertising supply chain fundamentally informs the level of value exchange the customer believes is beneficial to them.

> *P001: "I think it's going to be about the integration, not so much about how we say we're doing things, it's more about integration of touch points, and really providing value through to a marketplace."*

> *P004: "Value exchange piece is where I see blockchain adding the most benefit to consumers."*

One of the participants believed that the value of BCT for customers will be dependent on their need state, the strategy of the organisation, and what they are able to provide in terms of goods and services.

> *P004: "What is the value exchange? And does blockchain enable that, or doesn't it? Because now you're creating a blockchain solution, if it doesn't enable the value exchange then what is the point to develop? Don't play around with a platform or technology that doesn't enable your strategy."*

Similarly, customer experience also promotes building customer-centric relationships which is facilitated through customer engagements with the internet and the supporting technologies.

> *P001:" Blockchain is a is an enhancer of experience, it's a driver of experience."*

P007 agreed with P001 that if used correctly, BCT will provide a more positive experience.

> *P007: "If people use blockchain effectively, they can essentially give users a more customized, more seamless, more positive experience as opposed to a negative experience."*

By virtue of its decentralised nature, BCT fundamentally alters the manner in which customers interact with businesses, granting them greater data visibility, control and ownership. This encourages trust between organisations and customers. P002 and P004 both provided a practical example of this can be achieved.

> *P002: "Consumer trust can come back in is that, where Apple did quite well is that they simplified the way to show consumers how the data has been used. And I think blockchain accelerates the consumers understanding of how the data is being used."*

> *P004: "If we follow the thought that more people become a lot more data, data savvy, we understand what their personal data means to them, and how it's being utilised and wanting to understand how it's being utilised. Then all of a sudden, I think it's feasible that is a future where blockchain enables me to not only control my data and my data, but also then distributed and allow access to it from one centralised point and giving me a view of how it's been utilised and how it's been processed across the board. And so, I think from a personal perspective, it starts putting a lot of the control in the consumers hands."*

5.10.2 TRUST AND TRANSPARENCY

According to the committed-trust theory of relationship marketing, trust is indispensable in building and sustaining long-term relationships (Brown et al., 2019; Hunt et al., 2006). This is especially true for building trust in the digital age where customer data is collected, stored and used without much transparency (Beke et al., 2018; Boukis, 2020; Ertemel, 2018; Ghose, 2018; Luo, 2002). Through BCT's feature of distributed trust and transparency, the technology establishes and fosters trust to enhance customer-centric relationships (Ertemel, 2018; Rejeb et al., 2020). According to the findings of the study, transparency of data in all formats results in a substantial increase in customer confidence.

Participants have raised that data publishers are not transparent with the data they sell to digital and marketing agencies.

> *P001: "An agency who's buying media to connect audiences to brands, it's just not very transparent."*

> *P010: "Facebook do not make the data available. They're walled gardens, as you know, it's absolutely phenomenal to me that brands have spent billions of dollars with these companies without any verification whatsoever."*

P002 expressed doubt that agencies have control of the data they get, believing that they simply comply and accept what is provided to them by Facebook and Google.

> *P002: "The internet and then in the middle is what you call the open Internet. So, because the three big internets are covered by companies, we never get full transparency of the of the. So, we always dictated by what Facebook is telling us and what Google says."*

The lack of transparency raises concerns about rampant ad fraud due to no verification of the data being shared by intermediaries. Almost half the participants strongly support this finding.

> *P001: "Transparency has multiple layers, and one of those layers, of course, has to do with getting what you buy from publishers, which sometimes wouldn't even know, we get fake impressions."*

P003: "Where the issue came in, is on digital media. And the reason why is because, first of all I think digital media has a massive mess of transparency and fraud problem."

P003: "Companies like Google and Facebook who tend to rule the space. In any agency around the world, you're probably looking at about at least 60% of all digital ad budgets are going to those guys, right. So, that's a significant amount of volume and in return, we get very little transparency from them. So, they only surface the data that they're willing to. And then we don't have much transparency behind the scenes of what happens."

P005: "The last 10 years of digital marketing, there's so many cases of click fraud, and advertising fraud, hosted by major players in the industry."

P003: "Everybody's acknowledged that transparency and fraud and things like that in media is a huge problem."

In addition to the lack of data transparency, the annual cost of ad fraud in the industry is in the millions of dollars.

P002: "The ad tech industry is a marketing $300 billion industry. The ad fraud industry is 50% of that".

This results in inefficient spending on marketing budgets and compromised campaign results. Participants acknowledged that the lack of transparency is a major problem in the industry.

P010: "Digital is moving at such a rapid rate… all I ever worried about was fraud and corruption and waste."

This can hinder trust between organisations and customers over the long term if agencies do not take steps to implement technologies that could potentially solve their problems.

P010: "But in the long term, people are losing trust in these mediums, which ultimately means that people will lose trust in the agencies that are proposing these mediums."

Participants indicated that if BCT is implemented within digital marketing and advertising, it can foster trust for both agencies who deploy targeted campaigns and customers who engage with them. Agencies that employ BCT in their business model gain more accurate insight into their campaigns in terms of the data they receive from publishers, the touch points that the data is engages, and if it has reached the intended audience. BCT can provide log level data of every transaction that has taken place across the supply chain. Two participants gave their insights from experience using BCT within their agency.

