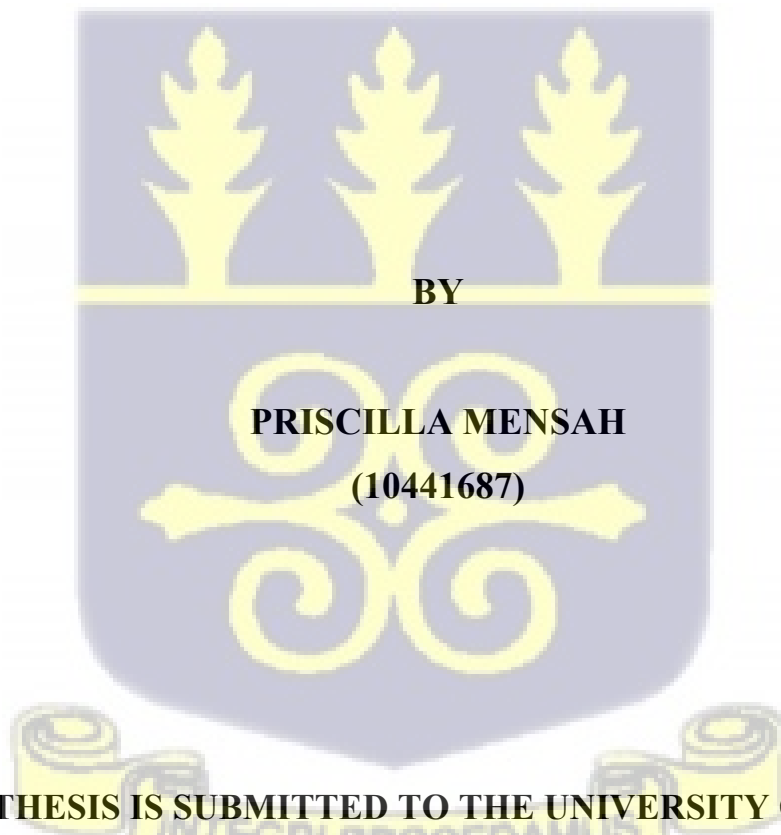


UNIVERSITY OF GHANA

**CONSUMER BEHAVIOURAL RESPONSES TO ONLINE DISPLAY
ADVERTISING IN GHANA – THE EFFECTS OF AD
CHARACTERISTICS, CONSUMER ATTITUDE AND INTERNET
USER MODE**



**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON, IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE AWARD OF PHD MARKETING DEGREE**

DECEMBER 2019

DECLARATION

I do hereby declare that this thesis is the result of my own research and has not been presented in whole or in part for any academic award in this or any other university. All references used in this thesis have been fully acknowledged. I bear sole responsibility for any shortcomings.

.....

PRISCILLA MENSAH
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.....

DATE

CERTIFICATION

I hereby certify that this work was supervised in accordance with procedures laid down by the University.

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DR. STEPHEN MAHAMA BRAIMAH
(CO-SUPERVISOR)

.....
DATE

DEDICATION

I dedicate this work to my terrific husband, Dr. Raphael Odoom for his unwavering support and understanding all through the years. Thanks for giving me the peace of mind I needed to complete this task. You are my God-given solace.

To my adorable son, RJ, for being my “muse” - I needed to wrap up efficiently so I could meet you.

To my mum, Madam Elizabeth Aryee, to whom I remain eternally grateful for the gift of education.

To the memory of my late dad, Mr. Francis Feller Mensah for his timeless counsels that set my course and still drive my decisions in life.

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ABSTRACT

The unrivalled strength of the internet in terms of reach, richness of information, targeting and interactivity has made it a vital medium for advertising which has caused a remarkable growth in online/internet advertising. Over the past decade, online display advertising (ODA) has emerged as the fastest growing category of online advertising spurring several firms and businesses to invest heavily in display ads in order to connect with and keep their brands in front of consumers. While ODA holds various benefits for firms, both the literature and practice point to advertising clutter as a major challenge that has accompanied its growth. This has left advertisers struggling to stand out among the clutter to capture consumer attention and also, gain insights into what types of display advertising work best in the online environment. This thesis sets out to provide a theoretical and practical understanding of consumer behavioural responses to online display advertising by offering insights into how ODA characteristics, consumer-specific factors like attitude toward online advertising (ATOA) and user mode (internet usage motive) as well as how the nature of the advertised brand (product or service) enhance ad acceptance and minimise ad avoidance behaviours of consumers in an emerging market setting – Ghana. The study draws on the stimulus organism response (SOR) model and the reversal theory to propose a conceptual framework to empirically examine and explain the interrelationships among these variables. Adopting a positivist paradigmatic stance, the thesis employed a quantitative cross-sectional survey to collect data from 592 internet users in Ghana. Data gathered was analysed using Structural Equation Modelling (SEM) as well as ANOVA and Binary Logistic Regression. The study finds that, interactivity, informativeness and personalisation were the relevant ODA characteristics that serve direct stimuli functions in eliciting approach behaviours (ad acceptance). In addition, attitude toward online advertising (ATOA) emerged as a significant mediator (facilitator) of the positive relationship and the negative relationship between these ODA characteristics and ad acceptance as well as ad avoidance respectively. Also, user mode significantly moderated the relationship between personalisation and ad acceptance as well as informativeness and ATOA, and there were differences in behavioural responses of consumers based on the nature of the advertised brand such that, ad avoidance was higher for service-featured ODAs and ad acceptance was higher for product-featured ODAs. These findings bring to the fore knowledge that, reliance on ODA characteristics although may be quite adequate in eliciting positive behavioural responses, may not be sufficient in lessening avoidance behaviours toward display ads; rather how these ODA stimuli generate positive consumer ATOA is more crucial. Findings also point to understanding consumers' motive for internet usage and the nature of the brands firms seek to promote as vital issues for advertisers and publishers if the appropriate ad features are to be selected in designing display ads that will suit the brands as well as appeal to the various user groups in order to generate the required attitude and responses. Further practical and theoretical implications of the study are discussed in the thesis.

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CHAPTER ONE

INTRODUCTION

1.1 CHAPTER OVERVIEW

This chapter provides a window into the study and an overview of the direction of the entire thesis. The chapter starts off with the background of the study which discusses current issues in online advertising, and notable challenges that have attended its growth leaving practitioners in want of indicators that may help elicit favourable consumer responses to their online display advertisements. The problem and the corresponding gaps in the literature the study seeks to address are presented along with key questions and objectives outlined to guide the study. The chapter then discusses the expected contributions of this thesis to both theory and practice. Lastly, to provide a roadmap for the entire thesis, the chapter presents the structure or flow of the study.

1.2 BACKGROUND TO THE STUDY

Since its advent, the internet has earned a special place as a medium of choice in present day advertising, attributable to its unequalled strength regarding reach, targeting, richness of information, and interactivity (McCoy *et al.*, 2012; Nihel, 2013; Liu & Mattila, 2017). More so, the tremendous surge over the past decade, in the number of internet users and the amount of time they spend online (Souiden *et al.*, 2017) speak to the internet's standing and potential as a pertinent advertising medium. In 2018, about half the global population are said to be online (i.e. are internet users) (Internet World Statistics, 2018). And so today, to create relevance among, reach out to, connect with, and keep brands in front of their customers and target segments, several firms and businesses do not only have online presence, but have also shifted most of their marketing strategies online and are intensifying their advertising efforts in the online environment (Kim, 2018).

As a result, Internet advertising (online advertising), has grown exponentially, contesting the prevalence of traditional media such as television and print, and has become a sizable portion of the total advertising market (Belanche *et al.*, 2017; Liu-Thompkins, 2019). In 2017, for instance, online advertising represented 41 percent of global advertising spending and reached \$209 billion (Kafka & Molla 2017). It is also projected that by 2020, the global market for online advertising, dominated by search and display advertising will reach \$265 billion (Companiesandmarkets.com, 2014; IAB, 2016). At this instant, it is relevant to point out that the focus of this thesis is on online display advertising (ODA), which represents graphical ads of different formats that are hosted on social networking sites, news sites, blogs, and commercial websites etc. (Chapelle *et al.*, 2014) that internet users or website visitors see along with other content. Growing at 17% every year, ODA currently accounts for 49.7% of the online advertising market and is anticipated to reach \$222.3 billion by 2022, making it the fastest growing category of online advertising (eMarketer, 2018). This is spurring marketers/advertisers and web publishers to invest heavily in display advertising (Hof, 2013; Fridgeirsdottir & Najafi-Asadolahi, 2018). Because most display ads are incorporated with mechanisms, that allow consumers to clickthrough, they create a high probability of advertising engagement. Also, internet-targeting technologies allow companies to tailor their ODA to consumers based on previous browsing history and personal information among other things (Sridhar *et al.*, 2016). From an industry standpoint, all these are strong indicators of the steady growth and relevance of online display advertising in the today's marketplace.

Paradoxically, this increasing growth of online display advertising presents marketers and advertisers with some challenges; the most significant of which is the perception of advertising clutter. Given its pervasive nature, the internet has a high advertising density (Ha & McCann, 2008; Goldfarb, 2014). At every visit to the internet, users are exposed to

torrents of ODAs that compete on the medium for their attention causing them to pay selective attention to ads as well as avoid them (Rejòn-Guardia & Martinez-Lopez, 2014). Also, the rapidly changing online advertising landscape, driven by new and evolving technology-enabled features, and the consistent emergence of diverse ODA formats from static banners to interactive audio-visual ads (Li & Lo, 2015), complicate advertisers' decisions regarding which formats will yield the best results for their campaigns (de Pelsmacker & Neijens, 2012; Belanche *et al.*, 2017). Because ODAs are capable of appealing to and irritating consumers depending on certain ad-related and consumer-related factors (Brajnik & Gabrielli, 2010; Janssens *et al.*, 2012), marketers and advertisers are grappling to stand out among the clutter of copious online advertising to not only capture consumer attention, but also hold it for elaboration of the advertising content which may translate into other positive behavioural effects (Kuisma *et al.*, 2010; Nihel, 2013). There is, therefore, a mounting need to understand consumer reactions and responses to online display advertising in order to provide pertinent indicators and actionable knowledge on how firms can effectively employ it to enhance their advertising goals.

From an academic perspective, online advertising in general has gained scholarly attention following its rapid global increase and corresponding practice-related challenges, (Smit *et al.*, 2014; Hoban *et al.*, 2015; Nasir, 2017). Yet, research in this area is considered the third most studied form of advertising after print and television (Kim *et al.*, 2014). Although this discrepancy may be ascribed to the relative nascence of the phenomenon given its brief history which only began in the mid-1990s (Tutaj & Reijmersdal, 2012), some compelling reasons have been put forth by scholars regarding why the quantum of research work in the area should experience an upsurge and catch up with the pace of conventional/traditional advertising research. Foremost, ad networks and host websites continually track consumers' online actions, providing a remarkable volume of data at individual levels which makes

online advertising highly measurable even in international contexts, unlike traditional advertising (Lewis *et al.*, 2011; Sridhar *et al.*, 2016). Additionally, online advertising has a pronounced interdisciplinary nature that transcends the fields of marketing, communication and advertising (Cho & Kang, 2006; Knoll, 2015), and is investigated by scholars in the field of information systems or management, economics and operations as well (e.g. Kim *et al.*, 2012; Johnson, 2013; Tang *et al.*, 2014). Nonetheless, in spite of the potential the field holds for academic investigations, there is a gap in advertising literature and by extension marketing literature. This study is thus, opportune as it responds to scholarly calls (e.g. Wojdyski & Evans, 2015; Liu-Thompkins, 2019) for further academic enquiries aimed at progressing the advertising field by providing theoretical and practical understanding of the value of online display advertising and how firms can use it appropriately.

1.3 PROBLEM FORMULATION AND RESEARCH GAPS

In a saturated media environment where consumers are overwhelmed with advertisements and are gaining more control over their advertising exposure, advertisers are struggling to stand out among the clutter, capture consumer attention as well as generate favourable reactions. For this reason, there is a growing need for marketers and advertisers to gain insights into what types of advertising work best in online settings (Bright & Daugherty, 2012; Hoban *et al.*, 2015). Over the past two decades, there has been a well-articulated stream of research on online advertising (e.g. Schlosser *et al.*, 1999; Rodgers & Thorson 2000; Robinson *et al.*, 2007; Ha, 2008; Goldfarb & Tucker, 2011; Goodrich, 2013; Aguirre *et al.*, 2015; Parra-Arnau *et al.*, 2017). Particularly, the possible antecedents to online display advertising effectiveness and the approaches for assessing the efficacy of online display ads have emerged as a timely focus of academic research aimed at offering insights that may suggest strategic ways to enhance positive online advertising effects and decrease

negative outcomes (Martín-santana & Beerli-Palacio, 2012; Lambrecht & Tucker, 2013; Eshghi *et al.*, 2017).

In spite of the plethora of available studies, the empirical evidence regarding the underlying factors that drive online display advertising effectiveness, remain rather inconclusive and less disciplined (Bleier & Eisbensen, 2015a; Auschaitraku & Mucherjee, 2017). Especially, the measurement in terms of consumer responses need to be resolutely grounded in the literature. Pursuant to this, a review of the online display advertising literature was conducted to understand the major themes, issues and evidences in ODA studies, in order to identify gaps, and define a research route for this study. Following from the discourses in the review, a number of gaps are apparent in the literature that require scholarly deliberation. For the purpose of this study, these gaps are ordered along three major strands (issues, theories and context, and methodology), and are discussed in the subsequent subsections.

1.3.1 Issue Gaps

Academic attention paid to online display advertising effectiveness has been considerably documented in the literature with most of the extant studies focusing on various ad formats and their possible effects (Tujat & Reijmersdal, 2012; Belanche *et al.*, 2017; de Pelsmacker & Neijens, 2012; Auschaitraku & Mucherjee, 2017). These ad formats have similarities and distinctions based on certain executional factors and elements that characterize them (Burns & Lutz, 2008; Li & Meeds, 2007). Nonetheless, most of the studies that focus on the ad formats do not effectively delineate the underlying characteristics that drive the effect of such formats (e.g. Tujat & Reijmersdal, 2012). Much more relevantly, studies that explicitly focus on these executional characteristics as antecedents to ODA effectiveness are limited (Rejón-Guardia & Martínez López, 2014). Of the several noteworthy ad characteristics studied (such as animation size, colour, sound, repetition, entertaining, language, and appeal

etc.) issues of interactivity, informativeness, placement (context-congruency), and exposure condition among others, are still high on the agenda of expected research (Segev, 2014; Mahmoud, 2014; Kim, 2018). Additionally, scholarly attention to such others as, salience, and personalisation, which typify some relatively nascent ad formats (e.g. native ads and skippable videos) has been even more scant (Agarwal *et al.*, 2011; de Pelsmacker & Neijens, 2012; Wojdyski & Evans, 2015). Although consumers' perceptions and responses are driven by these various features that make up the ads or formats, relatively few studies have focused on these individual features, and so examining the effects of these features is, therefore, a pertinent call in the literature (Tang *et al.*, 2014; Liu & Mattila, 2017) and the focus of this thesis.

Furthermore, several consumer responses to online advertisements, considered measures of online advertising effectiveness, have been of critical interest to practitioners and academics (see Rosenkrans, 2009; Kireyev *et al.*, 2015; Auschaitraku & Mucherjee, 2017). In the stream of literature reviewed, such behavioural responses as website visit (Hoban *et al.*, 2015), ad acceptance (Belanche *et al.*, 2017) ad clicking or mouse rollover (Wang & Sun 2010a; Bleier & Eisenbeiss, 2015a; Liu & Matila, 2017), ad avoidance (Seyedghorban *et al.*, 2016), and purchase intention (Jung *et al.*, 2011; Goodrich *et al.*, 2015) among others, have been examined. These empirical investigations notwithstanding, the literature is still fragmented and inconclusive on which responses serve as useful measures of online display advertising effectiveness, and which ad characteristics generate favourable and unfavourable conative responses (Resnick & Albert, 2014; Belanche *et al.*, 2017). The inconclusive results have been attributed to the investigation of different ad stimuli, methods, measures, audiences and contexts (Kuisma *et al.*, 2010), which make such studies hardly comparable. Particularly, the literature depicts a lack of studies that consider both direction (positive and negative) as well as the intensity (active and passive) of behavioural

responses in a single investigation. If advertisements are expected to generate positive effects of value to the advertiser and consumer but could have negative effects too (Tang *et al.*, 2014), then the question remains as to what ad features cause consumers to respond positively or negatively toward ODAs. In order to contribute to the literature in these foregoing regards, this study investigates the effects of a multiplicity of pertinent ODA characteristics on behavioural response in order to provide an understanding on their influence, and under what circumstances they may be more or less effective (i.e. generate positive or negative responses).

Also, while ad-related factors may influence consumer responses to online advertising, several empirical evidences have demonstrated that this relationship is not always direct and simple (Song *et al.*, 2011; Liu & Mattila, 2017). For this reason, available literature abounds in investigations on the intervening, confounding and complimentary roles that consumer-related and product-related factors play in this relationship (e.g. Ching *et al.*, 2013; Lambrecht & Tucker, 2013; Souiden *et al.*, 2017). However, attitude as a consumer-related factor though very topical in the literature, has received research attention (e.g. Goodrich, 2013; Eshghi *et al.*, 2017; Auschaitraku & Mucherjee, 2017) mostly as an outcome of online advertising, or an antecedent to other effects. While these studies have made valuable contributions to improve understanding of consumer attitude as a precursor to other outcomes or as a response in itself, they are deficient in two ways. First, with the exception of a few (e.g. Valaei *et al.*, 2016; Souiden *et al.*, 2017), existing studies have commonly examined attitude toward specific ads based on the scope of their research, rather than general attitude toward online advertising. Second, these studies are also limited in providing insights and explanations on how attitude functions as a facilitating variable in transmitting/enhancing the effect of advertising stimuli onto consumer responses. What is more, the few studies that have examined the intervening role of attitude toward online

advertising such as Wang *et al.*, (2009) and Wang and Sun (2010a; 2010b) also lack theoretical cohesion. Hence this study contends that further insights may be acquired if the mediating role played by attitude is examined from a general online advertising perspective grounded on a theoretical notion.

It is also worth noting that because the internet is a goal-oriented medium, one of the recognised predictors of consumers reactions to online advertisements is “user mode” or the goal-directedness/orientation of consumers which is driven by their internet usage motive (Zanjani *et al.*, 2011). However, online advertising studies that have examined its role in explicating responses to online display ads are wanting (Jung *et al.*, 2014). An aspect that has particularly, been overlooked is how user mode may function as a contingency factor causing variations in behavioural responses (Bleier & Eisenbess, 2015b; Seyedghorban *et al.*, 2016). This study focuses on user mode as a very relevant situational or consumer-related factor that may confound consumer responses to display advertising on the internet (as a goal-oriented environment). Moreover, although, evidence from the online advertising literature points to disparities in consumer processing and responses to online display ads of several product categories owing to product type peculiarities (e.g. Flores *et al.*, 2014; Eshghi *et al.*, 2017), the current stream of literature is deficient in evidence of such variations in the product-service context. Since these product-related and consumer-related variables offer explanations to how the effects of online display advertising may vary or be enhanced, they deserve further research and discussion in order to legitimise prior claims as well as provide new insights (Aguirre *et al.*, 2015; Seyerghorban *et al.*, 2016). As such, this thesis as well examines the moderating effect of user mode on the online ad characteristics-attitude-behavioural response relationships, and also assesses the disparities (or lack thereof) that might exist in consumer responses to online display advertising of services and products.

Following these issue gaps, the current study attempts to understand the relationship between online display advertising and consumer behavioural responses, by arguing that though the effects (behavioural responses) of ODAs are reliant on ad-related features, certain consumer-related variables may mediate and/or moderate these relationships (van Reijmersdal *et al.*, 2016; Belanche *et al.*, 2017), and the nature (product/service) of the advertised brand may also cause variances in these responses. There is thus, the need to clearly delineate these conditions, and to ascertain the degree to which they influence, enhance and/or confound behavioural responses to online display advertising.

1.3.2 Theoretical and Contextual Gaps

From a theoretical perspective, the literature documents a considerable amount of online advertising studies that have adopted atheoretical (e.g. construct/category-based and model-based) approaches, relative to theory-based approaches. Amid the theories that have been used in ODA research, the stimulus organism response (SOR) model and the reversal theory have been sparsely applied in spite of their unique perspectives on how ad-related and consumer-related factors may influence online advertising effects or outcomes (Jung *et al.*, 2014; Bleier & Eisenbess, 2015b). Although a number of the studies that were reviewed referred to features and executional elements of ODA as relevant advertising stimuli antecedent to the effectiveness of display ads, little to no attention is given to the stimulus organism response model which can provide some insights on ODA characteristics and their relationships with behavioural responses of consumers. It is fair to point out that while a considerable number of online empirical works have employed this theory, the focus has been on online retailing and shopping (e.g. Kim & Lennon, 2012; Kamboj *et al.*, 2018), leaving the stimulus role played by the executional features that characterise online display advertising unexplored. The SOR model depicts how external stimuli affect an individual's internal state and subsequently, their behaviour (Mehrabian & Russell, 1974). Because the

internet is a stimulus rich medium, with commercial websites featuring several advertisements on a single webpage (Kuisma *et al.*, 2010), examining how advertisers could leverage their ODA features as stimuli that may generate positive attitude toward online advertising and behavioural responses from the viewpoint of the SOR model could help provide theoretically and empirically grounded insights for theory progression (Tang *et al.*, 2014; Bleier & Eisenbess, 2015b). This will also allow for sturdy claims to be made about the stimuli function of ODA characteristics and their link with consumers' attitude toward online advertising and behavioural responses.

The stimulus organism response model helps explain the persuasive functions of advertising and how ODA characteristics act as stimuli generating internal (attitude) as well as external (behaviour) responses. Nevertheless, it falls short of explaining how user mode (goal orientation/internet usage motive) may confound these focal relationships (Bleier & Eisenbess, 2015b). In effect the reversal theory which offers explanations on how a contingency factor like "user mode" may moderate or cause variations in behavioural responses, has also been largely ignored in the ODA context (Seyeghorban *et al.*, 2016), as such, the possible link between these two theory streams has not been established. In light of the above, this study demonstrates empirically how consumer behavioural responses to online advertising are influenced by both ad-related and consumer-related factors in a coherent manner from these theoretical viewpoints. In so doing, the current study extends the explanatory power of these theories into the online advertising context and contributes to the theory integration call in the broader advertising literature (Jung *et al.*, 2014; Faber, 2015; Johar, 2016).

From a contextual viewpoint, the study, identifies a gap as empirical works on online advertising are greatly skewed towards data emanating from developed nations (e.g. Martin-

Santana & Beerli-Palacio, 2012; Hoban *et al.*, 2015; Hussain *et al.*, 2018). While some studies (e.g. Wang & Sun, 2010a; 2010b) have provided comparative understanding of online display advertising and its effects from both developed and developing market settings, the emerging market perspectives appear limited (Valaei *et al.*, 2016; Eshghi *et al.*, 2017). Emerging markets differ in several ways from developed markets. Also, differences exist among emerging markets as well because, such markets within Eastern Europe for instance, vary extensively in culture, economic development, internet penetrations, online advertising uptake, as well as the population of online consumers and their online behaviours from those in for instance, sub-Saharan Africa (Boone *et al.*, 2010). The study, therefore, considers the paucity of research into online advertising effects from emerging markets or developing contexts as significant, and attempts to bridge this gap by providing perspectives from a developing market setting – Ghana, where internet penetration and online advertising uptake though progressively picking up, lags behind other developed economies that have seen much representation in extant literature.

1.3.3 Methodological Gaps

The methodological gaps to be addressed are along two strands; the increased dominance of experimental studies, and high use of student samples. First, of the quantitative approaches, online advertising research is dominated by experimental (field and controlled) designs. While experiments provide the leeway to collect data unobtrusively and are free of self-reporting predisposition in real media atmospheres (Chang, 2017), laboratory experiments are plagued with external validity issues (Goldfarb, 2014), and the behaviour of respondents in laboratory experiments are considered falsified, given their knowledge of the research activity. It is also relevant to point out that in “normal” daily situations, unlike in controlled laboratory environments, people’s behaviours have a greater degree of variations, and such behaviours can be examined through observations or self-report data

(Tang *et al.*, 2014). More surveys and field experiments are, therefore, encouraged as they offer more uncontrived objectivity (Lewis & Rao, 2015). Particularly, since internet users who are exposed to online display advertisements may eventually engage in certain activities (e.g. offline purchase and behavioural intentions) that may not be observable in experimental situations, surveys offer more suitable approaches to measure such.

Second, the essence of sampling in any research is generalisability, and this is even more so for the advertising field because of its closely-knit link with practice. Sampling has been an essential methodological problem ailing online advertising research (Ha, 2008; Knoll, 2015) as is reflected in the reliance on college students by the majority of studies in the reviewed ODA literature. Given the stream of evidence that variations exist in consumer attitude toward advertising in terms of certain demographics, it is essential that studies use diverse and broader respondent populations as possible, especially when the explanatory power of predictors are interacted with respondents' characteristics (Chang, 2017; Eshghi *et al.*, 2017). Albeit college students may constitute a sizable fraction of internet users and are an essential segment for advertising, they undoubtedly are not representative of all internet users on the bases of some demographics (e.g. age, education, outlook on technology, familiarity with the internet and usage rate etc.). This study will therefore focus on a broader population of online consumers beyond the borders of college students in order to curb validity issues and provide a more representative picture from the study setting.

1.4 RESEARCH QUESTION AND OBJECTIVES

Following from the gaps raised with respect to issues, theories and methodologies, the study broadly seeks to examine how consumers respond to online display advertising by assessing the influence that specific ODA characteristics exert on these responses under different consumer-related conditions. Thus, the key question the study seeks to answer is *What*

effects do ad characteristics, attitude toward online advertising and internet user mode have on consumer behavioural responses toward online display advertising of product and service brands? Specific objectives culminating into this broader intent are to:

1. Determine the relationship between online display advertising (ODA) characteristics and consumer behavioural responses.
2. Examine the intervening role of consumer attitude toward online advertising in the relationships between ODA characteristics and behavioural responses.
3. Assess the moderating effect of user mode on the relationships between ODA characteristics, and attitude toward online advertising as well as behavioural responses.
4. Explore the likely variations in consumer behavioural responses based on the nature (product vs service) of the advertised brand.

1.5 SIGNIFICANCE OF THE STUDY

This study holds relevance along several strands for practical and theoretical developments. There is a lengthy debate in the advertising literature on the effectiveness of online advertising and current research on the issue has produced inconclusive results (Auschaitraku & Mucherjee, 2017). For this reason, there have been several academic calls for further research into both antecedents and measures of online display advertising effectiveness (Martin-santana & Beerli-Palacio 2012), as well as how to enhance user responses to online display ads (Bleier & Eisenbess, 2015b). This current study is thus, expected to provide theoretical and practical contributions which are briefly discussed next. Further detailed contributions from the thesis are provided in the concluding chapter (see pages 243-251).

1.5.1 Theoretical Contributions

This thesis seeks to strengthen existing knowledge on advertising by enhancing understanding of the ODA features that are essential in driving consumer behavioural responses in online environments through the examination of some pertinent characteristics. More importantly, the study's focus on a multiplicity of ad characteristics will help eliminate certain eccentric effects and provide deeper understanding of the individualised influence of the various characteristics to further enhance the online advertising effectiveness literature (Belanche *et al.*, 2017; Breuer and Brettel, 2017). Also, because this thesis examines both the direction (acceptance and avoidance) as well as the intensity (active and passive) of behavioural responses, it will add further insight and improve the general understanding among academics and practitioners on how approach behaviours toward online display ads can be enhanced and avoidance behaviours minimised.

Further, by relying on the SOR model and the reversal theory, the current study expands the borders and explanatory power of these theories from mainstream marketing into the online advertising context. What is more, these theories also allowed for the clear delineation of two consumer-related variables (attitude toward online advertising and internet user mode) which have not been adequately studied, and the possible integrative role they play with ODA features in engendering behavioural responses of consumers to ODA. The study also contributes to the existing literature on online advertising effectiveness by providing evidence from an emerging or developing middle-income country in sub-Saharan Africa. Contextual issues are essential in management and more specifically, marketing research (Boso *et al.*, 2013), and given the roles cultural differences are known to play in consumer attitude and responses to advertising (Wang & Sun, 2010b; Lascu *et al.*, 2016), providing this perspective will bring further enlightenment to the literature since evidence from the sub-Saharan African perspective are lacking.

1.5.2 Practical Contribution

Practically, the study advances online advertising practice by offering insights on the applicability and suitability, as well as aid in subsequent selection of appropriate features in display advertising designs for more effective outcomes. More relevantly, given the apparent unlimited possibilities of ODA formats, insights into consumer perceptions and attitudes regarding, and behavioural responses toward their underlying features will guide practitioners in their future design, placement or execution and improvement of ODA. By this, the study offers insight on how practitioners can harness these factors to shape and enhance their online advertising goals. With the international scope of business activities today, and the cross-border nature of online advertising, this study provides insights to help advertisers and marketers in Ghana, those in settings with similar economic and customer characteristics as well as those in the international front seeking to promote their businesses and brands in such settings to fine-tune their online advertising efforts and ODA designs to enhance effectiveness and positive consumer reactions. The outcomes of this study will also aid practitioners (advertiser, internet publishers etc.) to understand better how to, more seamlessly, employ online media and related substructures to advance their advertising goals.

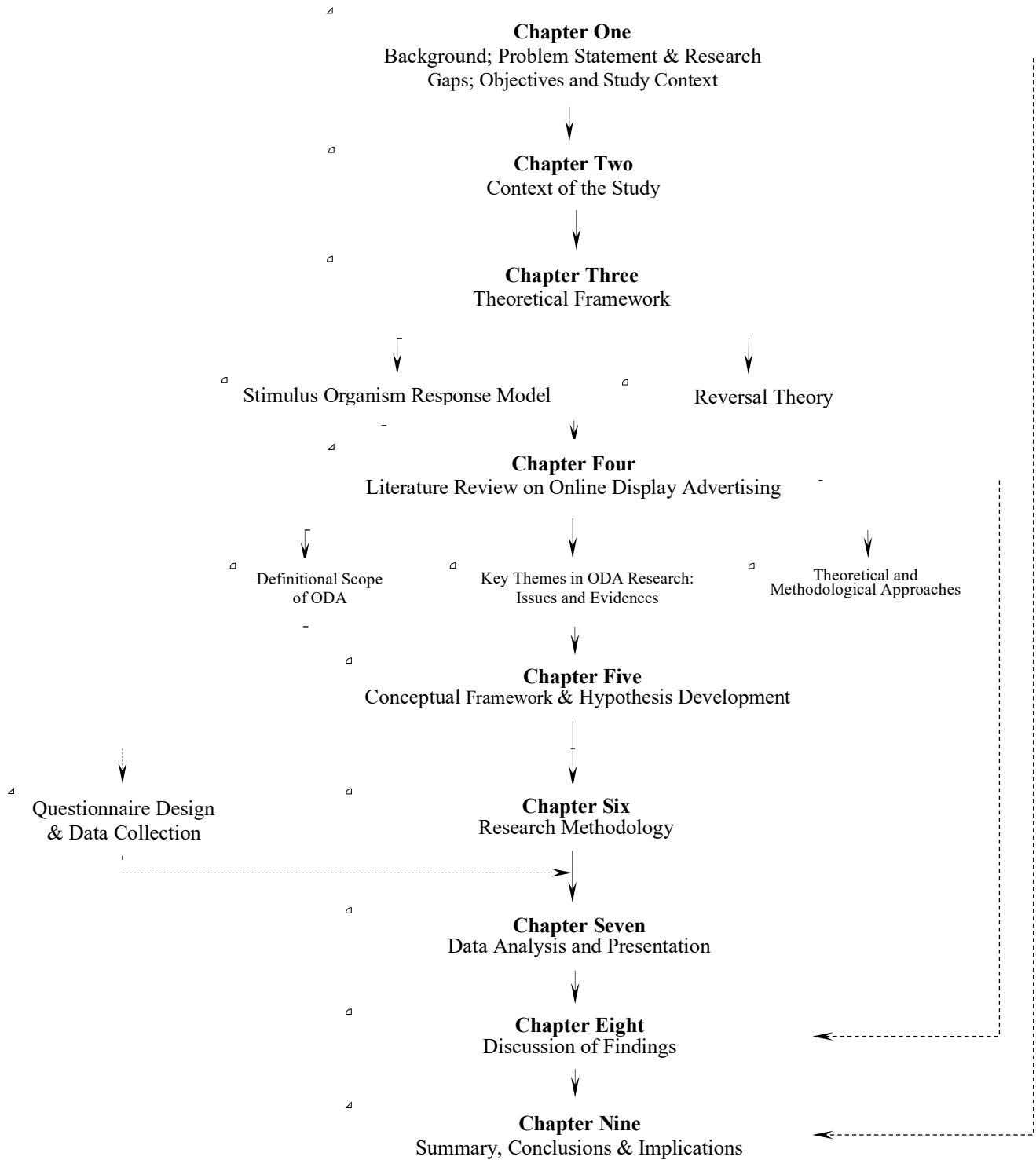
1.6 OUTLINE OF THE THESIS AND CHAPTER DISPOSITION

This study comprises nine chapters. Chapter one introduces the study by providing the background and argument for this thesis, the research problem and gaps, as well as the research objectives. Chapter two focuses on the study context by highlighting some developments in internet usage and shedding light on the advertising sector and online advertising practices in Ghana. Chapter three discusses the theoretical perspectives that underpin this thesis. Specifically, the chapter reviews and discusses the SOR model and reversal theory in order to establish how this thesis may contribute to knowledge through these theories. Chapter four

reviews extant literature in the study areas of online display advertising, discusses issues and evidences in ODA research under themes, and assess the theoretical and methodological approaches used in the reviewed ODA literature. This gives an understanding on the extent of research progression on this topic as well as aids in the identification of pertinent gaps in the literature. Following from this, chapter five incorporates the key issues arising from the review of literature and theoretical foundations into a conceptual framework that better explains the various relationships the study intends to examine in consort with corresponding testable hypotheses. The essence of this is to provide a graphical view of the study as well as guidance for the empirical investigation.

Chapters six to nine form the empirical aspect of the thesis. Chapter six outlines the methodology for the study, thus discussing how the study was conducted in order to achieve the objectives outlined in the first chapter. The chapter examines methodological issues such as research paradigm, purpose, approach, and strategy. The chapter also reviews the instrumentation used for data gathering and the modes by which data was analysed. Chapter seven then reports the data analysis, presentation and interpretation of the results of the hypothesis tests. Chapter eight provides thorough discussions on these results/findings, based on the stated hypotheses and the study objectives. These discussions are done in relation to existing literature and the study's context. Chapter nine which is the final chapter of the study covers five key areas. This chapter summarizes the study and findings, provides reflections, discusses implications for research and practice, draws conclusions and discusses limitations of the research, and points out avenues for further research. The structure of the entire thesis is illustrated in Figure 1.1 below.

Figure 1.1 Structure and Flow of the Thesis



1.7 CHAPTER SUMMARY

This chapter provides a general introduction to this thesis. The chapter puts forth the argument that the increasing growth of online advertising is attended by incessant emergence of ODA formats, increased advertising clutter, and consumers' selective attention to online display ads. These challenges have heightened the need to understand the relevant ad-related and consumer-related factors that influence consumer behavioural responses to ODA so actionable indicators can be provided for eliciting positive consumer behavioural responses. Discussions within the chapter point out that the explicit examination of the executional characteristics of ODA, and the mediating and moderating role of attitudes toward online advertising, and user mode respectively as well as the nature of the advertised brand (product vs. service) will allow for a better understanding of how they influence both the direction (ad acceptance and ad avoidance) and intensity of consumers' behavioural responses to online display advertising. The chapter concludes with a discussion on the significance of the thesis to practice and theory as well as how the entire thesis is structured.

CHAPTER TWO

CONTEXT OF THE STUDY

2.1 INTRODUCTION

This chapter describes the setting within which the study was conducted in order to provide a contextual frame for the thesis. The chapter first, presents a brief overview of Ghana's economy. Discussions on Internet usage in Ghana and the penetration rates over the years are presented. The chapter also highlights the current outlook of the advertising sector and throws light on the prevailing practices in online advertising in the country.

2.2 A BRIEF PRIMER ON GHANA'S ECONOMY

Ghana is a sub-Saharan African (SSA) country geographically bordering Togo, Cote d'Ivoire, and Burkina Faso, and is divided into sixteen (16) administrative regions, with the capital city, Accra, located in the Greater Accra Region. Ghana attained middle-income status in November 2010 and began commercial production of crude oil in 2011 (ISSER, 2017). The revenues that accrued in these years bumped the country to the global list of fastest growing developing economies and was ranked by the World Bank as the 2nd in West Africa and 85th among the world's largest economies with a 40.7 billion US Dollars GDP in 2012 (World Bank, 2014). Over the past decade, the economy is thriving, and the country has experienced advances in business activities, political stability, and heightened foreign investments which have improved economic growth. Ghana's economy keeps progressing and in the first quarter of 2019, the growth of gross domestic product (GDP) was estimated to be 6.7%, that is a 1.3% increment over the previous year (World Bank, 2019). This increased quarterly growth in 2019 was driven by a strong recovery in the services sector which grew by 7.2% relative to 1.2% in 2018.

The economy is made up of three main sectors; Agriculture, Industry, and Services. The service sector is the largest of the three sectors and contributes about 54.2% to Ghana’s GDP, making it the most dominant contributor. Selected indicators of economic growth and sector contributions are presented in Table 2.1. Ghana Statistical Service (GSS) categorises the service sector of the country as comprising financial and insurance activities; real estate; professional activities; administrative and support service activities; trade; transport and storage; repair of vehicles; household goods; hotels and restaurants; public administration and defense; social security; education; health and social work; community, social and personal service activities, and information/media and communication. Information/media and Communication is one of the subsectors contributing to the service sector growth, and is the sector under which the study falls. Ghana enjoys a considerable degree of media freedom, with radio as the most popular medium followed by television, and new media, particularly the internet which is also beginning to gain a foothold.

Table 2.1 Selected Indicators of Economic Growth in Ghana

Indicators	1990	2000	2010	2017
Population (in millions)	14.60	18.94	24.51	30.21
Gross Domestic Product (in billion \$)	402.59	263.11	1,312.61	42,689.78
Gross Domestic Product (annual growth in %)	3.33	3.70	7.90	3.58
Inflation (annual in %)	31.17	27.23	16.60	17.42
Foreign Direct Investment (in million \$)	14.80	165.90	2,527.35	3,485.33
<i>Sectorial Percentage Contribution to GDP</i>				
Agriculture	45.07	39.41	30.83	19.60
Industry	38.08	32.20	49.36	52.24
Services	16.86	28.39	19.81	28.16
Imports	16.88	48.80	29.48	40.74
Exports	25.85	67.25	45.90	47.86

Source: World Bank, 2018

As at 2019, the population of Ghana was about 30 million, making it a sizeable emerging market in the SSA Region (World Bank, 2019). As one of the most densely populated African countries, Ghana has a huge consumer market made up of an urban population (55%

of Ghanaians are urban dwellers) averagely higher than most African countries, and a young educated generation with literacy above 90% compared to a 76% literate adult population (Nordea, 2019).

2.3 INTERNET USAGE IN GHANA

Internet usage rates are growing globally and an emerging middle-income country such as Ghana is no exception. Ghana was the second country within the sub-Saharan African Region to have complete internet connectivity in 1995, however, penetration did not improve speedily until the mid 2000s (Quarshie & Ami-Narh, 2012). Ever since, the country's access to, and use of the internet has been increasing steadily, albeit the progress is below the global, regional and African average. Table 2.2 and Figure 2.1 show internet usage and penetration rates over the past decade. In Ghana although there are about 54 authorised internet service providers (NCA News, 2016), the telecommunications sub-sector is the largest provider of internet services, and the sector as at November 2017 was made up of 5 major operators (i.e. MTN, Vodafone, Airtel-Tigo, Glo and Expresso) who provide both voice and data services. These telecommunication companies with the exception of MTN (who provides 4G) operate with 3G mobile data (Citifmonline, 2016). Besides the telecom providers, other major internet service providers in the country include Surfline, Busy Ghana, and Blu Telecoms who also operate with 4G data.

As at the end of the second quarter of 2019, internet users in Ghana amounted to 11,400,732 which has been credited to the proliferation of smart mobile phones, personal computers, and easy access to internet connectivity in the country (IWS, 2019). Internet penetration in Ghana in 2019 therefore stands at 37.9%, and averagely Ghanaians spend nearly four hours online using any device (Africa news, 2019). It has also been recounted by Graphic Online (2018) that of the devices used, Ghanaians preferred mobile phones in their internet usage

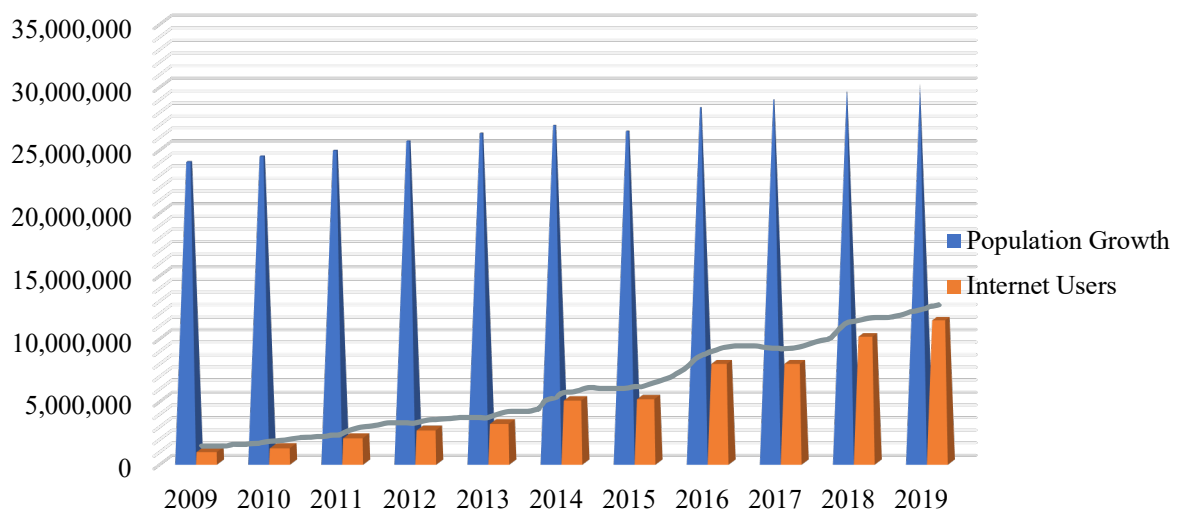
activities compared to computers (laptops and desktops), and tablets. Specifically, 75% of internet traffic is said to come from mobile phones, 22% from PCs and 3% from tablet devices.

Table 2.2 Internet Usage and Penetration Rate in Ghana

Year	Internet Users	Population	Penetration	Usage Source
2009	997,000	23,887,812	4.2 %	ITU
2010	1,297,000	24,339,838	5.3 %	ITU
2011	2,085,501	24,791,073	8.4 %	ITU
2012	2,707,724	25,544,565	10.6%	ITU/IWS
2013	3,218,225	26,164,432	12.3 %	ITU/IWS
2014	5,062,667	26,786,598	18.9 %	ITU/IWS
2015	5,171,993	26,327,649	19.6%	IWS
2016	7,958,675	28,206,728	29.6%	IWS
2017	7,958,675	28,833,629	27.8%	IWS
2018	10,110,000	29,463,643	33.6%	IWS
2019	11,400,732	30,096,970	37.9%	IWS

Source: International Telecommunications Union and Internet World Statistics

Figure 2.1 Population and Internet Usage Growth



With the substantial improvement in internet availability and mobile data services, several electronic commerce sites are shooting up that provide platforms for goods to be bought online and delivered to the doorsteps of customers. Although the electronic commerce market in Ghana is still in its early phases of development, it is more appealing compared to other West African countries (Nordea, 2019). Activities of the Pan-African online

platform, Jumia, and the emergence of other online retail outfits such as Konga, Kaymu, and Tonaton among a host of others, coupled with Ghana's Interbank Payment and Settlement Systems (GhIPSS) which kickstarted internet payment gateway, have also increased people's participation in online purchasing, as well as information seeking regarding purchases (itnewsafrika.com, 2015). With the recent introduction of mobile money payments interoperability system in May 2018, and the full PayPal compliance to be established by 2020, electronic commerce activities in the country are expected to improve. In view of this, various companies also now have online presence, especially, websites and social media accounts, and utilise the internet for the transaction of basic business activities and promoting their brands.

2.4 THE ADVERTISING SECTOR IN GHANA

The advertising sector in Ghana is a booming one as advertising is arguably, the most utilised marketing and communication tool employed in diverse sectors like education, politics, religion, fast moving consumer goods (e.g. electronic appliances and textiles), banking and insurance, real estate, agribusiness and hospitality (Nexus, 2013; The Report: Ghana 2012). Over the past two and a half decades, economic and media liberalisation has resulted in the growth of a highly competitive advertising industry with several new multinational and local agencies springing up (The Report: Ghana 2012) equipped with varying degrees of creative refinement and industry specialisation. Currently, there is no reliable database detailing the firms within the sector which makes it very challenging to know the number of registered agencies there are, as well as their specialties and focus. However, it is presumed that the sector has over 100 advertising agencies, and anecdotal accounts suggest that, as the general sector grows, and the internet penetration rate increases, more firms specialised in digital and internet advertising are joining the market. Currently there are about 10-15 renowned digital advertising agencies in Ghana (Digital

content Africa, 2017). From a traditional media perspective, radio and television remain the most popular mediums for advertising, although, outdoor advertising is also heavily patronised with billboards ranking first in that category.

In Ghana, there are no acts or governing bodies ordering and regulating advertising practice in the country, and so, advertising agencies operate without significant restrictions. An Advertising Council Bill which establishes the Advertising Council of Ghana, as the official government body charged with the duty of regulating advertising, registering practitioners in the industry and licensing advertising companies, has been presented to Parliament in 2016 and is yet to be passed into law. Presently, the Food and Drugs Authority is the formal body granted the mandate to vet and approve advertisements promoting pre-packaged foods, alcoholic and energy beverages. The Advertising Association of Ghana (AAG) is the industry body and professional institute in Ghana and is to a large extent the umbrella organisation representing agencies in the country. AAG is a non-profit organisation that represents the interests of advertising and marketing firms in the country and sets operational standards for the industry which signifies to a large extent, self-regulation. The AAG has as its members, eighty-two advertising agencies as at March 2020, and membership is voluntary. AAG is led by a thirteen-member executive council with three ex-officio members. As its aim and objectives, implemented through the Code of Professional Conduct and Ethics, the AAG seeks:

- to promote public confidence in the Advertising profession.
- to safeguard the common interests of those engaged in or using advertising for the promotion of common action and the institution of protective measures.
- to encourage the study of the theory and practice of advertising, and the improvement of its techniques, by the institution of study, examination and award of certificates.

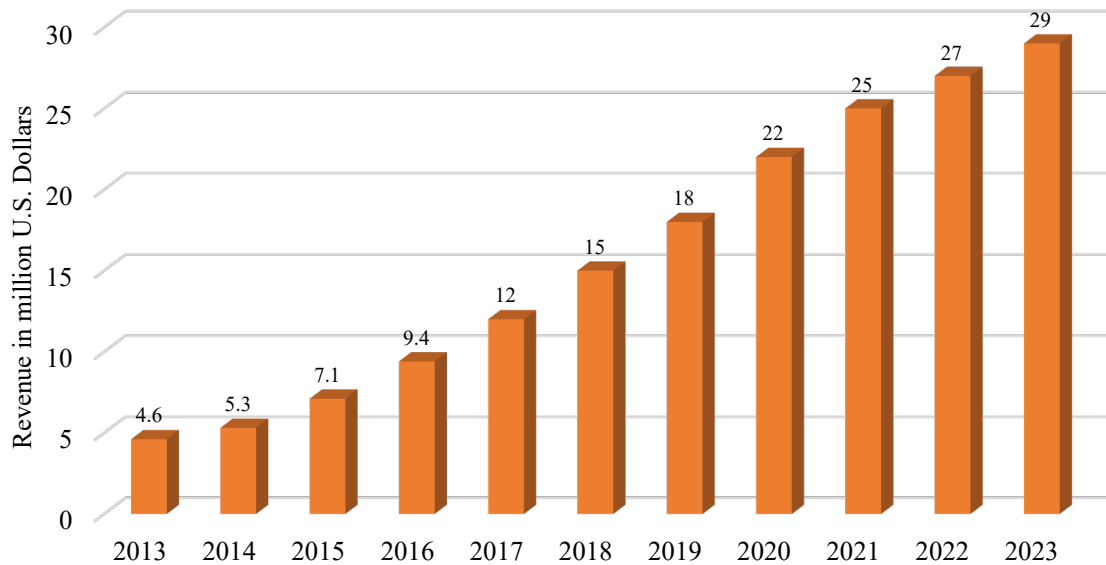
- to establish that efficient advertising is an essential factor in the marketing of goods and services, and in the economic life of the country.
- to demonstrate the efficiency of the services, that advertising and its associated interests can give to government, industry and the public.
- to further the adoption of standards or practice in the business relations between media owners, advertising agencies and advertisers.

2.5 ONLINE ADVERTISING IN GHANA

Consistent with the growth of internet usership, and the advertising sector, online advertising in Ghana is growing but trails behind developed settings and even other developing sub-Saharan African countries like South Africa and Nigeria. In spite of this, its forms have evolved from websites and emails to social media, and display ads which seem to be showing high potential. As the internet usage and penetration rates, the explosion of online retail outlets, and internet payment systems provide indications of the potential of the internet as a vital medium to reach and communicate with consumers, online advertising expenditures in the country are growing. Particularly, given the growing mobile device (e.g. smart phones and tablets) ownership and usage in the country, and mobile data connectivity, marketers are making a concerted effort to reach their target customers while they go about their daily activities (Graphic Online, 2018). Presently, most firms in Ghana are spending between 8-12% of their budget on digital advertising and the growing trend in digital spending on display ads and social media is led by international brands and telecom operators (Digital Content Africa, 2017). The Figure 2.2 below shows the internet advertising revenue in Ghana from 2013 to 2018, with future estimations up to 2023. According to Statista (2019), total internet advertising revenue in Ghana is projected to grow from 15 to 29 million U.S. dollars by 2023. The expected increase in revenue growth,

provides indications of corresponding likely surge in online advertising spending among firms in the coming years.

Figure 2.2 Internet Advertising Revenue



Source: Statista (2019)

Owing to the borderless and pervasive nature of the internet, online advertising campaign design is not the sole domain of ad agencies. Online ad maker software and applications (e.g. bannersnacks) allow individuals to design ads ranging from simple banners to video ads. Also, besides recognised large publishers, and social media sites (such as Facebook, LinkedIn, Instagram and YouTube) informational sites in Ghana such as online news portals (e.g. Myjoyonline, Citifmonline, Yen.com.gh etc.), blogs (e.g. AmeyawDebrah.com, GhBase.com) and commercial websites (e.g. jumia.com.gh, Tonaton.com etc.) host display ads of various product and service brands from within and outside the country. These advertised brands range from automobile, fashion (e.g. apparel, footwear, sportswear, accessories, cosmetics, textiles, and watches etc.), electronics (e.g. computers, mobile phones, televisions etc.), education, hospitality (e.g. lodging, restaurants/food, events etc), and auto repair among others.

However, unlike traditional advertising, because online advertising is still taking shape in the country, very little is known from an academic perspective about its uptake among practitioners, how Ghanaian consumers perceive and respond to, as well as form attitude toward online advertising in general. While several studies have been conducted in developed countries on the subject, findings from these studies cannot be generalised to developing settings. Particularly on the basis that advertising is considered a social actor and a cultural artefact that conveys socio-cultural values and beliefs (Frith, 1995), individuals' attitude and responses to advertising and their online behaviours are context-dependent and vary extensively by country (Wang & Sun, 2010b; De Mooji & Hofstede, 2010). For instance, according to Nordea (2019) compared to other African countries, Ghanaian consumers are more receptive to advertisement and show stronger interest in promotions and are also more willing to try new brands. Given that online advertising is a relatively budding phenomenon in Ghana, and consumers are often exposed to online display ads from within and outside the country for diverse categories of product and service brands, it would be enlightening to understand what issues impact consumer behavioural responses toward ODA in the Ghanaian market place, and how marketers and advertisers can better strategise their advertising designs.

2.6 CHAPTER SUMMARY

The chapter discussed the context in which the study was conducted by providing a brief overview of Ghana's profile and economic development over the years. The chapter discusses Internet usage and penetration trends in the country, and presents a synopsis of the advertising sector, throwing light on the lack of regulatory framework to order activities within the sector. Discussions on prevailing online advertising activities are also discussed in order to situate the study. The next chapter presents the theoretical framework that underpins the study.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 CHAPTER OVERVIEW

Following from the previous chapters which present the research problem, gaps and objectives as well as the context of the study, this chapter discusses the theoretical perspectives that underpin this current study. The review of extant ODA literature presented in the next chapter (see chapter three) unearthed five theories that stood out as used by researchers to provide understanding on key issues in online display advertising. These theories include the elaboration likelihood model (ELM) by Petty *et al.* (1983), reactance theory by Brehm (1966), mere exposure effect theory by Zajonc (1968), stimulus organism response model (SOR) by Mehrabian and Russell (1974), and reversal theory by Apter (1984). After a careful consideration of these theories, which all offer some perspectives and insights on ad-related and/or consumer-related issues and how these issues affect online display advertising outcomes, the study chose the stimulus organism response (SOR) model and the reversal theory as the main theories to underpin this current study. These two theories as opposed to others that emerged from the literature review, complement each other in examining how relevant ODA characteristics, influence consumer behavioural responses to online advertising under different consumer-related situations but have sparsely been applied in ODA research. By so doing, discussions in the chapter help to theoretically position the study in light of its contribution to knowledge.

In line with this, the chapter is organized as follows; introduction and justification for the chosen theories are presented in section two and section three respectively. Sections four and five then provide an overview of the underpinning theories, their assumptions and elements, applications, as well as their relevance to this thesis. Section six briefly discussed

the three other theories that emerged from the review in order to shed some light on their use in ODA research and the insights they could provide into consumer responses toward ODA as well as justifications for not using them as the main theoretical foundation for this study. A summary of the chapter is then presented in section seven.

3.2 INTRODUCTION

Theories are well-established principles that are used to explain, forecast, and understand occurrences and, in most instances, to challenge and extend prevailing knowledge within the limits of critical bounding assumptions (Abend, 2008). They are considered statements of constructs and their interconnections that depict the ‘how and why’ of an occurring phenomenon (Gioia & Pitre, 1990). For Miller (2005), *“they are the nets with which we catch the world, or the ways in which we make sense of social life”* (p.22). Theories are known to help researchers organize their thoughts to achieve better understanding of a given subject matter; hence, they form the footing on which most scholarly research works are grounded (Hambrick, 2007; Corley & Gioia, 2011). It is argued by Cai and Mehrai (2015) that any research work not guided by theory is deficient in interpreting and understanding the observed phenomenon. For this reason, discussing the theoretical parameters within which this thesis is conducted is essential as it helps define the specific viewpoints that the study takes in examining the overarching research question that need to be answered to increase understanding of the study as well as analysing and interpreting the data gathered in order to provide answers to the stated research objectives. For this reason, the subsequent section provides a rationalisation for the choice of SOR model and the reversal theory that are fundamental to the study’s aim of understanding consumer behavioural responses to online display advertising in Ghana.

3.3 JUSTIFICATION FOR THE UNDERPINNING THEORIES

Given the multidisciplinary nature of advertising, several theories from psychology, communications, advertising as well as marketing have been applied in studying online display advertising and its effects. In spite of this, compared to atheoretical approaches, there is still relatively low theory-based approaches to understanding the effects of online advertising. Evidence from both practice and the ODA literature suggests that owing to the high advertising density of the internet, advertisers are struggling to stand out among the clutter, to capture consumer attention as well as elicit favourable responses from consumers (Nihel, 2013; Hoban *et al.*, 2015). On account of this, the current study seeks a theory-based and practical understanding of consumer behavioural responses to online advertising, which the study proposes may be influenced by both ad-related and consumer-related factors.

ODA features or characteristics have been identified as essential factors that drive the effectiveness of display ads and influence online advertising responses (Brajnik & Gabrielli, 2010; Tang *et al.*, 2014). Through these features, advertisers are able to get consumers to be attentive to, and receptive toward online ads (Kuisma *et al.*, 2010; Wang *et al.*, 2013; Bruce *et al.*, 2016). Also, attitude toward online advertising has been pointed out as an essential consumer-related factor that influences consumers' reactions to display ads and is considered a major determinant of advertising efficiency. (Zha *et al.*, 2015; Shaouf *et al.*, 2016; Souiden *et al.*, 2017). What is more, the task/goal orientation of consumers are known to affect how they respond to persuasive communication (Wang *et al.*, 2013). Because internet users' online activities typically start with a task-oriented plan, user mode which depicts the degree to which internet usage is goal-directed is suggested to exert a certain degree of influence on the attention allotted, and/or interaction users have with online ads (Simola *et al.*, 2011; Kim *et al.*, 2014; Seyedghorban *et al.*, 2016).

As mentioned before, since the focus of this thesis is to examine consumer behavioural responses to online display advertising by enhancing understanding of how consumer attitude toward online advertising and their user mode enhance or mitigate the influence of ODA characteristics on behavioural responses, it became evident that a single theory may not sufficiently and coherently explain the interconnections the study seeks to explore (see Figure 5.1). The reasoning is that, in spite of the SOR model providing support for the stimuli function of ODA characteristics, and asserting that internal states of consumers intervene between the stimuli and behavioural responses, the theory is deficient in offering explications on how other consumer-related factors cause variations in behavioural responses. Alternately stated, the SOR model is used to explain how ODA characteristics represent essential stimuli that advertisers use to make their display ads stand out among the numerous online ads to which consumers are exposed. The model is also used to highlight the role of attitude toward online advertising as a facilitating/intervening factor that transmits the effect of the ODA characteristics on behavioural responses of consumers. However, the SOR model does not provide detailed accounts on how user mode may vary the direction and magnitude of the relationship between the stimuli and behavioural responses, thus necessitating input from another theory to offer understanding of situations in which ODA features may generate varying degrees of positive or negative consumer responses.