> *P003*: "We've been plugging our clients' campaigns into the system to get a better view of the advertising supply chain. And so, what it does, it gives you a unified view of your campaign validated by proof points across the advertising supply chain. And so, they use blockchain technology to kind of pull together that full supply chain of everything. But what they do, is they take a log level data, like undisputable data points across that supply chain. So, you can't cook those numbers, because it's the numbers that the systems are creating independently, right. But what it does, is it takes all those numbers and puts it in one place. It looks at the whole supply chain, and then surfaces where the issues are happening. So that has enables us to optimise that supply chain to know where's money going missing."

> *P010*: "Log level data from the DSP ran through our blockchain system and what essentially it was doing, is to say we want to make sure that this pixel on this impression fired at every single point in the supply chain. So, from the exchange to the SSP to the DSP through that whole digital advertising supply chain, from the advertiser through the ad server through the DSP through the exchange or the SSP via the viewability and fraud vendors. So, if this piece of creative with this pixel was picked at each of those places, we can confidently say that it was seen… as agencies did more and more campaigns, their AI allowed them to understand where the problems were. So, the fundamental level, if this data didn't go through one of the points in the supply chain, then it probably didn't end up where it was meant to end up. So, it could be a bot or it could be fraud or ended up on the wrong website…So it was a way of measuring that."

Another participant confirmed, though not from first-hand experience, that transparency can be achieved if BCT was implemented within advertising.

> *P005*: *"Definitely the transparency aspect of it, that you have this digital footprint that never goes anywhere. And how it applies to digital marketing sense is the accountability to spend that you as an advertiser can hold accountable the publisher to what exactly and how many people. We get to report on people and saying you had 10,000 clicks. And, okay I assume you're not lying to me that you don't know where this will add that layer of surety. You know, you have 10,000 clicks if you want, here's all the metadata of those clicks and you can see."*

For customers, BCT can foster trust and enhance customer-centric relationships by giving customers more visibility of where and how their data is used.

> *P004*: *"From POPIA perspective, I understand that at any given point, I should be able to go to any advertiser that has utilised my data and they should be able to give me a log of every single time my data has been processed. So, I think that blockchain technology with the transparency lens could enable a lot of that."*

> *P007*: *"There's opportunities for companies to create a little bit more relational setups with these customers where you can make it easier for them to do business with you. And therefore you'll build better trust."*

> *P008*: *"First party data and I think that there's a lot of value in transparency around it and its exact purpose."*

Through this, they are able to receive relevant personalised content from organisations and not get any content that can be classified as 'spam'.

> *P006*: *"It's really important for that experience be to be tailored to your interests, your preferences, your personal tastes. And transparency is part of that."*

> *P011*: *"It gives that level of trust that you know, adverts that are being directed to me, I had a hand in allowing that."*

To further build trust, participant P005 stated that brands need to be more explicit in demonstrating how their customer data is being used.

> *P005: "There's a responsibility, I think, from brands to communicate what we're doing. But in that sort of new world built on blockchain."*

A participant gave an example of first-hand experience embracing BCT within his personal capacity by utilising a decentralised web 3.0 platform. The platform pays him directly for his data, providing him with full transparency on where and how his personal data is used.

> *P005: "Blade is a good example of someone who's actively using blockchain, crypto rewards and security and transparency all in one ecosystem. I've completely migrated my personal browsing to Blade and I'm loving it. So, it's generated cryptocurrency and I've been paid for what I allow my data to be used for marketing. It's minor, but I'm getting the peace of mind of security and transparency, and I can pick what marketing I want to see and how much of it I want to expose."*

This was an excellent example of a practical application of BCT within digital advertising outside of the theoretical propositions considered in academia.

5.10.3 PRIVACY AND SECURITY

Research demonstrates that data underpins the entire advertising supply chain. This has raised concerns around data privacy, especially with the introduction of the South African Protection of Personal Information Act (POPIA) enacted in 2013. The objective of the act is "to promote the protection of personal information processed by public and private bodies; to introduce certain conditions so as to establish minimum requirements for the processing of personal information… to provide for the rights of persons regarding unsolicited electronic communications and automated decision making." (Republic of South Africa, 2013). This is particularly prevalent in digital marketing, where data is essential to all marketing- and advertising-related activities.

Due to the security attributes of a distributed ledger in BCT, participants have recognised that BCT has the ability to enable improved data privacy, security and data protection.

> *P003*: *"Data as we know over the last couple of years has become a big topic in terms of privacy."*

> *P002*: *"In digital marketing, I guess it's a lot related to exposure on privacy. Privacy is the one thing that we raise, it's come up a lot. Because of the privacy, advertisers are being fined for misuse of data."*

P011 stated that once organisations and customers understand the benefits of BCT, they will understand its value in terms protecting personal data that is aligned to the guidelines set out in the POPIA act.

> *P011*: *"They must demonstrate how are they are going to secure your data. And also, it must be in line with POPIA act. Blockchain technology basically plays a critical role in doing that. The more people understand the importance they will understand the value of blockchain."*

This was further supported by participant P004.

> *P004*: *"I think we're probably going to see blockchain filter into technologies and tech stacks around data. Personal data, privacy first would be my guest, because I think that then enables better security around first party data collection, second party data and data storage."*

In addition, security is also a key factor which contributes to building trust and fostering customer-centric relationships through decentralisation and disintermediation. A handful of participants provided their views on the matter.

> *P012*: *"better security because of the distributed ledger."*

> *P001*: *"There are strong cases of how it can be used in terms of fostering trust the disintermediation in terms of building the security."*

> *P004*: *"Because it's decentralised there isn't a high likelihood or probability of more security within that space. Because if you want to hack a blockchain, you've got to hack every single block across every single currency that has*

processed that. So that I think that building trust is what's starting to drive that space."

P007: "Think about the idea where your consumers now control their own data because on the blockchain and the storage of data doesn't sit on a company service since on a on a public ledger."

Participant P004 highlighted that data management platforms will be enhanced through BCT.

P004: DMP platforms is the future of blockchain based because that will drive further security for data privacy."

5.11 SUMMARY OF FINDING FROM RESEARCH QUESTION THREE

The question aimed to determine the factors that build trust and enhance customer-centric relationships. The most significant findings from research question three are data and transparency, which underpin all other factors that influenced trust and relationships.

From a customer perspective, research participants emphasised the central role of customer experience for building relationships and the relevance of the value exchange they receive from organisations and brands.

Data analytics from participant interviews demonstrated that the attributes of BCT, such as trust, transparency, security, privacy and decentralisation are crucial (Gleim & Stevens, 2021; Hoffman et al., 2022; Luo, 2002).

As it stands, the lack of transparency in how publishers gather and use client data erodes trust between data publishers and agencies, leads to fraud, and incorrectly measures campaign effectiveness (whether and how marketing messages are delivered to their intended recipients).

In addition, customers are becoming more data-savvy, which means they are becoming more aware of how and where their data is used. The findings indicate that BCT can improve data privacy and security.

5.12 SUMMARY OF RESULTS

This chapter presents the results of 12 interviews that were coded, categorised, and thematically analysed in accordance with an inductive qualitative research strategy. Emerging themes from categories linked to the research questions are mapped onto a diagrammatic presentation.

In addition, a summary the findings is presented at the end of each research question sub-section.The rich insights generated from each research question provides data that can be used to answer the overarching research problem and question set out in chapter 1.

The next chapter discusses the findings from chapter 5 in greater detail and connects it back to the literature review in chapter 2.

6 DISCUSSION OF RESULTS

6.1 INTRODUCTION

In this chapter, the research findings from chapter 5 are elaborated upon. The insights obtained in chapter 5 contrast and compare to the existing academic literature in chapter 2. The purpose of these findings (along with the literature) is to answer the research problem and subsequent research questions identified in chapter 1, that is: to understand the role and application of BCT to enhance trust in customer-centric relationships.

The outline for this chapter is structured according to the themes identified from the categories and codes analysed in chapter 5. This is discussed in greater detail in relation to each of the research questions. Table 6 below illustrates the discussion approach.

Table 6: Mapping of themes to research questions

Theme	Sub-Theme	Research Question
Understanding of BCT		RQ 1: What role does BCT play in digital marketing?
Implementation of BCT	Adoption of BCT	
	Changes to Business Operations	
The Use of BCT		RQ 2: How can BCT be applied in digital marketing?
The Customer		RQ 3: What are the factors that build trust and enhance client-centric relationships?
Trust and Transparency		
Privacy and Security		

6.2 DISCUSSION OF RESEARCH QUESTION ONE

RQ 1: What role does BCT play in Digital Marketing?

New and emerging technologies change the way organisations and customers engage and interact with one another. It is essential that modern day marketers understand, adopt and implement these technologies (Gleim & Stevens, 2021; Rejeb et al., 2020).

This research question aims to, firstly, gauge the extent to which participants understand BCT and how that affects their levels of insight into the subject matter. Secondly this question seeks to explore the role of BCT within digital marketing and advertising.

Moreover, this section continues the discussion on the themes which relate to research question one.

6.2.1 UNDERSTANDING OF BCT

The research found that participants had a good comprehension of BCT which allowed them to meaningfully engage with the subject matter. In summary, BCT is a public ledger in which data and transactions are stored across a distributed network not vulnerable to manipulation. The participants' understanding of BCT coupled with their experience and expertise within the marketing and advertising have provided rich insights specifically applicable to the industry. The findings that emerge can contribute significantly to existing literature.

Brock (2021), Hoffman et al. (2022), Jain et al. (2021) and Stallone et al. (2021) indicate that the understanding of BCT and its application within marketing activities is limited to a few conceptual papers and systematic reviews.
These insights and findings are unpacked in the themes and related research questions that follow.

6.2.2 IMPLEMENTATION OF BCT

This research study indicates that, although people are aware of BCT and its potential benefits, implementation of BCT within marketing and advertising agencies remains extremely low in South Africa compared to its global counterparts. Several participants and subject matter experts suggested that education and the required changes to business models were barriers to widespread adoption and implementation.

The findings revealed, for both the clients and agencies, that there was not enough knowledge concerning the contextual application of BCT. Additionally, agencies are not adequately equipped with time, money, and capability to adopt BCT into their business model and service offerings. This is largely attributed to the lack of BCT penetration in the marketing and advertising industry, with the exception of a few niche agencies that have experimented with BCT within their marketing activities.

Literature demonstrates that the adoption and integration of new technology is fundamental for organisation to achieve financial performance and sustain long-term competitive advantage (Hoffman et al., 2022). Rejeb et al. (2020) confirmed this by stating that the changing business environment causes organisations to constantly re-evaluate their competitive positioning within the industry.