And so, in addition to the SOR model which helps in explaining the link between the online ad characteristics, the mediating variable (attitude toward online advertising), and the outcome variables (behavioural responses), the study as well draws on a second theory, reversal theory, to help provide possible explanations to the contingencies of user mode and the variations it may cause in the baseline (ODA characteristics-behavioural response and ODA characteristics-attitude toward online advertising) relationships. The complementary

use of these theories in this study provides an avenue to comprehensively examine: how consumers perceive specific ODA characteristics and how these perceptions influence their behavioural responses; how attitude toward online advertising intervenes between the ODA characteristic-behavioural responses relationship; and how their goal directedness (user mode) may vary the direction and extent of these behavioural responses. In line with the aim of this research, the SOR model in consort with the reversal theory is reasonably the most appropriate and effective theoretical framework to explore the interrelationship among the variables in this thesis, and the key hypothesis postulated. Particularly because, according to Saunders *et al.* (2012), theories should not just comprise cause and effect components to examine fundamental variables but should as well be useful in describing the nature of the relationships among variables and provide rational explanations for the existence of such relationships. The next section discusses the SOR model.

3.4 STIMULUS ORGANISM RESPONSE (SOR) MODEL

3.4.1 Overview of the Theory

The Stimulus Organism Response (SOR) model as conceptualised by Mehrabian and Russell (1974) and later modified by Jacoby (2002), outlines how external stimuli affect people's internal state and subsequently their behaviour. The model which has its foundation in environmental psychology, proposes that cues or features in an environmental setting incite a person's emotional and cognitive conditions leading to certain behavioural outcomes (Donovan & Rositer, 1982). According to the SOR model, stimuli (S) in any surrounding may cause changes in an individual's internal/organism states (O), which then leads to approach or avoidance behavioural responses (R) (Mehrabian & Russell, 1974). Stimulus within the borders of the theory are factors that influence an individual's internal state and stimulate the individual (Eroglu *et al.*, 2001). Organism denotes internal processes and structures that intervene between the stimuli and the final reactions produced by the

individual (Chang *et al.*, 2011). These intervening processes come in the form of perceptions, physical, emotional and cognitive activities, and the original model focused on pleasure, arousal, and dominance (PAD) (Chang *et al.*, 2011). Then, the ultimate outcome or the conclusive decision of the consumer which may be approach or avoidance behaviours signify 'response' in the S-O-R framework (Sherman *et al.*, 1997). Essentially, the theory hinges on the premise that the relationship between any environmental stimuli and responsive behaviour is intervened by the internal processes of the organism exposed to such stimuli (Chen & Yao, 2018).

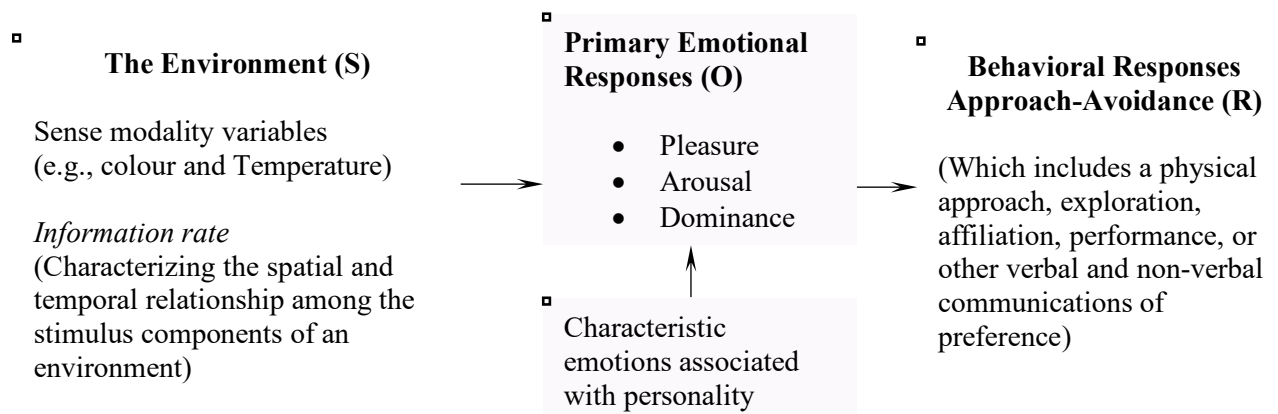
Since its introduction into marketing by Donovan and Rossiter (1982), extant marketing literature depicts a considerable use of the theory in the past years and researchers have broadened the array of circumstances in which the said interrelationships may occur (Islam & Rahman, 2017; Kamboj *et al.*, 2018). Stated alternately, the SOR model has been noticeably used to study several phenomena, and marketing literature has validated its applicability in predicting consumer behaviour in several settings. These studies have examined and extended the model to impulse buying behaviours (Chen & Yao, 2018), website experience (Mollen & Wilson, 2010; Kim & Lenon, 2012), online brand communities in social media (Islam & Rahman, 2017; Kamboj *et al.*, 2018), consumption experiences in m-commerce (Li *et al.*, 2012), tourist motivations (Rajaguru, 2013), as well as offline and online retail settings (Chang *et al.*, 2011; Goi *et al.*, 2014). With internet penetration and online consumption or purchasing behaviour surging, SOR has become the prevalent theoretical model in the impulse buying literature (Chan *et al.*, 2017) and has seen extensive use in the retail literature (Chen & Yao, 2018). The key notion of studies underpinned by the model lie in the submissions that design characteristics, features of websites as well as online brand community characteristics influence consumers emotional and cognitive states and subsequent behaviours either negatively or positively. In the

marketing and consumer behaviour literature, it is contended that stimuli that consumers are exposed to may be environmental factors or any of the marketing mix variables (Bagozzi 1986; Manganari *et al.*, 2009; Kim & Lennon, 2012).

3.4.2 Components of the Model

The key concepts and elements in the SOR model have been explained and illustrated by several researchers (Jacoby, 2002; Vieira, 2013). As reflected in the name these elements include the stimulus, organism, and the response. The Figure 3.1 provides a graphical view of the original SOR model and its primary elements are successively discussed.

Figure 3.1 SOR Model



Source: Mehrabian and Russell (1974, p.8)

3.4.2.1 Stimulus

The SOR model has at its core, the idea that stimuli are cues or any environmental factor that influences or arouses an individual (Eroglu *et al.*, 2001). Such stimuli are projected to be features or qualities of the stimulus object capable of generating some organism response (Chang *et al.*, 2011). Mehrabian and Russell (1974) at the initial development of the model proposed a general measure of environmental stimulation which could be applied within various physical and social settings to describe the information rate or load of the environment, and was reflected in dimensions such as complexity, unity, diversity,

congruity, artificiality, crowding, symmetry, novelty and meaningfulness. Following this perspective, researchers ascertain that the attractiveness of any stimulus is dependent on its information load (Steenkamp & Baumgartner, 1992). Within the context of consumer behaviour, however, Bagozzi (1986) and other researchers assert that these stimuli are external to consumers and may comprise marketing mix elements along with other environmental factors. According to Goi *et al.* (2014), it is the onus of marketers, therefore, to custom and project suitable information, actions and cues that effectively affect the internal (cognitive and emotional) state of customers in order to facilitate positive responses from them. Consequently, extant studies have examined diverse collections of characteristics as stimuli in various settings and acknowledge that ambient factors, design factors and social factors are essential stimuli in online environments (see Table 3.1).

3.4.2.2 Organism

The SOR model as well suggests that consumers respond to stimuli in two stages. The first is an internal response, referred to as “organism response” and the other is an external response referred to as “behavioural response” (Chen & Yao, 2018). Chang and Chen (2008) define organism as, “*cognitive and affective intermediary states and processes that mediate the relationships between the stimulus and the individual’s response*” (p.820). As the second element in the model, these internal responses are integral to enhancing behavioural responses, and are directed towards altering the connection between the organism and the stimulus object (Eroglu, 2003). It has been suggested by the original proponents of the model that the organism response mirrors the emotional states of individuals and are clustered in three independent dimensions namely: pleasure, arousal, and dominance (PAD). “Arousal-non-arousal refers to the degree to which an individual feel, excited, stimulated, alert or active in the situation; pleasure-displeasure refers to the degree to which an individual feels good, joyful, happy, or satisfied in the situation; and finally, dominance-

submissiveness refers to the degree to which an individual feels control over or free to act in the situation.”

While Donovan and Rossiter (1982) reasoning along the lines of the original proponents, submit that people’s response to a stimulus is intervened by their emotional reaction to that stimulus, other perspectives (e.g. Mazaheri *et al.*, 2011) suggest that response to stimulus is based on cognitive processes such as rational evaluation of informational cues. These two contrasting but complementary views provide a two-pronged perspective to organism response which supports Jacoby’s (2002) earlier position that emotions, attitudes and beliefs are all part of the organism element of the model. Particularly, studies that apply the framework to research in online settings argue that the online environment is a “cognitive landscape” typified by high levels of cognitive stimuli (Demangeot & Broderick, 2007), and as such studies in online environments should consider the bi-lateral view of organism response. In recent streams of studies underpinned by the SOR model (Kim & Lennon, 2012), the organism is represented by affective and cognitive intermediary states and processes that mediate the association between stimuli and responses, and others have also argued that a specific affective reaction satisfies the condition of organism response (Chang *et al.*, 2011).

3.4.2.3 Response

Response is the last element of the model and reflects behavioural reactions or the final action toward the stimulus object driven by the mediating organism response (Sherman *et al.*, 1997; Eroglu *et al.*, 2001). The response component of the model has been categorized into approach avoidance behaviours based on the idea that people’s behavioural reactions generally occur in either one or two of these directions (Chang & Chen, 2008;). Per the

model, the level of internal changes experienced by individuals exposed to a stimulus will determine their approach-avoidance response (Vieira, 2013).

Approach and Avoidance Behaviours

From the early viewpoint of Donovan and Rossiter (1982), behavioural responses toward a stimulus setting show four features representative of approach or avoidance predispositions: (1) a physical desire to stay in the presence of or remove oneself from the presence of the stimulus object; (2) a willingness to dedicate resources to enhance the relationship between the organism and the stimulus object or a tendency to avoid interaction between the organism or individual and stimulus object; (3) a willingness to engage with other stimuli associated with the stimulus object or a tendency to avoid additional stimuli related to the stimulus object and; (4) an elevation or reduction of personal satisfaction when engaged in stimulus-related task completion.

Thus, on the one hand, approach behaviours concern all favourable behaviours directed at the stimulus of interest (Rajaguru, 2013). These affirmative behaviours toward the stimuli may manifest in several forms such as a longing to remain within the stimulus environment, explore and connect with the stimulus object (Donovan *et al.*, 1994). From empirical marketing perspectives, other suggestions have pointed to amount of time spent within the environment (Mummalaneni, 2005), purchase within the environment (Chang & Chen, 2008; Chang *et al.*, 2011; Chen & Yao, 2018) satisfaction with the environment (Kim & Lennon, 2012) as well as a yearning to return to the environment (Jeong *et al.*, 2009; Kamboj *et al.*, 2018) as forms of approach behaviours.

On the other hand, avoidance behaviours within the parameters of the SOR model are actions contrary to approach behaviours (Tang *et al.*, 2014). Avoidance behaviours describe

the absence of interest or desire that the consumer may display toward the stimulus (Sweeney *et al.*, 2002). Researchers have espoused other explanations and manifestations of avoidance behaviours to include lack of intention to revisit the stimulus setting (Spangenberg *et al.*, 2006); an inclination to move away from the stimulus object, and to indulge in other activities (Kim & Moon, 2009).

3.4.3 Applications and Relevance of the Theory to this Thesis

Although the SOR model has been used extensively in the online context of consumer behaviour, the focus has been on retailing, online impulse purchasing (Islam & Rahman, 2017) as well as other internet-related behaviours. For instance, Kim and Lennon (2012) examined the effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intentions. In their study, website quality dimensions and reputation were considered stimuli that affected consumers emotions and perceptions of risk which influenced their purchase intentions. In a similar study, Sheng and Joqinapelly (2012) investigate the influence of web atmospheric cues on internet users' emotional responses and purchasing intention in an e-commerce setting. Their study revealed that interactivity and vividness positively influence users' valence and arousal states. Also, Kamboj *et al.* (2018) assessed branding co-creation in brand communities on social media and found brand trust as a mediator between customer participation and brand loyalty, trust and co-creation. Aside these online studies, the SOR model has also been employed in studies investigating the purchase behaviour of high technological products. Lee *et al.* (2011) in their study for instance found that stimuli such as innovativeness of technology, visual appeal. Prototypicality, and self-expression significantly influence behaviour as mediated by attitude and pleasure. Extant literature abounds in empirical works underpinned by the SOR model in the online retailing, and online consumer behaviour context, and Table 3.1 provides a summary of a selected few of these applications.

Table 3.1 Summary of Selected Research Articles Underpinned by the SOR Model

Study	Stimulus Variables	Organism Variables	Responses Variables
Jeong <i>et al.</i> (2009)	-Product Presentation Features	-Four Experience Realms <ul style="list-style-type: none"> ○ Entertainment ○ Educational ○ Escapist ○ Esthetic Consumer Emotion <ul style="list-style-type: none"> ○ Pleasure ○ Arousal 	-Website Patronage Intention
Koo & Ju (2010)	-Graphics -Colours -Links -Menus	-Pleasure -Arousal	-Intention
Wang <i>et al.</i> (2010)	-Perceived Web Aesthetics <ul style="list-style-type: none"> ○ Aesthetic Formality ○ Aesthetic Appeal 	-Satisfaction -Online service quality -Arousal	-Purchase -Re-purchase -Loyalty -Complaint -Service switch
Chang <i>et al.</i> , (2011)	-Ambient characteristics -Design characteristics -Social characteristics	-Positive emotional responses	-Impulse buying behaviour
Lam <i>et al.</i> (2011)	-Ambience -Navigation -Seating Comfort -Interior décor	-Customer Satisfaction -Cognitive -Affective	-Desire to Stay -Intention to revisit
Wong <i>et al.</i> (2012)	-Mall/store quality -Quality of merchandise -Convenience -Enhancements -Price orientation	-----	-Shopping enjoyment
Kim & Lennon (2012)	-Reputation -Website quality <ul style="list-style-type: none"> ○ Website design ○ Fulfillment/Reliability ○ Customer service ○ Security/Privacy 	-Emotion -Perceived risk	-Purchase intention
Dong & Siu (2013)	-Substantive staging <ul style="list-style-type: none"> ○ Background functional -Communicative Staging <ul style="list-style-type: none"> ○ Employee behavior ○ Employee image ○ Cultural atmospherics 	-Service experience evaluation	-Experience intensification -Experience extension
Rajaguru (2013)	-Visual effect -Vocal effect -Celebrity effect	-Tourism intentions	Visitation
Goi <i>et al.</i> (2014)	-Exterior -General interior -Store layout -Interior displays -Human variable -Value	-Experience -Mood -Emotions	-Cognitive -Affective -Behaviour
Tang <i>et al.</i> (2014)	-Online design features <ul style="list-style-type: none"> ○ Ad content 	-----	-Approach behaviour (active & passive)

	<ul style="list-style-type: none"> ○ Ad form ○ Ad action 		Avoidance behaviour (active & passive)
Bleier & Eisenbess (2015b)	<ul style="list-style-type: none"> -Ad personalisation <ul style="list-style-type: none"> ○ Depth ○ Breadth 	Usefulness Reactance Privacy concerns	Click- Through
Islam & Rahman (2017)	<ul style="list-style-type: none"> -Online brand community characteristics <ul style="list-style-type: none"> ○ Information quality ○ System quality ○ Virtual interactivity ○ Rewards 	-Customer engagement	-Brand loyalty
Chen & Yao (2018)	<ul style="list-style-type: none"> -Website architectural quality <ul style="list-style-type: none"> ○ Ubiquity ○ Ease of use ○ Information exchange -Promotional campaigns <ul style="list-style-type: none"> ○ Discount ○ Scarcity 	<ul style="list-style-type: none"> -Impulse buying tendencies -Normative evaluation -Positive affect 	-Impulse buying behaviour
Kamboj <i>et al.</i> (2018)	-SNSs participation motivations	-Customer participation in Brand communities on SNSs	<ul style="list-style-type: none"> -Brand trust -Brand loyalty -Branding co-creation
Nunthiphatprueksa & Suntrayuth (2018)	<ul style="list-style-type: none"> -Intrinsic quality -Contextual quality -Representational quality -Social quality 	-Destination Image	-Behavioural response

Note: Studies on online display advertising are in asterisks (*)

The SOR model is espoused to be applicable in a wide variety of settings, and so, this current study applies it to the ODA context. The focus of this thesis is to examine the effects of an array of online display advertising characteristics as essential stimuli in online advertising and how they influence consumer attitude toward online advertising and behavioural responses of consumers who are exposed to such advertisements. From a general advertising perspective, advertisers anticipate that following exposure to advertising stimuli, consumers will reckon the likelihood of advertised brands to satisfy their needs. From this perspective one would expect a considerable amount of advertising studies to employ the SOR model and extend arguments as well as assertions into the advertising or online advertising domain. However, out of the 63 empirical papers reviewed on online display advertising (see Appendix A2) and presented in the next chapter, the study identified only two studies (i.e. Tang *et al.*, 2014; Bleier & Eisenbess, 2015) underpinned by the SOR model.

In their study, Bleier and Eisenbess (2015b) investigated how trust moderates the effect of ad personalisation on consumers internal and external responses. Using a two-dimensional (breadth and depth) conceptualisation of personalisation, and usefulness, reactance and privacy concerns as internal responses, the researchers demonstrated that more trusted retailers can heighten the perceived usefulness of their ads through a combination of high depth and narrow breadth of personalisation without eliciting increased reactance or privacy concerns. On the other hand, for less trusted retailers, banners with higher depth are not perceived more useful but instead trigger increase reactane and privacy concerns regardless of their personalisation breadth. These effects directly translate into consumers' click-through intentions. Also, quite recently, Tang *et al.* (2014) expanded the approach-avoidance dimensions of the model through an exploratory study in the online advertising context. The authors argued that prior studies underpinned by the SOR have mostly focused on the direction of the behavioural response, thus overlooking the intensity of the behavioural response or efforts. The study then combined the behavioural direction and intensity into a two-dimensional framework. The said online behavioural responses are summarised into four main dimensions: “*active approach, passive approach, active avoidance and passive avoidance*”, and behavioural responses toward online ads may be one of the four types. This categorisation of course, requires further research given that the intensity level of behavioural responses have received sparse research attention.

The internet is considered a stimulus-rich environment with several formats of online display ads struggling to capture consumer attention. Online display advertisements unlike their search counterparts are push-based, and their executional characteristics have been posited to elicit consumer responses and influence consumer reactions or behaviours toward ads as well as the products/services and brands advertised (Goodrich 2011; Goodrich *et al.*, 2015). Since decisions regarding interactivity, appeal, animation, placement,

personalisation, and exposure conditions among others, convey both informative and persuasive intents of the advertiser, and are implemented to indicate high-quality ads that may attract consumer attention, researchers are focusing more on how these executional or ad-related features influence consumer perceptions, attitudes and behaviour (Bright & Daugherty, 2012; Goodrich *et al.*, 2015). For instance, van Doorn and Hoekstra (2013) examined the effects of personalisation on perceptions of intrusiveness as well as purchase intentions. The results of their study signify that, while high degrees of personalisation in the form of using names and transaction information increase perceptions of intrusiveness, and influence purchase intention negatively, these negative influences are lessened if the ad is tailored to fit the consumer's present needs. The studies that have considered these executional features have pointed to a paucity of research works to answer the question of which of these features may serve as useful or effective stimuli in the domain of online display advertising.

Discussions so far, have pointed out advances made by marketing researchers toward understanding the dependencies espoused in the SOR model leading to behavioural responses. Nonetheless researchers have proffered some suggestions for future studies in order to extend the application of the theory to other marketing phenomena. Some of these suggestions are briefly reflected on in the ensuing paragraphs as they pertain to this thesis. To begin with researchers in the domain of the SOR model have articulated the need for future studies employing the model to examine diverse categories of stimuli as used by firms in various settings (research and industry) particularly in the online context using various online applications (Kim & Lennon, 2012; Islam & Rahman, 2017; Chen & Yao, 2018). Though the theory has been applied in the online context, its application has been biased toward retail and consumer behaviour in such settings (see Viera, 2013). In applying the theory to online advertising, Tang *et al.* (2014) noted that future research into what specific

design elements/features of online display advertising may generate both approach and avoidance behaviours from consumers was needed.

Other SOR researchers also point to the need for future studies to assess how consumers meaningfully combine stimuli and then assign meanings to these combinations which may result in diverse internal (organism) and external (behavioural) responses for various consumers based on these groupings (Kim & Lennon, 2012). According to Islam and Rahman (2017), exploring and examining the different types of stimuli used by firms, could spur academic enquiries into how these assortments can be managed in order to amplify their integrated efficacy. Again, SOR researchers have called for future research that would investigate how various stimuli interact with one another and concurrently influence consumers' perceptions and subsequent behaviours (Chang *et al.*, 2011) as well as explore the contingencies of several consumer-related variables that may cause divergences in their perceptions, internal and external responses (Goi *et al.*, 2014; Bleier & Esenbeiss, 2015b).

On the basis of these discussions, and in line with the aim of this study, the SOR model is applied in explaining the influence of ODA characteristics on consumer behavioural responses. Consistent with the model, the study examines the effect of specific ODA characteristics (interactivity, informativeness, placement, personalisation, and exposure condition) considered to be the stimuli, on consumer attitude toward online advertising as the organism response or mediator, and ad acceptance and ad avoidance as behavioural responses. Quite importantly, which ODA characteristics may serve as relatively useful stimuli, and the extent to which consumer attitude toward online advertising may play an intervening (organism) role between such stimuli and the behavioural response of consumers are questions this current study seeks to answer. This thesis theorises and contends that to the extent that the effectiveness of online display ads depend on consumers' exposure to the

ad message content and ad-related features (ODA characteristics) such as interactivity, placement, personalisation, informativeness, and exposure conditions which serve as mechanisms by which awareness is raised and product quality is indicated in an attempt to influence consumer behaviour, then they provide significant stimulation for certain behavioural responses in the context of online display advertising.

Also, in line with the ODA literature, attitude toward online advertising is an essential affective response (Souiden *et al.*, 2017) that could play a facilitating role between the ODA stimuli and the behaviours evoked by such stimuli because attitude is a vital internal process that precedes behaviour (Wang & Sun, 2010b). What is more, in the online advertising contexts, advertisers face the likelihood of consumers showing both approach and avoidance behaviours toward their display ads owing to consumers favourable or unfavourable perceptions of such ads (Wang & Sun, 2010b). As a result, attitude toward online advertising is operationalised as an organism/internal response which can enhance the stimuli effect of ODA characteristics on behavioural (ad acceptance and ad avoidance) responses also operationalise as approach and avoidance behaviours. The thesis further introduces a consumer-related factor, ‘user mode’, as the moderator in the relationship between ODA characteristics and attitude toward online advertising as well as behavioural responses, and the theoretical rationale for this is discussed next.

3.5 REVERSAL THEORY

3.5.1 Overview of the Theory

Reversal theory focuses on people’s motivation, emotion, and dispositions based on an analysis of daily experiences (Apter, 1984; 2001). The theory suggests that the things individuals experience and their responses to these occurrences are “shaped by a set of alternative ways of seeing the world” (Apter, 2007). The fundamental assumption of the

theory is that every individual is a different sort of person at different times, and so, their dispositions alter during the course of day-to-day life (Portell & Mullet, 2014). Proponents of the theory aver that the subjective quality of any activity is determined by a person's current *frame of mind* referred to as *meta-motivational state* within the boundaries of the theory. The theory postulates eight meta-motivational states that are categorised into four contradictory pairs of domains, with each pair denoting opposite ways of experiencing activities in some basic way (Piotrowski, 2011). These pairs of meta-motivational states comprise:

- *Conformist* (rule-abiding) vs. *Negativistic* (rebellious)
- *Mastery* (domination-oriented) vs. *Sympathetic* (relationship-oriented)
- *Autic* (concern for self) vs. *Alloic* (concern for others)
- *Telic* (serious minded, goal-oriented) vs. *Paratelic* (playful, process-oriented)

Reversal theorists advance that people will “reverse”, or switch between these contrasting states in the course of an activity or their daily lives, and only one state in each pair can be active at a time (Apter, 2001; Mackenzie *et al.*, 2011). Although all eight meta-motivational states are important, the telic and paratelic states are essential for explaining variances in consumer behavioural responses to online display advertising (Seyedghorban *et al.*, 2016), and so are the focus of this thesis. This pair of meta-motivational state is discussed further in the next section.

3.5.2 Telic versus Paratelic Perspective of Reversal Theory

Given that reversal theory explicates the complexity and variability of consumers' cognitive experience at diverse points and times (Jung *et al.*, 2014), the telic/paratelic state is considered a “means-end” domain because individuals in these states are either focused on how they can enjoy themselves (the ‘means’) or achieve a goal (the ‘ends’) (Apter, 2001). The rationale Apter (2007) provides is that, individuals in a telic state focus on future goals,

and those in a paratelic state focus on the present moment and the specific activity they are engaged in instead of the goal. The telic state is one in which the goal is experienced as being paramount, and activities are simply means towards that end. The paratelic state, however, is one in which the ongoing activity is experienced to be of vital significance, and goals are there to merely make the activity more interesting (Wright *et al.*, 2012). Essentially, the point of view of the telic state is serious and that of the paratelic state is playful (Jung *et al.*, 2014). Extant literature on reversal theory therefore classifies the telic state as typified by serious-mindedness, goal and future-orientedness, planning ahead, arousal-avoidance, preference for important activities and focus on activity/task completions (Apter, 2007). The paratelic state is also characterized by values such as spontaneity, arousal-seeking, sensation-orientedness, playful-mindedness, present-orientedness, preference for trivial activities, and attempting to prolong an activity (Fruchart *et al.*, 2018).

An essential feature that separates this pair of meta-motivational states is known in reversal theory as a “protective frame” (Apter, 1992; Kerr, 2005). This experiential frame, when present, causes an individual to feel cut off from significant consequences. This is one of the aspects of playfulness and activity-orientation and is, therefore, a defining feature of the paratelic state. Conversely, the goal-oriented telic state is aware of consequences, including the serious consequences of things going wrong owing to a lack of the protective frame. Accordingly, within the context of reversal theory, irritating situations may be perceived as unpleasant in the telic state, and as pleasant in the paratelic state, because of the protective frame (Portell & Mullet, 2014).

3.5.3 Applications and Relevance of the Theory to this Thesis

Following its original proposition in the mid 1970s, reversal theory has been applied in diverse fields, and several research works have employed the theory to explain the complex behaviours of people in the areas of sports (e.g. Sit & Lindner, 2006; Fruchart *et al.*, 2018), personal training or exercise (e.g. Kerr, 2001), recreation (e.g. Kerr, 2007), stress-regulating effects (Martin *et al.*, 1987), behavioural counselling (Blaydon *et al.*, 2004), management (Carter, 2005), as well as consumer behaviour (Davis, 2009). Within the context of online advertisements Rodgers and Thorson (2000) was the first post-millennial study to incorporate reversal theory, specifically, the telic and para-telic dyad into their Interactive Advertising Model (IAM). Recent extant studies that have also underpinned their work with reversal theory include the works of Jung *et al.* (2014), and Seyedghorban *et al.* (2016). Generally, these studies indicate that the effects of predictors on consumer reactions to online advertising vary across user modes/groups.

In their study, Jung *et al.* (2014), proposed that internet users meta-motivational state, that is, telic versus paratelic mind frame defines the effectiveness of advertising interactivity. Specifically, the authors examined the moderating role of the telic/paratelic user mode in persuasion. Through a field experiment, they demonstrated that internet users in a serious-minded (telic) state form highly positive attitudes toward online ads with low levels of interactivity whereas those in a playful-minded (paratelic) state develop positive attitudes toward ads with low interactivity levels. The work of Jung *et al.* (2014) reinforced the suggested mechanism of reversal theory and appears to be one of the first online advertising study and by extension marketing studies to have used reversal theory. A bit more recently, seyedghorban *et al.* (2016), replicated and extended a model of internet advertising avoidance originally proposed by Cho and Cheon (2004). Working with the supposition that while the explosion of the Internet significantly improves ways in which firms target their

customers via online advertising, consumers have also become very capable at avoiding such advertisements (Johnson, 2013), Seyerghorban *et al.* (2016) used a survey of 339 Iranian internet users to validate Cho and Cheon's model. Relevantly, the extension phase of the study found that user mode moderates the associations acknowledged in the initial model. Consistent with the tenets of the reversal theory, the study showed that the effects of predictors such as perceived goal impediment, and prior negative experience on advertising avoidance differed among telic and paratelic users.

In spite of reversal theory's recognition in diverse fields, the marketing literature hardly explores this noteworthy behavioural theory even in the consumer behaviour context (see Rodgers & Thorson, 2000). Based on these earlier submissions and their findings, Jung *et al.* (2014) as well as Seyerghorban *et al.* (2016) suggest the need for future studies to explore how reversal theory explains consumers' online behaviours, particularly, given the extensive growth of internet usage and online advertising.

Relative to conventional media, the Internet is considered a more goal and task-oriented medium (Cho & Cheon 2004). Though consumers visit the Internet to achieve their goals, the nature of these goals (e.g. research, entertainment, shopping, socialization etc.) may put internet users in different states of mind at different times. Because the telic/paratelic meta-motivational states form a "goal directedness continuum" (Apter, 1984), the strength of behavioural responses to online advertising may fluctuate for users at the conflicting points. Hence, following from earlier discussions in this section, and the aim of this thesis, there is room to respond to some scholarly calls through the integration of reversal theory in examining consumer behavioural responses to ODA in Ghana. This thesis argues that stimulus interpretations are contingent on the "internet user mode" in which consumers may be at the time of exposure, and so the study examines the moderating effect that

telic/paratelic meta-motivational states, conceptualised as user mode may have on internet users' attitude toward online advertising and behavioural responses (ad acceptance and ad avoidance) to online display advertising driven by specific ODA characteristics/stimuli (interactivity, placement, informativeness, personalisation, and exposure conditions).

3.6 OTHER THEORETICAL PERSPECTIVES

As earlier stated, three other theories stood out in the literature review (see chapter three). Although these theories are less useful within the parameters of this thesis relative to the underpinning SOR model and the reversal theory, they do provide some added insights on the research problem and objectives the study seeks to address. For instance, considered a dual process model, the *elaboration likelihood model (ELM)* suggests that, there are two paths to consumer persuasion – a central route and peripheral route (Petty *et al.*, 1983). The “central route” is used when consumers are extremely motivated to process persuasive information. In such instances, more mental resources are deployed to scrutinise and elaborate on message content or argument. This results in the formation of an enduring attitude which is expected to be a relatively strong predictor of subsequent behaviour. The “peripheral route” is taken in situations of low motivation or involvement, where recipients consider a persuasive message as personally irrelevant or “are engaged in distracting task during their exposure to the appeal” (Cacioppo & Petty, 1984, p.673). In situations of low elaboration (peripheral route), the acceptance or rejection of a persuasive message is not based on the careful consideration of issue-relevant information, but on superficial analyses. For example, consumers may be attentive to exterior features like, colour, music, and image etc. in an ad (Wang *et al.*, 2009). This causes a provisional change in attitude which is less predictive of behaviour. From the perspective of online display advertising researchers (e.g. Rappaport, 2007; Spilkerattig & Brettel, 2010), the variant push and pull online advertising

forms, and characteristics of online advertising such as interactivity, make the ELM an appropriate framework for examining online advertising effectiveness.

Also, the theory of *mere exposure effects* which concerns how individuals form favourable attitudes from brief exposure to a stimulus, posits that the more exposure a person has to a stimulus, the more likely the person is to like the stimulus object (Zajonc, 1968). It has been argued that in most cases than not, exposure to advertisements occur under incidental situations when the individual's attention is directed toward something else (e.g. browsing the internet, reading a magazine, or playing a game). In situations of this sort, any stimulus (such as an ad) that is incorporated into the context of the individual's focal activity, are regarded as background issues and are not actively processed (Wang *et al.*, 2013). Nonetheless, because most affective reactions and learning occur outside awareness, such advertisements may still induce changes in the subconscious minds of people (Zajonc, 1980). More precisely, repeated exposures to these ads may cause preference and heightened liking 'merely' because viewers are subconsciously conversant with them (Janiszewski, 1993).

In the online display advertising milieu, some scholars (Briggs & Hollis, 1997) have asserted that by merely viewing a banner ad without clicking on it, viewers may still develop brand recognition which may impact their attitude toward the brand. Although the empirical evidences from studies that have applied the theory seem to differ (Goodrich, 2014), the bulk of the evidence seems to affirm high likelihood of mere exposure effects, nonetheless under certain conditions than others. For instance, Yeu *et al.* (2013) found that high achieving gamers (i.e. those more focused on the game) reported higher levels of implicit memory for banner ads imbedded in the game, than those less focused/involved in the game. Similarly, in an earlier study, Schneider and Cornwell (2005) using a banner ad in a car

racing game, found significant recall, and recognition effects when consumers were familiar with the brand compared to unfamiliar brands. The key notion of this theory lies in the assumption that independent of considerable rational information processing, consumers become more familiar with an ad and the advertised brand just by being repeatedly exposed to it, and this acquaintance may result in the development of positive emotions (Zajonc, 1968).

Another theory that surfaced in the literature and adds up to the discussion is the *theory of psychological reactance*. With a rich history in research on persuasive communication, this theory has been used to understand why persuasive messages or campaigns elicit behaviours opposite to what message senders anticipate (Hornik *et al.*, 2008). From the viewpoint of the reactance theory, attempts to influence behaviour involve both persuasion and coercion, and the extent to which these efforts intrude on or limit the target audience's freedom to choose or engage in a specific activity determines their response (Brehm & Brehm, 1981). Fundamentally, the theory terms such response *psychological reactance*, which is a motivational state of arousal to regain the reduced freedom; resulting in a heightened attractiveness of the threatened activity, and in a downgrading of the imposed alternative (Heinberg *et al.*, 2015). Because online display ads are mostly push-based, they may be perceived as intrusive depending on several ad-related factors that deprive consumers of the liberty to enjoy the contents of the medium that interest them. These perceptions may cause irritation, annoyance etc. leading consumers to react negatively towards such online ads (Edwards *et al.*, 2002; Tang *et al.*, 2014).

While these alternative theories offer some perspectives on the issues this thesis seeks to address, the viewpoints are limited. In the case of the ELM, the theory considers attitudes formed following exposure to persuasive messages as precursors to behavioural reactions;

its major emphasis, however, is on attitude formation and change based on processing styles. Furthermore, the mere exposure effect theory also focuses on cognitive and affective outcomes of advertising exposure. Since behavioural response is the major outcome variable this thesis seeks to evaluate, applying the ELM or the mere exposure effects theory would have provided a partial support to the issues the study seeks to address, thus restricting the contributions they thesis seeks to make, that is enhancing understanding of behavioural response issues in ODA research. The theory of psychological reactance, also though valuable in explaining the negative or avoidance behaviours of consumers towards display ads, gives attention to only one aspect of behavioural direction. According to the research objectives, this study seeks to examine the interrelationships among ODA characteristics, consumer attitude toward online advertising, and their behavioural responses from a two directional (ad acceptance and ad avoidance) viewpoint. Because the SOR model maps the nexus among these three interconnected levels of variables it provides the most suitable baseline theoretical parameter within which the study can be conducted. And because the SOR model also falls short of providing explications to the influence of situational consumer-related variables that may cause variations in the magnitude of the behavioural direction, it was complemented with the reversal theory in order to provide a wholesome view of the study.

3.7 CHAPTER SUMMARY

This chapter has presented the theoretical foundations for this thesis. The chapter provided an overview of the SOR model and the reversal theory, discussed their assumptions and dimensions, applications as well as their relevance to the current thesis. Other theoretical viewpoints that could have been applied are also briefly discussed and the rationale for choosing the SOR model and the reversal theories in lieu of the alternatives are provided, The choice of the SOR model and the reversal theory stem from their integrative ability in

explaining the effect that ODA characteristics may have on consumer behavioural responses to online display advertising, how attitude toward online advertising may enhance the effect of these characteristics, and the moderating role that internet user mode may play in the baseline relationships. By so doing the arguments raised in the chapter theoretically position the study in making contributions to knowledge as far as online display advertising and consumer behavioural response issues are concerned. The succeeding chapter presents a review of extant research on ODA which assesses the state of research in the area as well as pinpoints existing research gaps in need of scholarly attention, some of which provided the springboard for this current study.

CHAPTER FOUR

REVIEW OF ONLINE DISPLAY ADVERTISING (ODA) RESEARCH

4.1 CHAPTER OVERVIEW

The previous chapter discussed the theoretical foundation of the thesis, and how applicable the SOR model and the reversal theory are to examining consumer behavioural responses to online display advertising (ODA). This chapter reviews extant literature on ODA published over a 10-year period (2009 to 2018) in order to unearth relevant issues on the subject matter. Thus, the specific purpose of this chapter is to provide an analysis of current state of ODA research. To do this, the chapter identifies major themes in ODA research, evaluates evidences from studies under these themes, assesses the theoretical focus and methodological approaches used in these studies, identifies gaps, and suggests insights or avenues for future research. By doing this, some of the gaps identified are used to establish the parameters of this thesis in order to contribute to knowledge in the field. The chapter is organized in the following order: section two introduces the chapter and spells out in details the purpose of the review; section three presents the procedure used for the literature review; and section four discusses the definitional scope of advertising, online advertising and ODA as they pertain to this thesis. Section five discusses the issues and evidences from the review in themes. Sections six, seven and eight present findings on the methodological and theoretical approaches identified in extant ODA research, and geographical or economic dispersion of the reviewed articles respectively. Section nine discusses the gaps identified, and section ten provides a summary of the review.

4.2 INTRODUCTION

Reviews are essential roadmaps for knowledge advancement, theory development, closure of saturated research areas, and unearthing of novel avenues for research (Webster &

Watson, 2002). From the literature, three reviews exist on online advertising research. They include the works of Kim and McMillan (2008), who provided a general picture of internet advertising research with 113 articles published in four dominant advertising journals spanning 1996-2003 by examining influential authors and papers, and co-citation patterns to provide a trajectory from the past to the future. Similarly, Ha (2008) analyses articles published in six advertising journals between the period of 1996-2007 to examine the conceptual underpinnings, and practical contributions of online advertising research, as well as suggest a research agenda for future studies. Notably, some of the issues raised by Ha (2008) have received academic responses, with new trends and topics emerging from the studies that spawned afterwards. Based on such developments, a recent review by Liu-Thompkins (2019) assesses how online advertising research has evolved since the works of Kim and Macmillan (2008) and Ha (2008) were published. Liu-Thompkins's (2019) work discussed six thematic areas in online advertising research and pointed out some future research questions to be addressed.

As valuable as these reviews have been, they focused broadly on online advertising, and were limited to specific advertising and marketing journals. Considering the interdisciplinary nature of the phenomenon as well as current trends procreated in recent times particularly, regarding the various typologies of online advertising, this chapter using an expanded journal set, reviews literature on online display advertising. As the fastest growing category of online advertising, academic literature on ODA is correspondingly maturing; and so, by examining the empirical issues and evidences, conceptual and methodological approaches used in these studies, this chapter pinpoints knowledge gaps that may guide potential contributions in the area.

4.3 PROCEDURE FOR THE REVIEW

A fairly systematic approach is adopted in carrying out this review, as the approach has been advocated for its rigorous methodology, wider literature coverage, objectivity and coherent presentation of discourse (Okoli, 2015; Anees-ur Rehman *et al.*, 2016). A number of parameters were set in identifying, selecting and categorizing the literature sources. These criteria and the results from the literature search are delineated in subsections one to three.

4.3.1 Scope of the Review

The review was limited to peer-reviewed articles published in English language academic journals. This is in view of scholarly suggestions that the thoroughness of the peer-review process offers a high level of quality to research (Bornmann, 2011). Moreover, journal articles are conduits for evidence gathering and disseminating new findings to both practitioners and researchers (Ngai 2005), and are, therefore, regarded as sources of authenticated knowledge that have maximum influence within the academic setting (Podsakoff *et al.*, 2005). On these bases, unpublished working papers, conference proceedings, essays, books and doctoral dissertations were excepted from this review. Additionally, in an attempt to enhance and balance the current state as well as avoid overlaps with extant reviews on online advertising research (e.g. Ha, 2008, Kim and McMillan, 2008, Liu-Thompkins, 2019), the current review focuses on ODA. For the same reason, articles on social media advertising were also excepted since Knoll (2015) has reviewed research in that area. This review was also time-restricted to identify and focus on studies that have been published between 2009 and 2018 since the period is said to have witnessed several changes and dynamism to online advertising particularly in the area of display advertising (Auschaitraku & Mucherjee, 2017).

4.3.2 Literature Search, Article Selection and Information Extraction

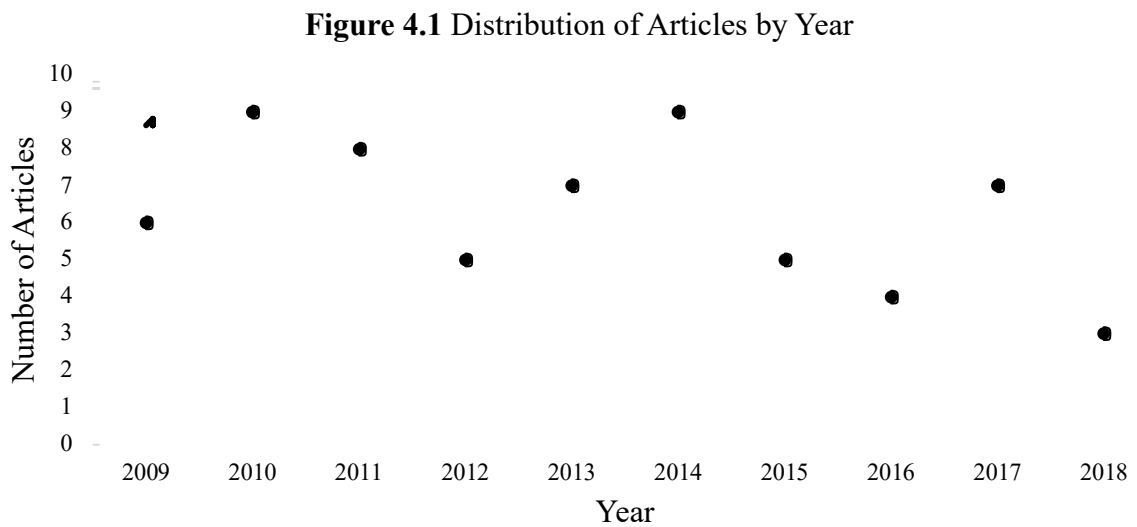
Pursuant to the aforementioned criteria, six online databases that accommodate diverse peer-review journals, as well as search engines (google scholar) were used for the search. The databases include Taylor and Francis Online, Emerald Fulltext, Science Direct, JSTOR, Wiley Online and Inderscience Online, and EBSCOhost. These databases were used for the search because they encompass a wide range of peer-reviewed journals in management science, communications and economics among others; more importantly, they index key advertising and marketing journals (Liu-Thompkins, 2019). The literature search was conducted using search keywords/phrases to enhance identification of information relevant to the study area. Keywords or phrases such as “online display advertising,” “display ad,” “web banner advertising,” “banner advertisings” and “internet advertising” were used one at a time. The databases were interrogated with these key phrases in titles, abstracts and keyword list in March 2018, which initially produced several articles. Through a detailed examination of the abstracts of these articles, duplications, as well as papers that made reference to online advertising but did not have display advertising as the focus of the paper, were eliminated, resulting in 106 articles. These 106 articles were subsequently assessed to determine their relevance to the study. In the process, some articles were superficially unclear; hence the full paper had to be read before a decision was made to exclude or include them. Relevance was determined on the grounds that online display advertising, was at least, the main or one of the main forms of online advertising under discussion, and its features and significances were discussed even if its usage was not deliberate. Following from this process, 63 articles met the study parameters and were thus used for the review. The final articles used in this review are provided in the appendix section (see Appendix A2), and also asterisked (*) in the list of references.

After creating a working list of 63 articles, certain preliminary information, such as year of publication, publishing journal, type of articles, geographic setting of the study, measured variables, and study theme, were recorded from each article. In addition to these, the theoretical focus and methodological approaches adopted were extracted, categorized and documented. The unit of analysis was, therefore, the full-text research article. The publishing journal and year of publication were essential for supporting claims of online advertising as a multidisciplinary field, gauging how much attention has been given to the area, as well as estimating growth trends. The study themes border on the major online display advertising subjects researched as well as the issues and evidences that emerged. Regarding theoretical focus, these studies were classified as using theoretical or atheoretical (i.e. frameworks, models, concepts and category-based) approaches (Heeks & Bailur, 2007; Kim *et al.*, 2014). The methodological approaches were categorized as qualitative, quantitative, and mixed methods. Studies classified as qualitative studies are those that gathered and analysed data using thematic analysis and interviews while quantitative studies are grouped as utilizing surveys and experimental strategies as well as secondary market data. Mixed methods studies utilised both qualitative and quantitative approaches while non-empirical studies passed as conceptual papers. Results from the literature search are presented in the subsequent sub-section highlighting the distribution of the articles by journals, and yearly publication frequency.

4.3.3 Distribution by Journal and Year

The literature search carried out in the six databases produced differing number of articles with Taylor & Francis Online producing the highest number. Considering the ten-year period under review, a majority of the articles (approximately 71%) were published between 2009 and 2014. Relatively, there was a decline in the number of published articles in the following years. This could among other things, be attributed to the attention of some

advertising journals within these periods to social media and native advertising which are relatively nascent forms of online advertising. Considering that 3 articles were identified at the time of the review (March 2018), it seemed fair to assume an increase in the number of publications for the study’s cut-off period. This observation provides a signal that the relevance of online display advertising as a subject of scholarly enquiry appears to be growing. The Figure 4.1 depicts distribution of the articles by year.



Regarding the journals (see Appendix A3) that published these articles, a bulk of them (23 out of 39 journals) were situated in the field of marketing, contributing approximately 70 percent of the reviewed articles; 5 journals were within the field of information management/systems, and the remaining 11 spread across economics, operation studies and general management, as well as area and sector studies. Journals that made significant contributions to ODA research in terms of quantity of articles published within the period under review include *International Journal of Advertising* which published seven articles; *Journal of Marketing Communication* and *Journal of Advertising Research* published four articles each; and *Journal of Marketing Research* and *Computers in Human Behaviour* published three articles each. Two articles each were published by *Journal of Advertising*, *Journal of Interactive Advertising*, *Journal of Interactive Marketing*, *Journal of Promotions*

Management, Psychology & Marketing, Marketing Science, International Journal of Internet Marketing and Advertising, and Electronic Commerce Research and Application.

These 12 Journals accounted for approximately, 60 percent of the articles published. The remaining 25 articles (approximately, 40%) were published in varied journals. The diversity of the journals speaks to the multidisciplinary and varied nature of online advertising. A detailed outline of the journals and the articles published in them are presented in Appendix A3. In order to provide a frame for the review, in the next section, the definitional parameter of online advertising and online display advertising is discussed.

4.4 ADVERTISING AND ONLINE ADVERTISING

To put discussions in this chapter in the right perspective as well as delimit the boundaries of the entire study, this section spells out the definitional scope of online advertising and narrows down to online display advertising which is the focus of the thesis. Harker (2008) observes that online advertising lacks a formal conceptualisation and this observation is depicted by the ad-hoc definitions in the literature, mostly based on the remit of such scholarly enquiries. The definitions of online advertising available in the literature, as enumerated in Table 4.1, are aligned with two perspectives of advertising definition. Generally considered a marketing communication tool, advertising has been defined as “*a paid, non-personal communication from an identified sponsor using mass media to persuade or influence an audience*” (Wells *et al.*, 1992, p.21). Following several changes to the advertising field, which rendered the definition of Wells *et al.* (1992) a tad conservative, the American Marketing Association (2005) defines advertising as “*the placement of persuasive messages in any of the mass media by organisations in order to inform and/or persuade people of a specific target market about their products, services, organisations or ideas*” (Van de Waldt *et al.*, 2007, p.186).

Closely aligned with the AMA's definition, is Schlosser *et al.* (1999) early definition of online or internet advertisement as *“any form of commercial content available on the internet that is designed by businesses to inform consumers about a product or service”* (p.36). Meyers and Gerstman (2001) coming from a similar angle, offer a definition that considers it as *“a form of promotion that uses the Internet and World Wide Web for the expressed purpose of delivering marketing messages to attract customers”*. Situated between the two general advertising perspectives, Barnes (2002, p.400) also considers it as *“any paid advertisement, from banners to sponsorships, which appears on the web or other Internet channels, including e-mail”*. Ha (2008, p.31), however, defines it as *“deliberate messages placed on third party web sites including search engines and directories available through Internet access”* – a definition that appears closely linked to the perspective of Well *et al.* (1992).

While, in the view of Schlosser *et al.* (1999), online advertising could be delivered via any medium in any form as well as offer information at any extent of depth, Ha's (2008) definition excepted self-promoting platforms or channels such as websites. Ha (2008) argues that if online advertising is to enhance advertising theory, its definitional scope should derive from the “traditional” definition of advertising, and permit research findings to work in partnership with online ad spending research and industry statistics since these data do not take into consideration self-promoting websites or e-mails. However, Johar (2016) reviewed the changing advertising scene and points out that the definition of advertising has fundamentally altered. According to Johar (2016), advertising is basically about persuading consumers, and so, definitional issues regarding whether or not it is paid for, non-personal, and/or comes from an identified sponsor, are obsolete. Further, drawing inspiration from Dahlén and Rosengren (2016) who defined advertising as *“brand-initiated communication intent on impacting people”*, Johar argues that in today's business

environment, even blog posts can qualify as advertising. Notwithstanding the absence of unanimity on an overarching umbrella definition of the scope and dimensional confines of online advertising, one commonality in the definitions in table 4.1 below is that any message on the internet intended to inform consumers and promote a brand can be considered online advertising.

Table 4.1 Selected Online Advertising Definitions

Author(s)	Definition
Schlosser <i>et al.</i> (1999)	“Any form of commercial content available on the internet that is designed by businesses to inform consumers about a product or service.”
Meyer & Gerstman (2001)	“A form of promotion that uses the Internet and World Wide Web for the expressed purpose of delivering marketing messages to attract customers.”
Barnes (2002)	“Any paid advertisement, from banners to sponsorships, which appears on the web or other Internet channels, including e-mail.”
de Pelsmacker <i>et al.</i> (2004)	“Spreading a commercial message in standardized formats on rented spaces on websites of other companies.”
Ha (2008)	“Deliberate messages placed on third party web sites including search engines and directories available through Internet access.”
Hanafizadeh & Behboudi (2012).	“Internet-based process by which advertisers communicate, interact with and persuade online users in order to position a brand, which allows a company to promote both consumer awareness and preference in a customized and personalized way, and to decrease the time needed to make a buying decision.”

4.4.1 Typologies of Online Advertising

According to Goldfarb (2014), although a consensus on a canopy definition for online advertising is lacking, the phenomenon can be clustered into three dominant typologies;

classified advertising, search advertising, and display advertising. An additional form that is pointed out in recent literature is what has become known as native advertising. Classified advertising generally refers to geographically specific ads that are presented or featured on classified websites and news blogs that do not provide algorithmic search or other media content (Goldfarb, 2014). To put this differently, they are textual links included in specialised online listings or web catalogues (Xu *et al.*, 2014). The term classified is used to signify the way in which the products and services being advertised are grouped under specific headings. Craigslist is considered the largest of such classified websites and online job sites as well fit this category of online advertising. In Ghana, GhanaAds.com is an example of a classified advertising site.

Search advertising, also known as sponsored/paid search advertising, describes the practice of advertisers paying fees to Internet search engines such as Google, Yahoo, MSN, and Bing etc. to fashion text ads in response to keyword searches which appear or are displayed alongside organic (non-sponsored) web results (Goldfarb, 2014; Yang & Ghose, 2010). This type of online advertising is directly linked to consumers' search requests which are "statements of intent" offering advertisers the right opportunity to expose these consumers to their ads because keywords and ad messages are typically matched with user-originated queries or behaviours (Goldfarb, 2014). In view of this, in relation to other forms of online advertising, search advertising scores extremely low on the consumer "intrusiveness spectrum" and is considered as leading to more fitting prospects for advertisers or firms (Yang & Ghose, 2010). Owing to the increasing popularity and reach of these search engines, search advertising represents one of the most rapidly growing forms of online advertising and is fast becoming a principal revenue stream for search engines (Katona & Savary, 2010; Yao & Mela, 2011).

4.4.1.1 Online Display Advertising (ODA)

ODA is a form of online advertising in which advertisers pay relevant publishers or third parties (e.g. news sites, blogs, social networking sites, commercial websites etc.) to place graphical ads on their web pages (Chapelle *et al.*, 2014). Online display ads are ads that come in graphic images varying in shape, size, animation, colour, and duration that internet users or website visitors see along with other content (Goldstein *et al.*, 2014). Display ads can be placed on any type of website and are more frequently seen on commercial and social media sites as well as applications (apps) (Auschaitraku & Mucherjee, 2017). ODA includes such diverse formats as banners, wallpapers, interstitials, skyscrapers, floating ads, pop-ups, plain text ads, rich media ads, and video ads among others (Draganska *et al.*, 2014; Goldfarb, 2014). Ad format denotes “*the manner in which an ad appears*” (Rodgers & Thorson, 2000, p.47) and so, *banners*, for instance, refer to horizontal, quadrilateral-shaped graphical elements found at the top of webpages while, *skyscrapers*, though akin to banners, are vertically located on the borders of a webpage (Burns & Lutz, 2008). *Pop-up ads* open another window over the user’s browser and can only be removed from the screen by closing or minimizing the window while *floating ads* use a combination of flash technology and Dynamic Hypertext Mark-up Language (DHTML) to create a translucent or shaded layer over the web page and then execute an animated ad within this layer and disappears after a specific time (typically 5-30 second). *Interstitials* are presented automatically to users when they move between two content pages, and once the requested page loads, the interstitial disappears, and *rich media* is an umbrella term used for ads improved with sound, video, motion and interactive features (Ha, 2008; Brajnik & Gabrielli, 2010).

Although ODA is used as a catch-all term for all graphic ads users see online, it is contrasted from native advertising which is a relatively nascent form of online advertising. Also

referred to as sponsored content, native advertising describes any paid customised message that is similar in form, tone, appearance, functionality and standards to the editorial and entertainment content as well as the autonomously produced materials of the publishing site (Tutaj & van Reijmersdal, 2012; Bakshi, 2015). Native ads are particularly popular on informational websites such as news sites and blogs as well as social networking sites (Becker-Olsen, 2003; Hoezel, 2014). While native ads are graphic in nature too, they are considered an independent category of online advertising because they are meant to blend in with the webpages on which they are placed, and not look like ads at all in order to circumvent consumer detection (Benton, 2014). Online display ads, however, are meant to stand out and attract user/consumer attention.

ODA is an essential form of online advertising which currently accounts for 49.7% of the online advertising market and is its fastest-growing category (eMarketer 2018). Given its relevance as a form of online advertising, its increasing use, its push-based (compared to search advertising), prominent and ubiquitous nature; internet users are exposed more frequently to display ads on webpages (e.g. commercial, social media, and search engines) accessed on PCs and all forms of mobile devices than they are to other categories; and so, this thesis focuses and is limited to online display advertisements. Having spelt out the definitional boundary of ODA, in the subsequent sections five to eight, findings from the literature classification and analysis on ODA are presented. These findings have been discussed in four broad sections: major themes in ODA research, methodological approaches, theoretical approaches, and geographical/economic dispersion of studies.

4.5 MAPPING ODA RESEARCH: MAJOR THEMES, ISSUES AND EVIDENCES

In mapping out the reviewed articles, some pertinent issues and sub-issues were identified in order to help comprehend dominant trends in the literature and put the discussion in a

comely perspective. The mapping exercise examined thematic patterns or some fundamental imports of studies in ODA research communicated in the literature. Working within the parameters of the current study, three key themes (with sub-themes) seem to emerge. This section, therefore, discusses the issues and evidences from the reviewed papers within these three themes namely: antecedents to online advertising effectiveness, assessing online advertising effectiveness, and consumer attitude towards online advertising.

4.5.1 Antecedents to ODA Effectiveness

Online media and, for that matter, advertising within online environments keeps evolving. This drives advertisers' and marketers' in their quest to gain insight into the types of advertisements that are suitable in the online domain. Given the diverse range of online ad formats, as well as inadequate and varied information regarding their usefulness, online advertising campaign choices become an intricate issue for advertisers (Burns & Lutz, 2008, de Pelsmacker & Neijens, 2012). There is, therefore, a growing body of literature on online advertising effectiveness, and this literature stream on one hand, describes the precursors to online advertising effectiveness. Studies that examine the effectiveness of ODA point to ad characteristics (such as format, design and execution elements and contents), context characteristics, and consumer characteristics as essential antecedents to online display advertising effectiveness (e.g. Jung *et al.*, 2011; Martin-santan & Beerli-Palacio, 2012; Wang *et al.*, 2013; Tang *et al.*, 2014). This lends credence to Rodgers and Thorson's (2002) Interactive Advertising Model (IAM) which stresses that both "advertiser-controlled" and 'consumer-controlled" factors are central to internet users' perceptions and processing of online ads. The ensuing sub-sections therefore probe into the issues and evidences from ad and consumer-related perspectives that surfaced in the literature analysis.

4.5.1.1 Ad-related Issues: Design features or Executional Characteristics

Contributing to this sub-theme in the ODA literature are papers that address forms and types of ODA, and how they should be executed for optimum outcome. These studies examined varieties of online ad formats in order to ascertain their usefulness because, in the view of Burns and Lutz (2006), the nature of online ad format is an important issue that influences online advertising responses. Common ad formats and types appearing in these studies are shown in Table 4.2 below. Despite being the oldest form of online ad formats, banner ads are still the most commonly studied, and this could be attributed partly to the continuous development of the banner ads market (Goodrich, 2010) as well as the tendency of researchers to use banners as an umbrella term for ‘non-rich media’ display ads.

Table 4.2 Online Display Advertising Forms Studied

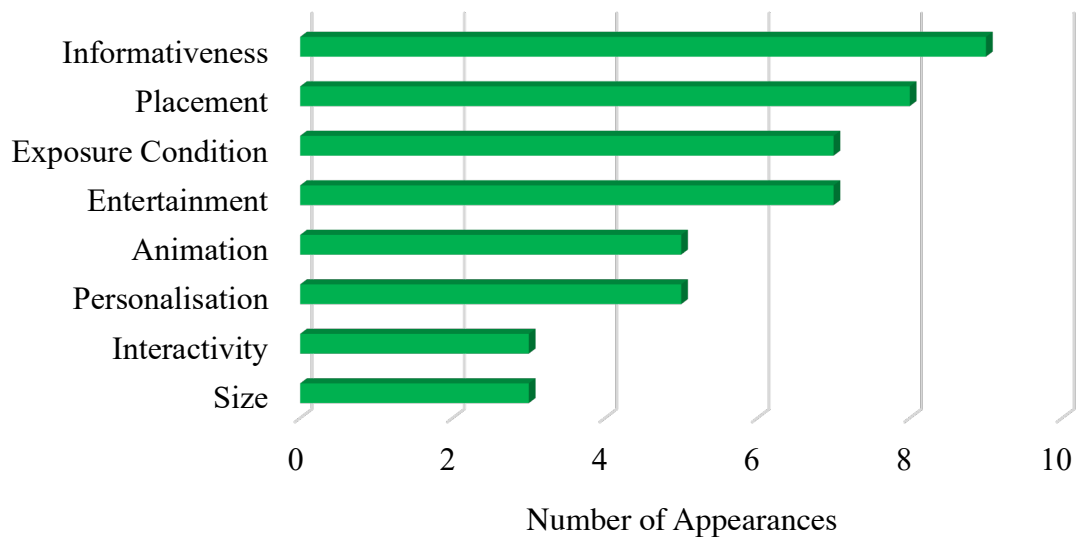
ODA Formats/Forms	Articles
○ Banners	Kuisma <i>et al.</i> (2010); Lee & Cho (2010); Heish & Chen (2011); Jung <i>et al.</i> (2011); Martin-Saantana & Beerli-Palacio (2012); Tutaj & van Reijmersdal (2012); Bright & Daugherty (2012); Flores <i>et al.</i> (2013); Goodrich (2013); Wang <i>et al.</i> (2013); Yeu <i>et al.</i> (2013); Segev <i>et al.</i> (2014) Bleier & Eisenbess (2015a; 2015b); Hussain <i>et al.</i> (2018)
○ Skyscrapers	Kuisma <i>et al.</i> (2010); Goodrich (2011); Goodrich (2014)
○ Pop-ups	Janssens <i>et al.</i> (2012); Chan <i>et al.</i> (2010)
○ Interstitials	Ying (2009)
○ ODA (Blanket)	Fulgoni & Mornn (2009); Kireyev <i>et al.</i> (2015); Goldfarb & Tucker (2011a)
○ Video Ads/Skippable Video Ads	Pashkevich <i>et al.</i> (2012); Belanche <i>et al.</i> (2017); Goodrich <i>et al.</i> (2015)
○ Rich Media ads	Rosenkrans (2009)

Although research focus on online ad format is still ongoing and valuable, a growing trend in recent literature has been a concentration on ad characteristics or executional features following Burns and Lutz’s (2008) call. Over a decade ago, Burns and Lutz (2008) studied

comprehensively the role internet users' perceptions about six ODA formats play in their attitude formation towards these formats. Finding that user perceptions and attitudes varied across the various ad formats, the researchers assert that the formats can be "profiled" to inform their suitable selection based on the online advertising goals of a firm. Burns and Lutz (2008) thus, advocated for studies that will explicitly examine how characteristics inherent in the various ad formats influence attitude. And so, studies that spawned after that, have given attention to the design, content and placement of ads as essential considerations in the literature (Ying *et al.*, 2009; Kuisma *et al.*, 2010; Goodrich, 2011).

Today, one cannot effectually discuss the effectiveness of online display advertising without bringing up issues of ad characteristics. As Tang *et al.* (2014) put it, "*as ... online ads have significant influence on consumers cognitive, affective and behavioural responses, design features of online ads is an area worth investigating*" (p.2). Essentially, ad characteristics make up the ad formats and Tang *et al.* (2014) underscore the importance of examining the effects of these characteristics than simply focusing on the formats. By that, the essence of ad characteristics in driving the effects of display ads is recognised. Presently, existing formats show a variety of features, and according to Brajnik and Gabrielli (2010), some of these features are inherent, in the sense that they can be identified from the content of the ad; while others are "relational" – dependent on the how the ad appears as well as its location and the context in which it is utilised. Since one of the aims of this thesis is to examine the effects of ad-characteristics, on behavioural responses, Figure 4.2 provides a snapshot of the executional characteristics that have steadily appeared in ODA research reviewed, and the ensuing passages interrogate these features as essential antecedents to online advertising effectiveness.

Figure 4.2 Cited Executional Characteristics in ODA Research



i. Informativeness

The role of advertising as a basic information source has long been established in the literature, and research has illustrated that the informativeness of advertising is its main legitimising task. This is on the grounds that the ability of an advertisement to provide useful information and present a true picture of products, is the prime reason why consumers approve of it, and is a fundamental consumer belief underlying its innate economic benefits (Rotzoll *et al.*, 1990). Informativeness is considered the ability of ads to inform consumers of products and alternatives so that purchases yielding the greatest possible satisfaction can be made (Ducoffe, 1996a). Affirming Ducoffe’s view of informativeness in the context of online advertising, Schlosser *et al.* (1999) argued that consumers’ attitude towards online advertising is a function of the informativeness of advertisement as well as its usefulness in stimulating purchasing behavioural decisions.

Informativeness gained ground in the literature because as a goal-oriented medium, internet usage is driven by a number of motives, and information search is one of these motives (Rhoades *et al.*, 2008). Informativeness as a feature is therefore, extensively explored in the literature on online advertising (Sun & Wang, 2010), and online display advertising

researchers embrace the idea that it is a means to enhancing receptivity toward and interaction with advertisements since online ads with beneficial information are perceived more favourably by internet users (Goodrich *et al.*, 2015). Prior studies on informativeness have assessed the extent to which display advertising aim to provide useful information, and how this influences consumers' attitude and responses. For instance, Wang and Sun (2010a; 2010b; 2010c; 2010d) examined the relationship among consumers' belief about online advertising, attitude toward online advertising, and their behavioural responses across multiple cultural setting, and found that informativeness as an essential belief factor among others, significantly predicts attitude toward online advertising, which then influences ad clicking and frequency of online shopping.

These earlier studies and others (e.g. Li-Ming *et al.*, 2013; Mahmoud, 2014) assert that the characteristic of informativeness satisfies internet users' or consumers' informational needs which moves them to attend to the advertisements. These assertions are corroborated by Goodrich *et al.* (2015) who stressed in their study that the inclusion of useful information among other features, can help overcome perceptions of intrusiveness which may have detrimental effects on advertising outcomes – e.g. ad abandonment. In their opinion, if internet users evade watching an advertisement, very minimal favourable outcomes can be anticipated for advertisers. In a web environment where advertisers aim to attract consumers' attention and get them to interact with their online advertisements, a prerequisite to achieving this aim is to have consumers actively use online ads for information gathering (Mahmoud, 2014; Zha *et al.*, 2015).

Gleaning from the literature, though the influence of informativeness as a feature of online advertising seem to have been established, the extent and nature of this influence vary across cultural or economic settings. Wang and Sun (2010a) in their study, found that although

Americans view online advertising as more informative, and were more likely to make online purchases as a result of this, relative to Chinese, they were less likely to click on ads. Driven by informativeness among other features, Romanians had the most positive attitude toward online advertising and tend to click on advertisements in relation to Americans (Wang & Sun, 2010b); and Chinese tend to purchase online more than Romanians do (Wang & Sun, 2010c). These findings birthed the need to examine these influences across diverse market or cultural settings to establish more firmly the effect of informativeness in the literature.

ii. Placement

Placement issues discussed in the ODA literature have been argued from various perspectives. Extant prevailing perspectives in the literature point to issues of ad position, ad-context congruency, and choice of webpage (e.g. Chan, 2010; Janssens et al., 2012; Belanche et al., 2017). From the first viewpoint, it is reasoned that ad position is integral to internet users' evaluation of online advertising. According to an Eyetrack III study on ad placement in 2004, an ad at the foot of the screen encourages fewer clicking behaviour, while an ad near the top of a webpage garners more attention. This has somewhat been ascribed to internet users' expectation that most relevant information are shown at the start of a page, and has also attributed to the notion that regardless of a viewer's screen size, an ad at the top of the page has a higher likelihood of being seen (Nihel, 2013). However, Rosenkrans (2009) in an experimental study found that a rich media ad ran below the fold line generated more clicks. In a later study to examine the effect of ads on attention and reading, Simola et al. (2011) also found that ads positioned to the immediate right of the text region generated and captured more attention than ads placed over the text region. In adding further insight to the ad positioning debate, Goodrich (2014) found ads positioned to the left to be associated with more favourable attitudes than those to the right. The study

as well reported significant variations in attitudes resulting from advertisement location based on gender. The author's findings suggest that males had more favourable attitudes toward left-positioned ads and females had more favorable attitudes toward ads positioned to the right.

Because advertisements do not appear in a vacuum, but are embedded in mediums or featured on webpages, consumers' perceptions and evaluations of ads are as well contingent on contextual factors that are possibly outside their awareness, and so, the second perspective on ad placement addresses issues of ad-context fit (congruency). A number of researchers agree that a fitting media context engenders more positive ad perceptions among internet users because ads that are congruent (thematically similar) with the content of the webpage on which they are hosted, correspond with the specific interests of visitors to such pages thus, resulting in more favourable responses (Jeong & King 2010; Segev et al., 2014; Belanche *et al.*, 2017). Although this is a prevailing view which has caused thematic congruence to become a standard in media choice for practitioners (Moorman *et al.*, 2005), other contrasting findings exist. For instance, in an earlier study, Dahlen *et al.* (2008) find that placing ads in unexpected media locations compared to expect media environments improve the effectiveness of such ads. They argued that contrasting stimuli may draw more viewer attention and hence result in more processing. Contributing to the ad-context congruency literature, Bleier and Eisenbess (2015a) showed that the context in which an ad appears does not always influence its effectiveness since such influence is dependent on the online browsing mode of consumers. Others also pointed out that the effect of ad-context congruency may only be understood through individual and situational factors that may cause the differences in effect (Janssens *et al.*, 2012).

Other placement issues that emerged in the reviewed literature include the type of webpages on which ads may be featured (Goodrich, 2011; Hsieh & Chen, 2011). These studies suggest that webpages with different information type affect users' attention to ODA and specifically, video-based and picture-based webpages have a relative edge in capturing and retaining consumers' advertising attention than text-based and text–picture-based webpages. Quite recently, Auschaitraku and Mucherjee (2017) find that propelled by higher processing fluency, online display ads are more effective on commercial than on social websites, and on brand pages than on personal pages of the latter. While previous studies have extensively explored the role of ad placement from various viewpoints in the ODA literature, the results are divergent thus requiring future enquiries into placement effects. Particularly, recent calls made in the literature have asked for more research focus on how ad-context issues influence advertising effectiveness in order to legitimize prior claims and establish more strongly their effect (Stripp, 2018) especially on behavioural responses since most previous studies have frequently examined cognitive and affective outcomes (Janssens *et al.*, 2012; Kim *et al.*, 2018). This can offer insights into how advertisers can strategise their ODA placement more effectively given the emergence of diverse media platforms.

iii. Exposure Conditions

Advertising exposure refers to the presentation of an ad to target audiences, viewers or consumers. Exposure is an essential determinant of advertising effectiveness because for an advertisement to have effect on consumers, they must see/watch, pay attention to, and comprehend the advertising message being presented (Percy & Elliot, 2012). Therefore, determining exposure issues that influence advertising effects has been an essential concern for both practitioners and scholars (Fugoni & Morn, 2009; Chan *et al.*, 2010). The most studied exposure subject in both traditional and online media contexts has been frequency or number of repetitions (Ying *et al.*, 2009). This derived from Krugman's (1977) 'three

exposure concepts' which espoused that an initial exposure to advertisements causes viewers to ask, "what is it", after a second exposure, consumers ask "what of it", and the third exposure serves as a reminder among other things. From the viewpoint of mere exposure effect, when individuals are frequently exposed to a stimulus, their positive emotions toward the stimulus are enhanced, which then improves the effectiveness of persuasion (Zajonc, 1968). In other words, the more exposure people have to stimuli, the more they tend to like it.

The literature on ad repetition thus suggest that, repeated exposures enhance the memory of viewers as well as their favourable attitudes, and behavioural intentions toward the ad (Li & Lo, 2015). Several researchers have supported the view that display advertisements presented over multiple exposures enhance ad recognition, favourable attitude and behaviours owing to heightened liking for the ad and the brand as well (Lee & Cho, 2010; Kim, 2018; Hussain *et al.*, 2018). Conversely, some researchers have cautioned that repeated exposure is also a source of users' unfavourable perceptions about online advertisements. Specifically, the number of exposures is said to affect internet user's perceptions of intrusiveness (McCoy *et al.*, 2017). Because consumers go online to achieve certain goals, excessive exposure to the same ad or too many ads at once delays their online experiences, hence causing a backlash (Yaverogly & Donthu, 2008).

Another facet of exposure considered, is how exposure duration plays into consumer processing and responses to ODA. And so, drawing on the literature on processing fluency, other studies focused on the exposure duration as essential to online display advertising effects. For instance, driven by the idea that internet users may not always encounter an ad more than once during an online session, Wang *et al.* (2013) investigated the influence of exposure duration on viewers' attitude toward the ad and the brand. It was revealed in their

study that longer exposure durations may not always result in favourable influences, in the sense that the effect of exposure duration is dependent on the banner ad complexity. Specifically, when the ad is difficult to process, an increase in exposure duration resulted in an increased attitude toward the ad and advertised brand. Within the context of video ads, Goodrich *et al.* (2015) also found that lengthy ads have more positive effects; particularly they generated more ad recall and reduced perceptions of intrusiveness.

Exposure to ads on the Internet is becoming more rampant, and advanced internet technologies now allow for display ads to be forced on internet users (Kim, 2018). This represents the third exposure issue discussed in the literature under review. In conventional media, television commercials depict instances of forced exposure because they disrupt the viewing process of audiences during or in-between programmes whereas newspaper ads exemplify voluntary exposure since readers may choose to view them or not when reading (Li & Leckenby, 2004). The internet, however, has the ability to display advertisements in both voluntary and forced exposure modes (Li & Meeds, 2007). Given the tendency of internet users to use ad filters to prevent the display of ads on their browser, advertisers and publishers have found means through evolving and complex technologies to generate varying levels of exposures (Hussain *et al.*, 2018). These varying levels are explained by the extent to which consumers feel compelled to watch an ad (Kim, 2018). Exposure is thus forced when it takes away viewers' freedom to choose what they watch and when they watch it. The few studies conducted into forced exposure have reported negative perceptions of consumers towards forced exposure ads driven by perceptions of intrusiveness (Hegner *et al.*, 2015). Although exposure conditions have been a recurring theme in ODA research, most of the studies reviewed have mostly focused on one or at most two of these conditions (Wang *et al.*, 2013). This study therefore integrates these three perspectives of exposure

(repeated exposure, duration of exposure and forced exposure), and by so doing provides a broader and clearer view of their collaborative influence from a 'single audience' viewpoint.

iv. Entertainment

Extant research shows that several people use the internet in pursuit of fun and leisure, and for such people, entertainment gratifies the pleasures of being online; they, therefore, hold entertaining expectations of advertisements presented on the internet as well (Ching *et al.*, 2013). According to Ducoffe (1996b), the entertainment value of online advertisement refers to the degree to which viewers perceive the ad as enjoyable or pleasing. As another precursor to online advertising effectiveness, entertaining ads have the ability to satisfy viewers' desire for amusement, distraction, and visual pleasure (Bellman *et al.*, 2014). Thus, such ads are able to create an affective connection between consumers and the advertising message (Wang & sun, 2010a). With the internet's increasing advertising density and countless advertising messages competing for consumer attention, an online ad ought to be fascinating and enjoyable in an innovative way to not only capture but also retain consumer attention as well as stimulate favourable attitude toward the advertised brand (Baron *et al.*, 2014).

The efficacy of entertainment as a characteristic of online display ads is in its tendency to stimulate sentiments that are successively linked to the advertised product or service brand (Goh & Ping, 2014). Accordingly, an entertaining advertisement can influence consumer attitudes toward the ad and the brand and generate purchase intentions because it brings surprise and excitement to viewers (Bellman *et al.*, 2014). Within the parameters of the reviewed literature, Jung *et al.* (2011) showed that when exposed to display ads with high entertainment value, consumers form more positive attitudes toward the brand as well as increased purchasing intentions. Wang and Sun's (2010a; 2010b; 2010c; 2010d) research

also suggest that entertainment is one of five belief factors that significantly predict attitude toward online advertising in both developed (e.g. USA) and developing countries (e.g. China). The authors assert that, in an evolving technological era, and an information-seeking society, the concept of ‘infotainment’ intimates that information and entertainment are often intertwined with each other, and online advertisements that epitomise this concept affect consumers more positively.

v. *Animation and Size*

Motion is the central concept underlying animation. In human-computer interactions, it is generally recognised that motion attracts attention, and relative to colour or orientation among other elements, user attention is more sensitive to motion (Nielsen, 2000). Animation describes the use of motion in making advertisements noticeable and is a unique feature of banner advertising. Animation is one of the influential “attention-getting” features employed in online display advertising (Ying *et al.*, 2009) because compared with “non-animated” objects, animated objects possess the edge of capturing the initial attention of users (Song *et al.*, 2011). Scholars studying motion effects have submitted that people display an innate inclination toward moving objects; that is to say, when people are exposed to moving images, they pay greater attention to the source of the motion and process relevant information therein (Yoo & Kim, 2005). Because some level of attention is required prior to thorough elaboration of online advertisements, animation has become a key component for attracting viewer attention. While watching an animated ad is no assurance that users will click on the ad, animation does heighten user’s attention, a condition that must be fulfilled before clicking and other behavioural responses can be achieved (Kuisma *et al.*, 2010).

The effect of animation on advertising effectiveness has been indicated in the extant literature (Ying *et al.*, 2009; Kuisma *et al.*, 2010; Song *et al.*, 2011; Bruce *et al.*, 2016). Kuisma *et al.* (2010), examined the influence of animation on attention and memorization, and demonstrated that, its effects may vary on the basis of the ad format. Specifically, animation heightens attention to skyscrapers, but only improves recognition for banners. Similarly, Bruce *et al.* (2016) suggests that animated ads have greater carryover effects hence, they influence engagement over a lengthier period than static ads.

Size also emerged as a design element or executional feature of ODA with three citations. Size is explained as the overall largeness or smallness of a display ad (Bruce *et al.*, 2016). The evidence regarding the effect of size seem inconclusive in the literature. Earlier studies outside the scope of this review have reported no significant effect of ad size on consumer reaction (e.g. Cho, 2003); arguing that internet users learn to ignore ads, though the ads may have some effect through peripheral visions. Also, although larger display ads are more likely to be seen, and so have been associated with higher attention and memorization (Nihel, 2013), they are also perceived as more intrusive because they disrupt viewers activities and cognitive processes more (Ying *et al.*, 2009). Ying *et al.* (2009) contends that, consumers are more receptive to small ads that occupy just a small area of a page or appear in another window on top of the browser because once viewers can still access a portion of their original content page, they would feel less disturbed. However, these types of ads stand the risk of being disregarded.

vi. *Personalisation*

Personalisation has become a key feature of online advertising and is increasingly used in display advertising owing to available consumer information. Consumers in online environments share vast amounts of personal data which marketers and advertisers utilise

to make their advertising personalised to a huge degree (Aguirre *et al.*, 2015). These data include personal identifiers, demographics, browsing history, purchase history and location information (Liu & Mattila, 2017). According to Chellapa & Sin (2005), personalisation refers to “*the use of technology and customer information to tailor electronic commerce interactions between a business and each individual customer*” (P.184). It has been described as a customer-oriented marketing strategy that adapts web content to deliver the right information to the right person at the right time, to increase instant and potential business opportunities (Tam & Ho, 2006; Maslowska *et al.*, 2016). In the domain of online advertising, personalisation emphasises message contents tailored for internet users or based on their unique preferences or personal information (Baek & Morimoto, 2012). The prime purpose of personalisation is to expose internet users or consumers to advertisements that match their interest by suggesting that the advertising message is directed toward them (Aguirre *et al.*, 2015).

As a key feature that sets online advertising from its offline counterparts, personalisation is increasingly used by practitioners in their ODA as it is assumed to offer benefits to both advertisers and consumers (Bright & Daugherty 2012). The literature suggests that personalised advertisements are more engaging because they correspond with consumers’ preferences and interests (Goldfarb & Tucker, 2011; Lambrecht & Tucker, 2013), and are two times more effective than non-personalised advertisements (Tucker, 2014). Although the upshots of personalisation are argued out in the literature, its downsides have been pointed out too. Personalisation grants consumers the opportunity to acquire relevant advertising information without facing random, obtrusive, and irrelevant advertisements (Goldfarb & Tucker 2011), but the tracking of online activities, collection of behavioural data, and information dissemination, are at odds with consumer privacy concerns (Baek & Morimoto 2012). And so, there is a growing stream of studies to indicate that perceptions

of intrusiveness are heightened for consumers when personalised advertisements reflect to a great extent their precise preferences (van Doorn & Hoekstra, 2013; Bleier & Eisenbeiss, 2015a) – a phenomenon Bleier and Eisenbeiss (2015a) referred to as “over-personalisation”. For van Doorn and Hoekstra (2013) personalisation is a two-edged sword since it induces higher purchase intentions, and at the same time higher perceptions of intrusiveness which then influences purchase intentions negatively.

In order to circumvent the negative upshot and increase the efficacy of personalisation, some studies within the body of literature reviewed called attention to ways of heightening consumer approval of personalised ads. Some of these studies show that: personalisation only fuels purchase if consumers are actively involved in the advertised product/service category or have narrowly construed preferences (Lambrecht & Tucker, 2013) and; internet users with a low desire for control have a greater likelihood (i.e. behavioural intention) to interact with personalised ads than those with a high desire for control (Bright & Daugherty, 2012). Liu and Mattila (2017) also propose a personalisation strategy that targets the psychological motivations of consumers in lieu of using their personal information. As a result, much of the recent literature from diverse perspectives, in identifying the value of personalisation point out that its efficiency hinges on the interplay with placement and various consumer-specific factors (Bleier & Eisenbeiss, 2015a). What then comes to light is the need to examine some consumer-related conditions under which personalised display ads may be effective in order to sturdily establish its usefulness.

vii. Interactivity

Interactivity is a defining feature of the internet, and the online environment enables the application of interactive technologies to advertising in this environment. According to Liu and Shrum (2002), interactivity is “*the degree to which two or more communicating parties*

can act on each other, and on the communication medium, and on the message, and the degree to which such influences are synchronised” (p.54). This definition provides a three-dimensional view of interactivity – active control, two-way communication, and synchronicity. For example, a common element in online advertising is the ability of internet users or consumers to click on hyperlinks provided in advertisements through to a brand website (Chatterjee, 2008) permitting them to exhibit control over the flow of content in accordance with their goals (Liu & Shrum, 2002). Two-way communication is also possible in online advertising as brand messages are transmitted to consumers, and advertisers gain feedback through several consumer actions (e.g. clicks, mouse rollovers). Synchronicity as an aspect of interactivity refers to the extent to which physical, spatial and distance impediments are removed in order for immediate responses to be provided to consumers (Liu & Shrum, 2002). Huge strides in technological advancements today, make it possible for advertisers to developed complex ad formats with automated immediate responses to consumer actions or requests (Baron *et al.*, 2014).

Online display advertisements with such interactive features are growing in popularity, and the academic literature has given attention to the issue of interactivity as a vital determinant of online display advertising effectiveness. In the stream of literature reviewed, few studies have examined the influence of interactivity on consumer attitudes, and behavioural responses (e.g. Rosenkrans, 2009; Jung *et al.*, 2011; Pashkevich *et al.*, 2012). Pashkevich *et al.* (2012) studied skippable video ads and established the importance of their interactive and controllable mechanisms in influencing consumer attitude and opinions, as well as reducing negative consequences. Jung *et al.* (2011) for instance, in an experimental study, included a puzzle game about the brand in an ad for the high interactive group, and the low interactive group surfed a music site that presented a banner ad. The authors established that consumer’ perception of advertising value, specifically entertainment value is influenced by

the level of advertising interactivity. Over and above perceptions of value, Rosenkrans (2009) found that rich media ads that are interactive enhance mouse roll-overs and clicks. In the case of Rosenkrans (2009) viewers were asked to move their mouse to perform specific tasks which influenced the likelihood of interaction with the ad. While these studies provide interesting findings regarding the role of interactivity, the experimental designs and the advertising outcomes measured, provide difficulties regarding whether the responses were deliberate. The use of a survey with limited researcher interference would thus, provide further insight into the effect of interactivity (particularly when online ads are perceived as such) on behavioural responses.

4.5.1.2 Consumer-Related Issues

Above and beyond ad characteristics, consumer-related factors have also been studied as critical to online advertising effectiveness (Hoban & Bucklin, 2015; Eshghi *et al.*, 2017). Pertinently, the literature under this sub-theme is cognizant of the influence that several factors from the consumer angle may have on advertising effectiveness. Gleaning from the literature, three general factors (consumer involvement, web browsing/user mode, and perceived or perceptions of intrusiveness) represent broader umbrellas of consumer-related factors that have served as antecedents, mediators and moderators of online advertising effects in the reviewed papers and are detailed in the ensuing subsections.

i. Consumer Involvement

Involvement generally denotes the extent of an individual's motivation to respond to stimuli as well as focus personal demand, conception and interest toward an object to achieve a desired outcome (Wang & Calder, 2006). According to the Elaboration Likelihood Model, an individual's level of involvement in the course of "message processing" is a vital element in defining the path to persuasion, given that, compared to consumers with lower

involvement, the highly-involved mostly display increased levels of cognition and further information-processing activities (Petty *et al.*, 2005). Studies examining consumer involvement in the body of reviewed literature, often focus on consumers' involvement with a product category (product involvement) or involvement with the advertisement (advertising involvement). Advertisement involvement is a person's inherent drive to rationally process the contents of an advertising message (Laczniak & Muehling, 1993). Product involvement, however, describes a consumer's lasting perception of the relevance of a product on the basis of their innate needs, values as well as interests (Zaichkowsky, 1985).

The elaboration likelihood model suggests that involvement induces an attentive state of mind, making consumers more driven and able to process information (Yoo & Kim, 2005). Regardless of the type of involvement (product or advertising), consumers who are highly involved are said to cautiously examine the message's claims, more determinedly scrutinize these claims, and persevere in their efforts regarding personal factors, such as personal relevance, beliefs and values (Ching *et al.*, 2013). Users who are more involved with an advertised product pay more attention to the ad and process the commercial information more intensively. Extant literature confirms a positive influence of involvement on display advertising effectiveness, in terms of forming lasting attitudes toward the ad and the brand, and on click-through rates (Martin-Santana & Beerli-Palacio, 2012). It also serves as an arbitrating variable in determining the level of an ad's influence on viewers (Te'eni-Harari *et al.*, 2009).

Several instances regarding the role of involvement are identified in the reviewed body of literature on ODA and include Belanche *et al.* (2017) who found that product involvement increases attitudes toward the ad and toward the brand and reduces the level of intrusiveness;

Eshghi *et al.* (2017) who established that advertising message involvement enhances the influence of ad copy type and task orientation on brand attitude; and Wang *et al.* (2009) who asserted that variation and appeal strategies that are employed in consort with consumer characteristics, such as product involvement may result in higher advertising effectiveness. Consumer involvement reflects a person's desire and drive to achieve an outcome, and therefore generally functions as an enhancer or a confounding factor in research on online advertising effects or effectiveness.

ii. Web browsing/User Mode

Earlier research suggests that the task orientation of consumers affects how they respond to persuasive communication (Rodgers & Sheldon, 1999). The relevance of this in the online environment is underscored by the knowledge that, people use the internet for diverse reasons. Internet usage motive defines “*online users’ inner drive to put efforts to carry out any online activity*” (Jung *et al.*, 2014, p.2). These motives could come in various forms as research, shopping, entertainment, surfing, communication, or socializing among others. Depending on these motives, internet users deal with, understand, and form attitudes toward advertisements they are exposed to, in different ways (Rodgers & Thorson, 2000). According to the Interactive Advertising Model, information processing is activated when users switch their usage motives, stimulated by ads they see when they are online, and these motives determine their usage/user mode. Because internet users’ online activities mostly begin with a goal-oriented plan, user mode specifies “*the extent to which internet activities are goal-directed*” (Rodgers & Thorson, 2000, p.46).

Within the literature reviewed using reversal theory as a guide, user mode has been broadly classified along a goal-directed spectrum with telic denoting “high goal-oriented, seriousness, and present-oriented” and paratelic representing “low goal-oriented, playful,

and activity/experience oriented” (Seyedghorban *et al.*, 2016). Illustratively, an internet user who is researching is debatably, serious-minded because “*searching is guided by specific goals, and goal-directed visual search occurs when individuals are motivated to find specific information in order to complete a task*” (Kim *et al.*, 2014, p.815); while the other pursuing entertainment is playful and may tend to exhibit curiosity and exploration to satisfy present needs. Thus, the goal of web users can exert strong influence on attention allocation such that ads attract more user attention when users are casually browsing the internet, than when they are involved in for instance, a reading task (Simola *et al.*, 2011).

Recently, Jung *et al.* (2014) examine the role of user mode in consumers’ attitude formation toward interactive online display ads while Seyedghorban *et al.* (2016) extended and incorporated user mode into Cho and Cheon’s (2004) internet advertising avoidance model. Similarly, Eshghi *et al.* (2017) investigated the complementary role of individual task orientation on involvement and attitude toward online advertising, and Bleier and Eisenbeiss (2015a) who assessed variations in responses to personalised ads depending on consumers’ web browsing mode. Notably, a common argument echoed in these studies is the essential role user mode or motives play in consumer reactions to advertising in online environments. However, the results from these studies varied across contexts and product categories. Also, the limited empirical marketing or advertising research on the role of user modes in determining consumer behavioural responses to online advertising, provides a good reason to examine how it helps explain online behaviours of consumers with a focus on advertising responses. This is highlighted by the peculiarity of the concept to the online domain.

iii. Perceived or Perception of Intrusiveness

Perceived intrusiveness is extensively discussed in online advertising literature (McCoy *et al.*, 2008; van Dorn & Hoekstra, 2013), and has been pointed out by Edwards *et al.* (2002)

as an essential factor in determining consumers responses to online advertising. Li *et al.* (2002) define intrusiveness as “*the degree to which advertisements in a media vehicle interrupt the flow of an editorial unit*” (p. 39). Thus, explaining perceived intrusiveness as the extent to which users feel removed from their purpose for being online or from their reason for browsing a particular webpage by being “cut-off” by an ad (Rejón-Guardia & Martínez-López, 2014). So, perception of intrusiveness is a subjective gauge of how distracting an ad is (McCoy *et al.*, 2008), and the manifestation of a means by which the ad evokes irritation and generates emotional responses in users, conceivably compelling them to evade the ad (Edwards *et al.*, 2002). Besides being approached from the perspective of cognitive process and task performance, perception of intrusiveness has also been considered from the viewpoint of interference with individual’s privacy (Rejón-Guardia & Martínez-López, 2014). In such instances it is suggested that, perceptions of intrusiveness are caused if; consumers are unfamiliar with an advertiser, ads infringe on user’ privacy, and are shown or presented without users’ permission (Milne *et al.*, 2004).

Although perceived intrusiveness is a consumer-related issue that impinges on advertising effectiveness, it is a function of several ad-related features, and describes the mechanism by which an ad induces negative emotional responses, but not the negative responses themselves. Researchers (e.g. Ying *et al.*, 2009) in the field, therefore, assert that perceived intrusiveness of ads can be regulated through manipulation of certain aspects of the ad such as: its value to the user, placement and quality of execution. In their view, if ads are informative, entertaining, related to the website’s content, and the frequency and quantity of ads are carefully controlled, they will be perceived as less intrusive. As van Dorn and Hoekstra (2013) also point out in their study, respondents with higher levels of privacy concerns experience greater perceptions of intrusiveness when they are exposed to personalised display ads. Following these, Goodrich *et al.* (2015) suggest that, it is equally

as helpful for advertisers as for website owners that ads are pretested for intrusiveness before full take-off so as to curb negative advertising outcomes. While the current study did not examine perceptions of intrusiveness, it serves as a foundational concept for explaining several of the relationships assessed in this study.

iv. Other Consumer/Product-Related Issues

There are also some studies within the body of literature reviewed that point out other consumer and product situation in which some advertising strategies may be more or less useful. The arguments put forward by these studies seem to espouse that design and execution of display ads should take into consideration consumer and product peculiarities in order to optimize advertising effects. They include the works of Lambrecht and Tucker (2013) who suggest that dynamic retargeted advertisements, though less effective than their generic counterparts, are more effective when consumers have narrowly constructed preferences – when consumers have detailed knowledge or ideas about the sort of product they intend to buy; Goldfarb and Tucker (2011) who found that context-based and obtrusive ads are effective when used independently, but become less effective when combined, particularly, for product categories considered private and customers who appear to guard their privacy. In the same vein others such as Eshghi *et al.* (2017) found that the technological intensity of the advertised brand/product influenced consumers advertising message involvement and subsequent attitude toward the brand/product; Goodrich (2013) also demonstrated the influence of age on attention and responses to ODA by indicating that older adults pay greater attention than younger adults to online banner ads as much as they form higher purchase intentions following exposure to such ads.

Gathering from the analysis of the literature, and the discussions put forward under this theme, and its ensuing sub-themes, it became apparent that, in ensuring that the literature

on online (display) advertising and its effects is progressed and strengthened, it is germane for studies to explore how variables related to both display ads, and consumers or internet users as well as the advertised product/brand may influence consumers behavioural responses toward ODA (Tang *et al.*, 2014; Belanche *et al.*, 2017). Drawing on these discussions, interactivity, placement, informativeness, personalisation and exposure conditions encapsulate the pertinent ad-related features that require further investigation in order that their influences may be resolutely established in the literature (Brajnik & Gabrielli, 2010; Bleier & Eisbensen, 2015a), and are the focus of the study at hand. Additionally, besides being the features that hold more significance for several contemporary ODA formats, they also lend themselves to non-experimental designs. And so, it is important that academic enquiries remain relevant to changes in practice and theoretical understanding of how these pertinent features are perceived by consumers. Additionally, focusing on user mode as the consumer-related (situational) mechanisms that may cause variations in the direction and intensity of their behavioural responses is another area in which this thesis seeks to make a contribution.

4.5.2 Assessing Online Display Advertising Effectiveness

This theme concerns literature which examines the approaches for assessing the efficacy of online ads. Higher online advertising saturation and consumer negativity toward online advertisements are some key factors driving the need to assess the effectiveness of online advertising (Martin-Santana & Beerli-Palacio, 2012). On the basis that advertising channels, campaigns and formats may vary, no single measure is regarded as all-encompassing, and so the standards used in most studies are divergent. Studies that inquired into measurement of display advertising effectiveness largely used internet-related or direct-response measures (such as click-through rates, ad impressions etc.) or conventional measures (such as attention toward the ad, attitude toward the ad or brand, ad acceptance, ad recall and

recognition, purchase intention and frequency etc.). They include works from authors such as Belanche *et al.* (2017); Auschaitraku and Mucherjee (2017); Bleier and Eisbensen (2015a; 2015b); Spalding *et al.* (2009); Rosenkrans (2009); Fulgoni and Morn (2009); Kireyev *et al.* (2015) as well as Xu *et al.* (2014) among others.

According to Martin-santana & Beerli-Palacio (2012) the conventional measures of assessing the effectiveness of online advertising can be categorised under the traditional cognitive, affective and conative/behavioural (CAB) criteria of advertising effectiveness. Arguing from a similar angle, Hollis (2005) earlier asserted that although the internet-related measures are peculiar to the internet given that the medium has capabilities that extend the function of advertising far past that of traditional media, most of the direct internet-related measures could still be classified under the CAB criteria. He further argues that click-through rate (CTR) for instance, is a form of conative response since it depicts a behavioural reaction “*indicative of a desire to check out claims made in the advertising to ascertain their relevance and veracity*” (p.266).

From the perspective of the CAB, the review identified memory-based techniques as the most commonly utilised cognitive measures. These cognitive measures include ad/content recognition, aided/unaided recall, attention and memorisation (e.g. Lee & Cho, 2010; Goodrich, 2011; Bright & Daugherty, 2012; Tujat & Reijmersdal, 2012; Nihel, 2013; Yeu *et al.*, 2013; Goodrich *et al.*, 2015). Studies that employed such measures demonstrate that conventional cognitive measurements offer vital information on internet advertising effectiveness that other forms of measures cannot detect. According to Wakolbinger *et al.* (2009) assessing online advertising effectiveness using recall for instance, gives advertisers some assurance that viewers who recollect the ad or the brands and products advertised are more likely to purchase them. It is also argued by Kuisma *et al.* (2010) that attention and

memorisation are essential cognitive responses to online display ads since these may result in other positive outcomes for advertisers.

Regarding affect-based measures, the extant studies reviewed point to attitude toward the ad, attitude toward the brand, attitude toward the website and ad liking as key affective indicators of online advertising effectiveness (see Jung *et al.*, 2014; Wang *et al.*, 2013; Goodrich *et al.*, 2015; Auschaitraku & Mucherjee, 2017; Belanche *et al.*, 2017; Eshghi *et al.*, 2017). Arguments raised by these studies are that, attitudes mirror the feelings of consumers during and after ad processing; as such, they improve brand evaluations which could in turn impact brand choice (Goodrich, 2011). Because “*affection refers to both attitudinal and emotional aspects of meaning*” (Li & Leckenby, 2004, p.5), other researchers (e.g. Van Reijmersdal *et al.*, 2016) also used ad liking as affect-based measures of effectiveness. Van Reijmersdal *et al.* (2016) for one reasoned that, since persuasion relies on affect-based learning mechanisms such as affect transfer, in lieu of cognitively processing ads, consumers use feelings and liking as processing cues. The position of most studies that used affect based-measures stemmed from early submissions that, ads that are liked (toward which consumers have favourable attitudes) are more successful at persuading consumers than those that are not, thus making affect-based measures essential to marketers and advertisers (Goodrich *et al.*, 2015; Eshghi *et al.*, 2017).

4.5.2.1 Conative/Behavioural Measures

According to Li and Leckenby (2004) conation or behaviour is the observable act of consumers or at least their stated desires to act (behavioural intentions). Brajnik and Gabrielli (2010) explain that they are actions or intended actions that succeed changes in cognitive and affective states of consumers exposed to advertising stimuli. Evidence from the reviewed ODA literature shows predominant use of CTR or ad clicking as well as

purchase intentions as conative or behavioural measures (see Rosenkrans, 2009; Chan, 2010; Goldfarb & Tucker, 2011; Bleier & Eisenbeiss, 2015b; Van Reijmersdal *et al.*, 2016; Liu & Mattila, 2017; Kim *et al.*, 2018). Other studies also utilised shopping frequency (e.g. Wang & Sun, 2010a; 2010b; Nasir, 2017), intentions for ad interaction (Bright & Daugherty, 2012), ad viewing (Simola *et al.*, 2011; Bleier & Eisenbeiss, 2015a), and ad acceptance (Belanche *et al.*, 2017).

Regarding the predominantly used behavioural measures, the prevailing argument has been that when consumers are persuaded by advertising message, they form the desire or intention to purchase the advertised brand; and since purchase intention is a commonly used and well established conative measure of advertising effectiveness particularly in traditional media, extending it to the online context further provides added insight regarding its role in gauging the effectiveness of ads (Wang & Sun, 2010c; 2010d). The other prevalent behavioural measure, CTR or ad clicking is also lauded as a key measure for assessing online advertising effectiveness (Bleier & Eisenbeiss, 2015b) because relative to other internet-related measures (e.g. ad impression), CTR is considered a more relevant and performance-centered measure (Rosenkrans, 2009; Nihel, 2013); and for this reason, has been used as one of the major behavioural response measures by majority of the reviewed studies.

In spite of all these studies, there are still significant challenges in gauging online advertising effectiveness (Goldfarb, 2014). The extreme use of the CTR for instance, has been probed by some researchers (Yaveroglu & Donthu, 2008) who argue that it focuses singularly on an active response to online ads and not possible exposure to it. Other authors such as Lavrakas *et al.* (2010) have also pointed to the inadequacy of CTR on the basis of its inability to measure cognitive and affective effects as well as other behavioural responses

consumers may engage in without clicking on ads. This explains the rationale behind studies that balance results gained by CTR, with those obtained using conventional advertising outcome measures (e.g. Spilker-Attig & Brettel, 2010; Song *et al.*, 2011; Martin-santan & Beerli-Palacio, 2012; Liu & Mattila, 2017). Empirical support for this position is provided by Fugoni and Morn (2009) who demonstrate that notwithstanding lack of clicks, display ads could positively induce consumers to visit advertiser websites, perform search queries using advertiser brand name, and make both online and offline purchase of advertised brands.

In providing further explanations to issues plaguing measures of effectiveness, Lewis *et al.* (2011) argue that consumers engage in several activities (watch ads, search for products and purchase items among other things) while online. In their view, therefore, studies that measure online advertising effectiveness by correlating user responses and online ads stand the risk of overstating the efficacy of such ads because there is bound to be a particular type of selection bias (activity bias). Following this perspective, Xu *et al.* (2014) developed a model that underscores clicks and purchases as dependent arbitrary occurrences in continuous time and, hence, suggest the need to deemphasize the “last click” effect and focus on the indirect contributions which other ads (or formats) may make toward final conversion. Kireyev *et al.* (2015) in a recent study, along the same line of reasoning, contend that simple stationary measures are plagued with a fundamental attribution problem and, therefore, suggested dynamic versions of the classic metrics.

While numerous researchers suggest their own conceptualizations of how consumers react to online advertising (which are considered indicators of online advertising effectiveness), some others (e.g. Ha, 2008; Spalding *et al.*, 2009; Wakolbinger *et al.*, 2009) recommend that the suitability of effectiveness measures should be done on the basis of a firm’s

advertising objectives or goals. Behavioural response is not only one of the major objectives of online advertising, but also one of the three dimensions of the hierarchy of effects' CAB criteria of effectiveness (Li & Leckenby, 2004) as discussed early on. However, the reviewed ODA literature depicts a prevalence of affective measures which seems consistent with Kim *et al.* (2014) who also found an increasing prominence of affective effects in advertising research. This current research, therefore, considers it expedient to examine consumers' responses to online display advertising from a behavioural perspective. Aligning with researchers such as Lavarakas *et al.* (2010) and Pavlou and Stewart (2000), who assert that because individuals play active roles in the online environment, the effectiveness of online advertising needs to be examined from perspectives that measure not only the response to the ad but also interactions with it, this thesis examines behavioural responses to ODA by focusing on consumers' approach and avoidance behaviours toward online display ads. Specifically, in this current study behavioural response was measured as "ad acceptance and ad avoidance" which examined the extent of consumer attentiveness, focus and interaction with ODA in the case of ad acceptance and lack of attentiveness, focus and interaction in the case of ad avoidance. In so doing this study takes into consideration both the direction and intensity of the behavioural response.

4.5.3 Consumer Attitude toward Online Advertising (ATOA)

The stream of studies under this theme, concerns consumers' perception, beliefs and general predisposition toward online advertising. Described as the evaluative sum of perceived attributes, as well as affective and cognitive benefits of online advertising (Wang & Sun, 2010b), attitude toward online advertising is topical in the literature owing to its role in predicting consumers' responses and behaviours to online advertising after exposure (Souiden *et al.*, 2017; Wang & Sun, 2010d). This literature stream diverges from earlier submissions that consider attitudes as analogous to and substitutable with beliefs (Mehta,

2000); and agrees with assertions that attitudes toward online advertising are outcomes of consumers' beliefs about online advertising (Bracket & Carr, 2001).

Subsequent to the initial work of Bracket and Carr (2001), several authors have made further contributions toward the latter assertion which holds that consumers' attitudes toward online advertising are formed or conditioned by their beliefs (e.g. Mahmoud, 2014; Nasir, 2017). Beliefs about online advertising from the perspective of this body of literature, therefore, are specific statements about the attributes of online advertising (Wang *et al.*, 2009). This position finds empirical backing in studies (such as Wang *et al.*, 2009; Wang & Sun, 2010a; 2010b; 2010c; 2010d) which investigated five belief dimensions (entertainment, information seeking, credibility, economy and value corruption) and found, in most instances, that all are significant predictors of attitude toward online advertising with variations across several cultural contexts. Other works (such as Li-Ming *et al.*, 2013; Sun & Wang, 2010) have assessed other antecedents such as familiarity, usability and trust.

Beyond studying attitudes toward online advertising as an outcome of antecedents like beliefs, familiarity, usability and trust as well as other ad-related features, these studies further investigated the influence of attitudes toward online advertising on consumer responses such as ad clicking, brand attitude and preferences, and online shopping intention and frequency (e.g. Wang *et al.*, 2009; Sun & Wang, 2010; Wang and Sun, 2010b; Goodrich, 2011). Others examined the attitudinal and behavioural differences across web user segments, cultures, genders, age as well as personality traits (Goodrich, 2013; 2014; Valaei *et al.* 2016; Nasir; 2017; Souiden *et al.*, 2017). In essence, studies within this theme recognize that while consumers' attitudes toward online advertising is considered a key outcome of certain pertinent precursors, it is also a vital antecedent to several behavioural responses, and these interrelationships are regulated by individual, demographic, cultural,

and ad-specific differences, which should be of utmost concern to researchers and practitioners alike.

Altogether, the central role of attitude in online advertising effects cannot be ignored as it appears the most frequently measured construct, either as an outcome in most cases or mediating variable in very few cases, derived from the understanding that attitudes are antecedent to behaviour and serve as an intervening response, determining the degree of online advertising influence on consumers or viewers (Wang & Sun, 2010b; Goodrich, 2011). Not surprisingly, although attitude toward advertising (ATA) in general has long been regarded a vital factor in determining advertising effectiveness (Lutz *et al.*, 1983), attitude toward online advertising (ATOA) is only as old as the phenomenon of online advertising (Zha *et al.*, 2015). Additionally, the experimental nature of most of the reviewed studies causes a tendency of the researchers to examine attitude toward specific ads, rather than ATOA with the exception of a few (e.g. Wang & Sun, 2010a; Valaei *et al.*, 2016; Souiden *et al.*, 2017). Also worth noting, is how silent extant studies have been on the dual (explicit and implicit) perspective of attitude in spite of its potential in explaining more vividly consumer behaviours (Goodrich, 2011). Given the relatively brief history, and limited empirical evidence on consumers' ATOA, understanding more about its dynamics and role in enhancing or explicating behavioural responses of consumers toward online display ads is crucial for theory advancement. Specifically, this thesis examines ATOA as an internal consumer response that transmits or facilitates the effects of ad characteristics on consumer behavioural responses to ODA.

4.6 THEORETICAL APPROACHES IN ODA RESEARCH

This section examines and discusses the conceptual or theoretical routes taken in the ODA studies that were reviewed. This was done in an attempt to appreciate the theoretical

perspectives underpinning these studies as well as explore the representation of the varied theoretical stances identified from the review. Using the classification scheme provided by Heeks and Bailur (2007) which depicts the degree of theorization along a spectrum from profound theory-based through shallow category-based approaches, the study differentiates the conceptual approaches employed in these studies. From this standpoint:

- *theory-based* studies make use of identified theories, through application or testing;
- *framework-based* studies employed frameworks explicitly derived from a stream of theoretical works;
- *model-based* studies applied models without alluding to any deeper knowledge stream;
- *concept-based* works used non-theoretically grounded but defined concepts and;
- *category-based* studies used sets of predefined factors to conduct analysis.

Table 4.3 maps the reviewed articles by theoretical approaches and geographical setting. The theoretical basis of the studies suggests that, 24 articles (approximately 38%) made recourse to theories or stated specific theories on which their works were grounded. These studies employed such theories as the elaboration likelihood model (Spilker-attig & Brettel, 2010; Wang *et al.*, 2009), stimulus organism response model (Tang *et al.*, 2014; Bleier & Eisenbess, 2015b), reactance theory (Ying *et al.*, 2009), processing fluency theory (Wang *et al.*, 2013), goal system theory (Jung *et al.*, 2011), mere exposure effects theory (Goodrich, 2011; 2014; Yeu *et al.*, 2013), reversal theory (Jung *et al.*, 2014; Seyedghorban *et al.*, 2016), and central capacity theory of attention (Simola *et al.*, 2011) among others. As reflected in the review, most of the featured theories are drawn from the field of psychology. Overall, the elaboration likelihood model (ELM) by Petty *et al.* (1983), reactance theory by Brehm (1966), mere exposure effect theory by (Zajonc, 1968), Stimulus organism response model (SOR) by Mehrabian and Russell (1974), and reversal theory by Apter (1984) were the five theories that were used in more than a single study. Specifically, ELM was utilised in four

studies, reactance and mere exposure effect theories were used in three studies each, and reversal theory, and SOR were used in two studies each. These theories (as shown in table 4.3) were either used by some studies in an explanatory capacity and/or integrated with other concepts or frameworks to examine online display advertising from various perspectives. Other studies in most cases, merely alluded to these theories in their discussions. The review's consideration of a study as being theory driven was on the basis of these three instances.

Aside the few theory-based studies, the remaining 39 papers, though are not based on identifiable theories, used concepts, constructs and frameworks within the broader advertising literature as well as those peculiar to online advertising to provide valuable insights on ODA and its outcomes in terms of consumer responses. The apparent low level of theory-based studies in the ODA literature resounds the outcome of Pitt *et al.*'s. (2005) audit on theory use in advertising research from three advertising journals which found merely 17% of articles utilizing specific theories. Again, Kim *et al.* (2014) studied trends in advertising research and found a little less than half of their study sample to be theory-driven. Though this may represent a growing recognition of the role of theory in advertising research, this progress is minimally reflected in the ODA papers reviewed. For Faber (2015), as an applied and interdisciplinary field, there is a degree of latitude to borrow and adapt theories from other domains. Adding his voice to Faber's view, Laczniak (2015) asserts that advertising research should be driven by theory and calls for empirical testing of these theories in diverse context in order to determine the degree of their generalisability. Keeping on course with the purpose of this review, the following section examines the methodological approaches employed in the body of literature reviewed.

Table 4.3 Distribution of Articles by Geographical Setting and Theoretical Approaches

Region/Country	Article	Theoretical Approach
<i>Americas</i>		
○ USA	Auschaitraku & Mucherjee (2017)	Framework-based
	Bright & Daugherty (2012)	Theory-based (EVM)
	Bruce <i>et al.</i> (2016)	Model-based
	Fulgoni & Morn (2009)	Category-based
	Goodrich (2014)	Theory-based (MET)
	Goodrich (2013)	Concept-based
	Goodrich (2011)	Theory-based (MET & DAM)
	Goodrich <i>et al.</i> (2015)	Category-based
	Hoban & Bucklin (2015)	Model-based
	Jung <i>et al.</i> (2011)	Theory-based (GST)
	Kireyev <i>et al.</i> (2015)	Model-based
	Kim (2018)	Theory-based (ACT)
	Liu & Mattila (2017)	Concept-based
	Pashkevich <i>et al.</i> (2012)	Model-based
	Rosenkrans (2009)	Theory-based (DT)
	Segev <i>et al.</i> (2014)	Concept-based
○ Canada	Souiden <i>et al.</i> (2017)	Category-based
○ Ecuador	Flore <i>et al.</i> (2014)	Category-based
<i>Europe</i>		
○ Netherlands	Tutaj & van Reijmersdal (2012)	Framework-based
	Van Dorn & Hoekstra (2013)	Category-based
	Van Reijmersdal <i>et al.</i> (2016)	Category-based
○ Spain	Belanche <i>et al.</i> (2017)	Category-based
	Martin-Santana & Beerli-Palacio (2012)	Category-based
○ Belgium	Janssens <i>et al.</i> (2012)	Framework-based
○ Germany	Spilker-attig & Brettel (2010)	Theory-based (ELM)
○ Greece	Drossos <i>et al.</i> (2011)	Category-based
○ Norway	Ying <i>et al.</i> (2009)	Theory-based (RT)
○ Finland	Kuisma <i>et al.</i> (2010)	Theory-based (IPT)
○ Germany	Bleier & Eisenbess (2015b)	Theory-based (SOR)
<i>Asia</i>		
○ China	Li <i>et al.</i> (2009)	Category-based
	Song <i>et al.</i> (2011)	Category-based
	Wang <i>et al.</i> (2009)	Category-based
	Nihel (2013)	Category-based
○ South Korea	Yeu <i>et al.</i> (2013)	Theory-based (MET)
	Kim <i>et al.</i> (2011)	Model-based
○ Taiwan	Wang <i>et al.</i> (2009)	Theory-based (ELM)
	Heish & Chen (2011)	Theory-based (ELM & SAT)
○ Malaysia	Li-Ming <i>et al.</i> (2013)	Theory-based (TAM)
	Valaei <i>et al.</i> (2016)	Theory (HCD)
○ India	Eshghi <i>et al.</i> (2017)	Category-based
○ Singapore	Chan <i>et al.</i> (2010)	Theory-based (MT, PFT & PKM)
<i>Middle East</i>		
○ Iran	Seyedghorban <i>et al.</i> (2016)	Theory-based (RET)
○ Turkey	Nasir (2017)	Category-based
○ Syria	Mahmoud (2014)	Category-based
<i>Australia</i>		

○	Hussain <i>et al.</i> (2018)	Theory-based (BTT)
<i>Cross-Cultural</i>		
○	USA & China	Sun & Wang (2010)
		Wang & Sun (2010a)
○	USA & Romania	Wang & Sun (2010c)
○	China & Romania	Wang & Sun (2010d)
○	USA, China & Romania	Wang & Sun (2010b)
<i>Silent on Region</i>		
○	Bleier & Eisenbeiss (2015a)	Model-based
○	Chapelle <i>et al.</i> (2014)	Model-based
○	Fridgeirdottir & Najafi-Asadolahi (2018)	Model-based
○	Jung <i>et al.</i> (2014)	Theory-based (RET)
○	Lambrecht & Tucker (2013)	Theory-based (CLT)
○	Miralles-Pechuan <i>et al.</i> (2017)	Model-based
○	Simola <i>et al.</i> (2011)	Theory-based (CCTA)
○	Tang <i>et al.</i> (2014)	Theory-based (SORM & RT)
○	Kim (2018)	Theory-based (ELM & RT)
○	Lee & Cho (2010)	Theory-based (BTT)
○	Xu <i>et al.</i> (2014)	Model-based
○	Wang <i>et al.</i> (2013)	Theory-based (PFT)

*Note:*DT=Distinctiveness Theory; RT=Reactance Theory; ELM=Elaboration Likelihood Model; MT=Mindset Theory; TAM=Technology Acceptance Model; HCD=Hofstede's Culture Dimensions; SAT>Selective Attention Theory; RET=Reversal Theory; EVM=Expectancy Value Model; GST=Goal Systems Theory; IPT=Information Processing Theory DAT=Dual Attitude Model; MET=Mere Exposure Effect Theory; BTT=Berlyne's Two-factor Theory; ACT=Advertising Contextual Theory CLT=Construal Level Theory; SORM=Stimulus Organism Response Model; CCTA=Central Capacity Theory of Attention; PKM=Persuasion Knowledge Model; PFT=Processing Fluency Theory

4.7 METHODOLOGICAL APPROACHES IN ODA RESEARCH

Generally, all articles reviewed were empirical with a high proportion of quantitative studies representing 95 percent of the total number. The review records only one qualitative study (Tang *et al.*, 2014), and two mixed methods studies (van Doorn & Hoekstra, 2013; Drossos *et al.*, 2011). The quantitative studies largely employed experiments, which is the most common or favoured method in advertising and online advertising research (Chang, 2017; Ha, 2008). Nineteen of the thirty-seven (approximately 60%) experimental studies were controlled experiments while eighteen were field experiments. A few of these studies conducted surveys subsequent to their experimental designs as a means of measuring behavioural intentions such as recall, revisit and purchase intentions (e.g. Goodrich *et al.*, 2015; Janssens *et al.*, 2012). Moreover, fourteen articles (approximately 22%) used surveys, and eight articles (approximately 13%) used secondary market data. Most of the surveys

were conducted online owing to time and cost efficiency considerations as well as ease of recruiting compared to offline surveys since the targeted respondents are generally web or internet users. Relevantly, the experimental studies and those that utilized secondary market data, were prevalent in the ‘antecedents to online advertising effectiveness’ and ‘measures of online advertising effectiveness’ themes as these studies observed user activities and measured actual cognitive and behavioural responses (such as clicks, shopping frequency, ad watching time) to ads (e.g. Belanche *et al.*, 2017; Bleier & Eisenbess, 2015a; Pashkevich *et al.*, 2012). The survey studies, however, were dominant under the online advertising attitudinal theme (See Appendix A1).