However, literature identifies the barriers to implementation, such as the cost to implement new technology, infrastructure changes, and resourcing, which contribute to the low enthusiasm for implementation (Cvitanović, 2018; Shaphali Gupta et al., 2020; Jain et al., 2021; Varadarajan et al., 2020). This is further supported by the research findings regarding the rare implementation of BCT within marketing and advertising.

6.2.2.1 ADOPTION OF BCT

The adoption and implementation of BCT within the marketing industry are linked. The research findings from research questions two and three in chapter 5 show that, although potential exists to implement BCT, one of the biggest impediments to adoption is inadequate knowledge and education around the benefits of BCT for the modern-day marketer. This was a participant-specific finding of the research.

One participant disagreed with the notion that insufficient knowledge and education were the predominant causes for low uptake in the industry. He argued that people did not see value in implementing a technology that demonstrates no apparent financial benefit. His rationale came from first-hand experience in trying to implement a BCT solution across various advertising agencies.

6.2.2.2 CHANGES TO THE BUSINESS OPERATION

To add to the argument regarding the low rates of BCT implementation and adoption within the marketing and advertising industry, digital transformation and operational changes in organisations become prevalent. As stated in section 6.2.2 of research question one, digital transformation requires time, money, and upskilling in resource capabilities. According to the findings, agencies are not yet willing to invest in that. Participants also mentioned that agencies are struggling to keep up with the rapid pace of technological advancements and that changing a business model is difficult.

6.2.3 SUMMARY OF DISCUSSION FOR RESEARCH QUESTION ONE

The conclusion for the first research question holds that BCT can provide financial benefit and long-term competitive advantages to organisations that strategically adopt and implement it within their digital marketing. However, the findings indicate that, even though participants understand the concept of BCT and its potential application in the marketing and advertising industry, there are significant barriers to adoption and implementation. These barriers include:

- Inadequate knowledge and education, for both customers and agencies, concerning effective implementation of BCT in the delivery of goods and services.

- Challenges with digital transformation and changes to the current business model.

- Lack of interest to invest time, money, and upskilling of resources.

This presents a missed opportunity for the participants in the industry to evolve with changes in technology and the value it could bring the organisation and their customers.

6.3 DISCUSSION OF RESULTS FOR RESEARCH QUESTION TWO

RQ 2: How can BCT be applied in digital marketing?
The second research question seeks to determine how BCT can be applied within the marketing and advertising context. Literature indicates that the application of BCT within marketing activities is limited and is subject to a few systemic reviews and conceptual papers (Boukis, 2020; Gleim & Stevens, 2021; Jain et al., 2021; Rejeb et al., 2020). Therefore, the purpose of this research question serves to close the gap in academic literature and provide practical applications of BCT's use cases.

6.3.1 THE USE OF BCT

The findings related to this research question are significant and valuable in that they provide both theoretical and practical insights regarding the possible applications of BCT within digital marketing and advertising. From the analysis reported in chapter 5, it is evident that there was a strong use case for BCT's application and the subsequent benefits within digital marketing and advertising. Harvey et al. (2018), Rejeb et al. (2020), and Tang et al. (2020) have also claimed that BCT has the potential to be applied across various industries. Similarly, one of the participants highlighted the wide scope of BCT and the gradual discovery of use cases outside of cryptocurrency applications.

Moreover, the interviewed research participants provided diverse perspectives on the advantages of BCT within digital marketing. A few participants suggested that BCT is particularly effective within the advertising supply chain, where there are multiple data points that requires storage, verification, and authentication. Due to transparency, an attribute of BCT, marketers are now able to verify the delivery of targeted communication to its intended recipient. This ensures greater data tracking accuracy for ROI and reduces the potential for ad fraud (Ghose, 2018). According to

Rejeb et al. (2020) strengthening data transparency can amplify customer relationships and begin to foster trust between customers and organisations.

Furthermore, participants mentioned that, due to the transactional nature of BCT, organisations can employ better marketing data analytics. Based on the customer behaviour from data transactions, organisations can create informed marketing strategies and campaigns that are contextual, targeted, and personalised to a particular customer. This finding is supported by Rejeb et al. (2020) and Varadarajan et al. (2020) who assets that an improved understanding of the market and customer will allow for better personalised communication, solution creation and the delivery of greater value.

Another significant finding regarding the use and application of BCT in marketing and advertising lies outside the conventional use cases and in the future of marketing, which is web 3.0 and the Metaverse. Web 3.0 is founded on the principle of decentralisation and openness, another key attribute of BCT (Belk et al., 2022).
This led to the creation of the Metaverse, which is built on BCT (Hollensen et al., 2022).The Metaverse is a 3D world that combines the physical and virtual worlds, allowing for greater experiences that can amplify the functionality of goods and services (Hollensen et al., 2022). To this end participants also anticipate the rise of eCommerce and digital assets such as NFTs (non-fungible tokens) being created and made available for customers to purchase within the Metaverse, thus changing the way customers transact and engage with brands. Section 5.7.1 in chapter 5 provides a few real-life use cases from participants who have executed campaigns in the Metaverse by incorporating the use of NFTs.

In addition, the majority of participants, including subject matter experts, highlighted that web 3.0 and the Metaverse will be the new way in which value is exchanged and interactions experienced. Belk et al. (2022) has predicted that web 3.0 will be the next big technology shift that marketers should be aware of.

Although, the literature and participants provided their perspective on the potential application of BCT within marketing and advertising, one of the participants drew attention to the fact that there are a couple years before such engagement is widespread in the industry.