The qualitative study (Tang *et al.*, 2014) represented in this review, categorised consumer online behavioural responses into more distinct and polished categories. Through a content and thematic analysis of primary data gathered, Tang *et al.* (2014) conceptualised a two-dimensional framework that combined the behavioural direction and intensity of the behavioural effort and generated four types of behavioural responses - active approach, passive approach, active avoidance, and passive avoidance. The two mixed-method studies (Drossos *et al.*, 2011; van Dorn & Hoekstra, 2013) included in this review, also provide insightful contribution to ODA research. In their study, van Dorn and Hoekstra (2013) examined how personalisation triggers perceptions of intrusiveness, and its effect on consumer purchase intentions. The study used a sequential mixed-methods approach in which a qualitative pre-study was conducted through 12 in-depth interviews with managers and focus group interviews with customers to assess their experiences and attitude toward personalised or customised ads. The next stage was an online experiment involving 233 participants on a consumer panel. The study highlighted that; highly personalised ads can be a two-edged sword heightening purchase intention but may also negatively affect purchase intentions through higher perceived intrusiveness. Conventionally, qualitative

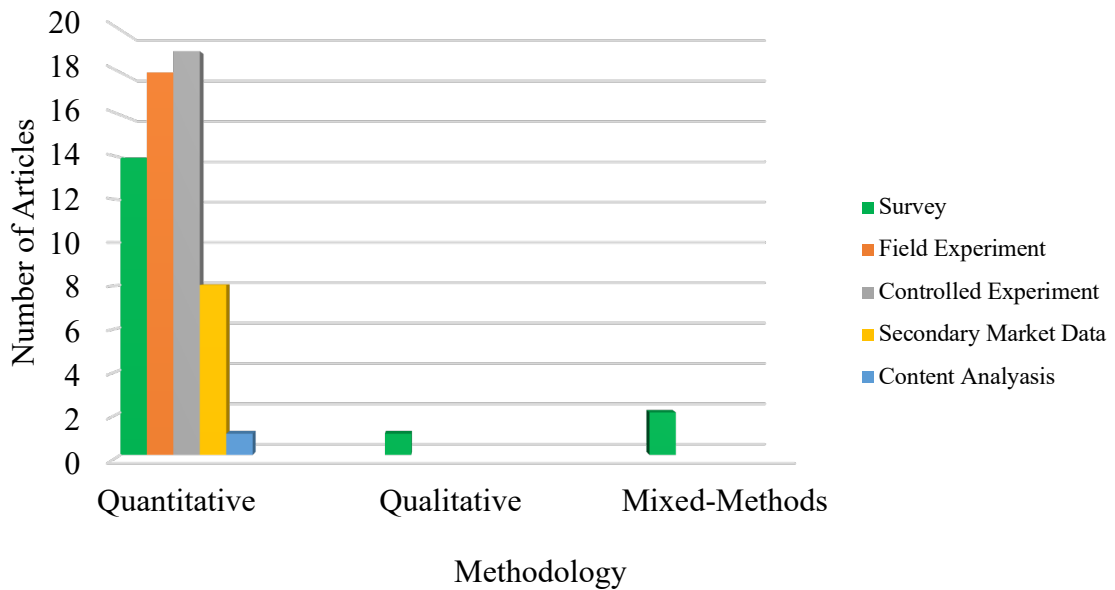
studies are suitable when the phenomenon or field of enquiry is embryonic (Yin, 2009), following which quantitative approaches are typically applied in an attempt to validate these qualitative findings and propositions (Malhotra, 2010). A plausible explication, therefore, for the bias against qualitative studies in ODA is that online advertising, as a field of scholarly enquiry, has a history of two and a half decades and has received considerable exploration and conceptualisation in the past years.

Sampling methods show that respondents or participants recruited for surveys and experiments have largely, been college students - accounting for 42 percent of these studies. Although they do not form a representative populace of all internet users, students are considered as more conversant with the internet and seem more easily accessible (Bright & Daugherty, 2012). Also, regarding the methods of analysis employed, most of the papers applied first generation methods of statistical analysis, reporting frequencies, t-tests, ANOVA, or regression analysis (e.g. Tujat & Reijmersdal, 2012; Goodrich *et al.*, 2015; Nasir, 2017), as well as more advanced data analysis methods such as economic, mathematical, and structural equation modelling (e.g. Valaei *et al.*, 2016; Miralles-Pechuan *et al.*, 2017; Fridgeirsdottir & Najafi-Asadolahi, 2018). Given their various advantages over first generational methods, advanced and more contemporary streams of analyses, could be used more by researchers to provide sturdy empirical support and validation to research findings.

The Figure 4.3 shows the methodological approaches and research strategies employed in these papers. Studies classified under secondary market data are those that used data collected from weblogs and other online databases of firms, as well as advertising and data mining agencies without any prior influence from researchers. These studies are distinguished from field studies, which design or influence ad formats and campaigns for

the purposes of the research in real life environments; and controlled experiment which are conducted in laboratory settings. In the subsequent section, discussions on the geographical spread or coverage of ODA literature under review are presented.

Figure 4.3 Distribution of Articles by Methodology

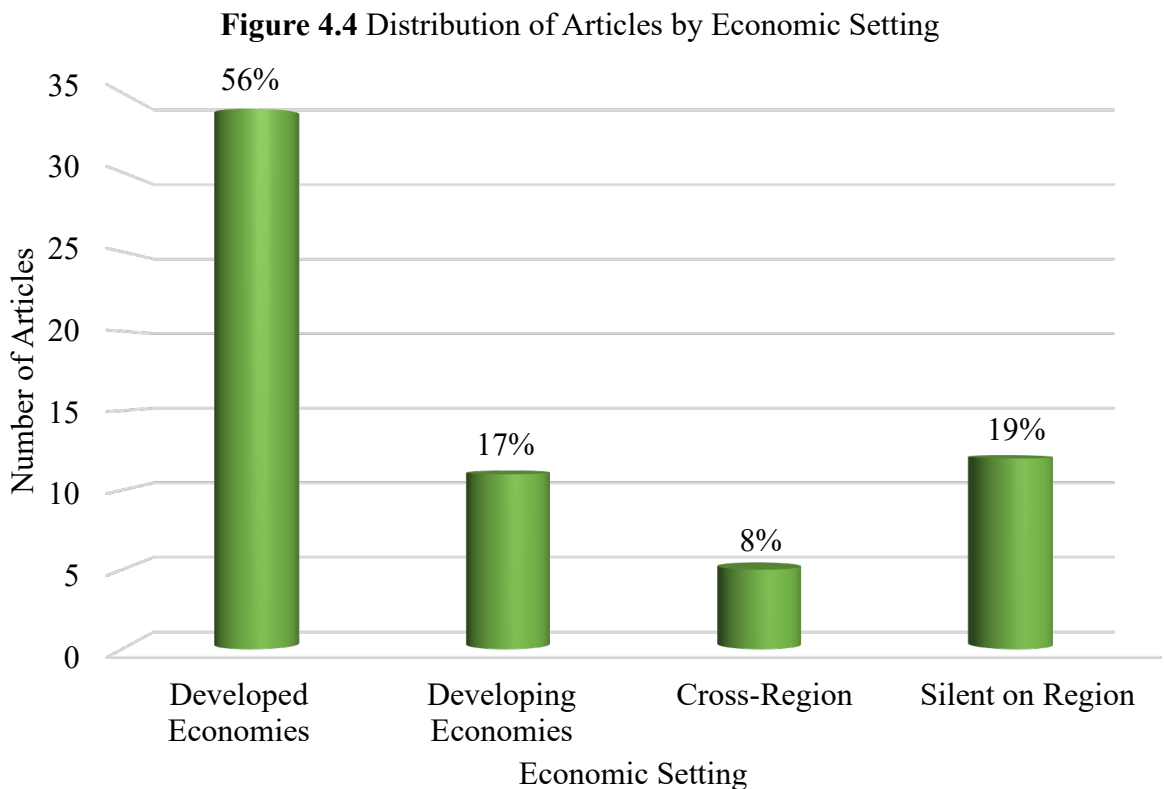


4.8 GEOGRAPHICAL AND ECONOMIC DISPERSION OF ODA RESEARCH

As indicated in Figure 4.4 the distribution of the reviewed articles shows greater attention on developed economies (approximately 56%) with a paucity of evidence from developing economy settings (17%). Specifically, there is a predominance of studies from North America, Europe and Asia; with less representation from the Middle East, South America, Australia and Oceania, and no apparent representation from Africa (see Table 4.3). The country focus of these studies fluctuates as well, with a substantial amount of North America studies domiciled in the USA. The seeming absence of studies from Africa may be attributed to the embryonic state of internet technology usage in most part of the region (Fuchs & Horak, 2008). Although the uptake of internet-related technologies by firms and the general populace is increasing; as indicated by the internet penetration rates, access to and internet

usage in most African countries still lag behind developed economies and even other developing middle-income countries.

There were a number of trans-regional studies which covered more than one country or region, as well as others which did not clearly state the context or geographical setting in which the studies were conducted and so, were labelled ‘silent on region’. The reviewed articles also, depict a high number of multiple authorships; 55 percent of the articles had more than two authors, 31 percent had two authors and only 14 percent were single-authored. Following the discussions so far, a number of research gaps have been identified and are discussed in the succeeding section.



4.9 RESEARCH GAPS AND FUTURE RESEARCH AVENUES

Following from the discourses on the findings from the review, a number of gaps are apparent in the literature, which prompt several avenues for future research, some (not all)

of which provide a springboard for this thesis. Despite being wide and varied (see Appendix A4), these are organised along three strands: gaps in issues and evidence; theoretical and contextual gaps; and gaps in methodological approaches.

4.9.1 Gaps in Issues and Evidences

This section identifies six major areas which could benefit from further research. Foremost, the constant emergence of new advertising formats presents an opportunity for additional investigations to establish their usefulness (Belanche *et al.*, 2017). Some relatively nascent ad formats and forms such as advergames, native advertising, in-stream videos and skippable videos have received scant attention (de Pelsmacker & Neijens, 2012; Goodrich *et al.*, 2015). From one angle, besides Burns and Lutz's (2008) work about a decade ago, it would seem no research has provided a comprehensive investigation on a diversity of ad formats in a single study. Importantly, because these formats may become obsolete or "fall out of favour", a comprehensive study of them (as has been done with older formats) may point out the pertinent design elements or features that may serve as enduring avenues for future studies as well as guide the design of newer formats (de Pelsmacker & Neijens, 2012).

Much more relevantly, several design elements and/or executional features are pointed out in the literature. The findings regarding their effects or influences in the literature are conflictive and less disciplined. It is argued that the fragmented and inconclusive results are attributable to the investigation of different ad stimuli, methods, measures, audiences and contexts (Kuisma *et al.*, 2010), which make such studies hardly comparable. As such, there is a need for future studies to examine a multiplicity of these features within a single investigation to provide a broad base for comparison (Spilker-attig & Brettell, 2010) as well as more precise and concerted postulations of their effects. From the perspective of some researchers (Rosenkrans, 2009; Bleier & Eisenbeiss, 2015b; Hussain *et al.*, 2018), explicit

focus on issues of personalisation, exposure, placement, interactivity require more dedication from future research in order to clarify the varied perspectives and establish more resolutely their influences. Authors such as Brajnik and Gabrielli (2010) and Kim (2018) have also called for studies addressing issues concerning the interactions between these features as the way forward.

Besides considerations of ad format and design elements or executional features, a few studies suggest that the presence of different types of ads on a webpage affect consumer responses (Lewis *et al.*, 2011). Because the internet is a stimulus-dense environment, commercial webpages selling advertising space feature numerous ads on a single web page and run multiple ads during commercial interruptions. However, what occurs when a webpage hosts multiple interactive, personalised, and rich media ads is presently unclear (Brajnik & Gabrielli, 2010). Since the likelihood that the effects stimulated by some of these ads trickle to other ads as well as the hosting website (Rosengren *et al.*, 2013), future research needs to examine consumer responses to a sequence of online ads rather than a single ad as well as competitiveness between ads on a website and across specific online platforms such as gaming and social networking platforms (e.g. YouTube, Facebook, Twitter etc.) (Liu & Mattila, 2017; Kim, 2018; Liu-Thompkins, 2019).

Second, the consumer-related issues identified in the review as precursor to, and intervenors or confounders of the effects of online display advertising are skewed. More focus has been given to issues of intrusiveness, attitude, and involvement and privacy concerns among other things. The internet is a goal-directed medium, a vital feature besides interactivity that sets it apart from conventional media (Wang *et al.*, 2009) and so, one would expect considerable amount of extant works to give attention to user motive/mode or goal orientation as a user-related or situational variable in examining online advertising

influences. However, how user mode or goal orientation influence consumer perceptions, attitude and responses to online display advertising has seldom been examined (Kuisma *et al.*, 2010; Seyedghorban *et al.*, 2016). Future studies are thus needed to lend further insights into the role user modes or goal orientation plays in consumer responses to online display advertising (Bleier & Eisenbess, 2015b).

Concerning the third gap, attitude toward online advertising has so far been studied from a unidimensional explicit perspective. A majority of extant online advertising studies that considered the attitude-behaviour relationship (e.g. Wang & Sun, 2010b; 2010c; Souiden *et al.*, 2017) so often presented a composite view on the role of attitude as a mediator of the beliefs/perceptions-behaviour nexus. It has, nonetheless, been argued in a recent study (Goodrich 2011) that the existence of dual attitudes toward online advertising is possible; an implicit attitude formed without conscious awareness and control, and an explicit attitude based on intentionally generated evaluations. Because implicit attitudes are different from their explicit counterparts on the basis of their formation, storage, retrieval and operations, a common theme that runs through recent streams of internet-related studies (e.g. Serenko & Turel, 2018) and that of Goodrich (2011) is the need to validate implicit attitude as a major attitudinal dimension germane to behaviour or behavioural responses, and not explicit attitude alone. Thus, necessitating the need to examine both perspectives in future studies to help explain more vividly, the role of attitude in influencing consumer responses to online advertising. Others also call for a focus on attitude toward online advertising in general, rather than attitude toward specific ads or formats based on the scope of such studies (Souiden *et al.*, 2017).

Fourth, the focus of the measures of effectiveness of online advertising has been on short-term effects of ad campaigns. However, as Breuer and Brettel (2012) suggests, the carryover

and long-term effects of advertising differ significantly from its short-term effects. With behavioural response and brand building as the two major objectives for advertising (Li & Leckenby, 2004), and the substantial use of online advertising by practitioners for brand-building purposes (Hollis 2005), future studies need to provide a much-enhanced understanding of the long run effect of online advertising campaigns on consumers. An essential question to provide answers to in this regard could be how the effect of an online ad exposure wanes/decays over time. Some extant research suggests that the degree of decay may vary by ad format (e.g. Breuer *et al.*, 2011); driving the need for more substantive enquiries of the decay pattern (Liu-Thompkins, 2019).

Fifth, there appears to be very few works focusing on service offerings (e.g. Kireyev *et al.*, 2015; Seyedghorban *et al.*, 2016; Liu & Mattilla, 2017) as most of the studies span different categories of physical products. Given the inherent peculiarity of services, it would be enlightening to know how these idiosyncrasies confound advertising of such in online environments to help improve research and advertising practice. Of particular value would be works that investigate the variations that exist in the ad outcomes for the different service processing categories: people (e.g. healthcare), possession (e.g. vehicle repair or maintenance), mental stimulus (e.g. education), and Information (e.g. banking) as has been done for physical products by majority of the reviewed studies (e.g. Flore *et al.*, 2014; Eshghi *et al.*, 2017). Also, various contrasts exist in the broader marketing literature, one of which is the product-service dichotomy. Springing on this knowledge, the review indicates that studies attempting to understand the differences and disparities that might exist in the advertising of service and product offerings in the online domain are absent. It would be instructive, therefore, for future research to examine this disparity (or lack thereof) in the ODA context.

Finally, another area of neglect is practitioner or industry perspective. As mirrored by this review, internet users and consumers' attitude and perceptions toward online advertising is prevalent in the literature. However, the views of practitioners are almost absent (Drossos *et al.*, 2011). It has been pointed out that such practitioners as website owners, marketing managers, advertisers and advertising agencies, among others, share and hold varying viewpoints (Knoll, 2015). As such, future investigations that delve into this pertinent area particularly, in diverse countries on the basis of internet penetration and maturity rates, may offer direct managerial implications, as well as contribute to theory building (Drossos *et al.*, 2011); since the practitioner perspectives may be juxtaposed with the scholarly viewpoints to find points of convergence and divergence (Ha, 2008).

4.9.2 Theoretical and Contextual Gaps

As pointed out in an earlier section, besides a little over a third of the reviewed articles, which clearly stated the theoretical foundations of their work, the literature depicts a general deficiency of studies grounded in established theories. In lieu of explicitly averring their theoretical underpinning or developing testable hypotheses from such theories, most of the studies commonly stated research questions and focused on specific factors or constructs and their interrelationships using prior empirical findings. These problem-driven and phenomenon-based approaches raise pertinent concerns from two perspectives. First, in view of the rapid advancements in the domain of online media, such studies run the chance of becoming dated. In addition, outcomes of such studies are restricted by the particular stimuli, message type, the category of product, and consumers, and so their applicability and generalisability across diverse market settings besides the initial study contexts become tricky (Goodrich *et al.*, 2015). In light of the above, researchers such as Knoll (2015) and Johar (2016) have called attention to the need for future studies to examine theories of how advertising works by developing research questions on more abstract levels and deriving

hypotheses from established theories. Owing to the ‘variable’ nature of advertising and its reputation for borrowing theories from older fields (Faber, 2015), other theoretical perspectives could be examined in the online advertising display literature.

Rather recently, Lackzniak (2015) re-echoed the need for universal theories to be contextualised to advertising studies, as depicted by the few theory-based studies identified in the review. Although most of these theories (e.g. ELM, MET, PKM) represented in the review have seen fair usage in both offline and online advertising contexts, some have not seen much usage and representation in the online advertising literature. For instance, from an SOR model perspective, there is a lack of theoretically driven understanding of the relationship between ODA characteristics and consumer attitude and behavioural responses. Because theories should provide explanations to why diverse individuals may respond to an ad in a particular or different way, and also be helpful in allowing advertisers to design ad messages that have anticipated influences on receivers from both a firm and societal perspective, Lackzniak (2015) avers that theories should be extended from other domains and applied to the field. For Faber (2015), where some theories appear deficient in providing explanations, they should be integrated with others to offer a more comprehensive view on issues.

What is more, empirical testing of theories particularly, in diverse geographical contexts to determine the degree of their generalisability is an essential aspect of scholarly enquiry. Such tests and conclusions derived from them, bring perspective to theoretical expectations, and extend theoretical limits of fields (Lackzniak, 2015). In spite of the borderless nature of online advertising, it is still crucial to inquire about how applicable theoretical perspectives may be across diverse countries (Janssens *et al.*, 2012). Interestingly, articles that did not disclose the geographical setting of their study, showed a high representation of theory-

based works, followed by Asian, North American, and European studies. As it would seem, theory-based works were non-existent, in cross-cultural research works (see Table 4.3). For an applied field like advertising, the contextualisation in theory development is needed to provide researchers with the prospects to account for certain idiosyncrasies that may offer meaningful insights to scholars and practitioners alike (Faber, 2015; Lackzniak, 2015).

Still speaking from a contextual standpoint, the reviewed studies focused more on developed market/country settings to the neglect of developing contexts (Lascu *et al.*, 2016). Also, the developing context studies were mainly from Asia and the Middle East with seemingly no African representation (See Table 4.3). Developing countries or markets differ in several ways from developed markets. However, differences exist among emerging or developing markets as well because such markets in Eastern Europe for instance, may vary in culture, economic development and other institutional conditions from those in sub-Saharan Africa. For this reason, researchers like Seyedghorban *et al.* (2016) and Eshghi *et al.* (2017) have called for findings to be tested across various geographical settings in order to progress understanding of online advertising influences and outcomes. Consequently, there is room for contribution to be made to the academic literature from a developing/emerging sub-Saharan African country perspective in both theoretical and practical terms.

Lastly, although some studies (e.g. Wang & Sun, 2010b; 2010c) have provided cross cultural comparisons of consumer perceptions and responses to online advertising, these studies are sparse, and the cultural perspectives appear limited. Since culture and advertising are so intertwined, future research need to broaden the cross-cultural examination of online advertising influences in order to advance present understanding of the impacts of global and local cultures on online advertising strategies (De Mooij & Hofstede, 2010; Bleier & Eisenbess, 2015b; Valaei *et al.*, 2016).

4.9.3 Gaps in Methodological Approaches

The methodological gaps in the reviewed studies are along three strands: the increasing dominance of experimental quantitative studies causing a dearth of qualitative studies; the prevalent use of student samples and; lack of longitudinal research. Online advertising research is dominated by quantitative approaches, particularly controlled experimental designs. While experiments provide the leeway to collect data unobtrusively and are free of self-reporting predisposition in real media atmospheres (Chang, 2017), the behaviour of respondents in laboratory experiments are considered falsified, given their knowledge of the research activity. Again, it may be argued that experimental designs allow the influence of extraneous factors to be controlled (Hussain *et al.*, 2018), but it is also relevant to point out that cognitive and behavioural activities of people are stifled or restrained in controlled laboratory environments. In “normal” daily situations, people’s behaviours have a greater degree of variations, and such behaviours can be examined through observations or self-report data (Tang *et al.*, 2014). Even more so, researchers like Brajnik and Gabrielli (2010) have called for studies that use actual ads, particularly, most commonly used or seen ones within the study area in lieu of temporary ones developed for the purposes of a specific study. In doing this, future studies could heighten the ecological validity of their findings and provide a more reliable depiction of users’ experience with, perceptions of, and responses to online advertising. In view of this, more field experiments, tracking studies (or use of secondary data) and surveys are, encouraged as they offer more uncontrived objectivity (Kim, 2018; Lewis & Rao, 2015).

The general lack of qualitative studies may be attributable to the neglect of certain areas of enquiry and geographical context. For instance, practitioner perspectives on ODA received little attention and were represented by only two studies from a developed, and a middle-

income economy (Drossos *et al.*, 2011; Li *et al.*, 2009). What is more, these studies did not provide much avenue for propositions to be made as they were mainly descriptive. In essence, more exploratory studies from developing contexts, where internet advertising is relatively nascent are required to serve as a springboard for further quantitative studies.

The second methodological gap concerns sampling. The essence of sampling in any research is generalisability, and this is even more so for the advertising field because of its closely-knit link with practice. Sampling has been an essential methodological problem ailing online advertising research (Ha, 2008; Knoll, 2015) as is once more reflected in the reliance on college/university students by the majority of studies in this review. Given the torrent of evidence that variations exist in consumer attitude toward advertising in terms of several factors (e.g. age, education, outlook on technologies, usage rates, and familiarity with the internet etc.), it is essential that studies use diverse and broader respondent populations as possible, especially when the explanatory power of predictors are interacted with respondents' characteristics (Gao *et al.*, 2009). Albeit youthful adults with 'high educational levels' are a key segment for advertising, other segments exist that have not been considerably studied so far (Brajnik & Gabrielli, 2010). As the representativeness of student samples has been questioned and the applicability and external validity of results using such are limited (Chang, 2017), there is a need for future studies to depend less on student samples and extend the scope of internet user categories employed in ODA studies (Ying *et al.*, 2009).

Drawing from the general advertising literature, it has been observed that real-life practices are constantly metamorphosing into much complicated states than existing methods can test. This makes the homogeneousness in method and prevalence of cross-sectional studies worrying (Chang, 2017). Following the recommendation of Ha (2008) over a decade ago,

attempts have been made by researchers to employ tracking and longitudinal studies. However, these studies are still extremely minimal relative to the standard approach of addressing online advertising effects from a cross-sectional standpoint. The online advertising landscape keeps evolving, and the dearth of longitudinal studies suggests that scant focus has been given to the dynamic changes in the expectations of consumers and advertisers. For instance, as Ha (2008) stated, studying the changes in the proportion of unsolicited and solicited ad exposure among internet users over time could help advertisers in creating suitable advertising strategies. As a means of reverberating the author's decade-long call, future studies may employ more longitudinal studies to provide a trajectory of changes in perceptions, attitude and behaviours of internet users and practitioners toward online advertising among other developments.

4.10 CHAPTER SUMMARY

This chapter conducted a review of online advertising literature with a focus on ODA research over the past decade by probing the issues and evidences, the theoretical and methodological approaches, and avenues for future research to be explored. Through a synthesis of relevant studies, the review demonstrates that online display advertising has progressed over the past ten years as several empirical papers have advanced our knowledge and understanding of the field. Much contributions have examined changes in online display advertising formats, several design elements or executional features as well as consumer-related factors pertaining to their efficacy. Generally, however, subjects such as examination of some new and emerging ad formats; explicit and collaborative focus on relevant design elements or executional features; practitioner perspectives on online display advertising; the dearth of theory-driven studies in online advertising research, the lack of qualitative approaches to enquiry, and the prevalent use of student samples are areas requiring future research attention.

Purposely, the interrelationships among some pertinent ODA features (exposure conditions, personalisation, interactivity, informativeness, and placement), attitudes toward online advertising, user mode or goal orientation, as well as the nature of the advertised brand (product or service), and the effect they may have on consumer behavioural responses have been given scant research attention and is the area in which this thesis seeks to contribute. The thesis also aims to address these influences from the viewpoint of the SOR model and reversal theory which complement each other in explaining how these ad-related and consumer-related factors may influence behavioural responses. Particularly considered a budding phenomenon in most developing countries, the ODA literature lacks empirical findings from emerging markets or developing country contexts. This thesis, therefore, explores these interrelationships, and also responds to calls for empirical views from developing countries in order to elucidate extant literature.

CHAPTER FIVE

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

5.1 CHAPTER OVERVIEW

The first chapter provided a background to the entire thesis, the second chapter discussed the context of the study and the third chapter discussed the two theories (the SOR model and reversal theory) underpinning the study. Chapter four reviewed extant research on online display advertising to show how far academic enquiries on the subject matter have progressed as well as point out gaps in existing research that require future scholarly attention; some of which provided the motivation for this thesis. Specifically, the review revealed that though research focus on features that characterise ODA are increasing, the literature depicts a paucity of explicit focus on some pertinent characteristics, and their influence on behavioural responses. Springing on the three preceding chapters, this chapter develops a research framework to guide the current study. The framework provides a graphical view of this study highlighting and integrating the ODA characteristic (interactivity, placement, informativeness, personalisation, and exposure conditions), consumer variables - attitude toward online advertising, and user mode as well as behavioural response (ad avoidance and ad acceptance) and their interrelationships as they pertain to this study. The chapter is organised in four sections with the overview as the opening section. The second section introduces, presents the graphical view of the conceptual framework, and outlines the assumptions underlying the framework, the third section formulates and presents the hypotheses that guide the empirical investigation, and the fourth section summarises discussions in the chapter.

5.2 INTRODUCTION AND ASSUMPTIONS UNDERLYING THE FRAMEWORK

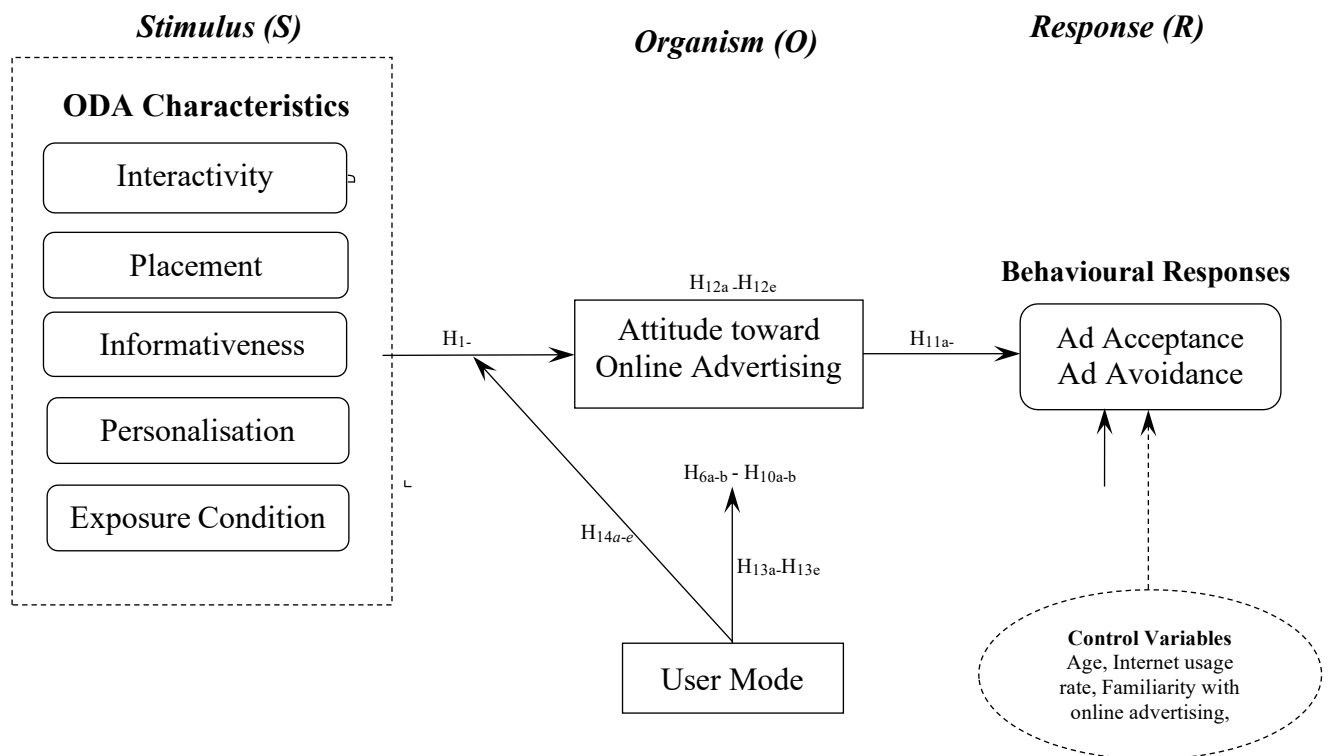
A conceptual framework is considered an essential constituent of any research, and an analytical device that guides a particular study, specifying the central ideas, concepts and variables drawn from various fields of enquiry relevant to the study (Saunders *et al.*, 2009). The framework outlines the constructs to be examined, and the proposed interrelationships among them to be verified and validated. It serves the purpose of aiding a researcher to develop understanding of the phenomenon under investigation by organising the examination procedure of the study data, and also furthering the presentation of results from the research (Grant & Osanloo, 2014). As such, a research framework that is well-illustrated helps the researcher make meaningful deduction from subsequent findings (Smyth, 2004).

Guided by the research objectives, theoretical background, and the ODA literature reviewed, a conceptual framework is proposed to guide the empirical part of this thesis. According to Crossan *et al.* (1999), a framework can only appropriately guide a study if it identifies the subject of enquiry; clearly describes the interrelationships among the components that make up the framework; and clearly states the main assumptions behind the framework. As such, this study examines consumer behavioural responses to online display advertising with a focus on how ad-related and consumer-related variables influence these responses. The framework is graphically portrayed by Figure 5.1 which captures the various factors and their interconnections pertinent to understanding consumer behavioural responses to ODA in Ghana.

Using the SOR model as a theoretical lens, the framework assumes that online display advertising (ODA) is characterised by certain stimuli/features conceptualised in this thesis to include interactivity, placement, and informativeness, personalisation, and exposure

condition. These ad characteristics are postulated to have a direct influence on consumer behavioural responses (ad avoidance and ad acceptance) to display ads. The framework also suggests that these influences are enhanced/facilitated (mediated) by consumer attitude toward online advertising. Underpinned by the reversal theory, the framework further purports that the effects of the ODA characteristics on attitude toward online advertising, and behavioural responses are moderated by internet user mode. To that end, the ODA characteristics are modelled as the independent variables (stimulus) while behavioural responses are modelled as the dependent or outcome variables. Attitude toward online advertising (ATOA) and user mode are modelled as mediating and moderating variables respectively. The subsequent sections discuss the variables and their interrelationships with corresponding hypotheses formulated to guide the remainder of the thesis.

Figure 5.1 Conceptual Framework



5.3 HYPOTHESES DERIVATION

This section examines the proposed interrelationships among the variables in the research framework and formulates 14 major testable hypotheses. The first set of hypotheses, H₁-H₅ test the direct relationships between the online display advertising characteristics (interactivity, placement, informativeness, personalisation and exposure condition) and attitude toward online advertising (ATOA), while hypotheses H_{6 a-b} -H_{10 a-b} assess the direct relationship between the ODA characteristics and behavioural responses (ad acceptance and ad avoidance). Hypothesis H_{11a-b} tests the direct relationship between attitude toward online advertising and behavioural responses. Also, hypothesis H_{12a}-H_{12e} tests the mediating role of attitude toward online advertising in the relationship between the ODA characteristics and behavioural responses, and hypothesis H_{13a}- H_{13e} and H_{14a-c} test the moderating role of user mode in the relationship between the ODA characteristics and ATOA as well as behavioural responses. Additionally, age, gender, internet usage rate, and user familiarity with online advertising were used as control variables in the study framework. Figure 5.1 visualises these hypothesised relationships, but before these relationships are discussed and their corresponding propositions stated, attention is first turned to how behavioural responses was operationalised in this study in order to put the hypotheses derivation in the right perspective.

5.3.1 Conceptualising Behavioural Responses

Behavioural responses are exhibited actions that follow changes in cognitive and affective states elicited by advertising stimuli (Brajnik & Gabrielli, 2010). From the perspective of Rodgers & Thorson's (2000) Interactive Advertising Model, they are outcomes of advertising which may include activities and decisions such as ignoring/forgetting the ad, attending to the ad, clicking on the ad, e-mailing the advertiser, searching about the product, purchasing the product, and so forth. While these behavioural responses may take several

forms, according to the tenets of the SOR model, the primal behavioural response of consumers or internet users following exposure to stimuli, would be toward (approach) or away from (avoidance) the stimulus environment (the ad) from which other forms of responses may derive (Eroglu *et al.*, 2003). Approach behaviour suggests that the individual moves towards and remains “within” the stimulus environment, whereas avoidance behaviour specifies that the individual moves away or “escapes” from the stimulus environment (Chang *et al.*, 2011). And so, consumers will first have to approach or avoid an ad, before further behavioural actions are taken.

What is more, in consumer behaviour research, approach and avoidance are commonly used to depict two broad directions of behavioural responses (e.g. Clark *et al.*, 2009). However, it has been observed by previous research (e.g. Pagani *et al.*, 2011) that examining behavioural responses to stimuli by focusing on only the behavioural direction, does not provide adequate understanding about the behavioural efforts. It is reasoned that during exposure to an advertising stimulus, individuals may not always devote an equal degree of efforts in responding to the ad; they may engage in approach or avoidance behaviours with differing levels of intensity (actively or passively). As such, assessing both the direction (approach or avoidance), and intensity (active or passive) is essential to understanding online behaviours of consumers at a more filtered level (Tang *et al.*, 2014).

In light of the above, this thesis considers both the direction (ad acceptance and ad avoidance) and intensity (active and passive) of behavioural responses. The study conceptualises ‘ad acceptance’ as actions taken by consumers to remain with, attend to or engage with an ad. In this vein, active ad acceptance describes effortful actions in this direction and may include, clicking on ads or links provided in the ads, bookmarking online ads, while passive ad acceptances may include such minimal behavioural efforts as paying

attention to the ad, reading or watching the ad etc. (Tang *et al.*, 2014). Ad avoidance on the other hand, within the parameters of this thesis denotes actions consumers take to escape from or get rid of online ads (Rejón-Guardia & Martínez-López, 2014). In an active form, avoidance behaviours may include clicking away from online ads, leaving webpages displaying online ads, skipping or closing online ads, and using ad blockers on computers, whereas passive ad avoidance behaviours may include ignoring the ad, looking away from the ad or waiting for the ads to go away (Cho & Cheon, 2004; Seyedghorban *et al.*, 2016). By focusing on the two-dimensional view of responses, this thesis contributes to a clearer understanding of how consumers respond to online display advertising, driven by the various ODA characteristics, as well as their attitude toward online advertising, and their user mode (goal-directedness).

5.3.2 Online Display Advertising (ODA) Characteristics as Stimuli

The postulations in the research framework suggests that ODA characteristics (interactivity, placement, informativeness, personalisation and exposure condition) function as stimuli that influence consumer perceptions and actions. To the extent that these characteristics serve as mechanisms by which awareness is raised and product quality is communicated, they convey both informative and persuasive intent; thus, may elicit feedbacks in the form of attitude toward online advertising, ad acceptance and ad avoidance. Next, we present the relationship between the various variables from diverse empirical viewpoints toward the derivation of relevant hypotheses.

5.3.2.1 Interactivity

Interactivity describes the extent to which a person can act on and react to (that is, affect and be affected by) a specific stimulus (Florenthal & Shoham, 2010). In the domain of online advertising, interactivity has been defined as “*a characteristic of computer mediated*

communication in the marketplace that increases with the bidirectionality, timeliness, mutual controllability and responsiveness of communication as perceived by consumers and firms” (Yadav & Varadarajan, 2005; p.585). Interactivity is an essential element of the online environment, and in light of this and other definitions considered a three-dimensional construct comprising active control, two-way communication and synchronicity. In the online advertising setting, interactivity allow consumers to actively partake in the persuasion process by controlling ad messages, through selection of content, timing, and order of presentation according to their preferences (Song & Zinkhan, 2008). With advances in internet-related technologies, emerging display ad formats are imbued with interactive features that transcend hyperlinks, to include those that give consumers the opportunity to engage with the advertisement by selecting items or topics of interest in the ad (Baron *et al.*, 2014). Some interactive ads provide automated responses to consumer actions with the ad thus, reducing the spatial separation between advertiser and consumers (Rosenkrans, 2010). Owing to these dimensions, an online display ad can have varying levels of interactivity.

The extant literature suggest that highly interactive ads give consumers a significant amount of control and choice that help shape their attitude toward online advertising (Ching *et al.*, 2013). Previous studies on interactive advertising also show affirmative findings in the sense that consumers develop positive attitude toward such ads because they perceive them as pleasant and enjoyable (Jung *et al.*, 2011). Rosenkrans (2009) in his study also indicates that interactive ads influence behavioural outcomes such as click-throughs and mouse rollovers as they tend to engage consumers in the process. Similarly, Pashkevich *et al.* (2012) established the importance of the interactive and controllable mechanisms of skippable video ads as a crucial feature influencing consumer attitude and reducing negative advertising effects or outcomes. Through its innovative features, interactivity is argued to encourage users to pay closer attention to ads as well as induce cognitive involvement in

processing such ads (Jung *et al.*, 2014). The level of interactivity of online display ads is therefore, expected to affect consumers attitude as well as their behavioural responses.

Following this rationale, it is hypothesised that:

H₁: Interactivity positively and significantly influences attitude toward online advertising

H_{6a}: Interactivity positively and significantly influences ad acceptance

H_{6b}: Interactivity negatively and significantly influences ad avoidance

5.3.2.2 Placement

As stated in the previous chapter, although placement issues are diverse, these study focuses on ad-context fit or congruency and so operationalises placement as such. Congruency in advertising research, refers to “*the significance of the degree of similarity between the program content and the advertisement content*” (Furnham *et al.*, 2002, p.526). Alternately stated, congruency depicts the extent to which advertising material or content is thematically alike to the editorial content of the media channel or platform (Zanjani *et al.*, 2011). Ad-context congruency is considered a vital factor that affects consumers’ attention to and elaboration of advertising messages and ultimately advertising effectiveness (Kononova & Yuan, 2015). As such, it is seen an essential characteristic in online advertising execution and has received increasing research focus in the past decade in the online display advertising context.

Nonetheless, extant research findings provide conflictive results regarding the effects of ad-context congruency explained by two mechanisms (Zanjani *et al.*, 2011). For instance, some empirical evidence suggests that in a congruent ad-context, viewers become more vulnerable to the advertising message which causes intensive information processing and stimulates them to evaluate both the message and the advertisement more favourably (Segev

et al., 2014; Belanche *et al.*, 2017). These findings have been explained within the framework of contextual priming. Extant studies associated with this viewpoint argue that, when an ad is placed in an incongruent context (e.g. a mobile phone ad on a website about food), viewers find the contradiction, difficult to process or resolve resulting in less favourable evaluations, attitude and reactions toward the ad (Kononova & Yuan, 2015).

On the other hand, the cognitive interference perspective contends that ad placement in an incongruent environment enhances advertising effectiveness. Studies aligning with this view assert that, on congruent webpages, viewers find it challenging to differentiate the advertisement's stimuli from those of the context (Janssens *et al.*, 2012). This is said to result in a merging of the components of the ad and the context which confuses viewers, and generates negative attitudes toward the ad, advertised brand, and hinders recall (Duff & Faber, 2011). Other studies (e.g. Teng *et al.*, 2014) also contend that because webpage contents are unchanging (i.e. lacking in variety), an incongruent ad may be seen as an exciting, refreshing cue that encourages a more concentrated processing of the advertising message, and may generate favourable attitudes and responses.

These contradictory viewpoints have spurred the need to examine the effect of ad-context congruency in this study. Yet, the current thesis finds compelling the contextual priming perspective, according to which context guides the choice of attributes used in processing an ad and the advertised offer by inducing top-of-mind awareness of these attributes, which then generates favourable ad evaluations and responses. Following this line of argument, the next hypotheses state:

H₂: Congruent placement positively and significantly influences attitude toward online advertising

H_{7a}: Congruent placement positively and significantly influences ad acceptance

H_{7b}: Congruent placement negatively and significantly influences ad avoidance

5.3.2.3 Informativeness

Informativeness is one of the content-driven features of advertising and describes the extent to which advertising provides valuable information to consumers. According to Wang and Sun (2010a) informativeness is the apprising role of advertising, which aids consumers in making better product and service decisions. It has long been argued that the ability of advertising to provide functional information, and present accurate depiction of products is what stimulates consumer's perception of advertising value and is the foremost reason for their approval of it (Rotzoll *et al.*, 1990). Today, these pre-millennial assertions even ring truer and may be brought to bear in this discussion because in a fast-evolving technological era, and an information seeking society, the internet offers informational gratification to consumers, and similar expectations are held of advertisements presented on the internet (Mahmoud, 2014). That is to say, consumers require beneficial information that is easily accessible and so, they expect online ads to be informative and useful to help them recognise product or brand differences, and make choices more effortlessly (Kim *et al.*, 2010).

Prior studies have identified informativeness as a determinant of consumer attitude toward online advertising as well as several behavioural responses (e.g. Wang & Sun, 2010a; 2010c; Taylor *et al.*, 2011; Yang *et al.*, 2017). Zha *et al.* (2015) for instance, assert that informative ads attract consumers' attention and get them to interact with such online ads. This assertion finds support in other studies (e.g. Li-Ming *et al.*, 2013, Mahmoud, 2014) who found informativeness as an online advertising feature that moves consumers to attend to ads. Goodrich *et al.* (2015) also found that among other features, the inclusion of useful information in an ad, reduces perceptions of intrusiveness, which is a studied cause of negative advertising outcomes such as ad abandonment and avoidance. Essentially, consumers perceived more favourably, online ads that provide beneficial information, and in view of this, the study advances the argument that informativeness or consumers'

perception of display ads as being informative plays a critical role in their attitude toward online advertising as well as their behavioural responses as encapsulated in the following hypotheses:

H₃: Informativeness positively and significantly influences attitude toward online advertising

H_{8a}: Informativeness positively and significantly influences ad acceptance

H_{8b}: Informativeness negatively and significantly influences ad avoidance

5.3.2.4 Personalisation

Personalisation signifies the extent to which advertising messages are tailored to reflect the preferences, lifestyle and specific cultural and geographical characteristics of individual consumers (Leppäniemi & Karjaluoto, 2008). It is a strategy in persuasive communication that involves integrating elements in a message that refer to individual recipients on the basis of their personal characteristics (e.g. name, gender, residence or location, occupation), previous behaviours and so on (Maslowska *et al.*, 2016; Liu & Matilla, 2017). According to Lambrecht and Tucker (2013), personalisation starts with a particular consumer, and efforts are made to design individualised advertisements that best match the individual's preferences and personal interests in order to heighten the benefits the consumer may gain. Montgomery and Smith (2009) opine that personalisation requires very little effort from the consumer because they depend on the marketer to recognise and fulfil their needs. By this, the strength of a personalised advertisement lies in the consumer's perception of it as being personally useful (Aguirre *et al.*, 2015).

Past studies have reported that personalised ad messages allow marketers to reach their prospective consumers in a bespoke manner causing these consumers to be more responsive toward such advertisements (Bright & Daugherty, 2012). Recent evidence also suggests that

the degree of personalisation plays a crucial part in consumers' perceptions of online advertising by heightening personal relevance, lessening ad skepticism, and encouraging more focused processing of ads (Maslowska *et al.*, 2016; Sahni *et al.*, 2018). An earlier study by Campbell and Wright (2008) also showed that participants' favourable attitude toward an ad increased when they were exposed to personally relevant messages, and they considered non-personally relevant messages as disruptive.

Although, personalised advertising is growing in popularity, its downsides have been confirmed by some studies (Baek & Morimoto 2012; Tucker, 2014; Bleier & Eisenbeiss, 2015a). For instance, van Doorn & Hoekstra (2013) in their study found that personalisation increases purchase intention but heightens perceptions of intrusiveness which in turn negatively affects purchase intentions, thus calling it a "double-edged sword". Similarly, Aguirre *et al.* (2015) found that click-through rates plummeted when consumers became aware that their personal data were traced and analysed without their permission. While both positive and negative effects of personalisation have been reported, this study puts forth the argument that to the extent that the personalised ads are relevant to consumers they are more likely to interact with the ad and form positive perceptions about it. In this light, the study hypothesises the following:

H₄: Personalisation positively and significantly influences attitude toward online advertising

H_{9a}: Personalisation positively and significantly influences ad acceptance

H_{9b}: Personalisation negatively and significantly influences ad avoidance

5.3.2.5 Exposure Conditions

Exposure conditions as discussed in the previous chapter, border on issues of forced exposure, exposure repetition, as well as exposure duration. Exposure conditions in this

study is therefore operationalised to comprise variables as how long an ad is, the frequency with which it is repeated, and the degree to which consumers are forced to view the ad. Forced exposure describes the degree to which internet users are coerced to view an ad if they wish to visit a webpage or continue in their online task (Edwards *et al.*, 2002). The nature of the exposure is one criterion that distinguishes ODA formats because while some formats allow viewers to close an ad window, others are imposed and do not provide this opportunity (Li & Meeds, 2007). A pop-up ad for instance, is illustrative of forced exposure, since the ad is run exclusive of any user action and disappears mechanically after a given time passes. Given the 'goal-orientedness' of the internet, any form of interference causes internet users to respond cognitively, affectively, and behaviourally, however, the nature of the interference will determine the direction (approach or avoidance) of the response (Campbell *et al.*, 2017). Researchers have noted that a forced exposure condition produces higher perceptions of ad intrusiveness, and more negative attitude toward the ad compared to unforced exposures which then affects the behavioural responses (Hegner *et al.*, 2015). Instances of forced exposure have been pointed out by other studies to lead to ad avoidance (Baek & Morimoto, 2012).

Concerning exposure frequency, studies such as Nottorf (2014) for instance, found that repeated exposure to display ads reduces the likelihood of ad clicking by consumers. According to McCoy *et al.* (2017), repeated exposure induces feelings of irritation resulting in unfavourable perceptions about online display ads. This provides support for Rejón-Guardia and Martínez-López (2014) who submitted that the connection between advertising repetition and attitudes is driven by an internet user's perceptions of intrusiveness and irritation. Yaverogly and Donthu (2008) also opined that when internet users are online to perform certain tasks, frequent exposure to the same ad produces lags in their internet usage experiences and causes them to react negatively toward such ads.

Online advertising researchers have also discussed the effects of exposure duration. In this regard, some researchers (e.g. Goodrich *et al.*, 2015; Li & Lo, 2015) reported from their study, that lengthy ads have more positive effects; as they generated more ad recall, recognition and reduced perceptions of intrusiveness while Pashkevich *et al.* (2012) in an earlier study in the context of skippable videos, confirm that a longer video ad reduces ad acceptance. From the perspective of Rejón-Guardia and Martínez-López (2014), ad messages that stay on the screen for long hold internet users' "captives" causing them to abandon their activities or employ avoidance behaviours like leaving the webpage. Providing further clarity on exposure duration, Wang *et al.* (2013) established that longer ads may not in all cases lead to positive influences and reactions. The authors explained that the effect of ad length is conditioned by the ease with which consumers can process the ad.

Since in examining the effects of advertising exposure on consumer perception, attitudes and behaviours, most studies consider the effect of repeated exposure to an ad (e.g. Lee & Cho, 2010); repeated exposure and forced exposure (e.g. Kim, 2018), as well as repeated exposure and exposure duration (e.g. Wang *et al.*, 2013) rather than the three perspectives, this thesis examines online advertising exposure effects from these perspectives. This study contends that when internet users are exposed to forced formats of ODA, they are restricted from indulging in their purpose for being online. For this reason, when forced ads are perceived as lengthy, and are shown multiple times during an online session or website visit, the perceptions of interruptions are pronounced causing unfavourable attitudes and reactions toward the ad and the opposite may hold true. The study, therefore, proposes the following testable hypotheses in examining the influence of exposure conditions on attitude toward online advertising and behavioural responses:

H₅: Exposure conditions positively and significantly influence attitude toward online

advertising

H_{10a}: Exposure conditions positively and significantly influence ad acceptance

H_{10b}: Exposure conditions negatively and significantly influence ad avoidance

5.3.3 Attitude toward Online Advertising (ATOA)

Per the SOR model, consumers react to stimuli in two stages, the first are internalised responses indicated as organism response, which drive the external response (Chen & Yao, 2018). “*Organism*” is the consumers affective state which show the feelings and emotions of the consumer, following exposure as well as cognitive states which involve all that goes on in the consumer’s mind regarding acquiring, processing, retaining and retrieving information (Eroglu *et al.*, 2001; Kamboj *et al.*, 2018). According to Jacoby (2002), beliefs and attitudes are part of the organism component. In this thesis attitude is considered as the organism element of the study, predicated on early scholarly submissions (Mitchell & Olson, 1981; Petty *et al.*, 1983) that attitude formation is an internal process that ultimately directs behaviour.

Within the borders of attitudinal models, attitude generally describes the extent to which an individual has a favourable or unfavourable evaluation of an object of interest following the belief (perceived probability) that the object of interest possesses particular attributes (Palmgreen, 1984; Ajzen, 2001). The concept of attitude toward advertising was first conceptualised by Lutz (1985) as “*a learned predisposition to respond in a consistently favorable or unfavorable manner to advertising in general*” (p.53). Attitude toward online advertising is thus, a learned predisposition that individuals develop as they perceive the benefits and drawbacks that online advertising offers them and/or to others (Fransen *et al.*, 2015). Essentially, attitude formation is preceded or conditioned by several forms of ad

evaluation through self-perceptions based on direct exposure to online ads (Souiden *et al.*, 2017; Wang *et al.*, 2010b).

Attitude is regarded as one of the major determinants of advertising efficiency, and the relationship between attitude and behaviour has been an area of key focus in advertising research (Mehta, 2000; Sung & Cho, 2012). Although research on attitude toward online advertising is relatively nascent and sparse, extant empirical evidence point to its role in affecting consumers' subsequent behaviour toward online ads and even the advertised brand (Shaouf *et al.*, 2016; Souiden *et al.*, 2017). For instance, Wang and Sun (2010a; 2010c) found that attitude toward online advertising was a strong driver of ad clicking and shopping behaviours among consumers. Moreover, attitude toward online advertising encapsulates how essential consumers consider online advertising to be; whether they like online advertising, consider it fun to see as well as hold favourable opinions about online advertising (Woolin *et al.*, 2002; Wang & Sun, 2010b), all of which have been found to have direct effect on consumer' behaviour and reactions toward online ads (Sun & Wang, 2010; Zha *et al.*, 2015). In spite of this, Wang *et al.* (2009) state that the associative relationship between consumers attitude toward online advertising and their behavioural responses is not fully grounded in the literature. In view of this, the present study, examines the formation of attitude toward online advertising as well as its effect on consumers' behavioural response toward display advertising. Conceptually, we link attitude toward online advertising (as an internal response) to ad acceptance and ad avoidance (as consumers' final external behavioural response). Hence the study hypothesises that:

H₁₁: Attitude toward online advertising directly influences behavioural responses such that:

H_{11a}: Favourable attitudes toward online advertising positively and significantly influence ad acceptance

H_{11b}: Favourable attitudes toward online advertising negatively and significantly influence ad avoidance

5.3.4 The Mediating Role of Attitude toward Online Advertising (ATOA)

The SOR model draws the links between three interconnected levels of variables by stating that the relationship between stimuli and responsive behaviour is facilitated by the internal responses of the organism exposed to the stimuli (Islam & Rahman, 2017). Following from earlier discussions, attitude toward online advertising is considered a mechanism that may explain the effects of ODA characteristics on behavioural responses. The attitude of consumers toward online advertising basically stems from perceptions they hold about online advertising (Réjon-Guardia & Martinez-López, 2014), and previous research has provided footing for the assertion that attitudes toward online advertising affect consumers' responses toward online advertising (Saadeghvaziri *et al.*, 2013). A more positive attitude toward online advertising has been associated with favourable evaluations of specific ads as being informative, interactive, and entertaining among other characteristics (Wang & Sun, 2010a; Ching *et al.*, 2013), and is said to lead to higher recalls and more positive behavioural responses toward ads and even purchase intentions (Goodrich, 2011; Goodrich *et al.*, 2015).

From this perspective, past studies have demonstrated that the influence of online advertising attributes as perceived by consumers on behavioural responses is theoretically and empirically mediated by attitudes toward online advertising (Wang *et al.*, 2009). For instance, Wang and Sun (2010a) found that attitude toward online advertising mediates the relationship between consumers belief about online advertising in general, and their online behaviours of ad clicking and shopping frequency in China and USA. This study was replicated across several cultural settings (Wang & Sun, 2010b; 2010c; 2010d) and found attitude toward online advertising to be a mediator of the relationship between consumers'

online advertising beliefs (entertainment, informative, credibility, economy, value corruption) and behaviours. However, the mediating effect of attitude toward online advertising in the context of online display advertising is yet to be fully investigated. Based on the assumptions of the SOR model, we expect attitude toward online advertising to serve as an intervening response, transmitting or facilitating the effects of online display advertising characteristics on behavioural responses of consumers. Accordingly, the study puts forth the following hypotheses:

H₁₂: The effects of ODA characteristics on consumer behavioural responses are mediated by attitude toward online advertising (ATOA) such that;

H_{12a}: ATOA mediates the relationship between interactivity and behavioural responses

H_{12b}: ATOA mediates the relationship between placement and behavioural responses

H_{12c}: ATOA mediates the relationship between informativeness and behavioural responses

H_{12d}: ATOA mediates the relationship between personalisation and behavioural responses

H_{12e}: ATOA mediates the relationship between exposure conditions and behavioural responses

5.3.5 The Moderating Role of Internet User Mode

In the view of Aguinis *et al.* (2016) moderation represents the notion that the degree of the effect of predictors on a response variable depends on contingency factors, and as such describes the conditions under which such effects may vary in size. This current study along this line of reasoning, argues that internet user mode moderates the relationship between ODA characteristics and ATOA as well as behavioural responses. In the context of media usage, people have various motivation for consuming media content (Bleier & Eisenbess, 2015a). Particularly, in comparison with conventional media, the Internet is considered a more goal and task-oriented medium (Cho & Cheon 2004, Wang *et al.*, 2013). This is because consumers go online to undertake certain tasks to achieve their goals, and according to the internet motivation inventory classification framework, usage motives come in four categories – researching, shopping, communication, and surfing (Rodgers *et al.*, 2007). Per

Jung *et al.* (2014), an internet usage motive “*is an inner drive to carry out any online activity*” (p.1309). Consistent with the reversal theory, the four internet usage motives are further classified into telic and paratelic modes (Rodgers *et al.*, 2007), and it is presumed that internet users who are most often researching and shopping online, are more goal-directed (telic) while users that are most often surfing and communicating are less goal-directed (paratelic) (Apter, 1984).