6.3.2   SUMMARY OF DISCUSSION FOR RESEARCH QUESTION TWO

In summary, the research findings and supporting literature indicate that there are a variety of versatile use cases for BCT that can be applied within digital marketing and advertising. All provided applications are based on the attributes of BCT which contribute to building trust and improved customer experience such as transparency, decentralisation, immutability, and security.

The findings draw attention to the next technological disruption in web 3.0 and the Metaverse, which is predicted to fundamentally alter the way organisations engage with customers and the value exchange of the goods and services they offer. This valuable insight enables marketers to prepare and upskill their capabilities to take part in the next wave of digital marketing advancements.

In contrast, the research revealed that the application of BCT within marketing and advertising is still limited or non-existent in the South African context.
Additional applications of BCT as well as its attributes in building trust and customer-centric relationships will be discussed in further detail in chapter 3.

6.4   DISCUSSION OF RESULTS FOR RESEARCH QUESTION THREE

RQ 3: What are the factors that build trust and enhance customer-centric relationships?
The aim of the third research question is to identify the factors that contribute to building trust that enhances customer-centric relationships within the parameters of BCT. It was also essential to understand the value that these factors have for customers, organisations, and the broader marketing industry.

The customer, trust, transparency, privacy, and security emerge as prominent themes in relation to this research question. This section discusses each of these themes.

6.4.1 THE CUSTOMER

According to the data analysis and findings presented in chapter 5, the customer is one of the most important components within the advertising supply chain since they are the recipients of targeted marketing campaigns. Therefore, it is essential to understand the level of value exchange that is beneficial to the customer and how BCT enables that.

Participants frequently mentioned that BCT can facilitate the value exchange through the opening marketplaces. However, they have identified that both the customer's and the organisation's needs must be taken into account. BCT and subsequent activities must align to a broader strategy that enables the right value exchange. Current literature supports, highlighting the fact that MarTech like BCT re-evaluates the value creation process (Cvitanović, 2018; Shaphali Gupta et al., 2020; Kannan & Hongshuang, 2017).

Closely linked to value exchange is consumer experience, as this can encourage customer-centric relationships. Technologies like BCT constantly change the way customers engage with the internet and, to a greater extent, organisations who employ digital marketing activities to reach their audiences. Insights from the findings have shown that BCT can be a driver for enhanced experience if used effectively. This is highlighted by the interviewees and supporting literature in section 6.3.1 of research question two in this chapter.

Customers have become more data-savvy, according to the findings of this study. They are more aware of the significance of their personal data. Through BCT's features of decentralisation, transparency, and privacy, customers will have the ability to have greater ownership and control over how and where their data is used. The interviewees express their understanding of how their data is used will improve if organisations are open and transparent about how they process their customer data. This would promote trust between the organisations and its customers. Rejeb et al. (2020) argues that customer relationships can be strengthened by increasing data transparency.

Lastly, the data analysis revealed that transparency was a key theme and insight that had a direct relationship with building and fostering long-term customer-centric relationships. This understanding will be elaborated upon in the subsequent theme.

6.4.2 TRUST AND TRANSPARENCY

When it comes to data, research has particular demonstrated that trust and openness are indispensable. Distributed trust and transparency are key features which have been extensively cited in literature to enhance customer-centric relationships (Rejeb et al., 2020).

Participants have noted, however, that impeding factors affect agencies from delivering on trust and transparency, which are related to reasons for ineffective ROI and ad fraud. The study has revealed that data publishers or intermediaries such as Facebook and Google are not transparent in the campaign data that they provide advertising agencies; they are perceived as walled gardens. Published literature corroborates that data is often tracked and accessed through a small number of intermediaries (Boukis, 2020; Sunil Gupta & Davin, 2016; Harvey et al., 2018). This presents a challenge for data verification in terms of accurate impressions and confirmation of targeted messages reaching their intended recipients. Due to the lack of transparency, advertising agencies are unable to determine if messages are sent to click bots or receiving fake impressions.

According to Jain et al. (2021) and Pärssinen et al. (2018), the rapid rise of the internet led to an increase in fraudulent activities. The lack of transparency is costs the industry millions of dollars each year in ad fraud (Boukis, 2020; Ghose, 2018; Harvey et al., 2018). This results in inefficient marketing budgets and puts pressure on marketers to justify their spend against ROI. Participants acknowledged that a lack of data transparency is linked to high levels ad fraud and budget wastage, which is supported by the findings.

Current literature states that BCT can mitigate some of these problems and build customer trust through enhanced transparency (Ghose, 2018; Gleim & Stevens, 2021; Harvey et al., 2018; Rejeb et al., 2020). Two of the interviewees attempted to reduce the high levels of ad fraud and increase ROI by implementing a BCT solution

across the advertising supply chain, allowing agencies to have a more accurate and transparent data. However, due to the of lack of enthusiasm to adopt such interventions, as highlighted in section 6.2.2 in research question one, the solution was never implemented beyond the pilot phase.

To build upon the findings of customer trust and transparency, participants stated that with increased data visibility of where and how customer data is used, customers have more control over the communications they receive. Consequently, allowing organisations to personalise the content that is served to customers is not considered 'spam'. In an interconnected world, online advertising continues to be an effective communication tool that allows brands to connect and build with their customers in a contextual way (Ghose, 2018; Stallone et al., 2021).

6.4.3 PRIVACY AND SECURITY

According to the research findings, data is the central link between the advertising supply chain, customers, organisations, and intermediaries. With the rise of online fraud over the past few years, data privacy, security, ownership, usage, and verification have become contentious issues. The POPIA act was designed in 2013 to protect the collection and processing of personal information.

Harvey et al. (2018) and Rejeb et al. (2020) add that, due to the secure nature of BCT with its immutable structure, decentralised ledger, privacy, reliability, and transparency, it is recognised as a technology that improves data storage, privacy, and security. This is especially important for digital marketing where the collection, processing, and usage of data is central to all marketing activities.

Decentralisation and the removal of intermediaries play a key role in building trust and enhancing customer-centric relationships. If data is collected directly from customers and stored on the blockchain ledger, tampering with the information would require hacking every block in the blockchain, further improving data security.

6.4.4 SUMMARY OF DISCUSSION FOR RESEARCH QUESTION THREE

The research study concludes that data transparency underpins all digital marketing and advertising activities within the advertising supply chain. Transparency is

discovered to be a key determining factor that influences, builds, and fosters trust that enables customer-centric relationships. Other factors cited to contribute to building trust are customer experience, perceived value exchange, and the data protection. The research also highlights factors that inhibit trust between organisations and customers.

6.5   CONCLUSION

This chapter presented the discussion of results outlined in chapter 5. The research study uncovered several factors that both promote and inhibit trust in digital marketing and advertising. Factors that enable trust include:

- The customer's perceived value exchange that can be obtained using BCT.

- Trust and transparency

- Privacy and security

The results presented in this chapter will be used to develop a framework that demonstrates the role and application of blockchain technology in digital marketing in building trust to enhance customer-centric relationships. This framework is presented in the conclusion chapter that follows.

7 CONCLUSION AND RECOMMENDATION

7.1 INTRODUCTION

The rise of the internet and the rapid evolution of new and emerging technologies have irrefutably disrupted traditional business models and the manner in which they interact with customers (Cvitanović, 2018; Shaphali Gupta et al., 2020; Kannan & Hongshuang, 2017). Literature also indicates that organisations must adopt and implement new technologies to be agile, have sustained financial performance, and maintain a competitive advantage (Cvitanović, 2018; Hoffman et al., 2022). Consequently, this has left marketers with the challenge of understanding, adopting and implementing these technologies (Gleim & Stevens, 2021; Rejeb et al., 2020).

Similarly, the rise of the internet increased the levels of ad fraud, costing the industry millions of dollars annually (Ghose, 2018; Harvey et al., 2018), thereby affecting online mediums such as digital marketing who use the internet as a platform to interact, engage and promote goods and services directly to customers (Jain et al., 2021). Given this, BCT is identified as a MarTech that could mitigate some of these issues (Rejeb et al., 2020) while having the ability to build trust between organisations and customers through its characteristics of security, transparency and trustworthiness (Gleim & Stevens, 2021; Hoffman et al., 2022).

Understanding the role and application of BCT in digital marketing in building trust to enhance customer-centric relationships is the purpose of this study. From the literature review presented in chapter 2 and the result findings in chapter 5, the proposed framework in section 7.2 below aims to demonstrate the results to the research problem described in chapter 1.

7.2 PROPOSED FRAMEWORK

Trust and transparency, according to the findings of the study, are the cornerstone of customer-centric relationships. Trust is one of the key attributes underpinning BCT. Furthermore, the study found that each characteristic of BCT, such as immutability, transparency, programmability, decentralisation, consensus, and

distributed trust (Rejeb et al., 2020), plays a role in the advertising supply chain, demonstrating its suitability for wider adoption and implementation.

Figure 9 below proposes a high-level view of the influencing factors that build trust and enhance customer-centric relationships.
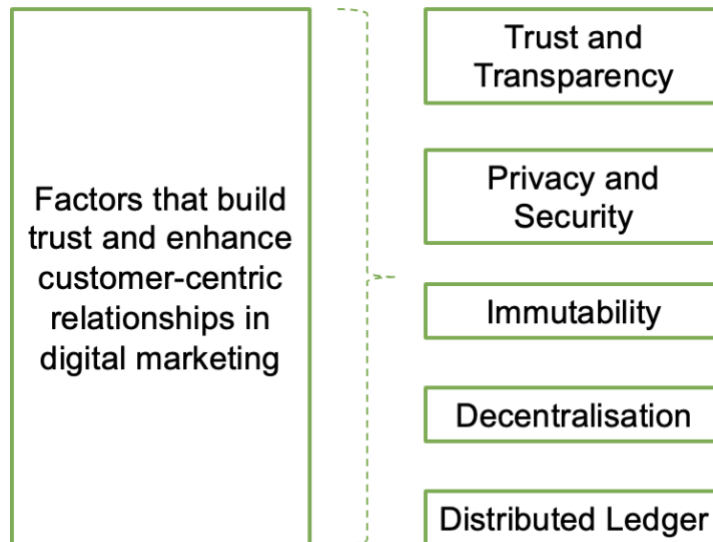
Figure 9: Proposed framework- factors that promotes trust and customer-centric relationships

7.3 RECOMMENDATIONS FOR BUSINESS

New and emerging technologies, such as BCT, alter the value exchange between organisations and customers, in addition to ensuring financial performance and competitive advantage (Cvitanović, 2018; Shaphali Gupta et al., 2020; Jain et al., 2021; Rejeb et al., 2020).