Extant literature suggests that goal-directed/telic users give more select attention to internet-to-goal-related information (Stanaland & Tan, 2010) and avoid disrupting information on the site (Duff & Faber, 2011) whereas experiential/paratelic users engage in screening activities, and easily shift attention from focal to unrelated materials (Janssens *et al.*, 2012). Past studies have demonstrated that telic and paratelic users, or consumers in telic and paratelic modes respond differently to online advertisements (Jung *et al.*, 2014; Seyedghorban *et al.*, 2016). According to Jung *et al.* (2014), Internet users in a serious-minded (telic) state form highly positive attitudes toward online ads with low levels of interactivity whereas those in a playful-minded (paratelic) state develop positive attitudes toward ads with low interactivity levels. Also, Seyedghorban *et al.* (2016) in their study showed that the effects of predictors such as perceived goal impediment, and prior negative experience on advertising avoidance differed among telic and paratelic users. Further Bleier and Eisenbess (2015a) in an experimental study, found variations in consumers’ perception of ad informativeness and intrusiveness and its effect on click-through on the basis of goal-directed browsing. For Simola *et al.* (2011), the goal/user mode of an internet user can exert significant influence on attention allocation such that ads attract more user attention when users are casually browsing the internet, than when they are involved in for instance, a reading task. Essentially, although attitude toward as well as behavioural responses to display ads may be influenced by the characteristics of these ads, the direction and intensity

of these responses may vary across user modes. In other words, according to the reversal theory, different user modes may generate different forms and levels of ATOA and behavioural responses. Considering these arguments, it seems reasonable to hypothesise that:

H₁₃: User mode moderates the relationship between ODA characteristics and behavioural responses such that;

H_{13a}: User mode moderates the relationship between interactivity and behavioural responses

H_{13b}: User mode moderates the relationship between placement and behavioural responses

H_{13c}: User mode moderates the relationship between informativeness and behavioural responses

H_{13d}: User mode moderates the relationship between personalisation and behavioural responses

H_{13e}: User mode moderates the relationship between exposure conditions and behavioural responses

H₁₄: User mode moderates the relationship between ODA characteristics and attitude toward online advertising (ATOA) such that;

H_{14a}: User mode moderates the relationship between interactivity and ATOA

H_{14b}: User mode moderates the relationship between placement and ATOA

H_{14c}: User mode moderates the relationship between informativeness and ATOA

H_{14d}: User mode moderates the relationship between personalisation and ATOA

H_{14e}: User mode moderates the relationship between exposure conditions and ATOA

In mapping the hypotheses to the research objectives, it should be noted that hypotheses 6 to 10 which propose a positive and significant influence of the ODA characteristic on consumer behavioural response, are stated to help achieve the first objective of the study. The second objective of the study is addressed by seven hypotheses; hypotheses 1 to 5 which propose a positive and significant influence of the ODA characteristics on attitude toward online advertising; hypothesis 11, which postulates a positive and significant relationship between attitude toward online advertising and behavioural responses, and hypothesis 12 which suggests the mediating influence of attitude toward online advertising in the relationship between ODA characteristics and behavioural responses. Lastly hypothesis 13

and 14 propose a moderating influence of user mode on the relationship between the ODA characteristics and behavioural responses as well as attitude toward online advertising and address the third objective of the study.

5.3.6 Control Variables

Scholars recommend that in order to eliminate possible non-hypothesised effects in a given study, researchers should determine the effect of control variables (van Reijmersdal *et al.*, 2016). In a particular study, variables that may have a potential influence on the outcome/dependent variable but are not observed variables of interest are considered control variables. In most fields of enquiry, demographic variables serve as control variables, and evidence exists in the online advertising literature that consumers with diverse demographic characteristics respond differently to advertisements (Ketelaar *et al.*, 2015; Shaouf *et al.*, 2016).

Concerning gender for instance, Goodrich (2014) identified in their study that males form more favourable attitudes toward online advertising with minimal or no advertising attention compared to women. Their study also showed gender differences in attitude formation based on ad placement in that, more favourable attitudes were generated for ads on the left of a webpage for males, and on the right for females. Regarding age, Goodrich (2013) found that older adults pay higher attention to online banner ads than younger adults, and mere exposure effects differ for the two age groups. We, therefore, control for the effect of demographic factors such as gender and age. Furthermore, internet users spend varying amounts of time online and show varying degrees of understanding with online advertising. In view of this, the framework as well integrates usage rate and familiarity with online advertising as control variables since these have been shown to influence consumer

judgements, perceptions and responses to online advertising (Sun & Wang, 2010; Hanafizadeh *et al.*, 2012).

5.4 CHAPTER SUMMARY

This chapter presented the research framework that guides the empirical part of the thesis. The two theories (SOR model and reversal theory) discussed in chapter two provide an appropriate theoretical underpinning for the conceptual framework which integrates the pertinent ODA characteristics, and consumer-related variables that emerged from the review of ODA literature. The chapter discussed the interrelationships among the various ODA characteristics, attitude toward online advertising, user mode, and behavioural responses, from which 14 major testable hypotheses were derived (as captured in Figure 5.1) to guide data collection and analysis. It is projected that the testing of hypotheses postulated in the research framework will produce insightful findings that may guide online display advertising designs and activities of practitioners (e.g. advertisers, publishers) in settings with similar dynamics to those in the study setting. This chapter concludes the first part of the thesis which provided the theoretical directions for addressing the research problem, and as such sets the tone for the empirical part which begins with the next chapter on the research methodology.

CHAPTER SIX

RESEARCH METHODOLOGY

6.1 CHAPTER OVERVIEW

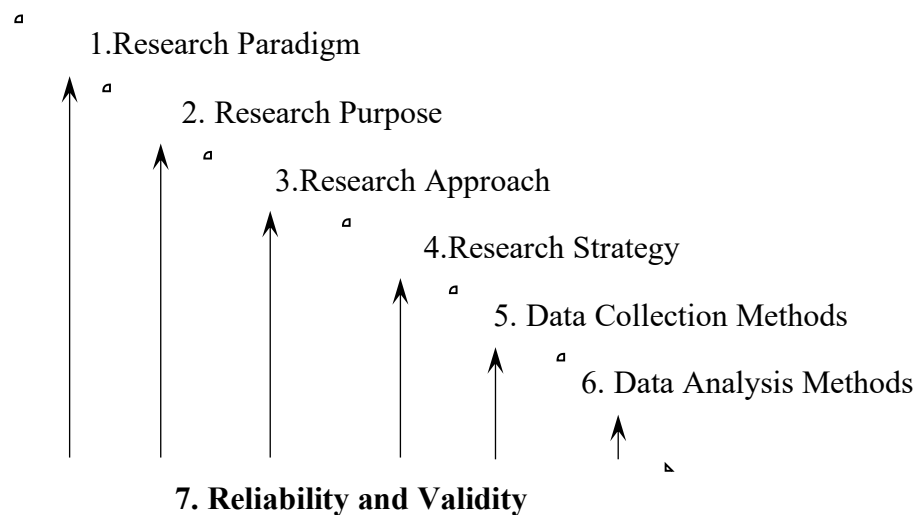
As stated in the preceding chapters, this thesis uses the stimulus organism response model and the reversal theory as foundational theoretical perspectives in developing a conceptual framework geared toward understanding the interrelationships among ODA characteristics, consumer attitude toward online advertising, internet user mode and behavioural responses. To begin the empirical part of the thesis, this chapter outlines the methodology used for the research. The chapter provides descriptions on the methods employed in the study as well as discussions and justifications for the approaches used to achieve the objectives and research questions delineated in chapter one. Besides the overview section, this chapter consists of nine remaining sections (6.2-6.10); section two introduces the chapter, and section three discusses research paradigms, and the choice of positivism as the paradigmatic stance for this thesis. Section four outlines the research purpose; and section five and six present the research approach and strategy respectively. Section seven discusses the data collection methods, followed by discussions on the mode of data analysis (section eight). The penultimate section of the chapter discusses reliability and validity issues regarding the research instrument and the final section summarises the entire chapter.

6.2 INTRODUCTION

Methodologies are considered systems of explicit rules on which research is grounded and claims regarding knowledge are evaluated (Frankfort-Nachmais & Nacmais, 1996). In view of this, any research work should be guided by a clear research methodology founded on scientific principles. Some scholars (e.g. Ying *et al.*, 2009; Saunders *et al.*, 2011) have pointed out that a researcher's choice of methodology or research design is determined by

the purpose and objectives of a given study. This suggests that a specific methodology may not be right or wrong but can be more or less suitable given the focus of the study for which it is employed (Silverman, 2001). From the perspective of Eldabi *et al.* (2000), methodological issues to be considered in any research work should include, paradigms/philosophical perspectives, research purpose, research approach, research strategy as well as data collection methods, and modes of data analysis. Following this suggestion, the structure of the methodology for this research is pictured in Figure 6.1, and the various issues pointed out by Eldabi *et al.* (2000) are subsequently discussed as they pertain to this thesis.

Figure 6.1 Structure of the Methodology



6.3 RESEARCH PARADIGM AND PHILOSOPHICAL VIEWPOINTS

Generally, all academic research works are grounded on a selected paradigm or philosophical perspectives (Blaikie, 2010). According to Myers (2013), paradigms constitute the fundamental philosophical assumptions which describe what a ‘valid’ research is, and the suitable methods that the research may apply. An early definition of research paradigm is provided by Kuhn (1970) who refers to it as a set of beliefs, values and

techniques that guide and dictate the sorts of problems that members within a discipline should address and the kinds of explanations that are acceptable to them. Largely, no specific paradigm can provide adequate grounds for understanding issues in any field of study; as such, academic fields can only be advanced if the diversities in the philosophical assumptions are allowed to aid complementary scholarly enquiries within disciplines (Bryman & Bell, 2015). Several paradigms exist and have clear distinctions among them based on their ontological, epistemological as well as methodological assumptions, and these assumptions act as a guiding structure which explicates and separates them from one another (Creswell, 2014). Husey and Husey (1997) therefore, highlight the need for researchers to recognize and understand their philosophical orientations in the context of the paradigm adopted for a specific research work.

Ontological assumptions concern the reality studied by researchers and explains a researcher's philosophical belief system about the nature of social reality (Healy & Perry, 2000). Two questions in the literature that confirm differences in research orientations explained in ontological assumptions border on whether ontology describes a phenomenon that is really ongoing (*objective reality*) or what the researcher beliefs is ongoing (*subjective reality*) (Hatch & Cunliffe 2006). Objectivism represents the position that social entities exist in reality, external to and independent of the social actor while subjectivism holds that social phenomena are created from the social actor's perceptions and resultant actions (Bryman 2001). In academic spheres, particularly in the context of social sciences, scholars admonish that stating one's ontological stance as a researcher is critical as this forms the foundation on which the researcher view reality (Crotty 2003).

Epistemological assumptions look at how we come to know the world around us and so, focus on the relationship between the researcher and the reality and/or how this reality is

known or captured (Neuman, 2014). Epistemology considers opinions about the most suitable ways of enquiring into the nature of reality (Easterby-Smith *et al.*, 2012) and so, looks at what counts as accepted truth by specifying the criteria for deciding when knowledge is both adequate and legitimate (Blakie, 2010). Methodology involves the strategy; action plan and the diverse processes designed to inform the choice and use of specific research methods for a desired outcome (Crotty 2003). According to Wahyuni (2012), methodology refers to the outline used to conduct research, within the framework of a certain paradigm. Ponterotto (2005) opines that methodology comprises the procedures and tools employed in learning about reality and derives from a researcher's ontological and epistemological position. It is worth noting that methodology can be contrasted from a research method which describes the set of specific techniques and tools used to gather and analyse the data specified by the research methodology (Blaikie 2010).

In simple terms, ontology looks at the nature of reality, whereas epistemology concerns how we come to know this reality, that is, what counts as knowledge. And methodology pinpoints the techniques we employ in knowing and learning about the reality (Krauss, 2005). In light of these philosophical viewpoints, and as early on hinted, diverse typologies of paradigms have been espoused by scholars. However, the most central paradigms that mirror the major theoretical directions in social science research are positivism, interpretivism/constructivism, realism, critical realism and pragmatism (Blaikie, 2010; Neuman, 2014). For every paradigm, there is a distinct logical relationship between its ontological, epistemological, and methodological assumptions, and Table 6.1 provides a glimpse of these major paradigms and succinctly explains their philosophical perspectives. After this, the study chooses and justifies positivism as its paradigmatic framework.

Table 6.1 Major Philosophical Paradigms in Social Science Research

Paradigm	Ontology <i>What is the nature of reality</i>	Epistemology <i>What is the nature of knowledge generated?</i>	Methodology <i>How is Knowledge created?</i>
Positivism	Singular, objective and tangible reality-researchers reject or fail to reject hypothesis.	Distance and impartiality. Knowledge generated is objective, free of time influences, and is independent of context (e.g., researchers objectively collect data on instruments)	Researchers apply deductive reasoning. That is, research questions are formulated, and hypotheses derived, and tested under controlled circumstances.
Interpretivism	Reality is socially constructed; thus, multiple realities exist - researchers provide quotes to illustrate different perspectives.	Closeness. Knowledge is composed via interactions between the researcher and participants or objects of investigation. Knowledge generated is therefore, subjective, time-bound and dependent on context.	Researchers apply inductive reasoning. Knowledge is generated by identifying various constructions of reality through the views of participants to build up patterns, theories, and generalizations.
Realism	Reality is real but only Probabilistically and imperfectly apprehensible; so, to learn about it, triangulation from many sources is needed.	Value-cognizant. Findings are probably true, but researcher needs to triangulate any perception collected.	Social phenomenon is understood via hypotheses which are tested to establish patterns of associations and hence the most possible explanation.
Critical Realism	Two worlds - transitive and intransitive. The former is what we observe and learn with our mind – perception of reality. The latter represents the reality which is independent of what the mind thinks.	Transitive world is value laden and changing continually. Intransitive world has underlying structures and mechanisms that are ‘relatively enduring’ – that is what we want to study	Researchers apply retroductive reasoning; seek to deconstruct and understand the structures & mechanism underlying the subjective existent realities. Triangulation from many sources is required to try to know it.
Pragmatism	Singular and multiple realities - researchers test hypothesis and provide multiple perspectives.	Practicality - researchers collect data by what works to address research question.	Combination of logical stances - researchers collect both quantitative and qualitative data and mixing them.

Source: Creswell and Clark (2010); Neuman (2014)

6.3.1 Positivism as the Paradigmatic Stance of this Study

The central belief of positivism is the view that the social world exists as an external environment where definite structures affect people in similar ways and vice versa (Proctor, 2005) and therefore, its properties should be measured through objective methods, rather than be inferred subjectively through sensational reflection or intuition (Easterby-Smith *et al.*, 2012). Positivism seeks unbiased findings through value-free approach and ensures that

the researcher is independent from the respondent (Malhotra & Birks, 2007). A positivist approach entails the need to reduce a research problem into coherent sub-units, operationalise concepts of interest in order to make measurements, select appreciable large samples to increase validity, and develop hypotheses to demonstrate and test their authenticity (Easterby-Smith *et al.*, 2012). This current study, (1) formulates research objectives geared toward answering the overarching research question, (2) provides definitional and measurement parameters within which the key constructs in the study are used, (3) estimated and used a considerably large sample based on scholarly suggestions and precedence from earlier works and, (4) develops 14 testable hypotheses to guide the empirical part of the study. In so doing, this study exhibits features that typify positivism and so, passes as a positivist research.

More specifically, by adopting a positivist paradigmatic position, the study assumes an objective ontology. According to Denscombe (2008), positivist ontology is an approach that pursues the natural science model of research to inquiries of social phenomena and explanations of the social world. This philosophical school of thought believes that a researcher is an entirely objective, neutral observer of an existing social reality (Easterby-Smith *et al.*, 2012). This study examines features that characterize online display advertising and assesses the behavioural responses of consumers as a result of their perceptions of these features, attitude toward online advertising and their internet usage motive or goal orientation (user mode). The nature of the research problem, and the research objectives indicate that the phenomenon (online display advertising) being enquired into exists external to the researcher whose views do not influence the subject under study.

From an epistemological perspective, positivists attempt to discover the truth about the social world, through observable and measurable facts in order to generalize fundamental

laws about universal social realities (Easterby-Smith *et al.*, 2012; Saunders *et al.*, 2009). Generally speaking, studies conducted from a positivist perspective, attempt to test theory, with the intention to surge the predictive understanding of a phenomena (Myers, 2013). This substantiates the primary aim of the current study which is to measure pertinent ODA characteristics, examine their influence on consumers attitude toward online advertising and their behavioural responses, as well as assess the variation that may exist in the direction and intensity of these behavioural responses on the basis of consumer user mode and the nature of the advertised brand. Relevantly, ‘interactivity, personalisation etc. as ODA characteristics are considered ‘real’, can be operationalized, and are objectively measurable without the influence of the researcher’s biases which may provide the most satisfactory scientific evidence (Saunders *et al.*, 2009).

Methodologically, Gill and Johnson (2010) argue that positivist research highlights extremely structured methodology so as to enable replication and quantifiable observations culminating in statistical analysis. In addition, according to Saunders *et al.* (2009), the positivist epistemology that objective facts provide most suitable scientific evidence most probably leads to the choice of quantitative research methods. Consistent with this view and the purpose of this study, a quantitative approach is employed through a cross-sectional survey to gather quantifiable responses, which were subjected to statistical analysis in order to test and confirm or disconfirm the hypotheses formulated from existing literature. This approach is more closed to bias and is thus, more objective reflecting the essence of positivism which also highlights the use of existing theory to test hypotheses (Blaikie 2010; Saunders *et al.*, 2009). Advertising is no new concept in marketing, however, following from the arguments laid out for the essence of an advertising study in the online domain, only justifies the researcher’s attempt to generate deductively new knowledge from existing ones by testing the constructs of empirical data as practiced by positivists. Having explicitly

stated the research paradigm for this study, the next section explains the basis on which the study is purposed.

6.4 RESEARCH PURPOSE/DESIGN

A research purpose offers the fundamental direction for conducting the research, and scholars (e.g. Neuman, 2014) suggest that a study may aim to explore, describe, explain, predict and change among other things. According to Marshall and Rossman (2014), dependent on the type of research questions a study seeks to answer, there can be a singular or multiple purpose to a research. From a social science research perspective however, there are three categories of research purpose or design namely; exploratory, descriptive and explanatory (Saunders *et al.*, 2011).

Descriptive Research

Descriptive research systematically describes a phenomenon, situation or problem and usually asks the ‘what’ question and is often employed when a problem is well-organised. Studies conducted with a descriptive purpose or design, enable profound enquiries into a research phenomenon. According to Babbie (2004), in descriptive studies, the researcher observes and then describes what was observed, and these descriptive reports can be conveyed in words or numbers and may comprise the development of sets of classifications (Blaikie, 2010).

Exploratory Research

With exploratory research, the main focus is on the discovery of ideas and insights and so, is mostly used when a researcher examines a new interest or when the subject of study itself is relatively new (Blaikie, 2010). Because the phenomenon of interest in such studies is considerably new and unfamiliar to the researcher, more information is needed to clarify the

concept and scope of the study, and to put the phenomenon into the right perspective and paint an accurate picture of the research issue (Saunders *et al.*, 2011). A research purposed on an exploratory basis could be conducted through a number of techniques including interviews, focus group, case study and so forth (Cooper & Schindler, 2006) which are used to better understand the research problem.

6.4.1 Explanatory Research as the Chosen Design

Explanatory research focuses on studying and understanding specific situations or problems in order to explain the relationships among variables (Saunders *et al.*, 2011). According to Yin (2012), explanatory research is also known as the causal research design as it addresses cause and effect relationships. This type of research aims to develop defined schemas that can be used to clarify a phenomenon, resulting in a generalization from the research (Green, 2008). Studies conducted using explanatory designs allow researchers to ascertain the effect a variable(s) has on other variables within a specified framework.

In order to examine the interrelationships among ODA characteristics, attitude toward online advertising, as well as their effect on consumer behavioural responses to ODA, this study is purposed on an explanatory basis with the intent of explicating the nature of relationship among these variables as illustrated in the conceptual framework. It must be noted that, explanatory research is generally quantitative and mostly tests previous hypotheses by measuring the connections between variables (Maxwell & Mittapalli, 2008). In this view, the explanatory design also aids the current study to provide clarifications on the contingency(moderating) effect of Internet user mode on these focal relationships. Following its explanatory design, the ensuing section presents the research approach used to conduct the study.

6.5 RESEARCH APPROACH

Research approach is the procedure for research and entails various stages from data gathering through analysis to interpretation (Creswell, 2014). Creswell and Clark (2007) advance three key non-discrete approaches to conducting research – qualitative, quantitative and mixed-methods; all of which are used in social science research. Quantitative and qualitative are the general approaches representing two ends of a spectrum, and a mixed-methods falls in the middle, incorporating elements of the two main approaches (Creswell, 2014). According to Cooper and Schindler (2006), where there is inadequate understanding of the phenomenon under investigation qualitative research is considered more fitting since it provides the researcher more descriptive space and does not restrict a study to rigid formulated processes. Alternatively, quantitative research is mainly concerned with figures and representativeness and has extremely controlled methods for data collection (Hair *et al.*, 2010). The dichotomy between these two approaches lies in the number of research respondents used, and the processes of data collection and analysis (Creswell, 2014). In order to make a cogent case for quantitative approach as the suitable style for this study, the next subsections discuss the three approaches.

6.5.1 Quantitative Research

The quantitative research approach involves testing objective theories in order to determine the degree of association among variables (Creswell, 2014). The approach emphasises the assessment, measurement and analysis of causal links between variables, and is aimed at heightening objectivity, replicability and generalisability (Ponterotto, 2005; Creswell & Clark, 2007). In other words, results gotten from quantitative studies are more generalisable, and their findings can be reproduced (Creswell, 2014). Quantitative studies are structured because they may begin with specific hypotheses or research questions developed from existing theories and prior studies and use objective instruments to collect data from a

carefully chosen sample (Hair *et al.*, 2010). Studies employing this approach, generate findings primarily via statistical analysis, adopt deductive logical positions, and are designed to isolate and minimize bias, as well as control for alternate explanations (Podsakoff *et al.*, 2012; Shaughnessy *et al.*, 2012). Despite its merits, quantitative research has often been criticized for lacking the capability to provide in-depth insights or understanding into a given phenomenon unlike qualitative studies.

6.5.2 Qualitative Research

Qualitative research involves an array of empirical procedures devised to illustrate and explain the experience of research participants in specific contexts (Creswell, 2014). Studies that adopt a qualitative approach to enquiry, investigate the social world generally from the viewpoint of participants involved in the study (Yin, 2012), and focus on unearthing the experiences of these participants using verbal summaries with no or minimal statistical analysis (Shaughnessy *et al.*, 2012). That is to say emphasis is placed on words to create in-depth understanding of the studies relative to what a quantitative approach provides. Because the qualitative approach is designed to help researchers understand people and their environment by gathering data from participant's in their own setting (Creswell, 2014), it entails extremely close interactions with small purposive samples over longer time periods (Yin, 2012). Qualitative research is mostly inductive, progressing from defragmented facts to a more wholesome view of a situation (Wynn & William, 2012) by employing open-ended questions that gives participants the latitude to articulate their views and offer deep insights into the research problem (Creswell, 2014). Although qualitative research may be an end in itself, it is also often relied upon for the subsequent development of hypotheses and the identification of variables that could be used in quantitative studies (Malhotra, 2010). A major downside to this approach, however, is the lack of replication since

qualitative research assumes that data analysis is restricted to the researcher, as well as the conditions and time of analysis (Yin, 2009).

6.5.3 Mixed-Methods Research

Mixed-methods refers to the gathering and analysis of data using a combination of both qualitative and quantitative approaches in a single investigation (Creswell & Clark, 2007). The approach emphasises the view that the reliance on a combination of both quantitative and qualitative approaches, enhances the quality of research and provides a comprehensive and detailed understanding of the research issue compared to when a single approach is used (Creswell, 2014). Three types of mixed methods have been pointed out in social science research namely; concurrent, sequential and embedded (Johnson *et al.*, 2007). Concurrent mixed methods (triangulation) uses both qualitative and quantitative approaches simultaneously to provide a complete analysis of the research issue. In embedded mixed methods, one approach supplements the other (Blaikie, 2010). Sequential mixed-methods builds on the results of one approach with another approach and may first start with a qualitative interview in order to explore the issue and is then followed by a quantitative survey to generalize results (i.e. exploratory sequence). The study may as well start with a quantitative method to verify a theory and follow up with a qualitative study for in-depth exploration with a few cases (explanatory sequence) (Creswell & Clark, 2010). Albeit mixed methods may be time intensive and does not provide researchers the proficiency in a particular approach, it advances the exploitation of both approaches in a complementary manner (Neuman, 2014). To this end, scholars (e.g. Creswell, 2014) have admonished that researchers consider it as an essential part of knowledge creation.

As hinted earlier, this study employs a quantitative approach to tackle the research objective and questions. The positivist paradigm adopted by this thesis, favours the quantitative

approach which embraces both first (e.g. ANOVA, regression, correlation) and second (structural equation modelling) generational statistical techniques to conduct analysis (Hair *et al.*, 2010). Aligned with the aim of the thesis which is to establish appropriate explanations for the interrelationships between ODA characteristics, consumer attitude toward online advertising and behavioural responses, the quantitative approach enables the researcher test and verify the associations among these constructs by developing clear hypotheses and producing or using numerical data. The approach as well provides the means to examine the direct relationship among the ODA characteristics and behavioural responses; the indirect relationship through the intervening role of attitude toward online advertising simultaneously; and also, the contingencies and alternative effects of user mode, nature of the advertised brand, and demographics (among other variables) respectively. The approach is also considered more suitable given that the study uses extant explicit theories to develop a conceptual framework in order to learn whether or not the theories match the observation. This represents a deductive stance to reasoning, which is an integral logical position in positivist research. The next section presents the research strategy adopted in this study.

6.6 RESEARCH STRATEGY

Research strategy refers to the procedures, tools and techniques used in collecting data for a given study in order to fulfil the purpose of the research (Saunders *et al.*, 2011). According to Saunders *et al.* (2009, p. 600), it is the “*general plan of how the researcher will go about answering the research question(s)*”. Several techniques are at a researcher’s disposal, given the paradigm the researcher endorses or subscribes to, and the corresponding research approach they decide to use (Aliyu *et al.*, 2014). Saunders *et al.* (2009) point out seven research strategies, namely: action research, case study, archival research, ethnography, experiment, grounded theory, and survey. The authors, nevertheless, submit that there are

considerable overlaps among these strategies, so it is vital that researchers choose the one that may be most useful for a given study. The selection of a research strategy is usually dependent on the nature of the research questions and objectives, the amount of existing literature on the phenomenon under investigation, and the availability of resources and time (Saunders *et al.*, 2011). Within the domain of business and management research, Creswell (2014) identifies four strategies that have been predominantly used by researchers. These include, case study, experiment, archival research and survey.

Case study in the words of Robson (2002) “*involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence*” (p.178). Case study research strategy is suitable in situations where the issues to be examined are very complex, and highly embedded within an organisation in order to provide deep understanding of the context of the subject of enquiry as well as the processes involved (Yin, 2009). Archival strategies focus on trends by examining past issues, and how they change over time using administrative records and manuscripts as the major source of data (Saunders *et al.*, 2009). The strategy, however, is mostly limited by the nature and quality of records accessible to the research.

In experimental research, two groups (experimental and control) that share similar characteristics are used. The researcher usually subjects the experimental group to some form of manipulation (using the independent variable) and subsequently re-measures the outcome variables for both groups before and after the manipulation to establish causalities (Neuman, 2014). Although experimental strategies are minimally used in management research, they are the most favoured method in online advertising research given their edge over others in terms of internal validity (Liu-Thompkin, 2019). Surveys on the other hand, use questionnaires to collect information about the perceptions, evaluations and

characteristics of a large group of people (Malhotra & Birks, 2007). Following from the objectives of this thesis as well as the chosen research approach, this study employs survey as a suitable corresponding strategy, and in the next subsection, the survey strategy is discussed in detail, and justifications for its selection are presented.

6.6.1 Survey as the Chosen Strategy for this Thesis

A survey is a method of gathering information about the opinions and attitudes of a large group of people (Creswell, 2014). According to Shaughnessy *et al.* (2012), surveys are commonly used in management research and are devised to directly enquire into the thoughts, feelings and opinions of respondents regarding a phenomenon. Surveys are highly favoured by studies conducted within the positivist paradigm and geared toward achieving systematic observation through structured research questions to achieve standardisation and consistency (Bryman & Bell, 2015). They are appropriate for studies concerned with collecting primary data about a population that may be too large to directly observe.

A survey strategy requires a researcher to select a representative sample with characteristics that mirror those of the broader population, as well as carefully design standardised questionnaires to generate responses in a similar way from all participants (Babbie, 2004). Although, surveys commonly use questionnaires for data gathering, structured observations and interviews are sometimes used too (Creswell, 2014). Surveys allow researchers to gather quantitative data that can be analysed using various statistical techniques. They are mostly effective in situations of low researcher control over behavioural events; and provide the researcher the merit of examining several variables, as well as generalising research results gained from a sample to the entire population (Yin, 2009; Wimmer & Dominick, 2011). According to Robson (2002), surveys are also suitable for cross-sectional studies. Cross-sectional research are studies that examine a phenomenon using a cross-section of a

population at a particular point in time, whereas its opposite, longitudinal studies, examine phenomena over an extended time period (Creswell, 2014). Because for the most part, academic research activities are time-bound, cross-sectional studies are the most common of the two, and commonly employ surveys (Saunders *et al.*, 2011).

Following from the above discourse, this study adopts the survey strategy since it aims to obtain direct responses from internet users and online consumers regarding their perceptions of ODA characteristics by employing structured questionnaires. As argued in the preceding chapters, the purpose of this study is to enhance theoretical and practical understanding of consumer behavioural responses to ODA in Ghana by examining the direct and indirect relationships among the ODA characteristics, consumer attitude toward online advertising, user mode and their behavioural responses. Given the large population of internet users, it is deemed necessary to gather data from a large number of respondents if the study is to produce reliable results. This necessitates the choice of a survey. It must also be highlighted that; surveys typically follow the deductive method of enquiry which is consistent with the methodological stance of positivism as adopted in this thesis. Since the objective of this study is to generate further insight about specific ad-related and consumer-related factors and the interrelationships among them using multivariate data analysis, the survey strategy seems most appropriate for this study.

What is more, the choice of survey is based on the fact that the study is cross-sectional in nature, and surveys have been pointed out as suitable in such situations (Fink, 2009; Easterby-Smith *et al.*, 2012). Malhotra and Birks (2007) outline various activities to be conducted by a researcher employing the survey strategy. Among these activities the authors highlight the need to design a sampling strategy by defining the study population, as well as constructing a survey instrument which operationalises the major constructs within the

study. The next section is therefore dedicated to data collection methods with a focus on sampling methods, survey instrument design and administration.

6.7 DATA COLLECTION METHODS

To achieve the objectives of a given study, the researcher must make decisions regarding the sources from which data will be collected. As pointed out in the literature, researchers may choose from primary or secondary sources (Saunders *et al.*, 2011). Primary data are collected for a particular study, and are direct reports of observations, while secondary data are collected for purposes other than the current problem commonly sourced from trade publications, personal records and so on (Malhotra, 2010). This study uses a cross-sectional survey to gather data, and because the study aims to examine the interrelationships among ODA characteristics, consumer attitude toward online advertising, and their behavioural responses as conditioned by user mode (goal orientation), it was vital to obtain responses directly from internet users and online consumers who are exposed to online display advertisements, and so, are considered primary sources. Considerations made in specifying the target primary sources are discussed next.

6.7.1 Population, Sampling Technique and Sample Size Determination

For any study, the target population refers to all persons that hold the information the researcher seeks, and from whom the study can make deductions (Churchill & Iacobucci, 2009). A target population is considered the general collection of constituents from which a study sample is drawn and to which the study may generalise its findings. According to Malhotra and Birks (2007), as a way of reducing the difficulties involved in sample selection for research, it is required that researchers not only define their study population but also, do so as precisely as possible. When the target population of a particular study is appropriately defined, the researcher is afforded the prospect of directing the study

recommendations and generalising findings to the appropriate audiences (Malhotra & Birks, 2007). The authors further assert that target population definitions should cover elements, sampling units, extent and time. The elements refer to the respondents in a survey research, and the sampling unit is said to contain the element. The extent describes the geographic confines of the survey, and time denotes a particular time-period under consideration (Malhotra & Birks, 2007). In light of these suggestions, this study considers all Internet users as its target population (sampling unit), and Internet users exposed to online display advertising as its element. Additionally, the study focuses on Internet users in Ghana, and limits exposures to ODA to a period of up to above six months (preferably, 12 months).

While every researcher would wish to gather data from all elements of a target population (an approach referred to as census), this is mostly only feasible when the target population of a given study is very small. As such, studies involving large target populations, as is the case with this thesis, rely on sampling techniques to choose representative samples from the population of interest (Malhotra, 2010). Malhotra and Birks (2007) define sample as “*a subgroup of the elements of the population selected for participation in the study*” (p.405). Sampling is therefore, considered the selection of an adequate number of elements from a bigger population expecting that the data gathered from them will lead to making precise judgements and inferences about the entire population (Hair *et al.*, 2010). The significance of sampling lies in its ability to expedite data gathering, guarantee more accurate results are produced, and make accessibility to potential respondents easier (Saunders *et al.*, 2011).

6.7.1.1 Sampling Technique for the Study

The sampling techniques identified in literature are in two broad categories namely: probability and non-probability sampling techniques (Saunders *et al.*, 2011). Probability sampling is commonly associated with surveys and experimental research where each

element in the population has an equally known likelihood of being selected while the opposite is true for non-probability sampling which mostly relies on personal judgements (Saunders *et al.*, 2011). This makes it difficult to make valid inferences about the population of interest in situations where the latter is employed. In spite of this, Saunders *et al.* (2009) point out that studies employing non-probability sampling could still make generalisations about the target population on theoretical, but not on statistical grounds.

There are various types of probability and non-probability sampling techniques. However, this study employs purposive and snowball sampling – non-probability sampling techniques. Purposive sampling involves selecting participants based on the researcher's discretion and judgment concerning who possesses the needed information to help achieve the research objectives (Saunders *et al.*, 2011). This technique is considered appropriate for this thesis on the grounds that, though the target population or sampling unit (Internet users) is large, the researcher chose respondents that were highly informative. Hence for the purpose of this thesis, internet users were selected on the basis of their exposure and familiarity with online advertising. These were mainly initial contacts on several online platforms (social media, blogs and commercial sites). Using the snowball technique, these initial contacts were then asked to forward the link to their networks and acquaintances online. Because the study used predominantly an online questionnaire, sampled respondents were spread across several regions in the country. However, the offline questionnaire which complemented the online survey was administered in Accra at business centres, shopping malls, university campuses, offices etc. Although the study elicited responses from internet users, to make sure that potential respondents possess the information sought by the researcher, the questionnaire was structured to ensure that only internet users who report frequent exposure to online display advertising during their online sessions were included in the survey. To do this, any participant who responded “never” to the preliminary question

“how often are you exposed to online display ads while using the internet?” was not allowed to proceed to the next phase, and a pop-up information was displayed to said respondents. In the case of the offline survey, respondents were asked the qualifying question to be sure they fell within the sample population before a questionnaire was given to them.

6.7.1.2 Sample Size for the Study

After the target population and sampling technique have been specified, the next logical step is to determine the sample size to be used for this study. A sample size refers to the overall number of elements, cases or participants to be included in a study (Malhotra, 2010). Various considerations that impact sample size determination include the research approach, nature of analysis, sample sizes used in prior similar studies as well as resource limitations (Malhotra & Birks, 2007). From a quantitative standpoint, it is reasoned that large sample sizes are prudent because they heighten the likelihood that the statistics derived from data analysis will mirror the precise estimates of the population, and minimise the possibilities of errors as the sample size increases (Malhotra, 2007; Hair *et al.*, 2010). Although this appears to be agreed upon, scholarly perspectives regarding what qualifies as a large sample size is divergent as Tabachnick and Fidell (2007) aver that a sample size of 200 is reasonable and 300 is suitable; and Hair *et al.* (2010) also states that any number above 100 is fitting for statistical analysis.

However, to achieve a suitable sample size determined on the basis of issues related to the current study, and the method of analysis to be employed, the researcher finds convincing two arguments. First is the assertion by Tabachnick and Fidell. (2007) that there should be a minimum of five-times more elements as there are items to be analysed. Second, is Nunnally’s (1978) early submission that researchers apply a 10 to 1 ratio of respondents to scale items. Since this study comprises 55 scale items (see Table 6.2), applying these two

perspectives provide an upper boundary sample size of 550 and lower boundary sample size of 275. Based on these two recommendations, as well as cues from prior survey-based online advertising studies (e.g. Wang & Sun, 2010c; Seyedghorban *et al.*, 2016; Nasir, 2017), the study estimated 550 as a suitable sample size from whom data could be gathered.

Owing to the combination of online and offline administration of the survey instrument, as well as the blend of purposive and snowball sampling employed, the total number of completed surveys returned were 886, far exceeding the estimated sample size. These responses were coded and inputted into SPSS, after which the data set was screened and cleaned for wrongly inputted scores, outliers and missing responses. During the screening process, 7 cases had missing responses in a number of sections, and 12 cases responded “never” regarding their frequency of exposure to online display ads when using the internet. These 19 cases were discarded resulting in a final sample of 867 cases or respondents. After this, based on some scholarly precedents (e.g. Souiden *et al.*, 2017) the data set was split into two; with 275 cases used for the EFA and 592 cases used for the CFA and the other major analyses. The data collection process was facilitated by utilizing structured questionnaires designed after an extensive review of the extant literature was conducted. The survey instrument design and administration are detailed out next.

6.7.2 Survey Instrument Development and Administration

The survey instrument was designed based on the study’s objectives and research questions following a thorough review of literature from which the components of the research framework were drawn. The instrument was a four-page questionnaire developed to consist of four main sections (see Appendix B). The first section captured information on respondents’ internet usage activities, motives and familiarity with online advertising. The second section examined issues relating to respondents’ perceptions of ODA characteristics;

and the third section obtained information regarding their attitude toward online advertising, and behavioural responses. The fourth and final section comprised internet users' demographic information that profiled the respondents in terms of gender, age, educational level, employment status, nationality, and region of residence. The major construct or variables were operationalised by adapting measurement items from extant online advertising research, as well as culling others from the ODA literature reviewed. These measurement/scale items were calibrated on a seven-point Likert scale. Specifically, respondents were asked to rate their perceptions on scales ranging from 1 (strongly disagree) to 7 (strongly agree). Table 6.2 provides a summary of the major constructs in the study framework as measured in the questionnaire, with their corresponding number of measurement items and sources.

Table 6.2 Summary of Study Constructs and Sources

Study Construct	Number of Items	Literature Source
Interactivity	8 scale items	Ko <i>et al.</i> (2005), Campbell and Wright (2008), Gao <i>et al.</i> (2009)
Placement	7 scale items	Segev <i>et al.</i> (2014).
Informativeness	8 scale items	Wang and Sun (2010a), Taylor <i>et al.</i> (2011)
Personalisation	7 scale items	Van Dorn and Hoekstra (2013), Bleier and Eisenbess (2015a; 2015b)
Exposure Condition	8 scale items	Chan <i>et al.</i> (2010), Wang <i>et al.</i> (2013), Kim (2018)
Attitude toward online advertising	5 scale items	Wang and Sun (2010a; 2010b) Wolin <i>et al.</i> (2002)
Ad Acceptance: Passive	3 scale items	Tang <i>et al.</i> (2014), Goodrich <i>et al.</i> (2015), Belanche <i>et al.</i> (2017)
Active	3 scale items	Tang <i>et al.</i> (2014), Goodrich <i>et al.</i> (2015), Belanche <i>et al.</i> (2017)
Ad Avoidance: Passive	3 scale items	Tang <i>et al.</i> (2014)
Active	3 scale items	Cho and Cheon (2004), Tang <i>et al.</i> (2014)

As indicated earlier, the choice of a questionnaire was based on the research purpose and objectives, which is to examine the interconnections among variables using a quantitative approach. Its cost effectiveness was also considered because the population and the sample for the study is large, and moreover, its standardised form offers some level of reliability and eases the process of data analysis as well as makes it more appropriate for a survey (Smith & Albaum, 2005; Malhotra, 2010). In spite of its advantages, it must be mentioned that written questionnaires come with certain challenges. For instance, statements may be improperly constructed which creates the possibility of wrongful interpretation on the part of the respondents. Additionally, it has been argued that questionnaires restrict respondents to options selected by the researcher which may not be very representative of the exact situation (Malhotra & Birks, 2007). To curb these challenges, the initial questionnaire draft was pre-tested as suggested by scholars (e.g. DeVellis, 2003; Saunders *et al.*, 2011).

6.7.2.1 Pre-testing, Questionnaire Modification, and Administration

The essence of pre-testing the questionnaire was to ascertain its suitability as well as assess wording errors and any ambiguity that may be found in the questionnaire before it is administered. It is advised that respondents for pre-testing should bear similarities with the actual population of a given study in order to correctly screen measurement items for their appropriateness (Cooper *et al.*, 2006). In this regard, after the research supervisor evaluated the questionnaire, and following his suggestions, some statements were re-worded for clarity, six (6) final year PhD students in the Department of Marketing and Entrepreneurship of the University of Ghana Business School who are internet users and show familiarity with online advertising, as well as two (2) employees from digital advertising firms, and twelve (12) other internet users totalling twenty (20) pre-test sample were used for a pilot test of the initial draft. These individuals were provided with links via WhatsApp, emails,

and other social media platforms to fill an online version of the questionnaire. Following their recommendations, further minor revisions were made to rectify clerical and grammatical errors found. The pre-testing process also ensured that the scale items were relevant to, and reflective of the constructs they are designed to measure. The final version of the questionnaire administered to the target sample is provided in Appendix B.

Concerning the process of administering the questionnaire, an online survey was the primary mode of administration complemented by a “paper and pencil” or offline version of the questionnaire. Online surveys are considered adequate means of reaching respondents who are familiar with the Internet and online activities (Souiden *et al.*, 2017), and are predominantly used in survey-based online advertising research (e.g. Valaei *et al.*, 2016; Nasir, 2017). The online questionnaire was designed using google forms (a survey administration application), and the link to the questionnaire was sent to respondents’ emails, shared on social media pages and platforms (e.g. Facebook, Twitter, WhatsApp and LinkedIn). The survey link was also displayed on some blogs. To be sure, responses were based on online display advertising, which is the focus of this thesis, at the opening part of the questionnaire, display ads were explained. Additionally, to guarantee that the required sample that truly reflects the population is acquired, the online survey was supplemented with an offline survey, in which respondents were intercepted at business centres, shopping malls, university campuses and workplaces after permission and approval was sought from the appropriate authorities (management and administrators). In such instances, with the help of research assistants, respondents were approached, and their consent was sought to help fill the questionnaire by explaining to them the purpose of the study. The data collection process lasted for four weeks, that is between September and October 2019.

6.8 METHODS OF DATA ANALYSIS

This section discusses the data analysis processes or techniques used in this study. Following from the discussions on the positivist stance, explanatory purpose, quantitative and deductive approach, and survey as the research design guiding this study, the thesis correspondingly applies quantitative methods of data analysis. The study employs specifically, descriptive analysis, and multivariate data analyses such as factor analysis (EFA and CFA), Structural Equation Modelling (SEM), Analysis of Variance (ANOVA), and Logistic Regression through the use of two analytical software; Statistical Package for Social Sciences (SPSS) version 22.0 and its add-on Analysis of Moment Structures (AMOS) version 22.0. These two are common software used in social science research and more so by online advertising researchers (e.g. Goodrich 2011; van Reijmersdal *et al.*, 2016; Ham, 2017) making them appropriate for this study. For initial coding, inputting and cleaning of the study data, SPSS was used. The data cleaning or screening process helped identify missing values, and outlying responses, as well as assess the normality of the data set. Since data sets subjected to factor analysis and SEM (the major analytical techniques used in this study) are required to be normally distributed, the screened data set was subsequently tested for normality using skewness and kurtosis. The results from the test produced values that were within the recommended level and parameter – closer to zero (Pallant, 2011), and by this the univariate normality of the data set was established. After these requirements were met, preliminary analysis (such as descriptive statistics and EFA) were conducted still using SPSS. The final data set was then transferred to AMOS for further substantive analysis.

6.8.1 Factor Analysis

After the relevant initial analysis were conducted, factor analysis was used to define the structure of the study constructs. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are two major factor analysis approaches (Field, 2013). Although both

approaches are used in this study, this section focuses on EFA, and CFA is discussed in the subsequent section. EFA is a statistical technique used in the initial stages of multivariate data analysis to examine the interrelationships among large numbers of variables by ensuring their propensity to be grouped together (Bryman & Bell, 2011). It is a technique that helps reduce large data sets into lesser more manageable sets of factors in order to eliminate issues of multicollinearity and improve their measurement quality among other things (Tabachnick & Fidell, 2013). Particularly, since the scale items were not adopted (i.e. some were adapted and others were drawn from the literature), an EFA was therefore, carried out in this study to refine and streamline the structure of the constructs/factors before further analysis (CFA and SEM) was conducted. The data set was, explored in line with the stages advanced by Pallant (2011) which are: assessing the suitability of the data for factor analysis, extracting the factors, and rotating and interpreting the factors. These phases are detailed next.

6.8.1.1 Assessing the Appropriateness of the Data Set for Factor Analysis

To ensure the suitability of a data set for analysis, two key issues are given consideration – the sample size and the strength of the association among the scale items (Pallant, 2011). As stated in an earlier section, scholars (e.g. Nunnally, 1978; Hair *et al.*, 2006; Tabachnick & Fidell, 2007). recommend a 5 to 1 or 10 to 1 ratio, that is ten or five cases for each item to be explored. Since these suggestions were applied in determining the sample size for study, a reasonably large data set of 867 (317 cases more than the estimated sample size was retrieved and found usable) cases was used in carrying out the factor analysis. Specifically, for the EFA, the 5 to 1 ratio (Tabachnick & Fidell, 2007) was applied resulting in 275 cases being used for exploration, and the remaining 592 cases were used for the CFA and other more substantive analyses.

The second issue that addresses the factorability of the data set is the strength of association among the scale items, and three statistical measures are used to verify this: the correlation coefficients, the Bartlett's test of sphericity, and the Kaiser-Meyer-Okin (KMO) measure of sampling adequacy. First, it is recommended that the correlation among the items should produce a much higher number of coefficients that are greater than 0.3 than those below (Tabachnick & Fidell, 2007). Second, when generated, using SPSS, the Bartlett's test of sphericity should be significant at $p < 0.05$ (Bartlett, 1954; Hinton *et al.*, 2014), and third, the KMO index although ranges from 0 to 1, a minimum value of 0.6 ($p \geq 0.6$) depicts a suitable data set that can be factor analysed (Tabachnick & Fidell, 2007). These three criteria were satisfied by the study data set.

6.8.1.2 Factor Extraction, Rotation and Interpretation

Factor extraction comprises determining the fewest number of factors that best depict the interconnections about the items (Pallant, 2011). This study extracted an ideal number of factors using the maximum likelihood method assisted by Kaiser's criterion (eigen value rule). By virtue of this rule, all factors with eigen values of 1.0 and above were maintained for further analysis. To aid in the interpretation of the resultant factors, the Promax rotation method with Kaiser normalisation was used to assess the number of strong loadings as well as specific items that loaded considerably onto the various factors/components (Pallant, 2013). The Promax method is an Oblique rotation technique that is ideal for larger data sets, and affords the researcher the ability to derive a simple structure by ensuring that each item loads strongly on only one component, and each component is represented by a number of high loading items (Tabachnick & Fidell, 2013). The loadings, therefore, simply describe the correlation between the items and their factors.

6.8.2 Structural Equation Modelling (SEM)

Following the preliminary data analysis procedures and EFA, a two-stage SEM was consecutively conducted based on the study's objectives. SEM appears to be a principal multivariate technique used in statistical analysis, particularly, in management and marketing studies that intend to assess cause and effect relationships among several latent constructs (Hair *et al.*, 2011). Structural Equation Modelling (SEM) describes "*a system of equations that establishes the structure of relationships among observed and unobserved (latent) quantitative variables*" (McQuitty & Wolf, 2013, p.59). According to McIntosh (2007) SEM is a family of statistical methods designed to test a conceptual or theoretical model. The technique involves measuring a model that defines the latent variables using one or more observable variables and a structural regression model that links the latent variables together (Hair *et al.*, 2010). Though some researchers (e.g. Bagozzi & Yi, 2012) caution that SEM does not assess or "prove" causality in the actual sense of its usage as in the natural sciences, others (including Byrne, 2013) also contend strongly that the technique tests and evaluates the influence one construct may have on another within a fully specified model.

The choice of SEM as the major data analysis technique for this study is founded on scholarly arguments that it helps deal with the challenges of first-generation statistical methods. For instance, SEM, combines elements of path analysis, factor analysis and multiple regression which permits the assessment of complex interrelated dependent relations among variables (Schumacker & Lomax, 2010; McQuitty & Wolf, 2013,). The technique also simultaneously incorporates the influence of measurement errors within the relationship into its structural coefficients, and measures the unidimensionality, reliability and validity of each construct in the model (Kline, 2005). According to Bagozzi and Yi (2012), SEM provides an integrative function and (1) helps researchers to be more precise in specifying hypotheses, and operationalising constructs, (2) takes into consideration

reliability of measures in tests of hypotheses in ways that transcend the averaging of multi-measures of constructs, (3) guides exploratory and confirmatory research in a manner combining self-insight and modelling skills with theory. SEM is therefore, suitable in aiding this study specify, estimate, and test the research model by means of a causal path diagram that depicts the hypothesised interrelationships among the study variables as well as allow the modification and deletion of any causal paths that do not fit with the principal model (Kline, 2011).

6.8.2.1 Two-Stage SEM

There are two widely used approaches in performing SEM: one-stage and two-stage. The one-stage approach processes the analysis of both the measurement and structural models simultaneously (Kline, 2005; Schumacker & Lomax, 2010) while the two-stage approach, separates the measurement model and structural model estimation (Hair *et al.*, 2010). On the basis that the two-stage approach avoids interaction that is needless between constructs during testing of the structural model (Anderson & Gerbing, 1988), this study uses it to test the research model as done by prior online advertising studies (e.g. Wang & Sun, 2010a; Souiden *et al.*, 2017).

1st Phase - Measurement Model/Confirmatory Factor Analysis (CFA): At the measurement stage, the measurement model was specified indicating the relationship between the various constructs and their measures. This was done by conducting a CFA. As the first stage or the basis of SEM, CFA is “*a version of factor analysis in which specific hypotheses about structure and relations between the latent variables that underlie the data are tested*” (Field, 2013, p. 872). CFA is used to propose relationships between the observed measures and a-priori theoretical pattern of factors and then assess the hypothesised model statistically (Byrne, 2013). The CFA, therefore, shows whether the model matches the actual

data that was gathered by examining reliability and validity (convergent and discriminant) (ibid.). Convergent validity of the constituents of the research model is ensured by ascertaining that the measurement items of the various constructs are correlated, and they are also correlated with the constructs they measure (Neuman, 2014). Discriminant validity on the other hand assesses the existence of high correlation between the various constructs (i.e. above 0.90), as well as empirical differences or co-variation among them (Kline, 2011). Specifically, Average Variance Extracted (AVE) was computed, and the squared correlations between the constructs were compared and used as indicator of convergent validity and discriminant validity of the research model. Internal consistency of the research model was confirmed using Composite Reliability (CR), AVE, and Cronbach's alpha. These indicators are discussed in detail in a later section on 'reliability and validity of the research instrument'.

2nd Phase – Structural Model: At this phase, the structural model was specified, depicting how the various constructs are interrelated (Tabachnick & Fidell, 2007). During the structural model specification, the non-structural covariances among the unobserved factors are substituted with the hypothesised structure, and the data is reanalysed. Alternately stated, this stage allowed for the testing of the hypothesised relationships among the various constructs in the study – ODA characteristics, attitude toward online advertising (ATO), user mode and behavioural responses (ad acceptance and ad avoidance). The appropriateness of the measurement and structural model were confirmed using the goodness-of-fit measures, and the significance of the various paths among the constructs and their measures were as well examined using the coefficient parameter estimates (Hair *et al.*, 2010).

6.8.2.2 Evaluating the Fitness of the Model

Model fitness evaluation involves the interpretation of how suitably the research model fits the empirical data and results. Scholars (such as Hair *et al.*, 2010; Iacobucci, 2010) have suggested various measures researchers can use to evaluate the general acceptability of both the measurement and structural models in a given research. This procedure is essentially comparative in nature since it involves choosing between various fit indices that subjectively show whether the data matches the theoretically postulated model (Bagozzi & Yi, 2012). The various goodness-of-fit indices with their cut-off criteria (conventionally acceptable values) proposed by scholars are categorized into three clusters namely; (1) absolute fit indices, (2) comparative fit indices and (3) parsimonious fit indices.

The ***absolute fit indices*** also known as the predictive fit indices provide a fundamental assessment of how well the data gathered matches or is close enough to the hypothesized model (Hair *et al.*, 2010). Fit indices commonly used to check for absolute fit include the Chi-square (χ^2) statistics, Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Standardised Root-Mean-Square Residual (SRMR), and Root-Mean-Square-Error of Approximation (RMSEA). These criteria are based on differences between the observed and model-implied correlation or covariance matrix (Byrne, 2013).

The ***comparative (incremental) fit indices*** compare the fit of the given research model with an estimated baseline model (null model) which operates under the assumption that all the observed variables are uncorrelated (Kelloway, 1998; Lombardi & Pastore, 2012). The fit indices under this category include the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), the Relative Non-centrality Index (RNI), and the Tucker-Lewis Index (TLI). The ***parsimonious fit indices***, however, permit the researcher to determine which model out of a set of competing models is the most suitable in terms of complexity (Hair *et al.*, 2010).

Measures of parsimony fit include the Parsimony-adjusted Normed Fit Index (NFI) and the Parsimony -adjusted Comparative Fit Index (CFI).

In this study, the baseline fit indices used to ascertain the acceptability of the construct measures or how best the measurement and structural model fit the study data include the Root Mean Square Error of Approximation ($RMSEA \leq 0.08$), and the Chi-square/degrees of freedom ($\chi^2/df \leq 2$ or 3). The choice of the Normed Chi-square (χ^2/df) stemmed from scholarly contentions that albeit the χ^2 is a principal measure of absolute fit, it is a function of the sample size, and the difference between the observed and estimated covariance matrices (Hair *et al.*, 2010). As such the value of the χ^2 increases with increase in sample size causing challenges in achieving model fit. On the basis of this argument, the (χ^2/df) ratio has been suggested as a suitable insulation against sample size influences (Byrne, 2010). The study also employed the Goodness-of-Fit Index ($GFI \geq 0.90$), the Comparative Fit Index ($CFI \geq 0.90$), Incremental Fit Index ($IFI \geq 0.90$), Normed Fit Index ($NFI \geq 0.90$), and the Tucker-Lewis Index ($TLI \geq 0.90$). These indexes were chosen on the basis that they are the universally acceptable criteria in social science research (Byrne, 2013).

6.8.2.3 Mediation Analysis

According to Aguinis *et al.* (2016, p.2) mediation refers to “*the underlying mechanisms and processes that connect antecedents and outcomes*”. Mediation occurs when an intervening variable conveys the effect of a precursor variable on an outcome partly or fully (Ndofor *et al.*, 2011). It, therefore, points to the presence of a third variable “*which represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest*” (Baron & Kenny, 1986, p.1173). Testing of mediation effects has a long tradition in social science research, and researchers have espoused and

adopted several approaches to conducting mediation analysis (Mathieu *et al.*, 2008). Four approaches that have been promulgated in the literature in addressing mediation effects include the causal steps approach (Baron & Kenny, 1986), the product of coefficients/ Sobel test (Sobel, 1986), the empirical *M*-test/ distribution of products approach (Holber & Stephenson, 2003), and the bootstrapping method (Preacher & Hayes, 2008).

The bootstrapping method is employed in this study to examine the mediating influence of attitude toward online advertising (ATOA) in the relationship between the ODA characteristics and behavioural responses. Bootstrapping involves generating an empirical representation of the sampling distribution of the indirect effect by dealing with the given sample as a microcosm of the broader population. The given sample is then used to produce another sample via an iteration process of replacement making it possible to put back cases initially drawn so they could be drawn again (Hayes, 2009). To state this concisely, bootstrapping involves repetitively sampling from the data and estimating the indirect influence in each resampled data. This results in a given number of estimates of the indirect effect, which functions as an empirical approximation of the sampling distribution used to establish confidence intervals of the indirect effect (Preacher & Hayes, 2008).

The bootstrapping method is considered one of the suitable approaches for addressing mediating effects (Williams & MacKinnon, 2008) and was chosen for this study because as a nonparametric re-sampling method, it edges the Sobel test and the causal steps approach, since it does not impose assumptions of normality on the sample distribution. What is more, this method of testing for intervening variable effects, besides enabling the researcher to control for the incorrect rejection of a valid null hypothesis (Type 1 error), also helps in making inferences about the indirect influences in a given model irrespective of model complexity and/or how many the direct paths are (Hayes, 2009). It has also been argued by

researchers (e.g. MacKinnon & Fairchild, 2009; Zhao et al., 2010) that the presence of a direct relationship between the predictor and outcome variables required by the causal steps approach for mediation to be determined is quite irrelevant in bootstrapping. Also, bootstrapping in comparison to the empirical *M*-test is less cumbersome in terms of computational burden since the method is incorporated in most SEM software (e.g. AMOS which is the software of choice for this study). In view of this, a bootstrap sample of 2000 as recommended by previous studies (Montoya & Hayes, 2017) is used to examine the indirect influence of ODA characteristics on behavioural responses through attitude toward online advertising (ATOA).

6.8.2.4 Moderation Analysis

Moderation refers to the function of a third variable “*which partitions a focal independent variable into subgroups that establish its domain of maximal effectiveness in regard to a given dependent variable*” (Baron & Kenny, 1986, p.1173). Moderation depicts the notion that the extent or level of the effect of an antecedent on an outcome depends on contingency factors; and thus, describes the circumstances under which an effect may vary in size (Aguinis *et al.*, 2016). In essence, it suggests an interaction effect which can (1) increase the influence of the independent variable on the dependent variable; (2) reduce the influence of the independent on the dependent variable; or (3) reverse the influence of the independent on the dependent variable. According to Baron and Kenny (1986), any qualitative or quantitative variable that affects the direction and/or strength of the relationship between a predictor variable and an outcome variable can function as a moderator.