Even though there are proven significant benefits to the customer, organisation and the broader marketing and advertising industry at large The study has found that there are extremely low levels of adoption and implementation of BCT. With specific regard to its ability to penetrate and create new market places, refine value, enhance customer experience and foster trust through security and transparency (Varadarajan et al., 2020).

Brock (2021) and Orji et al. (2020) assert that BCT is rapidly becoming the next generation of digital innovation underlying MarTech. Given these insights from both literature and research findings, it recommended that agencies devote more time to understanding the benefits of MarTech and incorporating their digital transformation strategy as part of their business model plans to ensure future-readiness. This includes infrastructure considerations, cost investment, and upskilling of capabilities. The internet and supporting technologies will continue to evolve, shifting the marketing environment and the way customer behave and interact with the organisation. Therefore, it is crucial that organisations evolve alongside these technologies to increase the value and effectiveness of the advertising supply chain.Technology and marketing need to co-evolve (Brock, 2021).

7.4 ACADEMIC CONTRIBUTION

The academic body of knowledge has cited that literature pertaining to BCT and its application to digital marketing has highlighted a substantial gap whereby literature pertaining to BCT is limited to a few conceptual papers and systematic reviews (Brock, 2021; Hoffman et al., 2022; Jain et al., 2021; Stallone et al., 2021). Through the exploratory nature of this study which had an inductive approach to theory building. This study has been able to gather insights around the phenomena which extends the literature past the conceptual analysis of BCT application to one which has provided practical use cases for its application in digital marketing.

Moreover, to further build onto existing theory development and propositions of commitment-trust theory of relationship marketing. This research study has contextualised the attributes of BCT of immutability, trust, transparency, decentralisation, privacy and security as factors that build trust and fosters long-term client-centric relationships. The literature and subsequent research findings has demonstrated that trust and transparency underpin all relationships across the advertising supply chain, particularly in the digital age where the increase in data collection and processing is resulting in high levels of ad fraud (Boukis, 2020; Ertemel, 2018; Ghose, 2018).

7.5 LIMITATIONS

Due to the constraints of the research topic and BCT still being a relatively new technology with its application outside of crypto currencies the found the following limitations within the research study:

- Some participants had limited or no first-hand experience with BCT within digital marketing apart from conceptual and theoretical engagements.

- Due to the researcher sharing the interview guide prior to the interview, expectancy bias could have been introduced on the part of the participant in that they could have provided answers they thought the researcher wanted to hear, this is similar to the Hawthorne effect (James & Vo, 2010).

- Inherent researcher bias in qualitative research (Saunders & Lewis, 2018).

- Sampling bias due to the parameters of the research only focusing on digital marketing and advising agencies. This could affect the validity and transferability of the search to the broader industry specialisations

- The size of the data collected could not be sufficient to apply transferability to the larger context of BCT within digital marketing and its ability to enhance trust within customer-centric relationships (Given, 2008).

- One of the key limitations of the study was unintentional gender bias due to the employment of a snowballing sampling technique. All the participants in the research study were male. This could potentially impact the study with regard to an alternative perspective and experience.
-

7.6 RECOMMENDATIONS FOR FUTURE RESEARCH

Academic practitioners should explore the following ideas for future research in order to better comprehend the advantages and implications of BCT in marketing and advertising within the scope of this study.

- Determine how the barriers for adoption and implementation of BCT in digital marketing and advertising can be overcome.

  Investigate the factors that influence greater awareness and knowledge for successful BCT adoption and implementation in digital marketing and advertising.

- Identify the factors within BCT that lead to financial performance and competitive advantage in digital marketing and advertising.

The findings of these future studies could contribute to narrowing the academic gap and advancing the marketing industry's understanding of BCT's practical applications (Jain et al., 2021; Stallone et al., 2021).

7.7 CONCLUSION

This study set out to close the gap in existing academic literature by conducting exploratory qualitative research with the objective of understanding the role and application of BCT in digital marketing in building trust to enhance customer-centric relationships.

The findings that emerge from the exploratory study and thematic analysis provide a clear perspective and understanding of the factors, influences and barriers that affect the role of BCT within digital marketing and its subsequent application across the advertising supply chain.

The study provided considerable insight into the benefit of improving transparency in building trust and enhancing relationships in the digital age (Gleim & Stevens, 2021; Luo, 2002; Shankar et al., 2022). Similarly, the findings have demonstrated how the attributes of BCT can mitigate the problems associated with ad fraud and enable marketers to effectively leverage transparent data-driven marketing by analysing, verifying, and controlling data (Ghose, 2018).

Furthermore, it is evident that technology is an enabler for improved experiences and the reimagination of the value exchange. BCT's integration into organisations is vital to drive innovation and competitive advantage (Kumar et al., 2021).

Finally, this study demonstrates strong contributions for business, academia, and recommendations for future research.

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9 APPENDIX: INTERVIEW GUIDE

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

Title of proposed study: Investigating the role and application of blockchain technology on digital marketing in building trust to enhance customer-centric relationships.

Research Context: New and emerging technologies such as big data, the internet of things (IoT), artificial intelligence (AI) and blockchain technology (BCT) are seen as marketing technologies which have reformed organisational structures, shifted operations, and re-evaluated the value creation process. New technologies like BCT now make it possible for marketers to better understand their customers' decision and purchasing journey, therefore enabling data-driven marketing and decision making.

Research Objective: New and emerging technologies have notably impacted the way in which brands reach and engage with their customer, which has left marketers with the challenge of understanding, adopting, and implementing these technologies. The application of new technologies such as BCT has started to integrate across various industries due to attributes related to transparency, trust, privacy, accountability and. The application of BCT in marketing has been noted to create a foundation for marketing activities that enhance security, trustworthiness, and client-centric relationships.

Overarching research question: what role does the application of BCT play in digital marketing in building trust to enhance client-centric relationships?

1. BCT can be explained as a cryptographic technology or distributed digital database where all transactions are made without third party involvement which is then stored in a secure chain of blocks. Every transaction in the block chain is recorded and timestamped, which is then widely distributed to a peer-to-peer network which maintains the integrity of the data. **What is your understanding of blockchain technology?**

2. Data analytics, big data, IoT, AI have made significant contributions to the prominent role of data in modern day marketing initiatives, given the context provided. I**n your view what role does BCT play in digital marketing?**

3. Characteristics such as immutability, transparency, programmability, decentralization, consensus, and distributed trust are well known attributes of BCT. How would you go about applying **attributes of BCT to digital marketing?**

4. Within the concept of BCT lies a component that tends to improve the accuracy and storage of data. How would you describe this as an enabler for effective digital marketing?

5. Research indicates that data accuracy can generally lead to improved customer relationships as marketers are able to use specific data points personalise the customer journey. By implementing attributes of BCT in your current business process, **how could these attributes reinforce trust in brands?**

6. In the current digital environment, where there are multiple data points, cookie tracking and data collected by third parties which poses a threat with regard to trust, privacy and security, **in your view how could BCT foster a culture of enhanced data security for better customer relationships?**

7. Research has shown that BCT is not commonly used in marketing activities. Based on your experience, **why do you think BCT is not widely implemented in marketing and advertising agencies?**

8. **Can you provide an example where you have seen/experienced the application of BCT in digital marketing?**

10 APPENDIX: CODES AND CATEGORIES LINKED TO EMERGING THEMES

Code	Categories	Themes	Research Questions
○ Blockchain ○ Application of blockchain ○ Understanding of blockchain technology ○ Implementation of blockchain ○ The role of blockchain ○ Smart contracts ○ NFT's ○ Education ○ Business processes ○ Integration ○ Adoption ○ Digital transformation	Blockchain Knowledge Business Operations	Understanding of BCT Implementation of BCT	**RQ 1:** What role does BCT play in digital marketing?
○ Crypto ○ Payments ○ Budgets ○ Transaction ○ Publishers ○ Media buying ○ Supply chain ○ Google and Facebook ○ Intermediaries ○ Disintermediation ○ Media ○ Web 1 ○ Web 2 ○ Web 3 ○ Decentralisation ○ Internet ○ Metaverse ○ eCommerce ○ Walled garden ○ Trends	Transactions Supply Chain Internet	Use of BCT	**RQ 2:** How can BCT be applied in digital marketing?
○ Customer experience ○ Customer relationships ○ Personalisation ○ Value exchange ○ Advertising ○ Traditional media ○ Digital marketing ○ Digital media ○ Targeting ○ Measurement ○ Attributable ○ Immutability ○ peer-to-peer ○ Privacy ○ Security ○ Verification ○ Transparency ○ Trust ○ Fraud ○ Waste ○ Data ○ Data accuracy ○ Data collection ○ Data ownership ○ Data storage	Customer Communication Mediums Blockchain Characteristics Fraud Data	Customer Trust and Transparency Privacy and Security	**RQ3**: What are the factors that build trust and enhance client-centric relationships?

11 APPENDIX: FREQUENCY TABLE

Code	Frequency of Mentions
○ Blockchain	42
○ Application of blockchain	40
○ Transparency	27
○ Implementation of blockchain	27
○ Data	26
○ Understanding of blockchain technology	17
○ Verification	16
○ The role of blockchain	14
○ Intermediaries	14
○ Google and Facebook	14
○ Trust	13
○ Security	13
○ Decentralisation	13
○ Adoption	13
○ Digital marketing	12
○ Supply chain	11
○ Privacy	11
○ Education	11
○ Budgets	11
○ Web 3	10
○ NFT's	10
○ Fraud	10
○ Customer relationships	10
○ Advertising	9
○ Media buying	8
○ Value exchange	7
○ Transaction	7
○ Metaverse	7
○ Media	6
○ Waste	5
○ Measurement	5
○ Ledger	5
○ Internet	5
○ Data storage	5
○ Data collection	5
○ Data accuracy	5
○ Attributable	5
○ Walled garden	4
○ Publishers	4
○ Personalisation	4
○ eCommerce	4
○ Customer experience	4
○ Business processes	4
○ Web 2	3
○ Smart contracts	3
○ Web 1	2
○ Trends	2
○ Traditional media	2
○ Targeting	2
○ Disintermediation	2
○ Digital transformation	2
○ Digital media	2
○ Crypto	2
○ peer-to-peer	1
○ Integration	1
○ Immutability	1
○ Data ownership	1

12 APPENDIX: ETHICAL CLEARANCE

Gordon Institute of Business Science
University of Pretoria

Terniell Ramlah <21818402@mygibs.co.za>

Ethical Clearance Approved
1 message

Masters Research <MastersResearch@gibs.co.za>
To: "21818402@mygibs.co.za" <21818402@mygibs.co.za>
Cc: Masters Research <MastersResearch@gibs.co.za>

18 July 2022 at 13:47

Advanced Professional Business Coaching Programme
September 2022 – March 2023

Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Terniell Ramlah,

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