Two principal approaches to conducting moderation analysis in SEM present in the literature are interactions and multi-group moderations (Boyd *et al.*, 2012). Interactions are used when the moderator variable is continuous, and in such instances, researchers examine

the relationship between a predictor (X) and an outcome (Y); a second predictor (Z) hypothesised to be a moderator; and then a product term between X and Z. The estimates or coefficients for the XZ product term then provide information on the presence and magnitude of the moderating effect (Little *et al.*, 2007; Aguinis *et al.*, 2016). In multi-group moderations however, the moderator variables are mostly categorical which calls for subgrouping analysis, and a comparison of the resultant estimates across the various subgroups or categories (Boyd *et al.*, 2012). Baron and Kenny (1986) also suggests that in cases where both the independent variable (X) and moderator variable (Z) are continuous, and the researcher believes that the moderator changes the X-Y relationship in a stepwise function, then the moderator variable (Z) can be dichotomised for a multi-group moderation.

As has been reiterated in the previous chapters, the third objective of this study is to assess the moderating effect of user mode on the relationships between ODA characteristics, and attitude toward online advertising as well as behavioural responses. This objective stems from the *telic-paratelic* viewpoint of the reversal theory, which proposes that internet users in telic (serious or goal directed) and paratelic (playful or experiential) modes form different attitudes toward, and respond differently to online advertising (Jung *et al.*, 2014). For this reason, this study employs the multi-group approach to analysing the moderation effect of user mode on the focal relationships. To achieve this, because the respondents' internet usage motive was measured as a categorical variable, respondents with shopping and (re)searching motives were coded and classified as telic users, and those with communication and surfing motives were classified as paratelic users as done in prior studies (Seyedghorban *et al.*, 2016). This was done to ensure that the right categorisations are derived.

6.8.3 Analysis of Variance (ANOVA)

Analysis of variance (ANOVA) is another analytical tool employed in this study. ANOVA is used when a study seeks to compare the mean scores of two or more groups on a continuous variable (Pallant, 2011). Following the fourth objective of the study which addressed the differences in behavioural responses based on the nature (product vs. service) of the advertised brand, the study employs specifically, a one-way ANOVA. One-way ANOVA is suitable when a study examines the effect of a single predictor on an outcome and since the objective was to assess whether the behavioural responses of the study sample differed on the basis of the nature of the brand (product vs. service) featured in the ODA they were exposed to, for which they provided responses, one-way ANOVA was deemed appropriate for tackling this aspect of the study. It is essential to state that there are two main types of one-way ANOVAs namely; repeated measures ANOVA and between-groups ANOVA (Tabachnick & Fidell, 2013). The former collects data from the same respondents on multiple (more than two) occasions while the latter also known as independent sample ANOVA, gathers data in a single instance from two or more different groups of respondents (Pallant, 2013). Given the cross-sectional nature of this study and the stated objective for which one-way ANOVA was employed, the study used the independent sample/ between-groups ANOVA.

6.8.4 Logistic Regression

Following results from the ANOVA test, the study further assesses the intensity of ODA-specific responses among respondents on the bases of the nature of the advertised brand, and logistic regression was employed to address this aspect of the study. Logistic regression is used to test the predictive power of a set of variables and to assess the relative contribution of each individual variable, particularly when the outcome or dependent variable is categorical (Pallant, 2013). Since the study sought to address the effect of the resultant ODA

characteristics that passed through the structural equation modelling phase on the two-dimensional view of behavioural responses between product-featured and service-featured ODAs, the study used specifically, binary logistic regression. To do this, the two behavioural response variables (ad acceptance and ad avoidance) were categorized/dichotomised into active-passive segments, and a multigroup binary logistic regression was used to examine the impact of the ODA characteristics on the likelihood of respondents reporting active (since the passive segment was used as a dummy) behavioural responses for product-featured ODAs, and service-featured ODAs.

6.8.5 Unit of Analysis

The unit of analysis refers to the type of element a researcher utilizes in measuring a given research phenomenon (Neuman, 2014). It is described as the level of data aggregation during analysis or the extent to which the level of enquiry or data gathered, focuses on specific object(s) (Zikmund, 2003). The object(s) could be a whole organisation, departments, groups, or individuals which are standard units of analysis in research in the social sciences. Among these, the individual is by far the commonest unit of analysis in surveys (Babbie, 2004). This study focuses on Internet users exposed to online display advertising. Since the study examines ODA characteristics that shape consumer attitude toward online advertising, and their behavioural responses, how their user mode may cause variations in these outcomes, as well as the likely difference that may occur in their responses based on the advertised brand (product or service), it is only logical to establish these interrelationships from the Internet user perspective. The individual (Internet user) is therefore a suitable unit of analysis for this study. The next section discusses the reliability and validity issues considered in this study.

6.9 RELIABILITY AND VALIDITY

It is important that the procedures by which researchers assess the credibility and accuracy of their research findings are communicated (Creswell, 2014). This has been argued from the viewpoint that adopting and adapting items from extant literature or prior studies may potentially affect the originality of instruments used for a particular study. According to Creswell, this necessitates the need to assess the validity and reliability of such instruments when conducting data analysis. Reliability and validity though closely related, are independent concepts on the basis that, an instrument that is reliable may not necessarily be valid (Zikmund *et al.*, 2009). On this premise, both reliability and validity were successively assessed to ensure that accurate conclusions can be drawn, and precise generalisations can be made from the findings of this study. The specific approaches to assessing the reliability and validity of the research instrument are explained in the succeeding sub-sections.

6.9.1 Reliability of the Research Instrument

Reliability explains the assessment of the magnitude of consistency or regularity among the items measuring a construct, which lends credibility to the findings of a study such that these findings could be reproduced (Burns & Burns, 2008; Hair *et al.*, 2010). To put this differently, it is the extent to which the research instrument and analysis processes generate coherent replicable findings. From other scholarly viewpoints, reliability depicts the level to which measurement scales are devoid of arbitrary error so that the higher the reliability value, the lower the amount of error (Zikmund *et al.*, 2009; Pallant, 2013). Research in the social sciences have mostly assessed reliability using two dominant approaches namely: internal consistency and test-retest reliability. Internal consistency “*is the degree to which the items that make up the scale are all measuring the same underlying attribute (i.e. the extent to which the items ‘hang together’)*” (Pallant, 2011, p.6). Test-retest on other hand, measures the correlation between scores obtained after an instrument is administered to the

same group of respondents at two different times in order to test for stability or the degree to which the instrument produces similar outcomes in both successive instances (Hair *et al.*, 2010).

For the purpose of this thesis, the internal consistency approach to assessing reliability is utilised. As mentioned in an earlier section, specifically, Cronbach's Alpha (α) and Composite Reliability (CR) were employed to determine the reliability of the research instrument. Cronbach's Alpha which measures the inter-correlation between various items representing a construct, is the predominantly used estimate of the reliability of a multiple item scale (Pallant, 2011). The literature suggests that Cronbach's Alpha values/estimates closer to 1 show that the instrument and data gathered are very reliable, while coefficients closer to 0 show that the data is not reliable (Pallant, 2013). There are differing suggestions on the acceptable threshold for Cronbach's Alpha estimates. According to Malhotra (2010), values between 0.7 and 0.9 are acceptable limits or criteria for reliability while Hair *et al.* (2006) argues coefficients of 0.6 and 0.7 to be the lower boundaries for acceptability. Although Cronbach's alpha is the most widely used measure of reliability, it has been contended that its value or estimate is affected by the number of items measuring a construct (Streiner, 2013). It is therefore, criticised for not being a sufficient measure of overall reliability of a research instrument since it focuses on individual constructs (Botha & Van de Waladt, 2011).

Owing to the deficiencies of Cronbach's alpha, at the confirmatory stage of data analysis (CFA), Composite Reliability (CR) tests and examination were conducted to complement the Cronbach's Alpha estimates in order to determine the total reliability of the research instrument. Composite reliability measures the general reliability of a collection of diverse but similar items. According to Hair *et al.* (2014), a composite reliability score that is lower

than 0.6 is an indicator of weak internal consistency while indicator values of 0.6 and above are considered acceptable. Evidence of the reliability measures are presented at both the EFA and CFA stages in the next chapter on data analysis.

6.9.2 Validity of the Research Instrument

Validity describes the match or fit between a construct and its measurement items (Burns & Burns, 2008), and assesses the quality of data and its corresponding results (Creswell and Clark, 2007). Essentially, it represents the accuracy of measurement items for a particular purpose. The main categories of validity commonly used in social science research are face validity, content validity, criterion validity, and construct validity (Pallant, 2011; Neuman, 2014). Face validity concerns how well items add up as a measure of a construct based on the judgements of others with expertise in the area. It is considered the subjective consensus among researchers and practitioners in the particular area of study that, the contents of a given scale soundly seem to measure what they intend to measure (Huck, 2012). Content validity measures the degree to which scale items correctly measure a particular construct by adequately and representatively capturing all the facets of the conceptual definition of said construct (Neuman, 2014).

Criterion validity relies on outside verification by comparing other measures of the same construct in which the researcher has confidence. Construct validity, however, depicts how well the items measuring each individual construct converge, and how well the items measuring the various separate constructs diverge (Neuman, 2014). By virtue of this explanation, there are two types of construct validity namely; convergent and discriminant validity (Hair *et al.*, 2010). Discriminant validity shows the degree to which a construct is different from others by ensuring that the items that measure it are unique indicators of the construct (Streiner, 2013). It is indicated by the low correlation between the measure of

interest and the measures of other constructs (Malhotra, 2010). Convergent validity ensures that the constructs identified are truly reflected by their measures, and these measures share a high amount of common variance (Hair *et al.*, 2010).

In this study, the research instrument was validated using face validity, content validity and construct validity. Adhering to the suggestions of researchers such as Ghauri and Gronhaug, (2005) and Hair *et al.* (2010), that a simple test for face and content validity is to obtain the viewpoints of others knowledgeable in the study area as well as pre-test the research instrument, content and face validity was guaranteed by allowing experts (both academics and practitioners) to review the scales used in the study after which the questionnaire was pilot-tested. Construct validity was also used to detect how well the results obtained using the research instrument fit theoretical expectations (Neuman, 2014). Construct validity was established by analysing the convergent and discriminant validity (Hair *et al.*, 2010) through the AVE values as well as the comparisons between the square-root of the AVEs and the inter-construct correlations estimated. The suitable limit for AVE score is 0.5 and above (Hair *et al.*, 2010), and results for validity measures are also presented at the CFA stage in next chapter.

6.10 ETHICAL CONSIDERATIONS

Ethical issues describe the appropriateness of a researcher's conduct concerning the rights of a study's participants and are essential considerations in any research. (Saunders et al., 2009). A key ethical issue considered in this study was to obtain informed consent or the willful agreement of individuals to participate in the research based on their understanding of the purpose and nature of the study. To do this, an application was submitted to the Ethics Committee for Humanities (ECH) at the University of Ghana, where ethical clearance (see Appendix C) was given for the conduct of the study.

On the basis that informed consent has four elements; disclosure, competence, comprehension and voluntariness (Jabreen 2012), the protocol consent form issued by the ethics committee, had the researcher detail out the purpose of the study. Besides, the study purpose was also provided on the questionnaire in order to steer clear off misunderstanding and lack of confidence. Also, the study ensured that participants possess some knowledge of the phenomenon being studied, had the ability to provide the information sought by the study, and understood the particular reason they were to partake in the study. In addition, no specific details related to the identity of the participants were taken, and because the data was analysed quantitatively, matching responses to a specific respondent was impossible. Finally, the study respondents were made aware that participation was voluntary, and they may decline and withdraw from the study at any time without any penalty.

6.11 CHAPTER SUMMARY

This chapter described the various research methodological approaches used in the study. Arguments for the choice of positivism and its various philosophical assumptions have been presented. Grounded on the arguments made for a positivist paradigmatic position coupled with the objectives of the study, a quantitative and deductive approach was considered the most suitable design. The quantitative research method or approach is presented requiring the discussion of specific methodological issues. In view of this, the chapter established a cross-sectional survey as the strategy employed in the study. The chapter then clearly described the procedures used in the questionnaire design, respondents' selection, sample size determination, and data collection. The chapter concludes by describing the main analytical methods employed in the study and provides support for their appropriateness in this study. In the next chapter, detailed discussions are presented on data analysis, interpretations and results with a focus on sample characteristics, descriptive statistics, Exploratory Factor Analysis (EFA), two-stage Structural Equation Modelling (SEM), Analysis of Variance (ANOVA), and logistic regression.

CHAPTER SEVEN

DATA ANALYSIS AND PRESENTATION OF EMPIRICAL RESULTS

7.1 CHAPTER OVERVIEW

This chapter presents results from the data analysis and includes two preliminary sections and five major analytical sections as discussed in the methodology. The chapter starts off with discussions on sample characteristics. After the sample characteristics are discussed, the chapter presents results of the preliminary data analysis which involved descriptive statistics and exploratory factor analysis (EFA). Assessment of common method variance which was conducted during the data exploration phase is subsequently discussed. Next the chapter presents results of the confirmatory factor analysis (CFA) for the latent variables. At the confirmatory stage, various reliability and validity tests on the scales used in the study are conducted to validate and substantiate the final model obtained. The third analytical section focuses on the results from the structural model, which tested the study hypotheses depicted in the conceptual framework thus, examining the effect of ODA characteristic on attitude toward online advertising (ATOA) and behavioural responses. This section includes the test for the mediation and moderation effects of ATOA and internet user mode respectively. The fourth and fifth key section present results from the one-way ANOVA analysis as well as from the logistic regression respectively. This is followed by a summary of the chapter.

7.2 SAMPLE CHARACTERISTICS

The sampled respondents of the study were profiled according to nationality, gender, age, educational level and employment status. The characteristics of the respondents also addressed issues regarding their internet usage. This was done to summarize and provide a cursory view of the profile of the sample or study respondents. In Table 7.1 results of the

demographic characteristics of the respondents are presented. The sample comprised 96.5% Ghanaians and 3.5% non-Ghanaians who were 325 (54.9%) female and 267 (45.1%) male. Majority of the respondents fell within the age bracket of 18 and 40 years constituting approximately 93% of the sample. Expressly, respondent within ages between 18 and 30 composed 53.7%, and those between 31 and 40 years constituted 39.2%. Only 6.1% and 1.0% of the respondents were between 41 and 50 years and above 50 years respectively.

Table 7.1 Demographic Profile of Respondents

Measures	Sample Composition	
	Frequency	Percent
<i>Age</i>		
18-30 years	318	53.7
31-40 years	232	39.2
41-50 years	36	6.1
Above 50 years	6	1.0
<i>Gender</i>		
Male	267	45.1
Female	325	54.9
<i>Educational Level</i>		
Secondary/Vocational/Technical	13	2.2
HND/Diploma/Undergraduate Degree	265	44.8
Postgraduate Degree	277	46.8
Professional Degree	37	6.3
<i>Employment Status</i>		
Unemployed	64	10.8
Self-employed	86	14.5
Salaried worker (Full-time)	277	46.8
Salaried worker (Part-time)	45	7.6
College/Tertiary Student	120	20.3
<i>Nationality</i>		
Ghanaian	571	96.5
Other	21	3.5

N=592

Concerning the educational qualification of the respondents, 2.2% have second-cycle training (secondary, vocational and technical), and the remaining respondents have tertiary education comprising HND/Diploma/Undergraduate degree (44.8%) postgraduate degree (46.8%), and professional degree (6.3%). This provides an indication of the respondent's ability to comprehend the key issues being addressed in the study as well as provide accurate

responses to questions. Most (approximately 70%) of the respondents were employed, while 20.3% were college/tertiary students and 10.8% were unemployed. Of the working respondents 54.4% were salaried workers (both full-time and part-time), and 14.5% were self-employed.

Table 7.2 Internet Usage Profile of Respondents

Measures	Frequency	Percent
<i>Frequency of Internet Usage</i>		
Several times a week	35	5.9
Every or almost every day	187	31.6
Several times a day	370	62.5
<i>Internet Usage Motive</i>		
I go online to make purchases and buy things - Shopping	123	20.8
I use the internet to search for any kind of information – (Re)searching	208	35.1
When online, I'm mostly browsing for fun and exploring new sites - Surfing	102	17.2
I go online to chat with friends, send and check emails - Communication	159	26.9
<i>Familiarity with Online Advertising</i>		
Somewhat familiar	21	3.5
Familiar	126	21.3
Very familiar	445	75.2
<i>Frequency of Exposure to ODA</i>		
Rarely	6	1.0
Sometimes	54	9.1
Always	532	89.9
<i>How long ago you viewed and/or made a purchase following an online display ad</i>		
Below 1 month	257	43.4
1-2 months	95	16.0
3-4 months	65	11.0
5-6 months	30	5.1
Above 6 months	145	24.5
<i>Nature of the website on which you saw the ad</i>		
Informational website (e.g. blogs, news site etc.)	70	11.8
Social media site (e.g. Facebook, Twitter, Instagram, YouTube etc.)	366	61.8
Commercial website (e.g. Tonaton, Jumia, OLX, Kaymu Amazon etc.)	111	18.8
Search engine (e.g. Google Adwords)	45	7.6
<i>Nature of the Advertised Brand</i>		
Product	455	76.9
Service	137	23.1

N=592

As mentioned earlier, the respondents were also profiled on the basis of their internet usage. Results of this as depicted in Table 7.2 reveal that approximately 94% of the respondents use the internet daily and several times in a day. Of all these respondents, 35.1% use the Internet mainly for (re)search purpose, 20.8% stated shopping as their major reason for using the Internet, those who use the Internet for surfing were 17.2%, and 26.9% go online with the key aim to communicate. 75.2% of the respondent also show high familiarity with online advertising, and approximately 90% indicated that they are always exposed to ODA while 9.0% and 1.0 % stated that they sometimes and rarely get exposed to ODA respectively. This is further confirmed by responses regarding how long-ago respondents viewed and/or made a purchase following an online display ad as majority (43.4%) of the responses were below a month. Also, most of the online display ads respondents are exposed to are advertised products (76.9%) relative to services (23.1%) and are mostly seen on social media sites (61.8%), commercial websites (18.8%), informational sites (11.8%) and a few on search engines (7.6%).

7.3 DESCRIPTIVE STATISTICS

Scholars (e.g. Pallant, 2011; Hair et al., 2010) in social science research, speak to the usefulness of first conducting descriptive analysis on research data so as to control the violation of assumptions necessary for major statistical tests. Descriptive statistics are numerical and graphical methods used to summarise data. Pallant (2011) and Zikmund *et al.* (2009) point to measures of central tendency such as mean, median and mode, and measures of dispersions such as standard deviation, skewness and kurtosis as relevant numerical descriptive statistics used to summarise research data. Table 7.3 and Table 7.4 presents the descriptive statistics of the various measurement/scale items of the study constructs from the survey instrument that are used for data analysis.

Table 7.3 Descriptive Statistics – ODA Characteristics

Scale Items	Item Code	Mean	S.E Mean	Std. Dev.
<i>The online display ad I saw ...</i>				
had interactive features	IT1	4.94	0.06	1.49
had links I could click for further information	IT2	5.54	0.06	1.37
provided opportunity for me to give my feedback	IT3	4.65	0.07	1.70
gave instantaneous information when I requested	IT4	4.46	0.07	1.64
made me feel the advertiser wants to listen to customers	IT5	4.31	0.07	1.65
allowed me a lot of control over my viewing experience	IT6	4.46	0.07	1.66
allowed me to choose the timing of the ad	IT7	3.20	0.08	1.97
provided two-way communication	IT8	4.08	0.07	1.78
was a good fit/match for the webpage/site on which it appeared	PL1	4.30	0.07	1.64
was consistent with the webpage/site on which it was featured	PL2	4.72	0.06	1.55
and the webpage/site on which it appeared belong together	PL3	4.08	0.07	1.66
had a lot in common with the webpage/site on which I saw it	PL4	4.20	0.07	1.68
matched the content of the webpage/website	PL5	4.20	0.07	1.68
was made more credible by the webpage on which it was featured	PL6	4.68	0.06	1.51
was similar to other ads on the webpage/site	PL7	4.62	0.06	1.42
was a good source of product/service information	INF1	5.07	0.06	1.41
was a convenient source of product/service information	INF2	5.06	0.06	1.45
supplied relevant information which was of value to me	INF3	4.83	0.06	1.53
had information worth paying attention to	INF4	4.92	0.06	1.51
gave me new ideas about the product/service	INF5	5.05	0.06	1.49
helped keep me up to date with the product/service category	INF6	4.98	0.06	1.52
made product information readily accessible	INF7	5.16	0.06	1.44
supplied complete product/service information	INF8	4.77	0.06	1.48
was tailored to my shopping situation at the time	PS1	4.42	0.07	1.61
made recommendations that matched my needs at the time	PS2	4.56	0.07	1.67
made me feel unique as an internet user	PS3	4.19	0.07	1.76
was related to my search history at the time	PS4	4.38	0.07	1.80
was useful and meaningful to me	PS5	4.89	0.06	1.58
provided information based on my real-time location	PS6	4.53	0.07	1.74
used my personal information (e.g. name & gender)	PS7	4.23	0.08	1.83
permitted me to choose freely what I wanted to see	EXC1	4.55	0.08	1.85
did not interfere with my online activity at the time	EXC2	4.05	0.08	1.96
did not intrude on the content I was accessing	EXC3	4.02	0.08	2.02
was not forced upon me	EXC4	4.47	0.08	2.07
was not repeated while I was on the webpage	EXC5	3.96	0.08	1.97
was not shown more than once during my activities on the webpage	EXC6	3.74	0.08	1.94
did not stay on the screen for long	EXC7	3.88	0.07	1.79
was not on the screen for up to 30 seconds	EXC8	3.75	0.08	1.90

The tables capture specifically the mean and standard deviation values which indicate the extent of respondents' perception regarding the ODA characteristics (see Table 7.3) as well as evaluations of their attitude toward online advertising and behavioural responses (see Table 7.4). Generally the mean values depict the extent of respondents' general agreement or disagreement with the statements in the survey instrument, and the standard deviation values show how spread out responses are from the mean value.

The mean scores in both Table 7.3 and Table 7.4 represent how each of the 55 statements or items performed from the perspective of the respondents depicting mean scores ranging from 2.83 to 5.54 given the seven-point scale used. The statement "had links I could click for further information" recorded the highest mean score (5.54), followed by the item "I consider online advertising very essential" (5.46); and the statement "I bookmark online ads when I'm using the internet" had the lowest mean score of 2.83. The scale on which these items were measured had a midpoint of 4, and most of the mean values are above the midpoint which shows a good fit to the data set. The 38 items captured in Table 7.3 represent the components of the five ODA characteristics - interactivity, placement, informativeness, personalisation and exposure condition; and the 17 items shown in Table 7.4 are measures of attitude toward online advertising (ATOA) and behavioural responses (Ad avoidance and Ad acceptance) as visualised in the study framework

Table 7.4 Descriptive Statistics – Attitude and Behavioural Responses

Scale Items	Item Code	Mean	S.E Mean	Std. Dev.
My general opinion of online advertising is favourable	ATOA1	5.15	0.06	1.38
I consider online advertising very essential	ATOA2	5.46	0.05	1.30
Online advertising is interesting and fun to see	ATOA3	4.88	0.06	1.56
I appreciate seeing advertising messages on the Internet	ATOA4	4.74	0.06	1.58
Overall, I like online advertising	ATOA5	4.87	0.07	1.61
I intentionally ignore online ads when using the internet	PADV1	4.64	0.07	1.82
I look away from online ads when I'm using the internet	PADV2	4.30	0.07	1.69
I wait for online ads to go away, then I continue with what I'm doing	PADV3	4.53	0.08	1.96
I scroll away from or leave webpages displaying online ads	AADV1	4.68	0.07	1.71
I skip/close online ads that appear on my screen while I'm online	AADV2	5.14	0.07	1.63
I use ad blockers on my devices	AADV3	3.47	0.08	1.99
I pay attention to online advertisements	PADC1	4.15	0.07	1.63
I carefully read the content of online advertisements	PADC2	4.11	0.07	1.75
I watch online/read online advertisements to the end	PADC3	3.41	0.07	1.77
I click on online advertisements or links provided in online ads	AADC1	3.69	0.07	1.73
I bookmark online ads when I'm using the internet	AADC2	2.83	0.07	1.76
I sign up or give feedback if the ad provides the option	AADC3	3.08	0.07	1.82

7.4 EXPLORATORY FACTOR ANALYSIS (EFA)

Following the descriptive analysis, an exploratory factor analysis was conducted on the 55 scale items with 275 cases from the data set using the maximum likelihood extraction method in SPSS version 23. Before the extraction, the data set was assessed to ensure its appropriateness for factor analysis. First, the correlation matrix generated, showed several satisfactory coefficients of 0.3 and above between the scale items; second, the Kaiser-Meyer-Okin (KMO) measure of sampling adequacy recorded a value of .907 which exceeds the recommended threshold of 0.6 (Kaiser, 1970; Pallant, 2011); and third, the Bartlett's Test of Sphericity produced an approximate Chi-square value of 111.744 which was significant (df. 1485, sig.000). The results of these three tests as displayed below in Table 7.5 established the appropriateness of the data set for factor analysis.

Table 7.5 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.907
Bartlett's Test of Sphericity	Approx. Chi-Square	11132.744
	df	1485
	Sig.	.000

7.4.1 Extraction, Rotation, Reliability and Re-specification of the EFA

After the suitability assessment, the factor extraction was conducted using the eigen value rule which unearthed factors/components with eigen values from 1.0 and above (Pallant, 2011). The extraction produced 8 factors, and these factors explained a total variance of 68.10%. To support and assist the interpretation of these 8 factors, the 55 items measuring them were rotated using an Oblique method, specifically Promax rotation in order to determine which items loaded considerably onto the various factors as well as those with strong loadings. To be retained for further analysis item loadings should be 0.7 and more although some scholars suggest a minimum value of 0.5 as acceptable (Hair *et al.*, 2014). On the basis of this rule, 20 scale items which did not meet the recommended minimum 0.5 value were dropped from further analysis.

Following the factor extraction and rotation, an assessment of the reliabilities of the remaining 35 scale items measuring the 8 factors was conducted as suggested by Pallant (2011) in order to ensure that the items are internally consistent or cohesive. The most widely used gauge for internal consistency, Cronbach's alpha was employed to assess the reliability of the scales in the study. Scholars (e.g. Malhotra, 2010) suggest Cronbach's alpha coefficients between 0.7 and 0.9 as ideal, and the assessment produced alpha values ranging from 0.786 to 0.938 for all 8 factors. Also, as part of the reliability test, an inspection of the item-total correlation (ITC) was done to ensure the significance of the items that loaded onto the factors and all items had acceptable values of above 0.3 except

two items; “was not repeated while I was on the page” and “was not shown more than ones during my activities on the page”. These items had ITCs of 0.207 and 0.284 respectively and so, were dropped from further analysis.

Table 7.6 Rotated Component Matrix and Scale Reliability

Factors	Items	Maximum Likelihood Loadings			Internal Consistencies	
		Promax (Oblique)	Variance Explained	Item-total Correlation	Cronbach's Alpha (α)	Alpha if items is deleted
Factor 1	IT3	.624	70.06	.611	.786	.725
	IT4	.602		.613		.723
	IT5	.776		.652		.681
Factor 2	PL4	.947	90.24	.805	.892	--
	PL5	.955		.805		--
Factor 3	INF1	.750	72.95	.786	.938	.929
	INF2	.879		.805		.928
	INF3	.792		.824		.926
	INF4	.688		.790		.929
	INF5	.762		.789		.929
	INF6	.898		.787		.929
	INF7	.941		.799		.928
Factor 4	PS1	.789	65.31	.719	.866	.831
	PS2	.606		.719		.830
	PS3	.621		.704		.833
	PS4	.737		.665		.844
	PS6	.614		.637		.850
Factor 5	EXC1	.924	75.77	.549	.838	.911
	EXC2	.886		.808		.667
	EXC3	.672		.766		.710
Factor 6	ATOA1	.757	72.93	.752	.906	.888
	ATOA2	.806		.743		.890
	ATOA3	.718		.745		.889
	ATOA4	.852		.793		.878
	ATOA5	.726		.799		.877
Factor 7	PADV1	.669	62.13	.596	.796	.752
	PADV2	.772		.604		.746
	AADV1	.724		.605		.746
	AADV2	.701		.625		.737
Factor 8	PADC3	.805	70.69	.692	.861	.830
	AADC1	.825		.739		.811
	AADC2	.703		.672		.838
	AADC3	.736		.730		.814

Note: **Extraction Method:** Maximum Likelihood. **Rotation Method:** Promax with Kaiser Normalisation

The table 7.6 above summarises the factor loadings and the reliability (internal consistency) measures on the final variables retained for the 8 constructs or factors. The exploration reduced or purified an initial pool of 55 items to 33 as the 8 items measuring interactivity were reduced to 3; items measuring placement were reduced from 7 to 2; those measuring informativeness were reduced from 8 to 7; scale items for personalisation were reduced from 7 to 5; and exposure condition items were also reduced from 8 to 3. The 5 scale items measuring attitude toward online advertising all passed the exploration and reliability tests and were retained for further analysis. It is however important to mention that scale items for passive ad avoidance and active ad avoidance were each reduced from 3 to 2; and passive ad acceptance was reduced from 3 to 1, while active ad acceptance maintained all three items. More relevantly, the extraction and rotation process merged the active and passive dimension of both ad acceptance and ad avoidance respectively, and thus, were maintained as such (i.e. unidimensional) on the basis of conceptual fitness.

7.4.2 Examination of Common Method Variance/ Bias

As the study data is based on self-reports, and as can be gleaned from Table 7.6 above, some factors (e.g. factor 2) accounted for higher levels of variance, thus necessitating the need to check and eliminate the presence of common method variance. Common method variance (CMV) is the false correlation between variables that result when a researcher employs a similar method to measure the predictor and outcome variables in a hypothesised relationship (Craighead *et al.*, 2011). This causes a systematic measurement error that considerably exaggerates or reduces the measured relationships among theoretical constructs (Siemsen *et al.*, 2010). Although the magnitude of CMV is said to vary across fields, it is considered “*the most common and dangerous threat to correct interpretation of research results*” (Pace, 2010, p.421). This calls for researchers to address issues of CMV whenever possible because its presence

casts doubt on the adequacy of a scale's reliability and convergent validity particularly in survey research (Richardson *et al.*, 2010; Podsakoff *et al.*, 2012).

This study employed a post-hoc statistical test specifically, Harman's single-factor test which is the dominantly used approach in controlling for CMV in social science research (Tang *et al.*, 2010). The key supposition of this test is that, during an EFA, if a single factor accounts for a majority of the variance in the variables or if a single factor is extracted from an unrotated factor solution, then CMV is purported to be present (Graighead *et al.*, 2011). In conducting the EFA, none of these conditions surfaced. It has also been suggested that the test unearths bias if the researcher extracts only one factor and that factor accounts for more than 50% variance (Fuller *et al.*, 2016). To test this assumption, during the EFA, one factor extraction was forced from the initial 55 scale items using unrotated maximum likelihood extraction. In that instance, the single factor solution accounted for 35.16% of variance, thus allaying concerns of CMV in this study, and instilling confidence in the outcome or findings of the research.

7.5 STRUCTURAL EQUATION MODELLING (SEM)

In the methodological chapter, the two stage SEM approach was discussed as the analytical method used to test the hypothesised relationships in the research framework following suggestions by Anderson and Gerbig (1988). In the first stage, which is the measurement phase, the causal relationships between the observed variables or measurement items and the underlying theoretical constructs were specified by conducting a confirmation factor analysis (CFA) using AMOS version 22. Through the CFA, a measurement model was generated. The second phase – structural phase subsequently assesses the causal relationships between the predictor and response variables as well as the the mediating and moderating effects using a structural model. Detailed discussions on the procedures followed

in conducting this two-stage analysis and their results are presented in the next sub-sections (7.5.1 -7.5.2).

7.5.1 Confirmatory Factor Analysis (CFA) / Measurement Model

After reducing the measurement items/scales into a manageable set through the EFA, as a vital first step to SEM, a confirmatory factor analysis (CFA) was conducted using the larger data set (592 cases) to determine whether all the measures are accurate indicators of, or truly reflect the latent variables (i.e. Interactivity, Placement, Informativeness, Personalisation, Exposure condition, Attitude toward Online Advertinsing, Ad Avoidance, and Ad Acceptance) in the research framework. The essence of this is to ensure further purification, validation and modification (if needs be) of the measurement model before it is used to address the structural hypotheses (Byrne, 2010). The 8 resultant factors and their 33 corresponding measurement items from the EFA (see Table 7.6) were used for the CFA, and the initial output from AMOS indicated that the standardised loadings for some of the indicators were below the recommended threshold causing the fit indexes to be lower than the acceptable values.

Adhering to scholarly suggestions (e.g. Hair *et al.*, 2010; Koo *et al.*, 2015), the initial measurement model was subjected to modification using the factor loadings, and correlation between measurement errors as adjustment criteria. During the modification process, a total of 6 scale items were dropped or removed in a step-by-step fashion so as to ensure that each item deletion or elimination was crucial to achieving a suitable model fit. Specifically, in the first modification phase (modified model I), one item each was deleted from Exposure Conditions (EXC1), and Ad Avoidance (ADV2), and two items from Personalisation (PS4 & PS6). In the second modification phase, two items were deleted – one from Attitude toward Online Advertising (ATO3) and one from Ad Acceptance (ADC2). Additionally, the residual erros with high variances were eliminated or covaried. After the eliminations, the model was re-analysed resulting in an improvement of the goodness-of-fit indices which exceeded or

approached the recommended standards (Bentler, 1990). For instance, the RMSEA was reported at 0.06, which is well beneath the suggested 0.08 cutoff point. The final measurement model with the acceptable fit indices was made up of 8 constructs with 27 corresponding indicators (measurement items). A summary of the modification process and the fit indices of the model are presented below in Table 7.7, and Figure 7.1 depicts a graphical view of the final measurement model.

Table 7.7 Modification and Model Fit Summary of Measurement Model

Fit Indices	Cut-off Criteria	Modifications of Fit Indices		
		Original Model	Modified Model I	Final Modified Model
GFI (Goodness of Fit Index)	≥0.90	0.81	0.89	0.91
CFI (Comparative Fit Index)	≥0.90	0.86	0.93	0.95
NFI (Normed Fit Index)	≥0.90	0.83	0.91	0.92
TLI (Tucker-Lewis Index)	≥0.90	0.84	0.92	0.93
IFI (Incremental Fit Index)	≥0.90	0.86	0.93	0.95
RMSEA (Root Mean Square Error Approximation)	<0.08	0.08	0.07	0.06
χ^2/df (Normed Chi-square)	≤ 2 or 3	5.23	3.47	3.12

Note: Model 1 (deleted: EXC1, ADV2, PS4 & PS6) Final Model (deleted ADC2 & ATOA3)

7.5.1.1 Reliability and Validity of the Final Measurement Model

After the acceptable goodness-of-fit indices were achieved, the final measurement model as pictured in Figure 7.1 below, was further assessed for reliability and validity using Cronbach’s alpha coefficient, Composite Reliability (CR), the outer or factor loadings, and Average Variance Extracted (AVE). First, because six items were deleted from the post-EFA pool during the CFA, alpha (α) values were again generated for the constructs in the model, and these values exceeded the satisfactory limit of 0.7 – an indication of internal consistency. Also, the CR values which depict the degree to which the indicators are reflective of the latent constructs surpassed the acceptable minimum of 0.7 (Nunnally, 1978), with which the collective reliability of the final measurement model was confirmed.

Figure 7.1 Final Measurement Model

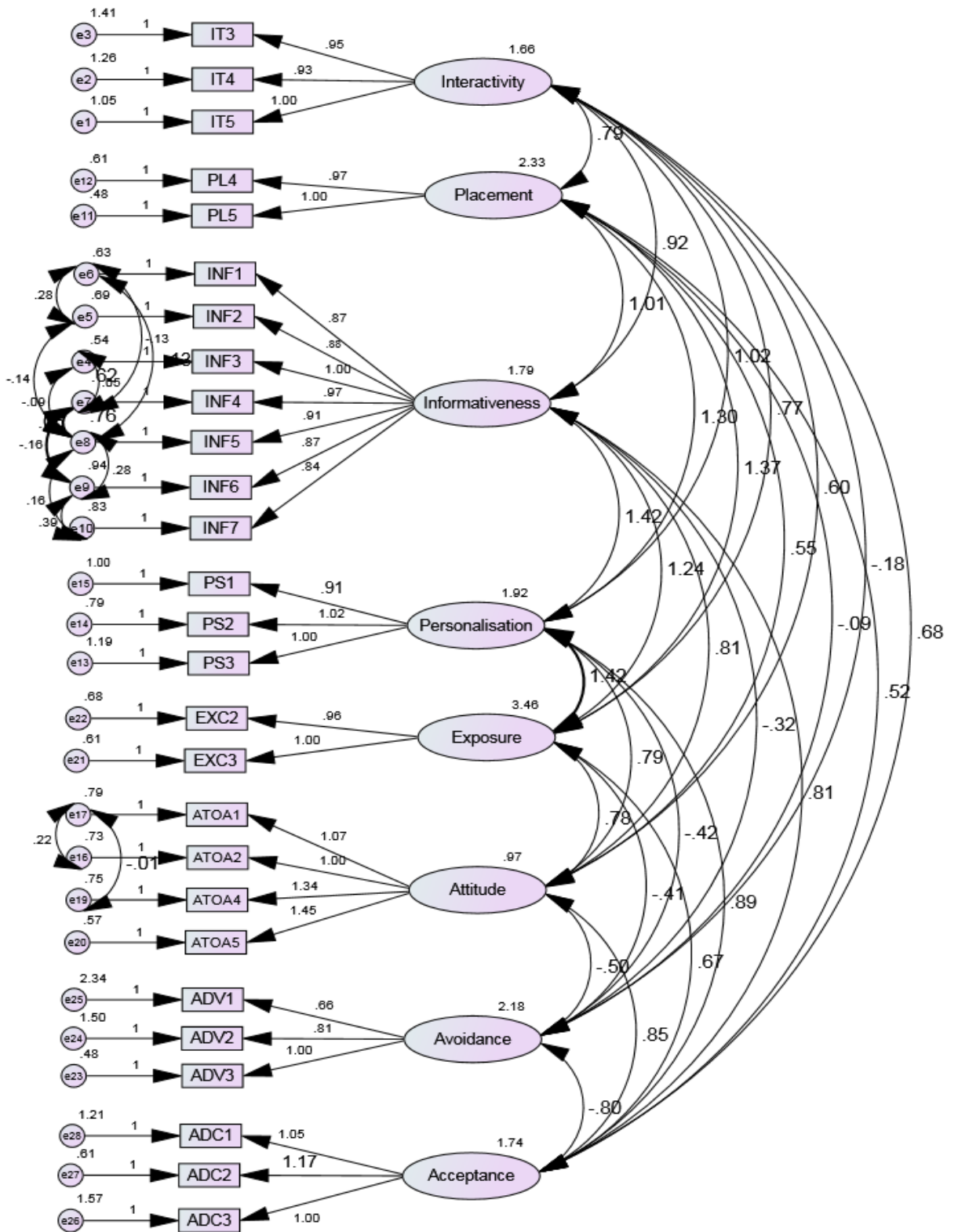


Table 7.8 CFA Results for Final Measurement Model

Constructs	Items	Standardised Loadings	t-Values	R ² Value	CR	AVE	Cronbach's Alpha (α)
Interactivity	IT3	0.72***	15.39	0.51	0.79	0.55	.77
	IT4	0.73***	15.57	0.53			
	IT5	0.78***	--	0.61			
Placement	PL4	0.88***	21.63	0.78	0.89	0.81	.89
	PL5	0.91***	--	0.83			
Informativeness	INF1	0.83***	24.74	0.68	0.93	0.67	.94
	INF2	0.82***	24.60	0.67			
	INF3	0.88***	--	0.77			
	INF4	0.85***	28.50	0.73			
	INF5	0.81***	20.99	0.66			
	INF6	0.77***	22.19	0.59			
	INF7	0.78***	22.75	0.60			
Personalisation	PS1	0.78***	17.74	0.61	0.85	0.65	.85
	PS2	0.85***	21.53	0.72			
	PS3	0.79***	--	0.62			
Exposure Condition	EXC2	0.91***	22.88	0.83	0.91	0.84	.91
	EXC3	0.92***	--	0.85			
Attitude Toward OA	ATOA1	0.77***	21.70	0.56	0.90	0.65	.89
	ATOA2	0.75***	--	0.57			
	ATOA4	0.84***	20.32	0.70			
	ATOA5	0.88***	21.31	0.78			
	ADV1	0.54***	11.47	0.22			
Ad Avoidance	ADV2	0.70***	13.63	0.49	0.77	0.53	.75
	ADV3	0.91***	--	0.82			
Ad Acceptance	ADC1	0.78***	17.85	0.61	0.84	0.65	.84
	ADC2	0.89***	19.30	0.80			
	ADC3	0.72***	--	0.53			

Note: ***p<0.001 Fixed Values (--)

Furthermore, convergent and discriminant validity were assessed to establish construct validity. In ascertaining the convergent validity of the measures in the model, the factor loadings for each item and the AVEs were examined. To be considered valid, Hair *et al.* (2010) recommend that factor loadings should be higher than 0.5. As can be gathered from Table 7.8 above, the factor loadings for all items are considerably high and within the range of 0.54 and 0.92; and were statistically significant at $p < 0.001$. Also, the AVE values ranged from 0.53 to 0.84 which are all above the minimum required level of 0.50 suggested by Fornell and Lacker (1981). The AVE values show the amount of variance the items share

with the construct they measure and so, describe the share of the variance that is explained by the indicators in relation to a particular construct. These two measures speak to the convergent validity of the constructs and their individual measurement items in the model.

The essence of the discriminant validity assessment is to ensure that each construct is unique and captures dissimilar but theoretically linked variables (Duarte & Raposo, 2010). This is done by correlating pairs of latent variables or constructs. The rule of thumb is that, to determine the presence of discriminant validity, for every pair of construct, the square-root of the AVE (correlation between a construct and itself) must be higher than the corresponding inter-construct correlation (correlation between the construct and other constructs) (Lu *et al.*, 2010). As can be surmised from Table 7.9, the square-root value of the AVEs are soundly higher than the correlations between each pair of constructs, thereby establishing the discriminant validity of the final measurement model.

Table 7.9 Correlation Matrix for Discriminant Validity

Constructs	Mean	Std. Dev	In	PI	Inf	Ps	Ex	At	Adv	Adc
Interactivity	4.478	1.663	0.743							
Placement	4.199	1.679	0.401	0.897						
Informativeness	5.009	1.477	0.532	0.496	0.819					
Personalisation	4.390	1.682	0.570	0.613	0.767	0.806				
Exposure Condition	4.037	1.991	0.323	0.483	0.500	0.551	0.915			
Attitude Toward OA	5.055	1.468	0.486	0.376	0.626	0.603	0.445	0.807		
Ad Avoidance	4.823	1.718	-0.095	-0.041	-0.160	-0.205	-0.148	-0.339	0.730	
Ad Acceptance	3.394	1.774	0.402	0.260	0.458	0.485	0.275	0.656	-0.410	0.803

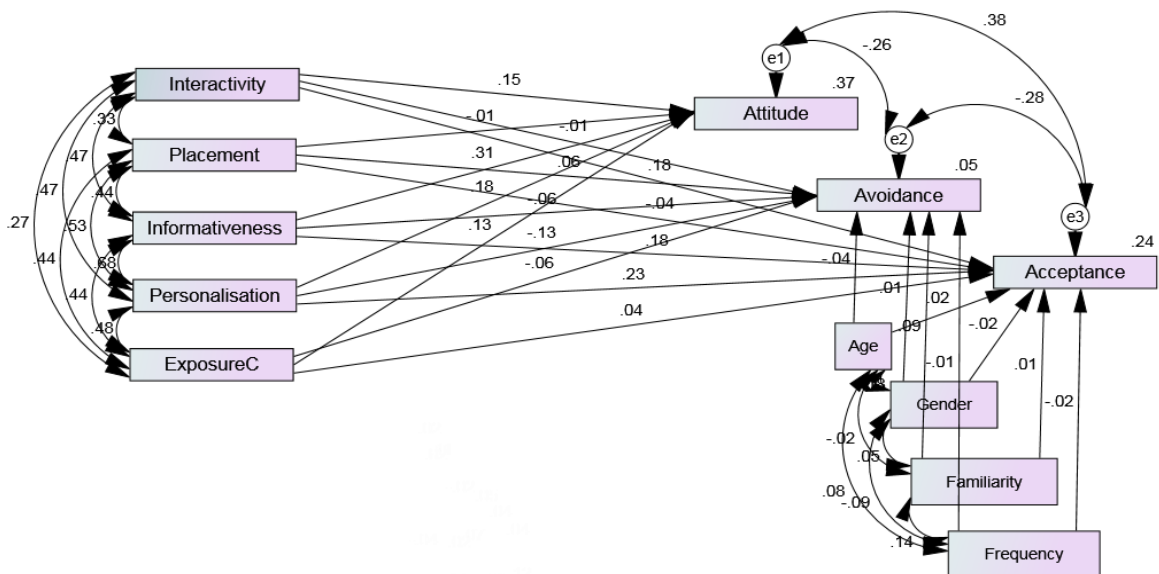
Note: Diagonal (bold) values are square roots of the AVE; off-diagonal values are the inter-construct correlations

7.5.2 Structural Model

The next logical step after the measurement model is specified, confirmed to be reliable, and validated with acceptable fit, is to test the structural model. Considered the key stage of SEM

analysis, this phase allowed for the estimation of the structural paths in order to test the hypothetical suppositions indicated in the research framework. Particularly, structural models help test multiple relationships concurrently in complex models while controlling for measurement errors (Byrne, 2013). Keeping on course with the aim of the study which is to examine the effect of ODA characteristics on consumer behavioural responses to online display advertising as mediated by attitude toward online advertising, as well as account for the moderating influence of internet user mode, the first sets of hypotheses suggest a direct influence of the ODA characteristics (interactivity, placement, informativeness, personalisation and exposure condition) on attitude toward online advertising (H1-H5), as well as on ad acceptance and ad avoidance (H6a,b – H10a,b). These direct proposed influences are first tested by creating single indicators for the latent variables as suggested by Ping (1995) to reduce the complexity of the model, and the results of their structural paths generated from AMOS are presented in figure 7.2 below.

Figure 7.2 Structural Model Results for Direct Paths



7.5.2.1 Assessment of the Direct Structural Model

By examining the structural model, the study establishes whether the data is consistent with the conceptualisation and resultant propositions put forth. To ensure this, foremost, the values of the relevant fit statistics were checked and found to meet the recommended parameters:

normed Chi-square (χ^2/df) = 2.71, Comparative Fit Index (CFI) = 0.98, Incremental Fit Index (IFI) = 0.99, Tucker Lewis Index (TLI) = 0.930, and Root Mean Square Error of Approximation (RMSEA) = 0.054. Second, the signs (negative or positive) of the various estimates (β -values) were checked to be sure the directions of the paths were as hypothesised. Third, the strength of the hypothesised paths was examined to guarantee they were significant. A vital condition for path significance is that the absolute figures of the critical ratio (t-values) should be higher than 1.96. Lastly the amount of variance in the endogenous variables explained by the exogenous variables depicted by the R^2 values were checked for suitability. These statistics of interest are reported in Table 7.10 below.

Table 7.10 Structural Model Results - Direct Paths

Hypothesised Direct Structural Paths			Estimates			Result	
			β	t	Sig.		
H ₁	Interactivity	---->	Attitude toward Online Advertising	0.15	3.96	***	Supported
H ₂	Placement	---->	Attitude toward Online Advertising	-0.01	-0.19	0.85	Unsupported
H ₃	Informativeness	---->	Attitude toward Online Advertising	0.31	6.60	***	Supported
H ₄	Personalisation	---->	Attitude toward Online Advertising	0.18	3.74	***	Supported
H ₅	Exposure Condition	---->	Attitude toward Online Advertising	0.13	3.35	***	Supported
H _{6a}	Interactivity	---->	Ad Acceptance	0.18	4.27	***	Supported
H _{7a}	Placement	---->	Ad Acceptance	-0.04	-0.91	0.36	Unsupported
H _{8a}	Informativeness	---->	Ad Acceptance	0.18	3.43	***	Supported
H _{9a}	Personalisation	---->	Ad Acceptance	0.23	4.14	***	Supported
H _{10a}	Exposure Condition	---->	Ad Acceptance	0.04	1.02	0.31	Unsupported
H _{6b}	Interactivity	---->	Ad Avoidance	-0.01	-0.12	0.91	Unsupported
H _{7b}	Placement	---->	Ad Avoidance	0.06	1.25	0.21	Unsupported
H _{8b}	Informativeness	---->	Ad Avoidance	-0.06	-0.97	0.33	Unsupported
H _{9b}	Personalisation	---->	Ad Avoidance	-0.13	-2.15	0.03*	Supported
H _{10b}	Exposure Condition	---->	Ad Avoidance	-0.07	-1.35	0.18	Unsupported
	Age	---->	Ad Acceptance	0.02	0.64	0.52	
	Age	---->	Ad Avoidance	-0.04	-1.07	0.29	
	Gender	---->	Ad Acceptance	-0.02	-0.64	0.53	
	Gender	---->	Ad Avoidance	0.01	0.22	0.83	
	Internet Familiarity	---->	Ad Acceptance	0.01	0.28	0.78	
	Internet Familiarity	---->	Ad Avoidance	0.09	2.35	0.02*	
	Usage Frequency	---->	Ad Acceptance	-0.02	-0.55	0.58	
	Usage Frequency	---->	Ad Avoidance	0.02	0.36	0.72	

$\chi^2/df=2.71$ RMSEA=0.054 GFI=0.98 NFI=0.99 IFI=0.99. TLI=0.930. CFI=0.98

Note: ***p<.001 **p<.01 *p<.05 Attitude: R²=0.37 Ad Acceptance: R²=0.24 Ad Avoidance: R²=0.05

As shown in Table 7.10 above, hypotheses 1 to 5 proposed a significant positive influence of the ODA characteristics on attitude toward online advertising (ATOA), and there was statistical support for all these paths except the path from placement to ATOA ($\beta = -0.01$, $p = 0.85$); as such hypothesis 2 is not supported. Of the four supported paths, the strongest relationship exists between informativeness and ATOA ($\beta = 0.31$, $p < 0.001$), followed by personalisation ($\beta = 0.18$, $p < 0.001$), interactivity ($\beta = 0.15$, $p < 0.001$), and exposure condition ($\beta = 0.13$, $p < 0.001$).

Because the study operationalised behavioural responses as ad avoidance and ad acceptance, hypotheses 6 to 10 had two sub-hypotheses each. Hypotheses 6a- 10a predicted a positive significant effect of the ODA characteristics on ad acceptance. There was support for H6a, H8a and H9a which represent the paths from interactivity, informativeness and personalisation respectively. However, results failed to support hypotheses H7a and H10a which showed non-significant results for the effects of placement ($\beta = -0.04$, $p = 0.36$) and exposure condition ($\beta = 0.04$, $p = 0.31$) on ad acceptance. Of the supported ODA characteristics-ad acceptance relationships, the strongest direct predictor of ad acceptance was personalisation ($\beta = 0.23$, $p < 0.001$), followed by interactivity ($\beta = 0.18$, $p < 0.001$), and informativeness ($\beta = 0.18$, $p < 0.001$). Additionally, hypotheses 6b to 10b posited significant negative influences of the ODA characteristics on ad avoidance. Nonetheless, results only supported Hypotheses 9b ($\beta = -0.13$, $p < 0.05$) which addresses the effect of personalisation. Generally, H1, H3, H4, H5, H6a, H8a, H9a and H9b were confirmed while H2, H6b, H7a-b, H8b, and H10a-b were rejected in this study.

In order to account for the other effects not hypothesised, the model also controlled for demographics such as age and gender, as well as frequency of internet usage and familiarity

with online advertising (see Table 7.10). Regarding these control variables, age, gender, and internet usage frequency had no significant effect on consumer behavioural responses (ad acceptance or ad avoidance) in the model. Also, familiarity with online advertising had no effect on ad acceptance ($\beta = 0.01$, $p = 0.78$), but was found to be positively related to ad avoidance ($\beta = 0.09$, $p = 0.02$). A chi-square difference test was then conducted to examine whether user familiarity accounts for any differences in the model. Results from the test revealed that the different levels of user familiarity with online advertising did not explain any differences in the model ($\Delta\chi^2 = 0.01$, $\Delta df = 1$, $p = 0.95$). In essence within the borders of this thesis, the relationships specified in the model are not confounded by the control variables.

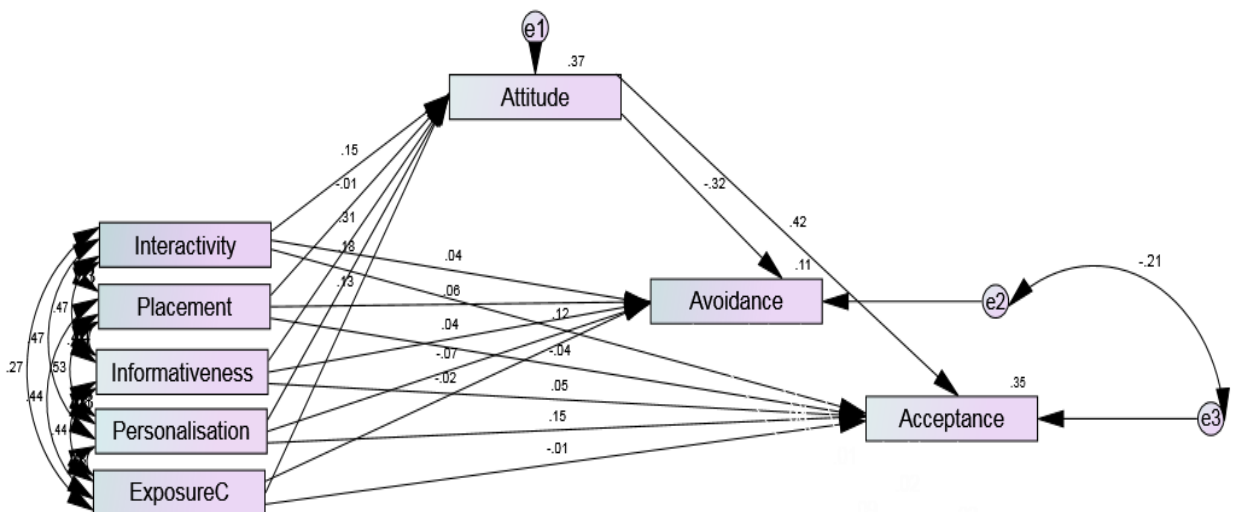
7.5.2.2 Test for Mediating Effects

The second objective of this study sought to establish the mediating role of attitude toward online advertising (ATOA) in the relationships between the ODA characteristics and behavioural responses (ad acceptance and ad avoidance). To this end, the study tested ten mediation paths from each of the five ODA characteristics to ad acceptance and ad avoidance through ATOA. Hypothesis $H12a_i - H12e_i$ tested the path from interactivity, placement, informativeness, personalisation and exposure condition respectively to ad acceptance through ATOA; and $H12a_{ii} - H12e_{ii}$ tested the path from interactivity, placement, informativeness, personalisation, and exposure condition respectively to ad avoidance through ATOA. The goal is to determine if ATOA enhances the effect of the ODA characteristics on consumer behavioural responses to online display ads than the direct effects of their perceptions of the ODA characteristics.

The bootstrapping approach to testing mediation effects was employed in the study using AMOS 22. Contrary to the prevalent causal steps approach espoused by Baron and Kenny

(1986), bootstrapping assumes that a non-significant relationship between independent and dependent variables does not provide grounds on which to write off the presence of the intervening influence of a third variable (Preacher & Hayes, 2004; Hayes, 2015). In other words, the presence of a significant relationship between an independent and a dependent variable also provides no guarantee that a mediating effect may exist through an intervening variable (Hayes, 2009). In view of this arguments, the study used bootstrapping to address the mediation effect of ATOA in the relationships between all five ODA characteristics and behavioural responses in spite of the lack of a direct relationship between interactivity, placement, informativeness and exposure condition and ad avoidance as well as between placement, exposure condition and ad acceptance. To determine the significance of the mediated paths, the analysis relied on a bootstrapped sample of 2000 at a bias-corrected accelerated confidence interval level of 95%. Figure 6.3 below presents the structural paths of the mediation analysis.

Figure 7.3 Structural Model Results for Mediated Paths



Per the bootstrapping approach, partial mediation is established or confirmed when a significant direct path from an independent variable to a dependent variable occurs concurrently with a significant indirect path from said independent variable to the dependent

variable through an intervening variable (Preacher & Hayes, 2008). On the other hand, full mediation is confirmed when a non-significant direct path from an independent variable to a dependent variable exists alongside a significant indirect path from the independent variable to the dependent variable through the intervening variable.

Illustratively, the results of the mediating test as shown in Table 7.11 below on the basis of the bootstrapping assumptions, indicate that no support was found for hypotheses 12bi and 12bii which represent the paths from placement to ad acceptance and ad avoidance respectively, as mediated by attitude toward online advertising. This is because, the study found no direct effect of placement on neither ad acceptance nor ad avoidance, and the indirect effect through ATOA was also not statistically significant.

Table 7.11 Structural Model Results - Mediated Paths

Hypothesised Mediated Structural Paths				Path Estimates			Result
				Direct without Mediator	Direct with Mediator	Indirect Effect	
H _{12ai}	Interactivity	-----> ATOA -----> Ad Acceptance	0.18***	0.12***	0.06***	Partial Mediation	
H _{12bi}	Placement	-----> ATOA -----> Ad Acceptance	-0.04	-0.04	-0.00	No Mediation	
H _{12ci}	Informativeness	-----> ATOA -----> Ad Acceptance	0.18***	0.05	0.13***	Full Mediation	
H _{12di}	Personalisation	-----> ATOA -----> Ad Acceptance	0.23***	0.15**	0.08***	Partial Mediation	
H _{12ei}	Exposure Condition	-----> ATOA -----> Ad Acceptance	0.04	-0.01	0.05***	Full Mediation	
H _{12aii}	Interactivity	-----> ATOA -----> Ad Avoidance	-0.01	0.04	-0.05***	Full Mediation	
H _{12bii}	Placement	-----> ATOA -----> Ad Avoidance	0.06	0.06	-0.00	No Mediation	
H _{12cii}	Informativeness	-----> ATOA -----> Ad Avoidance	-0.06	0.04	-0.10***	Full Mediation	
H _{12dii}	Personalisation	-----> ATOA -----> Ad Avoidance	-0.13*	-0.07	-0.06***	Full Mediation	
H _{12eii}	Exposure Condition	-----> ATOA -----> Ad Avoidance	-0.07	-0.02	-0.04***	Full Mediation	

Note: ***p<0.001 **p<0.01 *p<0.05 Attitude: R²=0.37 Ad Acceptance: R²=0.35 Ad Avoidance: R²=0.11

In addition, the results indicate that attitude toward online advertising (ATOA) partially mediates the relationship between interactivity and ad acceptance as well as the relationship between personalisation and ad acceptance with significant direct effects (interactivity; $\beta = 0.12$, $p < 0.001$; personalisation; $\beta = 0.15$, $p < 0.01$) and significant indirect effects (interactivity; $\beta = 0.06$, $p < 0.001$; personalisation; $\beta = 0.08$, $p < 0.001$) for both ODA characteristics.

The paths from informativeness and exposure condition to ad acceptance show non-significant direct effects (informativeness; $\beta = 0.05$, $p > 0.05$; exposure condition; $\beta = -0.01$, $p > 0.05$) but significant indirect effects (informativeness; $\beta = 0.12$, $p < 0.001$; exposure condition; $\beta = 0.05$, $p < 0.001$) indicating a full mediating role of ATOA in these relationships. Pertinently, ATOA fully mediates the relationships between interactivity, informativeness, personalisation, exposure condition and ad avoidance as, the direct paths of these ODA characteristics to ad avoidance showed non-significant effects but significant indirect effects for all four paths at $p < 0.001$ level. Results of the mediation analysis therefore provide support for eight of the ten Hypothesised mediated paths (i.e. H12ai, H12ci, H12di, H12ei; and H12aii, H12cii, H12dii, H12eii).

7.5.2.3 Test for Moderating Effects

After support was found for some of the direct effects and mediating effects, the next step was to include the proposed moderator variable into the revised model (depicting significant paths) in order to gain further insights. Underpinned by the reversal theory, this phase examines the moderating effect of user mode on the supported relationships established between the ODA characteristics and attitude toward online advertising as well as behavioural responses. To test the hypotheses (H13ai, H13di, and H14a, H14c, H14d, H14e) addressing the resultant paths, a multigroup moderation analysis was conducted. This was

done in two stages in AMOS. First, a structural invariance test was conducted to ensure differences in the hypothesised relationships across the subgroups (telic vs. paratelic users). To do this, the paths in the model for both groups were estimated concurrently allowing the estimates of the direct paths to vary across the groups, and this represented the baseline model. Next the parameter estimates of the groups were constrained to be the same resulting in a fully constrained model. In both cases, relevant fit indices were used to assess each model to ensure they meet the required benchmark. A chi-square difference test was then conducted between the baseline and constrained model (Anderson & Gerbing, 1988), which showed significant differences ($\Delta\chi^2 = 54.65, p < 0.001$) among the two user modes (telic versus paratelic) at the model level – an indication that the model is not structurally invariant. Results for the invariance test are shown in Table 7.12 below.

Table 7.12 Invariance Test Results: Multigroup Analysis

Overall Model	χ^2	<i>df</i>	χ^2/df	NFI	TLI	GFI	CFI	RMSEA	P-value
Baseline Model ^a	42.36	20	2.118	0.97	0.92	0.99	0.99	0.04	
Structural Weights Model ^b	97.01	36	2.66	0.94	0.86	0.97	0.96	0.05	
χ^2 Differences Test ($\Delta\chi^2, \Delta df$)	54.65	16							***

Note: ^aUnconstrained model ^bConstrained model *** $p < 0.001$

After invariance is established, for more sound results, it is suggested that researchers further conduct a path-by-path analysis to ascertain the particular paths that differ significantly across the subgroups (Byrne, 2004; 2011). Hence as the second stage of the multigroup test, a pairwise critical ratio difference test was subsequently conducted to identify whether there were significant differences for the individual paths across groups. This was done using the baseline (unconstrained) model which displayed relatively more acceptable fit indices from the invariance test. Results of the moderation test as shown in Table 7.13 suggest that only two out of the six hypothesised paths in the revised model were supported.

User mode was found to be a significant moderator of the relationship between informativeness and ATOA (hypothesis 14c: z-score=2.649; $p < 0.01$), as well as between personalisation and ad acceptance (hypothesis 13di: z-score=1.924; $p < 0.10$). To further probe the moderated paths, the standardized estimates from the results were examined, and this indicate that the effect of informativeness on ATOA is stronger for paratelic users ($\beta = 0.50$; $p < 0.01$) than for telic users ($\beta = 0.25$; $p < 0.01$). Also, personalisation had a significant positive effect on ad acceptance among telic users ($\beta = 0.21$; $p < 0.01$) but not among paratelic users ($\beta = -0.05$; n.s.). However, there is no support for hypothesis 13ai which proposes that user mode moderates the relationship between interactivity and ad acceptance. The study also failed to find support for, H14a, H14d, H14e. For these unsupported hypotheses, the results show that the impact of interactivity, personalisation and exposure condition on attitude toward online advertising do not vary between telic and paratelic users.

Table 7.13 Structural Model Results for Multigroup (User Mode) Moderation

Hypothesised Moderated Paths		Telic		Paratelic		z-score
		β	Sig.	β	Sig.	
Interactivity	----> ATOA	0.14	0.00	0.12	0.04	-0.21
Informativeness	----> ATOA	0.25	0.00	0.50	0.00	2.65***
Personalisation	----> ATOA	0.20	0.00	0.08	0.20 ^{n.s.}	-1.57
Exposure Condition	----> ATOA	0.10	0.00	0.03	0.44 ^{n.s.}	-1.32
Interactivity	----> Ad Acceptance	0.11	0.01	0.18	0.04	0.67
Personalisation	----> Ad Acceptance	0.21	0.00	-0.05	0.52 ^{n.s.}	-2.83***

Note: *** $p < 0.01$

n.s.= not significant

7.6 ONE-WAY ANALYSIS OF VARIANCE (ANOVA)

Though not hypothesised, in order to gain further insights into other influences as well as examine the intensity of behavioural responses, the study addresses differences in behavioural responses on the basis of the nature of advertised brands featured in ODAs. This was encapsulated in the fourth objective of the study. Since the survey instrument

elicited information on the nature of the advertised brand consumers purchased after exposure to a recent display ad, the study categorised responses into product-featured ODAs and service-featured ODAs. Pursuant to this objective, the study first performed an ANOVA test, and result as shown in Table 7.14 indicate significant differences in acceptance and avoidance responses among consumers exposed to ODAs that featured product brands and those exposed to ODAs that featured service brands. Precisely, avoidance was higher for service-featured ODAs relative to product-featured ODAs with mean values ranging from 4.96 to 5.54 for the former and from 4.55 to 5.01 for the latter. Additionally, acceptance was higher among consumers exposed to product-featured ODAs (3.20 – 3.80) compared to those exposed to service-featured ODAs (2.70 - 3.30)

Table 7.14 ANOVA Results

Behavioural Responses to ODA	Product- featured ODAs n=455	Service- featured ODAs n=137	F	Sig.
<i>Ad acceptance</i>				
I watch/read online advertisements to the end	3.57	2.90	15.80	.000
I click on online advertisements or links provided in online ads	3.80	3.30	9.07	.003
I sign up or give feedback if the ad provides the option	3.20	2.70	8.24	.004
<i>Ad Avoidance</i>				
I intentionally ignore online ads when using the internet	4.55	4.96	5.31	.022
I click/scroll away from or leave webpages displaying online ads	4.55	5.12	12.04	.001
I skip/close online ads that appear on my screen while I'm online	5.01	5.54	10.82	.001

7.7 LOGISTIC REGRESSION

To elucidate the ANOVA results further, the study assesses the intensity of the behavioural responses by categorising respondents into active and passive behavioural segment or levels. After the categorisation, which was done in SPSS, two sets of homogeneous groups were generated for both ad acceptance and ad avoidance. In examining the intensity of ODA-specific behavioural response among the study sample, a multigroup logistic

regression was performed to assess the effect of the four ODA characteristics (Interactivity, Personalisation, Informativeness and Exposure Condition). that passed the major (SEM) analytical stage. Although not all four characteristics had direct influences on ad acceptance and ad avoidance in the structural model, the study employed logistic regression to assess the impact of their effect on the likelihood of respondents reporting active behavioural responses. Four models were generated, and the four ODA characteristics were the independent variables in all models. However, active-passive binary segments of ad acceptance were the dependent variable in model 1a and 1b; and active-passive segments of avoidance were the dependent variables in Model 2a and 2b. The nature of the brand (product versus service) featured in the display ads respondents viewed, were inputted as selection variables in order to determine ODA-specific behavioural response. All sorted models in the analysis were drawn from active behavioural response (active acceptance and active avoidance) categories since the analysis procedure treated the passive segments as dummies. Results from the regression output are presented in Table 7.15.

The full unsorted model 1 (containing both product-featured and service-featured ODAs), was statistically significant, $\chi^2 = 98.33$, $df = 4$, p value < 0.001 . The model explained between 15.3 percent (Cox & Snell R^2) and 20.7 percent (Nagelkerke R^2) of the variance in ad acceptance and an overall predictive accuracy of 69.1 percent of cases in the data - a sign that the model differentiated the two intensity levels of ad acceptance. The two sorted models; model 1a ($\chi^2 = 95.54$, $df = 4$, p value < 0.001) and model 1b ($\chi^2 = 11.34$, $df = 4$, p value < 0.05) were statistically significant., and both had predictive accuracies of 62 percent and 66.6 percent respectively. In Model 1a, three ODA characteristics except informativeness (Wald = 0.05, p value = n.s.) made unique statistical contributions to the model. Controlling for all the other ODA characteristics, the odds ratio values reveal that consumers or internet users are 1.54 times more likely to actively accept personalised ODAs featuring product brands;

1.28 times more likely to actively accept interactive ODAs featuring product brands; and 1.15 times more likely to actively accept product-featured ODAs presented with unforced exposure. In model 1b, which was based on service-featured ODAs, the statistics show that only interactivity (Wald = 8.24, p value < 0.001) made statistically significant contribution to the model, and its corresponding odds ratio value indicates that internet users are 1.67 times more likely to actively accept interactive service-featured ODAs than non-interactive ones.

Table 7.15 Logistic Regression with likelihood Ratio for Intensity of Behavioural Responses

Nature of Advertised Brand	ODA Characteristics	B	Wald	Sig.	Odds Ratio	95% C.I. for Odds Ratio	
						Lower	Upper
Model 1^a							
<i>Product-featured ODA</i>	Interactivity	0.25	7.33	0.01	1.28	1.07	1.54
	Informativeness	0.10	0.59	0.45 ^{n.s.}	1.11	0.85	1.43
	Personalisation	0.43	14.01	0.00	1.54	1.23	1.93
	Exposure Condition	0.14	4.60	0.03	1.15	1.01	1.31
Model 1^b							
<i>Service-featured ODA</i>	Interactivity	0.52	8.24	0.00	1.67	1.18	2.38
	Informativeness	-0.04	0.04	0.85 ^{n.s.}	0.96	0.62	1.47
	Personalisation	0.13	0.56	0.45 ^{n.s.}	1.14	0.81	1.60
	Exposure Condition	-0.03	0.05	0.82 ^{n.s.}	0.97	0.78	1.22
Model 2^a							
<i>Product-featured ODA</i>	Interactivity	-0.06	0.35	0.55 ^{n.s.}	0.94	0.93	2.55
	Informativeness	-0.15	0.75	0.38 ^{n.s.}	0.87	0.63	3.06
	Personalisation	-0.35	6.24	0.01	0.70	0.66	1.76
	Exposure Condition	0.08	1.08	0.30 ^{n.s.}	1.08	0.38	0.94
Model 2^b							
<i>Service-featured ODA</i>	Interactivity	0.43	2.81	0.09 ^{n.s.}	1.54	0.76	1.16
	Informativeness	0.32	0.66	0.42 ^{n.s.}	1.39	0.62	1.20
	Personalisation	0.08	0.09	0.77 ^{n.s.}	1.08	0.53	0.93
	Exposure Condition	-0.52	4.93	0.03	0.60	0.93	1.26
Dependent variables: Model 1 ^{ab} Ad Acceptance		Model 2 ^{ab} Ad Avoidance		n.s.= not significant			

The full unsorted model 2 (comprising both product-featured and service-featured ODAs) was also statistically significant, $\chi^2 = 17.08$, $df = 4$, p value = 0.001. The Hosmer and Lemeshow Test (H-L statistic) was not statistically significant (0.46), and the the model explained between 3.2% (Cox and Snell R^2) and 5.2% (Nagelkerke R^2) of the variance in

ad avoidance, as well as correctly categorized 83.4% of cases which means the model is quite a good fit. As illustrated in Table 7.15, above in model 2a, only one ODA characteristic, personalisation made a statistically significant ($B = -0.35$, Wald = 6.24, p value = 0.01) contribution to the model reporting an odds ratio of 0.70. This shows that controlling for all other ODA characteristics, internet users are 0.70 less likely to actively avoid product-featured ODAs that are personalised than those that are not personalised. Model 2a also shows that, service-featured ODAs that are not presented with forced exposures, are 0.60 less likely to cause active avoidance among consumers or internet users with all other ODA characteristics controlled for; given that exposure condition was the only significant contributor ($B = -0.52$, Wald = 4.93, p value = 0.03) to the model.

7.8 CHAPTER SUMMARY

This chapter presented the analysis of empirical data obtained from a sample of 592 internet users in order to test the postulated hypotheses geared toward achieving the research objectives. The methods, approaches and procedures spelt out in the methodological chapter were employed in analysing the research data. The demographic characteristics of the respondents and their internet usage information were presented in this chapter; this was followed by preliminary analysis particularly, descriptive statistics and exploratory factor analysis which helped reduced the scale items into a manageable set. The factors that emerged from the EFA and their corresponding measures were used in conducting a confirmatory factor analysis. At the CFA stage, the measurement model was specified, and its validity and reliability were assessed to ensure the required benchmarks were met, producing an acceptable and reliable model for the structural model analysis. The direct relationships as well as the mediation and moderation relationships posited were tested, and results indicate that four out of the five ODA characteristics examined in this study had significant influences on consumer attitude toward online advertising (ATOAs) as well as

behavioural responses with differing strengths of effects. Attitude toward online advertising was found to fully mediate the relationships between these four ODA characteristics (interactivity, personalisation, informativeness and exposure condition) and ad avoidance. For ad acceptance, attitude toward online advertising partially mediated its relationship with interactivity and personalisation; and fully mediated its relationship with informativeness and exposure condition. As the moderator variable in the study, user mode moderated the relationship between personalisation and ad acceptance as well as informativeness and attitude toward online advertising. Also, differences were found in consumers' behavioural responses to ODA based on the nature of the advertised brands. These results are discussed in detail in the following chapter.

CHAPTER EIGHT

DISCUSSION OF RESEARCH FINDINGS

8.1 CHAPTER OVERVIEW

This chapter discusses the findings of the study obtained from the data analysis conducted in the preceding chapter. Discussions were done in relation to extant literature as results are presented in the context of previous studies, the research framework, and the setting of the study, and were structured on the basis of the research questions as well as the formulated hypotheses. Specifically, the chapter is in three major sections including the opening section. The second section provides a brief overview of the study, and further discusses the research findings to address the stated research questions in the introductory chapter of the study. The section first discusses the stimuli effect of ODA characteristics on ATOA and behavioural response, this is followed by the mediating role of ATOA in the relationship between the ODA characteristics and behavioural responses, the moderating influence of user mode on the relationship between ODA characteristics and ATOA as well as behavioural responses are also presented, and the section wraps up with discussions on the variations in the direction and intensity of behavioural responses based on the nature of the advertised brand. A summary of the chapter is then presented in the third section.

8.2 INTRODUCTION AND DISCUSSION OF FINDINGS

The overarching aim of this study is to examine the effect of ad characteristics, consumer attitude toward online advertising, and user mode on behavioural responses to online display advertising. Arguments put forth in earlier chapters of the study, pointed to ODA as an essential form of online advertising which currently accounts for 49.7% of the online advertising market, and is its fastest-growing and dominant category (eMarketer 2018), thus, instigating marketers or several firms to invest heavily in display advertising

(Fridgeirdottir & Najafi-Asadolahi, 2018). However, issues of advertising clutter, and consumers' selective attention to display ads have left practitioners in need of vital indicators to generate desired responses to their ads. A thorough review of the ODA literature suggested that to provide vital insights and offer strategic ways to enhance positive online advertising effects and decrease negative outcomes (Brajnik & Gabrielle, 2010; Tang *et al.*, 2014), a clear and explicit examination of design element or executional characteristics, as well as consumer-related factors are essential areas of focus. Springing on the stimulus-organism-response (SOR) model, and the reversal theory, this study contends that to better understand consumer behavioural responses to online display ads, an assessment of specific ODA features or characteristics (interactivity, placement, informativeness, personalisation and exposure condition) that serve a stimuli role, in consort with pertinent consumer-related variables and situations which function as intervening (attitude toward online advertising) and contingency factors (user mode) may offer valuable insights on their integrated influence in driving positive or negative behavioural responses. The major results from the theoretical and empirical investigations carried out in pursuit of this aim are discussed in detail in the succeeding sections of this chapter.

8.2.1 The Stimuli Effect of ODA characteristics on ATOA and Behavioural Response

The study first sought to establish the relationship between ODA characteristics and attitude toward online advertising, and behavioural responses. Five ODA characteristics were examined in this study namely interactivity, placement, informativeness, personalisation and exposure condition. Results from the data analysis revealed that placement does not exert any influence on consumers' or internet users' internal responses – attitude toward online advertising (ATOA), neither does it on their approach/avoidance behavioural responses. Within the tenets of the SOR model, placement of ODAs from the perspective of Ghanaian consumers or internet users does not serve as a useful stimulus that

generates internal or any form of behavioural response. Personalisation, interactivity and informativeness however, surfaced as notable ad characteristics that directly influence consumers' approach behavioural responses to online display advertising (ad acceptance). Personalisation emerged as the only ODA characteristic that directly influences negative behavioural responses (ad avoidance). The study results also show informativeness, personalisation, interactivity and exposure condition as significant influencers of attitude toward online advertising (ATOA). Because a unique contribution of this study lies in its examination of the effects of this individual ODA characteristics, the discussions in this section are organised to focus on each ad characteristics and the stimuli function they play in influencing consumers' internal response (ATOA) as well as approach-avoidance behavioural responses (ad acceptance and ad avoidance).

8.2.1.1 Personalisation

Among the ODA characteristics revealed to serve a stimuli function, personalisation emerged as the only predictor of consumers' attitude toward online advertising as well as both ad acceptance and ad avoidance. As earlier explained, personalisation denotes the degree to which advertising messages are tailored to reflect preferences, lifestyle and specific cultural and geo-demographic characteristics of individual consumers (Leppäniemi & Karjaluoto, 2008). The effects of personalisation in the context of online display advertising has been of vital attention in prior recent studies with findings generally suggesting that personalised ads enhance more attentive processing of ads and enhance favourable attitude toward such advertisements (Campbell & Wright, 2008; Sahni *et al.*, 2018). Studies such as van Doorn and Hoekstra (2013) also opine that personalisation increases negative perceptions and generate unfavourable responses among consumers resulting from feelings of intrusiveness.

Contrary to the mixed findings in prior literature, fairly consistent results emerged in this study as personalisation positively influenced ad acceptance and consumers' ATOA, and negatively influenced ad avoidance. Although its effects on all three response variables were significant, relative to ad acceptance and ATOA, the effect of personalisation on ad avoidance was less prominent. The negative influence of personalisation on ad avoidance, disputes the submission of researchers that tracking online activities and collection of personal data are at variance with consumers' privacy concerns (Baek & Morimoto, 2012), which results in higher levels of intrusiveness and uneasiness especially in cases where ads reflect consumers' exact preferences to a high degree (Bleier & Eisenbeiss, 2015a). In essence, in this study, consumers consider personalised display ads as less distracting, and the negative influence suggest that the more personalised an ad, the less consumers will avoid it. A conceivable explanation put forth as accounting for the findings in the current study is that, consumers are increasingly becoming cognizant of the tracking of their online activities as well as collection and analysing of their personal data and information (Liu & Matilla, 2017), and this knowledge could be a probable buffer for the negative outcomes of personalisation suggested by earlier studies.

The significant positive effect of personalisation on ad acceptance and ATOA nonetheless, affirms perspectives and findings from studies such as Tucker (2014), Aguirre et al. (2015) and Liu and Matilla (2017). The work of Aguirre et al. (2015) for instance, found that consumers' perception of an ad as being personally relevant, substantively influences their favourable attitude and responses toward such ads. Tucker (2014) in their study as well found that personalised display ads are twice as effective as non-personalised ads since they match the preferences and tastes of consumers, and so attract more consumer attention, engagement and favourable evaluations. These positive influences are driven by the

heightened benefits consumers perceive they may gain from such ads (Lambrecht & Tucker, 2013) since messages in personalised ads are assumed to be directed toward them.

Overall, it can be gathered from the findings of this study that in the Ghanaian context, display ads that are tailored to consumers' shopping situation at the time of internet usage, browsing activities, or exposure are likely to engender more acceptance manifested in interactions and attention to the ad. Also, to get consumers to perceive display ads more favourably, advertisers and publishers need to demonstrate knowledge of their consumers or internet users, evoking in them a feeling of uniqueness by making product recommendation through ads that match their behavioural, preferential and locational needs (Liu & Matilla, 2017). Furthermore, with the volume of online display advertising on a constant increase, generic (unpersonalised) ads are gradually becoming less effective. Thus, in order to break through the clutter, and reduce negative consumer responses to display advertising, ODAs should be personally relevant or meaningful to consumers among other things. This is particularly vital as personalisation emerged as the only ODA characteristic that directly, significantly and negatively influences ad avoidance in this study.

8.2.1.2 Interactivity

As a defining feature of the internet, interactivity is also an essential characteristic of online advertising and has been posited to play a vital role in the effectiveness of online display advertisements (Jung *et al.*, 2014) and was thus, examined in this study. Besides personalisation, interactivity was also found to have significant influence on ATOA ($\beta = 0.15$, t -value = 3.96, $P < 0.001$) and ad acceptance ($\beta = 0.18$, t -value = 4.27, $P < 0.001$) but not ad avoidance ($\beta = -0.01$, t -value = -0.12, $P = n.s.$). Interactivity is one of the commonest and a default feature of online ads that allows consumers to click through to brand pages in order to access more product or service information (Rosenkrans, 2009). Interactivity as examined

in this study however, transcended this default aspect of ads to include their ability to allow consumers to provide feedbacks, provide instantaneous information in response to consumer request or enquiries, and make consumers feel that advertisers want to listen to them.

The findings that interactivity did not exert any influence on ad avoidance failed to support the stated hypothesis (H6 aii), which posited its negative effect on ad avoidance. This finding was unexpected since Pashkevich *et al.* (2012) in their study asserted that interactivity reduces negative advertising effects or outcomes. This is on the basis that higher levels of interactivity offer users a certain degree of control over the ad content to which they are exposed, and the presence of such lessens the distractive and intrusive perceptions they hold of such ads (Johnshon, 2013). Conversely, McCoy *et al.* (2008) earlier contended that consumers find the mechanism of control as invasive since they will have to wilfully close, move or interact with the ad when their actual desire may be to not have the advertisement at all. Gleaning from the results in the CFA, two scale items of interactivity which depict control; did not emerge as valid measures of the construct in the Ghanaian context of online display advertising, hence providing a probable explanation for the lack of effect on ad avoidance.

The positive relationship between interactivity and consumers' acceptance of online display ads as well as their favourable perceptions of such ads are supported in this study. Interactive ads are known to allow consumers to participate in their ad viewing experience which encourages them to engage with the ads and so stimulates more positive behavioural response (Rosenkrans, 2010). Jung *et al.* (2011) affirm that consumers develop favourable perceptions about display ads they find entertaining, and the entertainment value of an ad is influenced by the level of ad interactivity. The findings also appear consistent with Pashkevich *et al.* (2012), who found that the interactive element of skippable video ads is a

valuable feature influencing consumer attitude. By virtue of its inventive qualities, interactivity is also contended to urge users to pay closer attention to ads, and also induce cognitive involvement in processing such ads (Jung *et al.*, 2014). The study findings in this regard, therefore, lend credence and further support to extant research which found interactivity as an essential determinant of online advertising effectiveness (Campbell *et al.*, 2010; Bleier & Eisenbeiss, 2015b), and also from the viewpoint of the SOR model, establishes interactivity as an essential stimulus that generates positive internal responses and approach behaviours.

8.2.1.3 Informativeness

Also of significance to consumers' ATOA and ad acceptance is the informativeness of display ads. The provision of information has long been a basic role of advertising and has been shown to be a fundamental reason why consumers approve of advertisements in all media channels (Rotzoll, 1990). Informativeness is considered one of the content-driven characteristics of advertising and it depicts the degree to which advertising offers valuable information to consumers. Kim *et al.* (2010) argue that because consumers require beneficial information that is easily understandable, they expect online ads to be informative and helpful to aid them detect product/service brand distinctions and make choices more readily. The study therefore, proposed that informativeness has a significant positive influence on attitude toward online advertising and ad acceptance, and these postulations were supported by the study findings which revealed significantly positive relationships between consumers' perception of display ads as being good, convenient and relevant sources of valuable product/service information, and their ATOA as well as their acceptance of display ads. The reasoning here is that consumers will most possibly find display ads interesting, essential and have favourable opinions of them if the ads make complete product/service information easily accessible. In such instances, consumers may also most likely read/watch

online display ads to the end and click on the ads and links provided in such ads. Thereby liking and interacting with the ads on the basis of the ad's informativeness (Mahmoud, 2014).

These findings find support in the work of Goodrich *et al.* (2015) who in the context of video ads assert that informativeness is a way to improving receptivity toward and interaction with online ads; and online ads with beneficial information are perceived more favourably by internet users. The findings also confirm the works of Li-Ming *et al.* (2013) and Mahmoud (2014) who point to informativeness as a gratifier of the informational needs of internet users thus, driving them to attend to ads that fulfil this need. Zha *et al.* (2015) therefore, admonish that in the online environment where advertisers intend to appeal to consumers' and have them respond positively to their ads, it behoves them to make ads as informative as feasible. This is particularly helpful if their consumers actively use online ads for information gathering. As can be gathered from the internet usage profile of the study sample, a majority (approximately 35%) of them use the internet mainly for information (research) purposes, which provides further insight into the significant influence of informativeness as a vital stimulus that engenders positive attitude toward online advertising as well as approach behavioural response in the Ghanaian setting.

Regarding the absence of a relationship between informativeness and ad avoidance, evidence in extant literature are contrary to the finding in this study. Some of these evidences suggests that when consumers find the information provided in display advertisements useful, their perceptions of intrusiveness and irritation are lessened (Goodrich *et al.*, 2015). It is also argued by Rejón-Guardia and Martínez-López (2014) that perceptions of intrusion and irritation are mental states that drive avoidance of online ads and other negative behavioural outcomes that may be detrimental to a firm's advertising goals. Since the study

failed to prove that ODA informativeness lessens or reduces ad avoidance, it seems fairly reasonable to assume that the relationship between the two constructs may be better explained through some other mechanism which is discussed in a subsequent section on the mediating role of ATOA as postulated by the SOR model.

8.2.1.4 Exposure Condition

Exposure condition also surfaced in this study as a major ad characteristic impacting consumers' attitude toward online advertising. Within the boundaries of this study, exposure condition was conceptualised to initially comprise variables such as how long an ad is, the frequency with which it is repeated, and the degree to which consumers are forced to view the ad (nature of the exposure). After the exploratory and confirmatory analysis however, the resultant indicators measuring the construct in the final model were those of the nature of the exposure that is the extent of forceful or voluntary exposure to online ads (Edwards *et al.*, 2002; Li & Meeds, 2007). The significant relationship found between exposure condition and ATOA indicates that consumers' perception of the non-interference of display ads in addition to their non-intrusion on the content they are accessing at the time of exposure have a noteworthy influence on their attitude toward online advertising.

As has been reiterated in earlier chapters, the internet is a more goal-oriented medium unlike traditional media. Owing to its goal-orientedness, the disruptions consumers experience during their online activities are correspondingly more amplified as ads become sources of inconvenience hindering them from their actual reasons for being online (Rejón-Guardia & Martínez-López, 2014). For this reason, within the domain of online display advertising, such issues as being able to choose freely what they want to see, not having ads interfere with their online activity, as well as not intruding on the content they wish to access, hold so much significance for consumers or internet users.

Evidently, findings in this study confirm the position of previous studies (e.g. Hegner *et al.*, 2015) who have reported negative perceptions of consumers towards forced exposure ads propelled by perceptions of intrusiveness. The study findings are as well in consonance with other scholarly assertions that when consumers are coerced to watch ads if they wish to continue with their online activities, higher perceptions of ad intrusiveness and more negative attitude toward the ad are produced which then affects other consumer behavioural outcomes (Baek & Morimoto, 2012; Campbell *et al.*, 2017). These assertions have been confirmed on the one hand, within the study context as unforced exposure was found to significantly influence consumer attitude toward online advertising.

On the other hand, because prior empirical works in the general online advertising literature have established perceived goal impediment as a predictor of ad avoidance (e.g. Yoon *et al.*, 2011), we expected that unforced exposure may reduce ad avoidance. More so because, Goldfarb and Tucker (2011) found that when ad messages interrupt but do not totally cover the webpage's content, consumers may view such ads as mere disturbances but may not necessarily avoid such ads. These suppositions were however, not supported in the current study as exposure condition did not to a significant extent influence (reduce) ad avoidance as posited. This affirms that avoidance behaviours of internet users or consumers in Ghana is not directly driven by exposure conditions but may do so through some other underlying mechanism. Notwithstanding, findings regarding ATOA call for advertisers to display online ads with minimal forced exposure or more essentially in voluntary modes. This is more so feasible as the internet by means of evolving and complex technologies aids in generating varying levels of exposure (Hussain *et al.*, 2018) unlike traditional media.

8.2.2 The Mediating Effect of ATOA in the ODA Characteristic-Response Relationship

Establishing the influence of ODA characteristics on behavioural responses and ATOA; particularly, acknowledging the lack of direct influence of most of the ODA characteristics on avoidance behaviours, the study also sought to further examine ATOA as an internal process that may mediate the positive and negative relationships between the ODA characteristics and approach behaviours as well as avoidance behaviours of consumers respectively. According to the SOR model, consumers react to stimuli in two stages, the first are internalised affective or cognitive responses indicated as organism, which drive the external response (Chen & Yao, 2018). In order to establish ATOA as a consumer-related conditions under which the influences of ODA features are enhanced, in this thesis, ATOA is operationalised as the organism element of the study, grounded on early scholarly positions (Petty *et al.*, 1983) that attitude formation is an internal process that eventually guides behaviour. This section, therefore, addresses the second research question “how does consumer attitude toward online advertising mediate the relationship between ODA characteristics and consumer behavioural responses?”

Generally, results of the mediation analysis provide support for the intervening role of ATOA in the relationship between the ODA characteristics (Interactivity, Personalisation, Informativeness and Exposure condition) and ad avoidance as well as ad acceptance. Specifically, the findings revealed that ATOA partially mediates the positive relationship between interactivity and ad acceptance as well as between personalisation and ad acceptance; all other relationships were fully mediated (see Figure 6.3). In the case of ad avoidance, these findings suggest that ATOA strongly and significantly mediated the negative influence of the ODA characteristics on consumers’ avoidance behaviours. The inference is that, even though the ODA characteristics do not directly lessen consumers’ avoidance behaviour, they do so indirectly through consumers’ ATOA as a facilitating

variable. To put this differently, any possibility of the ODA characteristics negatively influencing ad avoidance are only existent through the attitude they form toward online advertising.

These findings, therefore, support the view of the SOR model which fundamentally hinges on the idea that the relationship between any stimuli and responsive behaviour is intervened by the internal processes of the organism exposed to such stimuli (Kamboj *et al.*, 2018). Emperically, the findings support Sung and Cho's (2012) assertion that consumer attitude plays a critical role in the effectiveness of online advertising; and also corroborate Wang and Sun's (2010a; 2010b) position that attitude toward online advertising mediates the relationship between consumers belief about online advertising in general, and their online behaviours of ad clicking and shopping frequency. Other past studies have demonstrated that consumers' attitude toward online advertising which stems from perceptions they hold about online ads (Réjon-Guardia & Martinez-López, 2014), affect their responses toward online advertising (Saadeghvaziri *et al.*, 2013). Positive attitude toward online advertising has also been associated with more positive behavioural responses toward ads and even purchase intentions (Goodrich, 2011; Goodrich *et al.*, 2015).

On the basis of these findings therefore, ATOA is extremely relevant in the context of display advertising in enhancing consumer's approach behaviours and reducing avoidance behaviours. Consistent with previous studies on online advertising, it seems reasonable to state that, for consumers or internet users to be responsive and attentive to display ads as well as interact with them, they must have generally favourable perceptions of, like, and consider online advertising as essential. Much more pertinently, for ODA characteristics to reduce consumers' avoidance of display ads, these characteristics must first generate positive attitude toward online advertising. In other words, in the absence of a general

ATOAs, interactivity, informativeness and exposure condition hold no relevance for consumers avoidance of display ads. Since these findings agree with prior empirical results and lend credibility to the SOR model, the study thus, provides a solid footing for making generalisation particularly in the context of Ghanaian consumers that, attitude toward online advertising is a strong mediator of the ad characteristics-behavioural response relationship.

8.2.3 The Moderating Effect of User Mode

As a follow-on to earlier discussions, this section discusses findings from the analysis on the influence of user mode on the nexus between the ODA characteristics and the behavioural responses of consumers as well as between the ODA characteristics and consumer attitude toward online advertising. Consistent with the overarching aim of this study, it was pertinent to examine how a situational or an individual factor such as the goal orientation of consumers driven by their internet usage motives regulates their attitude toward online advertising and their behavioural responses. Internet usage motives are in four categories according to the internet motivation inventory classification framework – researching, shopping, communication, and surfing (Rodgers *et al.*, 2007). These internet usage motives per the reversal theory, are classified into telic and paratelic user modes on the basis that those with researching and shopping motives are more goal-directed/serious-minded (telic) while users that are mostly surfing and communicating are less goal (experience)-directed/playful-minded (paratelic) (Apter, 1984; Rodgers *et al.*, 2007). These two user modes were the focus of this study given that consumer perceptions of, and reactions to online advertising are conditioned by these dimensions (Wang *et al.*, 2013; Kim *et al.*, 2014).

This study substantiated this claim by conducting a moderation analysis using the supported direct paths. A multigroup moderation analysis was conducted following the suggestion of

Anderson and Gerbing (1988). The results of the analysis revealed that user mode moderated the strength and direction of two paths across the two user groups – the relationship between personalisation and ad acceptance as well as the relationship between informativeness and attitude toward online advertising. Specifically, the effect of informativeness on ATOA was stronger for paratelic users than for telic users. Likewise, personalisation had a significant positive effect on ad acceptance among telic users but not among paratelic users. This study to some extent provides empirical support to prior studies that have demonstrated how user mode regulate the effectiveness of online advertising (see Simola *et al.*, 2011; Eshghi *et al.*, 2017; Bleier & Eisenbeiss, 2015a), and also corroborate assumptions regarding the telic vs. paratelic dimension of the reversal theory (Seyeghorban *et al.*, 2016).

Regarding the informativeness-ATOA relationship, it may be reasoned that because telic users are driven by defined objectives and directed search, they focus on specific tasks and are not very attentive to other peripheral activities as much as paratelic users who are driven by the browsing experience and other activities that come with it (Bleier & Eisenbeiss, 2015a). For this reason, telic users are less likely than paratelic users to recognise and recall ads, better still to recollect how informative such ads are (Zanjani *et al.*, 2011). And so, the influence of this perception on subsequent attitude toward online advertising being stronger for paratelic users is thus expected. In the case of personalisation and its impact on ad acceptance, it has been contended by Bleier and Eisenbeiss (2015a) that because personalised display ads catch consumers attention more easily, they are likely to be seen as more disrupting. However, in the context of this study, personaliation had a strong direct impact on ad acceptance generally; and in the moderation analysis, for telic users but not for paratelic users. In providing a probable explanation for this finding, this study argues on the basis of relevance and suggests that telic users who are more goal-directed give more attention to related than unrelated materials when online (Stanaland & Tan, 2010; Janssens

et al., 2012), and as such are more receptive towards display ads that are tailored to their shopping needs, that make recommendations matching their needs, thus conferring a sense of uniqueness on them as internet users. In this sense, this finding appears incongruent with Schuman *et al.* (2014) who found that appealing to reciprocity in lieu of relevance increases acceptance of online advertising among telic users.

These results go to show that marketers and advertisers must consider it prudent to examine consumers' internet usage motive prior to making decisions regarding how to personalise ads to reflect their preferences and interests, as well as deciding on the degree of informativeness with which to imbue such ads. This would be particularly helpful at the individual consumer level because usage motive or task/goal-directedness normally varies among consumers, and also because with complex tracking algorithm and technologies, advertisers have access to large volumes of consumer data even at individual levels.

8.2.4 Behavioural Responses to Product and Service-featured ODAs

Generally, product types and peculiarities cause some differences in online advertising effects (Belanche *et al.*, 2017). Evidence from the online advertising literature points to disparities in consumer processing and responses to the online ads of different product categories (e.g. Bradley & Meeds, 2004; Flore *et al.*, 2014; Eshghi *et al.*, 2017). In view of this, from the onset, this study argued that possible disparities in online advertising responses could be theorised for products and services particularly because the extant ODA literature is deficient in empirical evidence on such disparities. Besides, given the increasing imbibing of the service-dominant logic which suggest a diminishing relevance of the goods-service dichotomy (Vargo & Lusch, 2017), this study attempted to understand the disparities (or lack thereof) that might exist in consumer responses to online display ads that feature product brands and those that feature service brands. The study's outcome in this regard, revealed

quite interesting perspectives in the ODA subgroups. First, the ANOVA test revealed that avoidance was higher for service-featured ODAs relative to product-featured ODAs while acceptance was higher among consumers exposed to product-featured ODAs compared to those exposed to service-ODAs.

Regarding the intensity of behavioural response, the logistic regression results (see Table 7.15) show that while interactivity, personalisation and exposure condition were all significant influencers of active acceptance for product-featured ODAs, interactivity was the only statistically significant influencer of active ad acceptance for service-featured ODAs. A possible explanation to this lies in the fact that since services are intangible in nature, requiring interactions with both providers and consumers to be produced (Davis, 2007; Skaalsvik & Olsen, 2014), for display ads featuring service brands consumers are driven by the need to interact, thus using interactivity of the ad as a pseudo for the providers. Results also showed that contrary to service-featured ODAs, personalisation for instance, was a significant negative predictor of active avoidance for product-featured ODAs; while exposure condition was a viable predictor of active avoidance for service-featured ODAs relative to product-featured ones. These findings suggest that brand types (in terms of product and services) are relevant and play essential roles in eliciting behavioural responses in varying directions and intensities (Tang *et al.*, 2014; Eshgi *et al.*, 2017). As such, it seems prudent for advertisers to consider their market offering when making choices regarding the ODA characteristics to mix and match so as to elicit the desired behavioural response. This is even more so relevant for marketers of service brands since avoidance was found to be higher for service-featured ODAs.

8.3 CHAPTER SUMMARY

This chapter discussed the findings of the study in order to address the research objectives and questions outlined in the introductory chapter, and so, the discussions were structured to address, the effect of the ODA characteristics on consumers' attitude toward online advertising, and behavioural responses. This was followed by discussions on the mediating role of attitude toward online advertising as well as the moderating effect of user modes on these relationships, and finally discussions on behavioural responses to product and service-featured ODAs. The findings of the study supported the perspectives and assumptions of both the SOR model and the reversal theory and offer important pointers for the design of online display advertising strategies. The next and final chapter presents the research conclusions and the contributions of the study to theory. The study also provides strategic implications the study holds for managerial practice. At the same time the chapter highlights and reflects on the processes employed in the study, acknowledges the limitations of the thesis and also presents avenues that may be the focus of future studies.

CHAPTER NINE

SUMMARY, CONCLUSIONS AND IMPLICATIONS

9.1 CHAPTER OVERVIEW

This, as the final chapter of the study, summarises the research, draws conclusions, presents implications and proffers directions for future research. Particularly, the chapter assesses vital outcomes from the study, and discusses the contributions the study makes to the academic literature as well as managerial practice. As such, beside the overview section, the chapter is divided into five major sections. A succinct summary of the research problem and objectives are provided, and key findings corresponding to these objectives are presented. The next section reflects on the theoretical framework, the conceptual framework and the methodological approaches employed in order to further establish their appropriateness as they pertained to the conduct of this thesis. The chapter then presents contributions this study makes to theory as well as implications for practice. This is followed by the research conclusions and the limitations of the study, and finally vital pointers that future research may pursue in addressing consumer response issues in online advertising.

9.2 SUMMARY OF THE RESEARCH AND MAJOR FINDINGS

The overall aim of this study was to examine consumer behavioural responses to online display advertising by delineating and assessing how specific ODA characteristics, in consort with consumer attitude toward online advertising as well as a situational factor such as user mode positively and negatively influence these responses from a developing sub-Saharan African country context. These ad-related and consumer-related issues though of theoretical and practical concern for online advertising, were found to have received limited scholarly attention, and extant research attention to these issues appeared fragmented and

less disciplined. A thorough review of the literature on ODA revealed five pertinent ad-characteristics namely, interactivity, placement, informativeness, personalisation and exposure condition that needed further research focus to determine how they affect the effectiveness of online display ads. In addition, to provide further insights into which consumer-related factors may also impact consumer responses to display advertising, the study from the perspective of the stimulus organism response (SOR) model, operationalised consumer attitude toward online advertising (ATOA) as an internal “organism” process that may transmit the effect of the ODA characteristics onto consumers’ approach and avoidance behavioural responses. The key constructs in the study, that is the five ODA characteristics were theorised as stimuli or advertising cues that are vital in eliciting both internal and external consumer responses.

Also, from the viewpoint of the reversal theory, the study conceptualised user mode as a vital contingency variable that may confound the relationship between the ODA characteristics (stimuli) and consumer ATOA (organism) as well as ad acceptance and ad avoidance behaviours (responses). In order to achieve its broader aim, the study started off with four key research objectives in the introductory chapter: (1) to determine the relationship between the ODA characteristics and consumer behavioural responses, (2) to examine the intervening role of attitude toward online advertising in the ODA characteristic-behavioural response relationship, (3) to assess the moderating effect of user mode on the relationship between the ODA characteristics and ATOA as well as behavioural responses, and (4) to explore the variations in behavioural responses based on the nature of the advertised brand.

Following the introductory chapter, the study context was discussed and recent developments in online advertising in the Ghanaian setting were presented in order to put

the entire research work in a suitable perspective. The theoretical framework within which the study was conducted was discussed focusing on the SOR model and the reversal theory as appropriate theoretical foundations that help explain the interrelationships the study seeks to address. Following this was a fairly systematic enquiry into the literature on ODA spanning a ten-year period (2009-2018) in order to understand relevant issues in the field. Various gaps were identified through the review relating to issues, context, theoretical and methodological approaches. Discourses in the three preceding chapters resulted in the development of a research framework that guided the empirical aspect of the study.

The assumptions underlying the framework were that, that online display advertising (ODA) is characterised by certain stimuli/features conceptualised in this thesis to include interactivity, placement, informativeness, personalisation, and exposure condition. These ad characteristics are postulated to have a direct influence on consumer behavioural responses (ad avoidance and ad acceptance) to display ads. The framework also suggests that these influences are enhanced (mediated) by consumer attitude toward online advertising. Underpinned by the reversal theory, the framework further purports that the effects of the ODA characteristics on attitude toward online advertising, and behavioural responses are moderated by internet user mode. Springing on these assumptions, various conceptualisations and prior empirical research in the broader online advertising and ODA literature, the study derived hypotheses that were tested using a combination of online and offline surveys of 592 internet users in Ghana who are exposed to online display advertising. The analysis of the empirical data yielded some valuable results which were discussed in relation to extant literature and the study context in the immediate preceding chapter. These findings are recapped or presented in precis based on the research objectives in the Table 9.1 below.

Table 9.1 Summary of Key Findings from the Study

Research Objectives	Key Findings
<p>Objective One:</p> <p><i>Determine the relationship between ODA characteristics and consumer behavioural responses.</i></p>	<p>The study revealed that interactivity, informativeness and personalisation are essential ODA characteristics that directly elicit approach behaviours (ad acceptance) among consumers; thus, providing evidence to show that these characteristics serve a stimuli function that influence attentive processing of ads as well as consumers’ interaction with such ads. Relevantly, personalisation emerged as the only ODA characteristic that influences avoidance behaviours by lessening consumers’ inclination to ignore, skip or scroll away from online display ads. In the case of approach behaviours, interactivity has the strongest influence on ad acceptance, followed by personalisation and informativeness.</p>
<p>Objective Two:</p> <p><i>Examine the intervening role of consumer ATOA in the relationship between ODA characteristics and behavioural responses.</i></p>	<p>Outcomes of the study supported the mediating role of consumer ATOA in the ODA characteristic-behavioural response relationship. Particularly, consumers’ attitude toward online advertising enhances the effects of interactivity, personalisation, informativeness and exposure condition on ad acceptance as well as ad avoidance. More definitely, even though most of the ODA characteristics do not directly influence avoidance behaviours among consumers, they do so indirectly through ATOA as a facilitating variable. These findings evidently support the viewpoint of the SOR model which suggest that the relationship between any stimuli and responsive (approach/avoidance) behaviour is intervened by the internal processes of individuals exposed to such stimuli. By this, ATOA is established as a crucial internal response that facilitates the positive effect of ODA characteristics on approach behaviours; and also transmits their negative effect on consumers’ avoidance behaviours toward online display advertising.</p>
<p>Objective Three:</p> <p><i>Assess the moderating effect of user mode on the relationships between ODA characteristics, and ATOA as well as behavioural responses.</i></p>	<p>The study provided evidence to fairly buttress the telic vs. paratelic perspective of the reversal theory by demonstrating that user mode moderates the relationship between informativeness and ATOA as well as the relationship between personalisation and ad acceptance. To be more precise, the effect of informativeness on ATOA was stronger for paratelic users than for telic users; while personalisation had a significant positive effect on ad acceptance among telic users but not among paratelic users. Thus, making the need for advertisers to examine and keep abreast with consumers’ internet usage motives a vital endeavour.</p>
<p>Objective Four:</p> <p><i>Explore the variations in consumer behavioural responses based on the nature</i></p>	<p>The study’s outcome in this regard, revealed differences in behavioural responses across the ODA subgroups. On the basis of these outcomes, avoidance was higher for service-featured ODAs relative to product-featured ODAs while acceptance was higher for product-featured ODAs compared to service-featured ODAs. What is more, interactivity, personalisation and exposure condition were all significant influencers of active acceptance for</p>

<p><i>(product vs. service) of the brand being advertised.</i></p>	<p>product-featured ODAs, whereas, interactivity was the only statistically significant influencer of active ad acceptance for service-featured ODAs.</p> <p>Results also showed that contrary to service-featured ODAs, personalisation for instance, was a significant negative predictor of active avoidance for product-featured ODAs; while exposure condition was a viable predictor of active avoidance for service-featured ODAs relative to product-featured ones. These findings point to brand types (product and services) as relevant and vital in evoking behavioural responses in varying directions and intensities.</p>
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9.3 REFLECTIONS

For any valuable research work, it is essential that the researcher does some form of retrospection on the procedures, approaches and routes taken in providing answers to the stated research questions and objectives. The goal for such appraisal is to re-validate and further substantiate the suitability of the various designs and processes employed to arrive at the most useful contributions made by the study relative to alternative approaches that could have been used. In light of this, discussions in the section are centred on the theoretical framework, the conceptual framework, and the methodological approach which represent three key areas on which this study is grounded.

9.3.1 Reflections on Theories

The review of extant ODA literature conducted in the third chapter of the thesis pointed to the lack of theory-based approaches to examining online display advertising effects relative to atheoretical (e.g. category and model-based) approaches. Additionally, the nature of the study necessitated the application of theories that would support the integrated role of ad-related and consumer-related factors as vital to determining online display advertising outcomes. In view of this, the study employed two main theories namely, the Stimulus-Organism-Response model and the Reversal theory as pertinent theoretical perspectives that could shape and direct the conduct of this study. The choice of these theories was predicated on evidence from the literature highlighting both ad-related and consumer-related factors as

vital to online display advertising effects. Consequently, the SOR model assisted in understanding and explaining the link or association between the ODA characteristics, consumers' ATOA, and their approach/avoidance behaviours towards online display ads. The study within the framework of the SOR model therefore, conceptualised ad characteristics as major online display advertising stimuli, attitude toward online advertising as an essential internal/organismic response that may transmit the effect of the stimuli onto consumers approach and avoidance responses. In retrospect, the SOR model was the most apt theory to help situate ODA characteristics, ATOA, and behavioural responses as key constructs in light of the research objectives and framework. Also, the literature review indicated that the effectiveness of online display advertising, measured in terms of consumers' reaction to such ads, are largely regulated by their goal-directedness. These assertions derive from the goal orientation of the Internet as a medium since consumers and users go online for various specific purposes (e.g. communicate, surf, shop and search). As such, the reversal theory particularly, the telic vs. paratelic dimension, which offers insights into how these task/goal directions of consumers may affect their responses to display advertising was also applied to the study.

Given the researcher's cognisance of the limited ability of the individual theories to fully explain and provide a comprehensive understanding of the relevant issues addressed in this thesis, the two theories were used in conjunctive manner. The use of these two theories provided a clearer and more comprehensive understanding of the research problem, objectives, the research framework that captured the interrelationships the study examined as well as the methodological procedures utilised. Though these theories have been sparsely used by extant works on online display advertising (Tang *et al.*, 2014; Bleier & Eisenbess, 2015b; Seyedghorban *et al.*, 2016) particularly, in such complementary manner as done in this study, they are nonetheless not new to the the subject under investigation. It also seems

appropriate to point out that insofar as understanding consumer responses to online advertising are concerned, these theories are far from being exhaustive, although they were the most useful within the boundaries of this thesis. Albeit it is believed that theories such as the elaboration likelihood model, the mere exposure effects theory, selective attention theory, and reactance theory among others could have revealed added viewpoints, it is also the researcher's contention that such theories would not have provided deeper and more ample understanding of the research objectives particularly, in light of the research framework. This would have restricted the contributions the thesis seeks to make, that is enhance understanding of behavioural response issues in ODA research. For this reason, their exception from this thesis did not by any means undermine or weaken the findings of this study, given that the applied theories provided valuable support for the study and its outcomes.

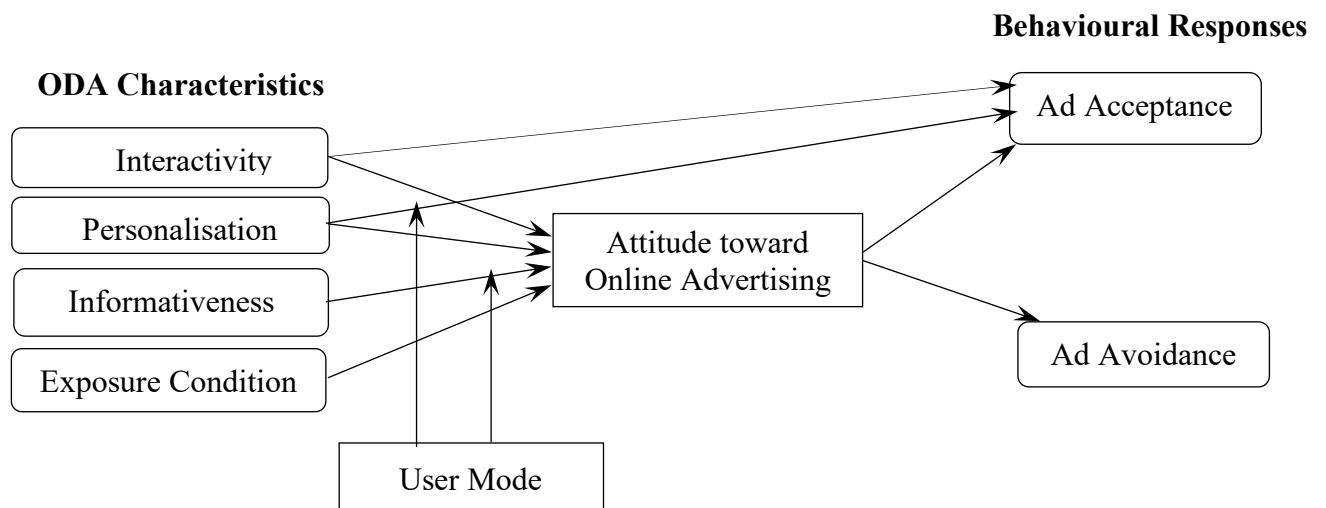
9.3.2 Reflections on Conceptual Framework and Post-Study Framework

As has been reiterated in several sections of this research, following the specification of the theoretical framework, and a thorough review of the ODA literature, in the fifth chapter of the thesis, a conceptual framework was developed to guide the empirical conduct of the study. The framework used relevant theories, concepts and constructs from the literature review to establish interconnections and propositions among ODA characteristics, attitude toward online advertising (ATO), and behavioural responses of consumers. The framework also incorporated user mode as a contingency variable that moderated the other relationships, as well as control variables such as gender, age, internet usage rate and familiarity with online advertising.

The results or outcomes of the study provided support for the constructs in the conceptual framework and confirmed most of the hypotheses posited in the study in the sense that one

ODA characteristic (placement), and some other hypothesised relationships illustrated in the initial conceptual framework presented in chapter five, were not supported. As such, the proposed conceptual framework was revised to reflect results from the data analysis. The post-study framework pictured in Figure 9.1 relative to the initial framework, best depicts relevant ODA characteristics that influence Ghanaian consumers' or internet users' attitude toward online advertising and, in turn, their behavioural responses. The framework as well depicts the two paths or relationships (personalisation– ad acceptance, and informativeness– attitude toward online advertising) that are moderated by internet user mode. In essence, the post-study framework is a diagrammatic recapitulation of the study outcome.

Figure 9.1 Post-Study Framework



Although these key variables included in the conceptual framework were representative and essential to achieving the research aim and providing answers to the research problem, it is the submission of this thesis that, they were not all-inclusive. Given the wide array of ODA elements and characteristics, it seems within reason to suggest that the inclusion of other variables such as entertainment, animation and size among others could have surged or improved the predictive value of the research framework. Also, from the perspective of the consumer-related factors, there is also a likelihood that variables such as privacy concerns,

perceptions of intrusiveness as alternative intermediate variables could have further clarified the relationship between consumers' perceptions of ODA characteristics and their approach or avoidance behaviours. In spite of this, the outcome of the study which confirmed the stimuli effect of four out of the five ODA characteristics, and the strong empirical support provided for ATOA as a significant intervener in the focal relationship goes a long way to show that the choice of these variables was not misplaced, and the exclusion of other possible alternatives casts no doubts on the outcome of the study, neither does it provide grounds on which to demean the study findings. Particularly, as far as these variables were derived from a thorough review of the literature and appear congruent with the underpinning theories as well as other conceptualisations in prior studies, the resultant post-study framework is considered vital in offering insights for online advertising practice.

9.3.3 Reflections on Methodological Approach

Since the study was conducted within the framework of the positivist paradigm, all other methodological choices were made in a logical fashion to align with the chosen paradigmatic stance. As such, a quantitative approach, and a survey strategy were adopted through the use of structured questionnaires to obtain the required information from respondents. The quantitative approach, and its corresponding survey strategy are justifiable on the basis that, the study sought to provide understanding regarding specific factors and their interconnections and associations with one another by testing relevant hypotheses derived from existing theories, and prior empirical works (Creswell, 2014; Saunders *et al.*, 2012). Moreover, the research required the use of a larger sample of internet users to enable generalisation of the study outcomes regarding consumer responses to display advertising in the online context through statistical explanations of the extent of associations that exists among the ODA characteristics, consumer attitude toward online advertising, internet user mode, and the approach/avoidance behavioural responses of consumers.

It is possible that an experimental design or strategy may have provided much observable evidence particularly concerning consumers' behavioural reactions in real media environments, and also increase the internal validity of the study. However, this would have offered a stagnant view of the reality as well as limit the sample diversity in terms of certain demographics (e.g. respondents' age and occupation) and internet usage profile (e.g. usage frequency and familiarity with online advertising); particularly since the study controlled for some of these variables. Again, although an experimental design would have reduced the social desirability of responses that may have occurred given the survey strategy adopted, the quantitative analysis allowed for the controlling of outlying as well as skewed responses. It may also be argued that a qualitative approach to addressing the research problem and objectives would have revealed some added insights from internet users especially since calls have been made for qualitative approaches to addressing online advertising effects (Drossos et al., 2011; Tang et al., 2014). Notwithstanding, the quantitative survey appeared more suited to the study goals given the large sample of respondents needed, and even a qualitative approach would have made it rather challenging to objectively test and confirm the hypothesised relationships. By adopting a positivist stance, and a quantitative survey design, the study objectively examined the relevant issues pertinent to the research problem and through its rigorous and sequential analytical approach, provided more suited and valuable answers to the research questions than any alternative method would have allowed.

9.4 CONTRIBUTIONS AND IMPLICATIONS OF THE RESEARCH

This study set out to provide a theoretical and practical understanding of consumer behavioural responses to online display advertising by offering insight into how ODA characteristics drive approach and avoidance behaviours, as well as explaining how

consumer-specific factors like attitude toward online advertising and user mode can enhance ad acceptance and minimise ad avoidance among consumers. It must be stated that, the efforts made in this study by employing the stimulus organism response (SOR) model and the reversal theory to examine online display advertising and its effects, which resulted in the theory-based framework that guided our empirical results have produced vital theoretical contributions to the online advertising literature and managerial implication for online advertising practice which are discussed in the following sections.

9.4.1 Theoretical Contributions and Implications

It is argued by Corley and Gioia (2011) that any research work that possesses originality and utility is fit to make valid theoretical contributions to knowledge. The authors maintain that originality speaks to the extent to which the research offers revelatory or incremental insights; and utility concerns the scientific and/or practical usefulness of the study. We consider contributions made by this research as offering incremental value to extant knowledge on online display advertising, and as such we also deem it useful for improving current research and advertising practice in the online domain. This study makes three key contributions to knowledge in the online display advertising field and the online advertising literature. Foremost, the study took stock of research works on ODA through a fairly systematic review of the literature which pinpointed relevant themes and issues, and also established pertinent gaps in these issues, theoretical and methodological approaches, and context. In so doing, this study establishes knowledge gaps that may guide future research in the area. The incremental value of the review conducted in this study, relative to other reviews in the extant literature (e.g. Kim & Macmillan, 2008; Ha, 2008; Liu-Thompkins, 2019) stems from its specific focus on ODA, the fastest growing category of online advertising. This defined focus, allowed the study to delineate specific ODA issues, and

provide deeper insights into the assumptions and rationales underlying their usage and the effects they have.

Second, the review of extant literature and the review of the theoretical foundations called for more theory-based approaches to understanding how advertising works (Laczniak, 2015; Faber, 2015) as well as more studies to test these theories in the online advertising context (Jung et al., 2014; Bleier & Esenbeiss, 2015b). This study as a result of the reviews synthesised the diversive literature on online display advertising and developed a conceptual framework which integrates two relevant theories namely, stimulus organism response model and reversal theory. The integration of these two theories in this current study, responds to these pressing calls and demonstrates that reversal theory can complement the SOR model. A number of phenomena in the broader marketing literature have been studied using the SOR model and reversal theory but both theories have been separately and sporadically applied. Our findings suggest that the complementarity between the two theories can best be understood by considering the telic-paratelic dimension of the reversal theory as applied in this study, as a contingency consumer-variable that regulates the relationship between a stimulus (S) and the organism (O) as well as a stimulus and the responses (R). And so, to provide a more complete depiction of the effects of a stimulus, this study suggests the reversal theory is used to balance the SOR model as a possible contingency factor that causes variations in the direction and magnitude of both internal and external consumer responses elicited by environmental stimuli particularly in the online media context. This study passes as one of the few marketing studies to provide empirical backing to the combined applicability of these two theories in explaining behavioural responses to online display advertising.

Additionally, the theory-based framework identifies, incorporates and describes how ad characteristics in consort with consumer-related factors enhance and/or mitigate consumers' behavioural responses to online display advertising. The application of these two theories enabled the study to ascertain and highlight how relevant ODA characteristics (interactivity, informativeness, personalisation and exposure condition) could be employed and exploited as useful stimuli in eliciting approach behaviours, and assuaging avoidance behaviours toward display ads among consumers. By examining the effects of these ad-characteristics individually, the study provides detailed appreciation of their individualised effects on consumers' evaluation of online advertising and their approach and avoidance behaviours. Much more profoundly, by confirming attitude toward online advertising (ATOA) as a vital internal consumer process or response that intervenes in the relationship between the ad stimulus (ODA characteristics) and behavioural responses of consumers, the study has demonstrated that when ad features do not directly influence behavioural responses significantly, the favourable attitude consumers have or form toward online advertising, can facilitate (enhance) such effects or influences. This research, therefore, provides vital insights to progress our understanding of how consumers' favourable perceptions and evaluations of online advertising mediate the influence of ad characteristics on their approach and avoidance behaviours.

The perspective of the reversal theory as applied in this study also provides clarifications on how telic and the paratelic user mode may vary the effect of specific ad stimuli on the direction and magnitude of the behavioural response of consumers. With heightened focus on interactive and informative advertising in the online environment (Mahmoud, 2014; Zha *et al.*, 2015), this study throws more light on how such display ads can be valuable to advertisers through consumers' favourable perceptions and acceptance of them. Thus, as a further contribution, this study demonstrates to a fair extent, the importance of

understanding consumers' motive (goal-directed/serious-minded or experience-directed/playful minded) for internet usage given the moderating effect these motives have on the effects of interactivity and informativeness on attitude toward online advertising and ad acceptance respectively. This is considered an extension of extant literature on online display advertising and the extant literature on reversal theory in the online advertising environment.

The third important contribution of this study lies in the provision of empirical evidence and support for understanding consumer behavioural responses to online display advertising and the test of the above theories from an emerging economy context from sub-Saharan Africa. Since the review of extant ODA literature points to limited studies from developing country setting, and more specifically no apparent studies from Africa, the current study represents a response to the call for an investigation into different context using data from emerging markets on online advertising effects (Valaei *et al.*, 2016; Eshghi *et al.*, 2017). The relative dearth of research into online display advertising and its effects from emerging market settings, and the seeming lack from an African perspective is telling. This is particularly so because, the literature indicates that individuals' attitude and responses to advertising and their online behaviours are context-dependent and vary extensively by country (Wang & Sun, 2010b; De Mooji & Hofstede, 2010). Given such contextual disparities, this study has presented a different contextual perspective to the online advertising literature from a lower-middle income economy such as Ghana, and as one of the few of such, this study therefore, possesses contextual originality.

9.4.2 Implications for Online Display Advertising Practice

A vital aim of any internet advertising research is to unearth and understand ways in which online advertising can be acceptable to consumers and in turn be applicable and effective to

advertisers as well as appropriate for publishers (Li & Leckenby, 2004). The research in this regard, provides some actionable pointers or implications for online display advertising practice. A major challenge faced by advertising professionals and publishers is identifying executional features and design elements that can capture consumer attention and ensure that display ads generate favourable reactions (Bleier & Esenbeiss, 2015b; Kim, 2018). This current study shows that an understanding of the direct and indirect (through consumer-related factors) influence of pertinent ODA characteristics can be valuable for making guided decisions concerning the sorts of ads to design and display.

First, this research shows that interactivity, personalisation and informativeness are the relevant ODA characteristics that directly influence approach and avoidance behaviours of consumers toward display ads. Interactive display ads were found to have the most positive influence on consumers' acceptance of ads. Inherent in this finding is the need for advertisers to embrace the knowledge that, infusing display ads with features that allow consumers to click ads for further informations or provide instantaneous information when consumers request as well as mechanisms that allow consumers the opportunity to provide feedback is a key step in engendering approach behaviours towards such ads which may be manifested in attentiveness, focus and interaction with the ads. This finding underscores interactivity as a requisite ODA stimulus or feature that consumers expect if they are to find display ads as acceptable, and calls on advertisers and publishers to leverage the constantly evolving interactivity of the internet as an advertising medium appropriately to this effect. Similar implications may apply in the case of informative display ads. Consumers consider as informative display ads that serve as good and convenient sources of information as well as provide complete and up to date information that keep them abreast of the product/service category and brand. For this reason, informativeness is also recommended as a vital driver of approach behaviours among consumers. Information search is one of the four major

motives for internet usage (Rodgers & Thorson, 2000; Rhoades *et al.*, 2008). And since internet tracking technologies allow publishers and advertisers access to consumers browsing history, beyond focus on product types, advertisers need to carefully consider the types of product-specific information consumers search for in order to provide such detailed information that consumers consider relevant in their display ads.

In reference to personalisation, advertisers need to understand its dual stimuli function. This is to mean that unlike interactivity and informativeness which only positively influence ad acceptance, personalisation was found to positively influence acceptance behaviours and negatively influence avoidance behaviours as well. The findings in this regard provide indications that to effectively reach consumers, get them to not ignore, skip or scroll away from display ads as well as be attentive to and interact with ads, there is the need for advertisers to make ads personally relevant to consumers. This can be achieved by enhancing ad personalisation through tailoring ads to meet consumers search and shopping need, which makes them feel unique as internet users. Although personalisation has relatively less influence on ad acceptance than did interactivity and informativeness, and its negative influence on ad avoidance is even more so less significant, its twofold function promises that more benefits may accrue to advertisers and publishers if they personalised their display ads more.

Second, we found evidence to support ATOA as a consumer-related condition under which the influences of ODA characteristics are enhanced or amplified. These findings confirm that while advertisers with a focus on emerging markets like the study setting can influence consumers acceptance of their display ads, and minimise avoidance through ad characteristics, such outcomes are much more feasible if consumers form positive ATOA. Springing on the evidence in the context of this study, advertisers and marketers are well

advised that, albeit necessary, it might not be sufficient to imbue display ads with interactive, personalised, informative and unforced exposure features. These features must first result in positive consumer attitudes toward online advertising which will then translate into desired behavioural responses; particularly, if advertisers aim to reduce consumers' avoidance behaviours toward their display ads because the effects of interactivity, informative and exposure condition for instance, are only present or manifest through attitude toward online advertising. In essence, the goal of engendering approach behavioural responses and lessening avoidance behaviours toward online display advertising can be achieved through ODA features that generate positive ATOA.

Third, the importance of understanding consumers' internet usage motive is underlined in this study. Illustratively, the positive influence of informativeness on attitude toward online advertising was stronger among paratelic or experience-oriented users than for telic or goal-oriented users. Likewise, personalisation was found to have a positive effect on ad acceptance only among telic users. In view of this, advertisers must give careful considerations to consumers' motivation for internet usage before designing ads to persuade them. Specifically valuable for advertisers seeking to reach consumers driven by shopping and (re)searching motives (telic users), findings from this study suggest that they can enhance acceptance behaviours among this group of consumers by presenting to them display ads that are personally relevant or consistent with their usage goals. Such an approach could be effective in eliciting positive behavioural responses and minimizing avoidance behaviours.

Fourth, researchers recognise that advertising by itself independent of the advertised product or service brand can and should be valuable to consumers (e.g. Cunningham & Haley, 2000). In spite of this, product peculiarities have also been known to influence the effectiveness of

online ads (Flore *et al.*, 2014; Eshghi *et al.*, 2017). While our findings lend credence to the former position, they also provide empirical evidence to the fact that, (1) ad acceptance is higher for ODAs featuring product brands relative to those featuring service brands and ad avoidance is higher for service-featured ODAs compared to product-featured ODAs; (2) personalisation, interactivity and exposure condition were significant influencers of active acceptance for product-featured ODAs while interactivity was the only significant influencer of active acceptance for service-featured ODAs; (3) personalisation and exposure condition were the only negative influencers of active ad avoidance in the case of product-featured ads and service-featured ads respectively.

Against these non-hypothesised evidences, it therefore makes good business sense for marketers and publishers to promote product brands using personalised and interactive display ads in voluntary exposure modes, in order to enhance acceptance behaviours among consumers. It similarly behoves firms operating in service sectors or marketers of service brands to focus on interactivity and exposure condition as relevant features to elicit acceptance as well as dull avoidance behaviours of consumers toward their display ads. Basically, in order to stimulate the desired behavioural responses, advertisers must consider their market offering (product or services) when making choices regarding the ODA characteristics to blend. This is especially important for service brand marketers since avoidance was found to be generally higher among consumers exposed to service-featured ODAs.

These implications emphasise the significance of prudently controlling and coordinating the design and types of display ads presented to consumers, more especially in terms of providing two way communications, imbuing ads with relevant information, matching ads to consumers needs and preferences and making sure consumers have control over their

viewing experience and ads do not interfere with their online activities. Over and above these ad-related issues, practitioner attention should focus on consumers attitude toward online advertising and their internet usage motives as pertinent consumer-related factors, and the firms market offering as conditions under which online display ads with the above features may be more effective.

9.5 CONCLUSIONS

A number of conclusions may be drawn from this research since results support the core proposition of the study that, the role played by both ad-related and consumer-related factors are very vital to the design of online display ads in influencing the behavioural responses of consumers. The current study shows that internal consumer processes can act as intermediate variables in the relationship between ODA characteristics and behavioural responses of consumers toward display ad. Thus, the study particularly submits that the deployment of display ads designed to be informative, personalised, interactive and presented in unforced exposure modes may elicit acceptance behaviours and reduce avoidance behaviours through consumers' attitude toward online advertising as a facilitating factor. By springing on the theoretical insights derived from the SOR model (Mehrabian & Russell, 1974), this study supports and mirrors the position of Rodgers and Thorson (2000) that both "advertiser-controlled" and "consumer-controlled" factors are central to internet users' perceptions and processing of online ads as well as advertising outcomes. In light of these, it seems logical to argue that reliance on ODA characteristics or design elements although may be quite adequate in eliciting positive behavioural responses, may not be sufficient in lessening avoidance behaviours toward display ads; rather how these ODA stimuli generate positive consumer ATOA is more crucial.

The study further asserts that, given the role user mode underpinned by the reversal theory is found to play in these relationships as depicted in the study findings and post-study framework, understanding consumers' motive for internet usage, becomes crucial for advertisers and publishers if they hope to appeal to the various user groups with the appropriate display ads imbued with the right features to generate the required attitude and responses. It has also been established from this study that an understanding of the product/service brands advertisers seek to promote is required if the appropriate ad features are to be selected in designing display ads that may suit such brands. In other words, the type or nature of brand (product or service) can determine the ODA characteristics that may be effective for an advertiser or firm. Finally, this research contends from a theoretical and empirical standpoint that, the effectiveness of online display ads measured in terms of consumer behavioural responses, is dependent on marketers or advertisers' ability to blend the right features which need to be well-identified, harnessed, and deployed in a way that enhances approach behaviours of consumers and lessens avoidance behaviours through generating positive consumer attitude toward online advertising, as well as identifying consumers' internet usage motive and giving consideration to the product/service brand being advertised. In precis, it is the conclusion of this research that the SOR model in consort with the reversal theory provide a useful framework for understanding consumer behavioural responses in the online advertising environment; and points to ODA characteristics together with attitude toward online advertising, user moder (consumers' internet usage motive) as relevant research variables with direct implications for online advertising practice, and so does the nature of the brand (product or service).

9.6 RESEARCH LIMITATIONS AND AVENUES FOR FUTURE RESEARCH

As with any academic research work, although this study makes useful contributions to the online advertising literature by providing relevant insights into online display advertising,

these contributions should be viewed in light of the limitations amid which the study was conducted thus, pointing out avenues to be addressed by future research. To begin with, conceptually, the variables examined in the research model are vital to the current study's aims and objectives and so are considered illustrative. They, however, are not exhaustive because other likely ad-related and consumer-related factors could explain and influence the interrelationships assessed in this study. First, the thesis in responding to the gaps identified in literature, focused on five ODA characteristics -interactivity, placement, personalisation, informativeness and exposure condition. Yet given the contended contextual originality of the study, other features such as entertainment, animation, and size though have been considerably studied, could have been incorporated into the model in order to compare results obtained with extant findings in the literature. This is even more so relevant since internet penetration and online advertising uptake in Ghana as mentioned early on (see chapter one) are progressively picking up. Moreover, several of these factors synchronously (work together to) influence online advertising outcomes. As such, research efforts that extend the study model to include these additional constructs as well as examine their interaction effects, can notably progress understanding of their influence from a less advanced technological context and offer comparable insights for online advertising strategies and design.

Second, this study conceptualised user mode as two distinct groups of internet users. However, the reversal theory also suggests that user mode of internet users reverses during an online session. That is to say internet users' metamotivational state can alter from paratelic to telic states or the other way around during their online activities (Mehrabian & Russell, 1974; Jung *et al.*, 2014). Demonstrating this reversal effect was outside the remit of this current study owing to the research design and methodological approaches employed. As a viable area for further research, future studies on online display advertising through

experimental designs could observe and validate the reversal of metamotivational or user mode over a controlled time period. Moreover, user mode was used as a consumer-related moderator in this study, but the influence of ODA characteristics on consumers' ATOA and behavioural responses could be moderated by context-related factors as well. Auschaitraku and Mucherjee (2017) in their recent study establish that website types influence the effectiveness of online display advertising, and as found in this current study, consumers are exposed to ODA on various types of websites; informational websites (e.g. blogs and news sites), social media site (e.g. Facebook, Twitter, Instagram, YouTube), commercial website (e.g. Amazon, Tonaton, Jumia, OLX, Kaymu) and search engine (e.g. Google Adwords). Whether the effect of ODA characteristics on consumers behavioural responses and ATOA varies across these websites is an interesting question for future research to explore.

Third, future research could also examine alternative mediating variables. This study informed by the SOR model conceptualised organism response using attitude toward online advertising (ATOA) which is an affective state. Findings from this current study provided evidence to support the significant mediational role of ATOA, which was examined from an explicit unidimensional perspective. However, it has been argued in quite recent studies (e.g. Goodrich 2011) that the existence of dual attitudes toward online advertising is possible; an implicit attitude formed without conscious awareness and control, and an explicit attitude based on intentionally generated evaluations which can be self reported. Because implicit attitudes are said to be distinct from their explicit equivalents on the basis of their formation, storage, retrieval and operations (e.g. Serenko & Turel, 2018), future research attention in the online advertising literature should be given to studying implicit attitude as a major attitudinal dimension or organism response that may predict behavioural responses, and not explicit attitude alone. This focus on dual attitudes or

implicit attitudes is even more so warranted because researchers (e.g. Cowley, 2007) arguing within the framework of the SOR model have pointed out that there may be inaccuracies in consumers recall and report of internal responses. Since implicit unlike explicit attitudes are examined using implicit tests and not self-reports, examining the differential intervening role of dual attitudes is a research venture worth the efforts of future studies.

Still speaking from a mediational standpoint, the online environment as argued by some authors (e.g. Demangeot & Broderick, 2007; Rosen & Purinton, 2004) is a “cognitive landscape” typified by stimuli that that can be processed cognitively, and this provides another avenue for the examination of the possibility that consumers’ behaviours to online display advertising could be intervened by internal cognitive responses. Particularly, consumers’ approach and avoidance behaviours toward ODA may be further explained by examining the intermediate role of such cognitive factors as advertising recognition, recall and memorisation. Future studies could therefore investigate these variables from the perspective of the SOR model and/or through cognition-primed models. It would also be instructive for future studies on online display advertising to consider the bi-lateral view of the organism response to extend the model presented in the current study by incorporating a cognitively mediated response.

Fourth, attempts made by this study to investigate the differences in behavioural responses on the basis of the nature of the advertised brands featured in the ODAs were at best exploratory or tentative. Generally, findings show significant differences in acceptance and avoidance behaviours for product-featured ODAs and service-featured ODAs as well as differences in which ODA characteristics are likely to influence active acceptance and avoidance behaviours for the two types of ODAs. Since the study focused on the broad

product-service dichotomy, it would be enlightening for future research to extend the current study by investigating possible variations that may exist in ODA effects for the different service processing categories: people (e.g. healthcare, hospitality), possession (e.g. repair or maintenance), mental stimulus (e.g. education), and Information (e.g. banking, insurance) as has been done for physical product categories by prior studies (e.g. Flore *et al.*, 2014; Eshghi *et al.*, 2017; Belanche *et al.*, 2017).

This current study also bears a few methodological limitations that are worth mentioning. The study was a cross-sectional survey-based research which assessed consumers' behavioural responses using self-reported measures. The advantage of survey-based designs is that they have acceptable external validity as they are centred on real occurrences experienced by the consumers (Lewis & Rao, 2015) over time. The survey design also allowed the study to rule out the eccentric effect that emanates from using one ad for a particular brand of a specific product category. Nonetheless, researchers (e.g. Wang & Minor 2008) argue that cross-sectional studies are limited in their ability to determine true causality. Also, the self-reported measurement of behavioural responses limited the identification of "subtle or unconscious" behaviours of which consumers may be unaware. Although the study attempted to curb this drawback and provide a more refined view of approach and avoidance behaviours by examining both the intensity (active and passive) and dire direction (ad acceptance and avoidance) of behavioural responses, only the behavioural direction was determined at the exploration and model refinement stage as relevant in the current study setting. As such future studies could tackle these shortcomings by employing scenario-based methods or field experiments and alternative data collection approaches such as secondary/clickstream data or by using longitudinal designs which would offer significant additional insights. Also, the study data was obtained from a relatively large respondent sample (n=592) using purposive and snowball sampling which

have elements of convenience. It is therefore, acknowledged that the study does not encompass all internet users. While the sampling techniques used are appropriate approaches for studies that purport to test theory as was done in this study, and the theoretical as well as methodological approaches to reduce this limitation were applied, it is still prudent that caution is exercised when generalizing the results of the research to all internet users.

Lastly with the contextual disparities identified in extant ODA literature, prospects exist for future research to replicate the theory-based research framework presented in this study along side other avenues pointed out in settings with similar economic and consumer characteristics as well as other emerging markets or developing economies with relatively higher internet penetration and online advertising uptake. It is the contention of this study that evidence from these other economic settings as well as cross-economy studies will provide considerable amount of data, added perspectives, and a broad base for comparisons toward developing theoretically grounded insights for improving online advertising strategies and practice.

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APPENDICES

Appendix A1 ODA Thematic Areas and Methodological Approaches

Major Themes in ODA Research	Quantitative Approaches				Qualitative & Mixed Methods
	<i>Controlled Experiment</i>	<i>Field Experiment</i>	<i>Survey & Content Analysis</i>	<i>Secondary Market Data</i>	
Antecedents to Online Advertising Effectiveness	1, 7, 11, 15, 18, 21, 22, 24, 26, 29, 31, 39, 50, 54, 55	2, 4, 34, 40, 41, 44, 42	36, 43, 63	6, 28	<u>49</u> , 52
Assessing Online Advertising Effectiveness	1, 20, 21, 24, 39, 54, 55, 62	2, 3, 13, 14, 16, 19, 23, 30, 41, 44, 45,	37	6, 8, 12, 25, 28, 37, 47, 61,	
Attitude Toward Online Advertising	5, 10, 18, 53	17,	32, 35, 38, 46, 48, 49, 51, 56, 57, 58, 59, 60		9 , <u>49</u>
Other Themes			33*		

Note: **Bold:** Mixed methods study Analysis

Underlined: Qualitative study

Asterisk (*): Content

Appendix A2 Numbered Articles used for the Review of Literature

No.	Author(s)	No.	Author(s)
1.	Auschaitraku & Mucherjee (2017)	33.	Li <i>et al.</i> (2009)
2.	Belanche <i>et al.</i> (2017)	34.	Liu & Mattila (2017)
3.	Bleier & Eisenbeiss (2015a)	35.	Mahmoud (2014)
4.	Bleier & Eisenbess (2015b)	36.	Martin-Santana & Beerli-Palacio (2012)
5.	Bright & Daugherty (2012)	37.	Miralles-Pechuan <i>et al.</i> (2017)
6.	Bruce <i>et al.</i> (2016)	38.	Nasir (2017)
7.	Chan (2010)	39.	Nihel (2013)
8.	Chapelle <i>et al.</i> (2014)	40.	Pashkevich <i>et al.</i> (2012)
9.	Drossos <i>et al.</i> (2011)	41.	Rosenkrans (2009)
10.	Eshghi <i>et al.</i> (2017)	42.	Segev <i>et al.</i> (2014)
11.	Flores <i>et al.</i> (2014)	43.	Seyedghorban <i>et al.</i> (2016)
12.	Fridgeirsdottir & Najafi-Asadolahi (2018)	44.	Simola <i>et al.</i> (2011)
13.	Fugoni & Morn (2009)	45.	Song <i>et al.</i> (2011)
14.	Goldfarb & Tucker (2011)	46.	Souiden <i>et al.</i> (2017)
15.	Goodrich (2011)	47.	Spilkerattig & Brettel (2010)
16.	Goodrich (2013)	48.	Sun & Wang (2010)
17.	Goodrich (2014)	49.	Tang <i>et al.</i> (2014)
18.	Goodrich <i>et al.</i> (2015)	50.	Tutaj & van Reijmersdal (2012)
19.	Hoban & Bucklin (2015)	51.	Valaei <i>et al.</i> (2016)
20.	Hsieh & Chen (2011)	52.	Van Dorn & Hoekstra (2013)
21.	Hussain <i>et al.</i> (2018)	53.	Van Reijmersdal <i>et al.</i> (2016)
22.	Janssens <i>et al.</i> (2012)	54.	Wang <i>et al.</i> (2013)
23.	Jung <i>et al.</i> (2014)	55.	Wang <i>et al.</i> (2009)
24.	Jung <i>et al.</i> (2011)	56.	Wang & Sun (2010a)
25.	Kim <i>et al.</i> (2011)	57.	Wang & Sun (2010b)
26.	Kim (2018)	58.	Wang & Sun (2010c)
27.	Kim <i>et al.</i> (2018)	59.	Wang & Sun (2010d)
28.	Kireyev <i>et al.</i> (2015)	60.	Wang <i>et al.</i> (2009)
29.	Kuisma <i>et al.</i> (2010)	61.	Xu <i>et al.</i> (2014)
30.	Lambrecht & Tucker (2013)	62.	Yeu <i>et al.</i> (2013)
31.	Lee & Cho (2010)	63.	Ying <i>et al.</i> (2009)
32.	Li-Ming <i>et al.</i> (2013)		

Appendix A3 Publication by Journals and Years

Journal Name and Category	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total	%
Marketing											44	69.8
<i>International Journal of Advertising</i>	√√	-	-	√	√	√	-	√	-	√	7	
<i>Journal of Marketing Communication</i>	-	√	-	√√√	√	-	-	-	-	-	4	
<i>Journal of Advertising Research</i>	√	-	-	-	-	√	√	-	-	-	4	
<i>Journal of Marketing Research</i>	-	-	-	-	√	-	√	√	-	-	3	
<i>Journal of Interactive Advertising</i>	√	-	-	-	-	-	-	-	-	√	2	
<i>Journal of Advertising</i>	-	-	-	-	√	-	-	√	-	-	2	
<i>Journal of Interactive Marketing</i>	-	√	-	-	-	-	-	-	√	-	2	
<i>Journal of Promotion Management</i>	-	√	-	-	-	-	-	-	√	-	2	
<i>Psychology & Marketing</i>	-	-	√	-	-	-	-	-	√	-	2	
<i>Marketing Science</i>	-	-	√	-	-	-	√	-	-	-	2	
<i>International Journal of Internet Marketing and Advertising</i>	-	-	√	-	-	-	-	√	-	-	2	
<i>Marketing Letters</i>	-	-	-	-	√	-	-	-	-	-	1	
<i>Marketing Intelligence & Planning</i>	-	-	-	-	-	-	-	-	√	-	1	
<i>Journal of Research in Interactive Marketing</i>	√	-	-	-	-	-	-	-	-	-	1	
<i>Journal of Retailing</i>	-	-	-	-	-	-	√	-	-	-	1	
<i>Journal of Current Issues and Research in Advertising</i>	-	√	-	-	-	-	-	-	-	-	1	
<i>Journal of Marketing Management</i>	-	√	-	-	-	-	-	-	-	-	1	
<i>Journal of Global Marketing</i>	-	√	-	-	-	-	-	-	-	-	1	
<i>Journal of Islamic Marketing</i>	-	-	-	-	-	√	-	-	-	-	1	
<i>International Marketing Review</i>	-	√	-	-	-	-	-	-	-	-	1	
<i>International Journal of Research in Marketing</i>	-	-	-	-	-	-	√	-	-	-	1	
<i>Asia Pacific Journal of Marketing & Logistics</i>	-	-	√	-	-	-	-	-	-	-	1	
<i>International Journal of Marketing Studies</i>	-	-	-	-	√	-	-	-	-	-	1	
Information Management											8	12.7
<i>Computers in Human Behaviour</i>	-	-	√	-	-	√√	-	-	-	-	3	
<i>Electronic Commerce Research and Applications</i>	-	-	√	-	-	-	-	-	√	-	2	
<i>Expert Systems with Application</i>	-	-	√	-	-	-	-	-	-	-	1	
<i>Information Systems Frontiers</i>	-	-	-	-	-	√	-	-	-	-	1	
<i>International Journal of Electronic Commerce</i>	√	-	-	-	-	-	-	-	-	-	1	
General Management, Economics, Operations Research, Sector & Area Studies											11	17.5
<i>Journal of Business Research</i>	-	-	-	-	-	√	-	-	-	-	1	
<i>Management Science</i>	-	-	-	-	-	√	-	-	-	-	1	
<i>ACM Transactions on Intelligent Systems and Technology</i>	-	-	-	-	-	√	-	-	-	-	1	
<i>Operations Research</i>	-	-	-	-	-	-	-	-	-	√	1	
<i>Online Information Review</i>	-	-	-	√	-	-	-	-	-	-	1	
<i>Journal of Internet Commerce</i>	-	-	-	-	-	-	-	-	√	-	1	
<i>International Journal of Hospitality Management</i>	-	-	-	-	-	-	-	-	√	-	1	
<i>International Journal of Applied Psychology</i>	-	-	-	-	√	-	-	-	-	-	1	
<i>International Business Review</i>	-	√	-	-	-	-	-	-	-	-	1	
<i>Journal of Experimental Psychology: Applied</i>	-	-	√	-	-	-	-	-	-	-	1	
<i>IEEE Transactions on Engineering Management</i>	-	√	-	-	-	-	-	-	-	-	1	
Total	6	9	8	5	7	9	5	4	7	3	63	100

Appendix A4: Summary of Study Focus, Measured Variables, Findings and Gaps in ODA Research

Study	Focus and Measured/Studied Variables	Major Findings	Relevant Research Gaps Identified
Auschaitraku & Mucherjee (2017)	Influence of website type on ODA effectiveness: Website type, product involvement, brand familiarity, attitude toward the ad, attitude toward the brand, and <i>processing fluency</i> .	ODA is more effective in terms of attitude toward the ad and brand on commercial than on social websites; as well as on brand compared to personal pages of the latter.	<i>Future research could:</i> 1. replicate these findings on behavior in the field by examining click stream and purchase data from actual ODA being shown on social and commercial Web sites. 2. investigate ad-related (source of the ad) and context-related (type of websites not used in the current study e.g. information or entertainment) moderators.
Belanche <i>et al.</i> (2017)	Skippable ad effectiveness: High and low-arousal stimuli, ad attitude, ad acceptance, brand attitude, ad intrusiveness, context congruency, and product involvement .	high-arousal ads are watched for longer time, and are more effective in congruent contexts. Users' product involvement determines the intrusiveness of high- and low-arousal skippable ads.	<i>Future research could:</i> 1. use actual brands in ad design as well as longitudinal measures that may focus on brand recall. 2. focus on elements that differentiate advertising from other online persuasive messages 3. examine how users' active roles may determine ad effectiveness
Bleier & Eisenbeiss (2015a)	Personalised online ad effectiveness -interplay of what, when and where: Degree of content personalization, website congruency, web browsing mode (Goal-directed vs experiential), click through, view through.	Personalisation increases click-through at early information stage of purchase decision and does so irrespective of banner ad-website congruency It however, increases view through only on motive congruent websites, but decreases it on incongruent websites.	<i>Future research could:</i> 1. focus on other directly observable indicators (duration of shop visit, spending per purchase) or implicit indicators (attitude toward ad, firm, ad recall) 2. extend the degree of content personalisation to shopping actions (product placed in shopping carts or on wish lists)
Bleier & Eisenbeiss (2015b)	Importance of trust in personalised online advertising: Depth of personalisation, Breadth of personalisation, trust in the retailer, usefulness, reactance, privacy concern, click-through.	Trusted retailers can increase personalisation of ads through high depth and narrow breadth without eliciting reactance or privacy concern. For less trusted retailer's high depth banners trigger reactance and privacy concerns reflecting in click-throughs.	<i>Future research could:</i> 1. consider other moderators (e.g. browsing mode, age, personality traits, shopping habits etc.)
Bright & Daugherty (2012)	Does customisation impact advertising: Customisation desire for control (High/low), ad format (Banner ad/Keyword ad/No ad), attitude toward advertising, content recognition, behavioural intention for ad interaction.	Customized environments create a sense of engagement for consumers; subjects who thought they were exposed to a customized media environment had greater behavioural intention for interacting with advertising, and those who thought the environment was non-customized had a more positive attitude toward advertising. Ad recognition was high for those with low desire for control.	<i>Future research could:</i> 1. determine additional individual differences (including Internet self-efficacy and degree of information overload) that may impact effects in customized online environments. 2. explore how choices regarding personal agency and system-driven customizations impact the perception of advertising within customized online environments.

Bruce <i>et al.</i> (2016)	The Effects of creative formats, message content and targeting on engagement: Ad size, animation, content, and targeting.	Carryover effects for dynamic formats are greater than for static formats; yet static format can still be effective for price ads and re-targeting. Re-targeted ads are effective only if they offer price incentives	<i>Future research could:</i> 1. use individual or cookie level data 2. build a hierarchical dynamic model using demographics and retargeting data to define segment level distributions from which individual behaviour could arise.
Chan (2010)	Online interaction-based advertising: Exposure timing, advertising intent, brand image , and purchase intention.	Ads designed with implicit advertising intent compared to explicit intent are more effective in the pre-decisional shopping phase. Brand image is found to moderate the effects of advertising intent on consumer's purchase intention.	<i>Future research could:</i> 1. examine other design factors to complement existing results: e.g. contextual factors relating to websites (type and reputation) in which ads are launched.
Drossos <i>et al.</i> (2011)	Perceptions of advertising agencies and marketing managers: Enablers and motivators, awareness, readiness to use, and perceptions.	Reluctance toward online advertising due to highly perceived disadvantages such as low levels of; internet penetration, click-through rates, online purchases, education in interactive channels. Increase in online advertising expenditures would be driven by increase in internet penetration, and growth in internet buyers and sellers.	<i>Future research could:</i> 1. use qualitative approaches to examine perceptions of practitioners from countries with differing levels of internet penetration and maturity.
Eshghi <i>et al.</i> (2017)	Impact of online advertising on brand attitude: Ad copy type (narrative vs. factual), task orientation (researchers vs. surfers), <i>Ad message involvement</i> , product type (technical vs. non-technical), attitude toward the brand.	Effects of ad copy type and task orientation on brand attitude is mediated by ad message involvement. Narrative ad copies generate greater involvement than factual ad copies, regardless of task orientation or product type.	<i>Future research could:</i> 1. conduct cross-cultural research across other emerging or developed economies to enhance the generalizability 2. explore other possible moderators (e.g. utilitarian vs. hedonic products) 3. examine the potential for replication in the context of services
Flores <i>et al.</i> (2014)	Effects of variation in banner ads: Product involvement (high - smartphone vs. low involvement – news magazine), website context (video vs. newspaper), ad type and shape, language (English vs. Spanish), and attitude toward the brand.	An interaction suggested that the high-involvement product was seen as fairly more appealing if advertised with display ads rather than text-only ads; the low-involvement product was slightly more appealing if advertised with text-only ads. Finally, products were slightly more appealing if advertised on 'highly congruent' websites.	<i>Future research could:</i> 1. expand the sample pool and include other design elements as well as interact this features or factors.
Goldfarb & Tucker (2011)	Online display advertising targeting and obtrusiveness: Contextual targeted ads, obtrusiveness ads, privacy concerns , purchase intent	Matching an ad to website content, and increasing an ad's visibility independently increase purchase intent, but are ineffective when combined. These results are moderated by privacy concern.	<i>Future research could:</i> 1. consider actual purchase data 2. explore behavioural processes that stimulate consumer privacy concerns. 3. explore responses to behavioural targeted ads to generate a theoretical framework for understanding how behavioural targeting and privacy concerns interact.

Goodrich (2011)	Attention to online advertising and multiple outcomes: Ad type (pictorial vs. text), ad location (left vs. right), page type (image-oriented vs. textual), attention, aided recall, brand attitude, purchase intention.	Attention to an ad is affected by ad type and the interaction between ad location, and page. attention is positively related to aided recall and to purchase intention, but negatively associated with brand attitude.	<i>Future research could:</i> 1. use live webpages for better understating of user navigation and clickstreams. 2. Use diverse products and page contexts to enhance understanding of their effects.
Goodrich (2013)	Effects of age and time of day on internet advertising outcomes: Time of day, age, gender, attention, brand attitude, and purchase intention.	Older adults pay greater attention than younger adults to online banner ads regardless of time of day. A mere exposure effect, with lower attention associated with more favorable brand attitudes, is found for the entire sample, but is not particularly distinct for older adults. Purchase intention is highest for older adults, mainly later in the day when processing resources are very low.	<i>Future research could:</i> 1. use explore different advertised products to better understand varied effects. 2. examine effects of product familiarity and involvement to reveal other insights. 3. study gender issues or effects across a wide range of products.
Goodrich (2014)	Gender brain-processing differences about online advertising: Advertising location (left or right), gender, attention to ad, and brand attitude.	Results of this study support basic gender variances in the processing of advertising information: males have higher attention to online ads and are more susceptible to mere exposure effect than females, ads positioned on the left of a page generate more favourable attitudes from males as rightward positioned ads do for females, and lower ad attention generates more favourable attitudes.	<i>Future research could:</i> 1. explore different Other potentially interesting areas for future research include using neuromarketing to test gender processing differences and exploring gender-related processing differences with higher attention appeals.
Goodrich <i>et al.</i> (2015)	Consumer reactions to online-video ads: Length, informativeness, humour, <i>intrusiveness</i> , attitude toward the ad, brand and host website, ad abandonment, ad recall, website revisit intention, and purchase intentions.	Informative and humorous ads reduce intrusiveness; longer pre-roll ads heighten ad recall; more intrusive ads generate more abandonment, recall and negatively influence ad attitudes and reduce attitude toward the host website; attitude toward the brand influences purchase intention; and attitude toward the host website correlates with site revisit intentions.	
Hoban & Bucklin (2015)	Effects of internet display advertising in the purchase funnel: Stages of purchase funnel (non-visitor, visitor, authenticated user, converted customer). Website visits	display ads positively affect visitation to the firm's website for users in three of the four stages of the purchase funnels studied, but not for those who previously visited the site without creating an account. Expected visits increase nearly 10 percent when display ad impressions are partially reallocated from non-visitors and visitors to authenticated users.	<i>Future research could:</i> 1. use larger, more diverse data sets to substantiate results or the underlying mechanisms driving differences in display advertising response by funnel stage are fully understood.
Hsieh & Chen (2011)	Effects of information type on attention to online advertising:	Different information types of browsing content affect the number and intensity of attention to ads from the strongest to the weakest were in	<i>Future research could:</i> 1. use a large-scale sample beyond college students to provide a representative view of internet users.

	Information type (text-based, text-picture mixed, picture-based, and video-based web pages), user attention to banner ad	this order: video-based, picture-based, text-picture mixed, and text-based.	2. verify the influence of other web content types (e.g. interactive format or audio format webpage)
Hussain <i>et al.</i> (2018)	Impact of web banner advertising frequency on attitude: Exposure frequency, Ad type (pop-up vs. static), ad appeal (emotional vs. rational); brand attitude.	Ad type moderated the influence of frequency on brand attitude; the moderating effect of ad appeal manifested at a higher exposure frequency.	<i>Future research could:</i> 1. ascertain what happens from sixth or more exposure in order to establish the wear-out effect as well as decide on the optimal frequency level to enhance suitable designs and executions.
Janssens <i>et al.</i> (2012)	Online advertising and congruency effects: Type of exposure (ad before page vs. page before ad), context congruency (congruent vs. incongruent), attitude toward the ad, and click intention, and divided attention .	Undivided attention benefits web ads that are congruent with the web page in which they are embedded, but divided attention benefits those that are incongruent with the web page.	<i>Future research could:</i> 1. use several ads for different brands across different product categories and test them in different contexts to exclude the idiosyncratic effects of testing one ad for one brand of a product category. 2. explore further processed by which congruency and incongruency effects emerge
Jung <i>et al.</i> (2014)	Telic/para-telic influence on internet advertising effectiveness: User mode, perceived advertising interactivity, attitude toward the ad, <i>arousal seeking tendency</i> .	Telic state consumers form more positive attitudes toward a low-level interactive ad, while para-telic state consumers form more positive attitudes toward a high-level interactive ad. Arousal seeking tendency mediates the meta-motivational state's impact on ad attitude.	<i>Future research could:</i> 1. conduct laboratory experiment to demonstrate reversal for different activities. 2. further explore how reversal theory explains online behaviour.
Jung <i>et al.</i> (2011)	How entertainment value affects persuasion: Perceived advertising value, recall, need for cognitive closure, versatility of internet usage , attitude toward the brand and purchase intention.	show that more favorable brand attitudes and more positive purchase intentions are formed when consumers are exposed to an ad that generates a high (game ad), rather than a low (banner ad) level of entertainment value. However, such effects are qualified by consumers' shopping goals.	<i>Future research could:</i> 1. examine entertainment value independent of interactivity. 2. further explore and clarify the relationship among goal accessibility, cognitive elaboration, and persuasion. 3. use high involvement products.
Kim (2018)	Effect of ad customisation and variation on user perceptions: Ad customisation, ad variation, perceived intrusiveness, perceived irritation, attitude toward the ad, attitude toward the website,	Advertising content control through a customization feature was an influential factor that led to positive attitudes toward multiple exposures to the ads. In addition, ad variation induces users' positive attitudes toward multiple ad exposures. Furthermore, users' perceived intrusiveness and feelings of irritation seemed to play an underlying mechanism in ad variation and customization -effectiveness relationship.	<i>Future research could:</i> 1. test what circumstances create a strong association between attitudes toward the websites in a more natural setting. 2. use a broader population and multiple products in competitive exposure instances.
Kim <i>et al.</i> (2018)	Ad type (native vs. banner), placement type (solo vs. duo), persuasion knowledge (high vs. low), perceived fit, ad credibility, brand attitude, and click intentions.	In the solo condition, native advertising was evaluated more favourably than banner advertising in terms of perceived fit, ad credibility, brand attitudes and click intention.	<i>Future research could:</i> 1. use more diverse set of participants and ads/ 2. use natural exposure design and compare findings to find points of similarities and/or differences.

		Significant interaction effects between ad type and placement type were found on all dependent variables, with native advertising showing a significant decrease in duo placement. These interaction effects appeared to be more manifest for consumers with high persuasion knowledge, confirming its moderating role.	
Kuisma <i>et al.</i> (2010)	Effects of animation and format on perception and memory of online advertising: Animation, ad format (banner and skyscraper), attention, and memorization (recognition and recall).	There is a strong interaction effect between animation and ad format, which suggests that the effect of animation is conditioned by ad format: animation can increase attention to a skyscraper, but not to a banner. Animation can also increase memorizing of an ad, especially recognition of banners.	<i>Future research could:</i> <ol style="list-style-type: none"> investigate how task and task involvement influence the perception of ads and attract visual attention. employ brain imaging on hemispheric lateralization, selective attention, and attention control to enrich the models of perception of advertising
Lambrecht & Tucker (2013)	When does retargeting work: Dynamic retargeted and generic retargeted ads, purchase and review site visit	Dynamic retargeted ads are, on average, less effective than their generic equivalents. When consumers have narrowly construed preferences, they respond positively (purchase) to ads that display detailed product information (dynamic retargeting).	<i>Future research could:</i> <ol style="list-style-type: none"> explicitly address the specific of dynamic retargeting ad design; e.g. which products should be highlighted. explore how competitive ads moderate the effectiveness of dynamic retargeting.
Lee & Cho (2010)	The effects of frequency and clutter in banner advertising: Exposure frequency, ad clutter, ad recall, ad recognition, attitude toward ad, attitude toward brand, and trial intention.	Exposure frequency influenced recall, attitudes toward brand, and trial intention. behaviour. However, contrary to expectation, banner clutter does not lead to negative effects on recall, attitudes, and behaviour. Negative impact of banner clutter was significant only on ad recognition.	<i>Future research could:</i> <ol style="list-style-type: none"> examine influences of task-oriented and casual browsers or users on ad effectiveness. examine diverse formats and shapes in real life situations.
Li-Ming <i>et al.</i> (2013)	Predictors of Attitude toward online advertising: Usability, trust, and information, and attitude toward online advertising	Usability, trust and information are positive predictors of consumer attitude toward online advertising.	
Li <i>et al.</i> (2009)	Internet advertising strategies of MNCs in China: Creative, placement and budget strategies.	Both Eastern and Western companies dominantly use individualist appeals for internet advertising in China, a collectivist country. However, Eastern multinationals also rely on emotional appeals, whereas Western companies generally adopt rational appeals.	<i>Future research could:</i> <ol style="list-style-type: none"> explore similar perspectives in different country contexts with different levels of economic development.
Liu & Mattila (2017)	Online targeted advertising: Appeal (belongingness vs. uniqueness), sense of power (high vs. low), <i>self-brand connection</i> , click-through intention, purchase intention	Powerless individuals exhibit higher click-through and purchase intention to belongingness appeal, while powerful individuals react more positively to the uniqueness appeal. Self-brand connection is the underlying mechanism (mediator) that explains these effects.	<i>Future research could:</i> <ol style="list-style-type: none"> use field experiments and measure consumers' actual behaviours such as click-through rate and purchase. use longitudinal studies to help check consistency across waves.

Mahmoud (2014)	Linking information motivation to attitude toward web advertising: Information motivation, <i>beliefs (information, entertainment, irritation, and value corruption), and attitude toward web advertising</i>	Information motivation predicts three dimensions of beliefs about web advertising, i.e. positively for information and entertainment; and negatively for irritation. Information motivation positively influences consumers' attitudes towards advertising. Also, information, entertainment and irritation are found to partially mediate the relationship between information motivation and attitude towards Web advertising.	<i>Future research could:</i> 1. investigate or include other types of internet usage motivation (e.g. social escapism, fun). 2. examine the sequential effects of several/arrays of ads.
Martin-santana & Beerli-Palacio (2012)	Effectiveness of web ads: Ad format (rectangle vs. contextual banners), product involvement, duration of website visit, attitude toward the website, unaided and aided recall, aided, recognition, attitude toward the ad and brand, and CTR.	A direct relation between measurements of effectiveness and CTR emerged; there were differences in the effectiveness of the two advertising formats explained by attitude toward the web site, involvement with the product and duration of web site visit.	<i>Future research could:</i> 1. investigate and extend study results to other online platforms, use divers' products and advertising formats.
Nasir (2017)	Identification of web user segments based on beliefs about online advertising: Beliefs about online advertising, attitude toward online advertising, willingness to purchase and pay more	Web users were segmented into three groups based on their beliefs about online ads (supporters, neutrals, and opponents). Web users who hold affirmative beliefs about online advertising have high levels of variety-seeking, innovativeness, & market-mavenism personality traits, when compared to those who hold negative beliefs.	<i>Future research could:</i> 1. explore the impact of culture in web user segments with positive or negative beliefs about online advertising.
Nihel (2013)	Effectiveness of internet advertising: Position, animation, size, profession, duration, images, colours, memorisation, and click.	Memorisation of a banner ad is largely affected by ad location, size and animation; and banner click is influenced by colours used in the banner, size and clarity of the message.	
Rosenkrans (2009)	Creativeness and effectiveness of online interactive rich media advertising: Interactivity, ad placement, click-through, and mouse rollover.	The interactive, rich media ad earned significantly higher click-through rates than the non-interactive, rich media ads. It also generated more user engagement and encouraged more user interactivity, thus increasing user involvement, as indicated by mouse rollovers.	<i>Future research could:</i> 1. continue to focus on online ad placement 2. focus on measure of mouse rollover independent of interactivity
Segev <i>et al.</i> (2014)	Effect of ad-context congruency on advertising responses: Ad-context congruency, attitude toward the ad, attitude toward the brand, purchase intention, issue involvement.	A banner ad that is thematically congruent with the blog's context generates more favourable responses than an ad that is not congruent with the context. However, issue involvement moderates the effect of congruency.	<i>Future research could:</i> 3. test participant in a more realistic setting of blog reading using a mock blog. 1. test the moderating effect of issue involvement on a wide variety of issues.

Seyedghorban <i>et al.</i> (2016)	Re-inquiry into internet advertising avoidance: Perceived goal impediment, perceived ad clutter, prior negative experience, user mode, and ad avoidance.	A positive relationship between perceived ad clutter, negative prior experience and ad avoidance is supported but was weaker for perceived goal impediment. User mode moderates the association between perceived goal impediment and ad avoidance only among telic users, and the impact of prior negative experience and ad avoidance was stronger among paratelic users. No interaction effects of ad clutter emerged.	<i>Future research could:</i> <ol style="list-style-type: none"> 1. focus on other specific internet platforms (e.g., gaming and social networking platforms), or media (e.g., free web services). 2. examine and compare avoidance toward different ad formats (e.g. banners, skyscrapers, interstitials etc.). 3. focus on examining differences across the three types of ad avoidance among telic and paratelic users.
Simola <i>et al.</i> (2011)	Impact of salient advertisements on reading and attention: Ad position, animation, attention, view time	Ads were overtly attended during reading and dwell times on ads were the longest when the ad above was static and the ad positioned right was animated; and ads close to the text capture more overt attention. Salient ads attract overt visual attention and disrupt reading and were viewed more frequently and for longer during casual browsing than during reading.	
Song <i>et al.</i> (2011)	Influence of product integration on online advertising effectiveness: Integration type, <i>perceived tie</i> , attitude toward promotion, usage intention, and click-through rates.	The integration level influences the strength of the perceived tie which in turn has a significant impact on advertising effectiveness. Product integration level also has a direct impact on advertising effectiveness.	<i>Future research could:</i> <ol style="list-style-type: none"> 1. replicate the study and include task characteristics and other contextual factors. 2. investigate the influence of bounded choice through product bundling on user adoption behaviour.
Souiden <i>et al.</i> (2017)	Consumer attitude toward online advertising: attitude toward advertising, personality (extroversion vs. introversion), attitude toward advertising, attitude toward online advertising.	Attitude toward advertising in general has a positive and significant impact on attitude toward online advertising. Introversion is found to have no moderating effect on the relationship between both attitudes. However, extroversion moderates this relationship.	<i>Future research could:</i> <ol style="list-style-type: none"> 1. broaden the sample scope in terms of age 2. consider how other personality traits (e.g. openness) may explain consumers' attitude to online advertising.
Spilker-Attig & Brettel (2010)	Channel Presence: e-mail, affiliate banner, affiliate price comparison, affiliate loyalty, and SEM, price group , ad impressions, ad clicks, site visitations and orders generated.	The results show that push channels have a minor effect on sales compared with pull channels. Additionally, we show that products at different price levels can be promoted via selective advertising channels.	<i>Future research could:</i> <ol style="list-style-type: none"> 1. focus on the details of individual ads (e.g. content and size format etc.). 2. analyse online advertising in combination with offline marketing efforts in order to gain insight into a lean and efficient marketing mix 3. examine the effect of social networks as well as interactions between the ad channels on orders.
Sun & Wang (2010)	Consumer response to online advertising in China and the United States: Familiarity with online advertising, beliefs about online advertising, attitude toward online advertising, and consumer responses (persuasion, and shopping experience).	For U.S. consumers, familiarity was a positive predictor of online shopping but not a significant predictor of persuasion. For Chinese consumers, familiarity was a positive predictor of persuasion but not a significant predictor of online shopping. Familiarity did not influence any belief factors in the U.S. sample but	<i>Future research could:</i> <ol style="list-style-type: none"> 1. conduct longitudinal studies to offer further insights into the relationships among the evolving belief and attitudinal factors. 2. focus on how other social and individual factors such as economic development level, demographics, lifestyle, and Internet experience,

		emerged as a significant predictor of all five belief factors in the Chinese sample. For both samples, ATOA positively predicted persuasion (stronger for US consumers), which positively predicted online shopping.	and development stage of online advertising come together to influence online advertising.
Tang <i>et al.</i> (2014)	Categorising consumer behavioural responses in online advertising: Ad content, ad form, and ad action, active approach behaviour, active avoidance behaviour, passive approach behaviour, passive avoidance behaviour	All four types of consumer behaviors were present, and all behaviors identified can be classified into one of the four types. categorization of the three types of ad design features can also guide the understanding of consumers' judgments of ads, which may function as a bridge of ad design features' influence on consumer behaviours.	<i>Future research could:</i> 1. provide more rigorous validation about the interplay between ad features, judgement of ad features and behavioural responses. 2. focus on other design features like repetition, timing etc.
Tujat & Reijmersdal (2012)	Effect of online advertising format on audience reaction: Ad format (sponsored content and banner ad), perceived advertising value, advertising recognition, understanding of persuasive and selling intent, and advertising skepticism.	Participants find sponsored content more informative, more amusing, and less irritating than the banner ad. With respect to persuasion knowledge, recognition of the advertising format, understanding of persuasive intent, and ad skepticism are higher for banner ads than for sponsored content. Ad skepticism seems to be strongly related to perceived advertising value.	<i>Future research could:</i> 1. explore the mediating or moderating effects of involvement and web experience. 2. investigate other formats (e.g. advergames, pop-ups) to provide more evidence for format effectiveness 3. construct and validate an overall measurement scale for persuasion knowledge.
Valaei <i>et al.</i> (2016)	Effect of culture on attitude toward advertising and online brands: Hofstede's cultural factors, attitude toward online advertising, and attitude toward online brands.	Individualism and long-term orientation are predictors of ATOA and ATOB. In addition, uncertainty avoidance does not have a positive relationship with ATOA and ATOB; and while there is no association between power distance and ATOB.	<i>Future research could:</i> 1. explore the results of inter-cultural difference in diverse countries.
Van Dorn & Hoekstra (2013)	Customisation of online advertising: Personalization (use of name, use of transaction information), privacy concern , intrusiveness, and purchase intentions.	Higher degrees of personalization such as adding personal identification or transaction information to browsing data is considered a double-edged sword; it increases purchase intention but also increases feelings of intrusiveness, which negatively affects purchase intentions. respondents with higher levels of privacy concerns experience stronger feelings of intrusiveness.	
Van Reijmersdal <i>et al.</i> (2016)	Processes and effects of targeted online advertising among children: Profile targeting (colour vs. product), <i>ad liking</i> , <i>perceived personal relevance</i> , <i>targeting recognition</i> , brand attitude, purchase intention.	Product targeting results in greater brand liking and increased purchase intention. These effects are explained by increased ad liking. Targeting colors in online advertisements had no effect. Children did not think that profile-	<i>Future research could:</i> 1. compare children, teenagers, and adults in a single study to gain more insights into the type of processing each uses.

		targeted ads are more relevant, and they also did not seem to understand the targeting tactic.	<ol style="list-style-type: none"> 2. examine whether other types of targeting have stronger impacts., that is, whether different types of targeting differ their effects. 3. use real targeted online advertisements based on children's profile pages. 4. employ a larger sample size and test hypotheses using SEM 5. use qualitative methods, allowing children to talk about this practice through use of tools such as focus groups or in-depth interviews
Wang <i>et al.</i> (2013)	How banner ads can be effective: Exposure duration, ad complexity, attitude toward the ad, attitude toward the brand,	When a banner ad is difficult to process, increase in exposure duration in the priming phase linearly heightens attitude toward the ad and brand in the testing phase. When the ad is moderately difficult, and easy to process, an inverted-U pattern, and U pattern occur respectively.	<p><i>Future research could:</i></p> <ol style="list-style-type: none"> 1. explore these effects in online media environment 2. determine the optimal exposure frequency of banner ads 3. further investigate the possibility that the degree of ad-context congruity has a meaningful impact on the effects of exposure duration and banner ad complexity.
Wang <i>et al.</i> (2009)	Influence of web advertising strategies on effectiveness: Ad variation strategy (substantive vs. cosmetic), message appeal strategy (emotional vs. informational), and goal-directedness , Consumer involvement , and attitude toward the ad	Product involvement moderated the relationship between ad variation and Attitude toward the ad. Specifically, under substantive variation, high-involvement consumers showed more positive attitude toward the ad than low-involvement consumers. Results were similar in the instance of informational appeal	<p><i>Future research could:</i></p> <ol style="list-style-type: none"> 1. verify results across diverse product categories, and website types 2. incorporate other ad formats to enrich outcomes and examine behavioural measures (e.g. click-through rate, eye tracking) to extend findings.
Wang & Sun (2010a); (2010b)	Cross cultural comparison of beliefs, attitude, and responses to online advertising: Belief factors (information seeking, entertainment, credibility, economy, value corruption), <i>attitude toward online advertising</i> , ad clicking, and shopping frequency	<p>Culture influences belief factors: compared to Chinese, Americans believe online advertising is more informative, credible and less beneficial to the economy.</p> <p>The influence of ATOA on ad clicking is stronger among Chinese than Americans (2010a).</p> <p>Romanians believed online advertising was more informative and credible; and they held more positive attitudes toward online advertising compared Americans and Chinese consumers (2010b).</p>	<p><i>Future research could:</i></p> <ol style="list-style-type: none"> 1. examine a broader profile of online consumers besides students and compare online advertising across different profiles. 2. conduct longitudinal studies to offer further insights into the relationships among the evolving belief and attitudinal factors. 3. focus on how other social and individual factors such as economic development level, demographics, lifestyle, and Internet experience conspire to influence online advertising.
Wang & Sun (2010c); (2010d)	Cross cultural comparison of beliefs, attitude, and responses to online advertising:	all five belief factors significantly predicted ATOA, which in turn predicted online ad clicking, and online shopping frequency.	

	Belief factors (information seeking, entertainment, credibility, economy, value corruption), <i>attitude toward online advertising</i> , ad clicking, and shopping frequency	<p>Compared to the Chinese, Romanians held more positive ATOA and were more likely to click on ads, while Chines were more likely to purchase online than Romanians (2010c).</p> <p>Compared to Americans, Romanians held a more positive ATOA and are more likely to click advertisements, while Americans are more likely than Romanians to make online purchases (2010d).</p>	
Wang <i>et al.</i> (2009)	Belief and attitude toward online advertising: Belief factors, <i>attitude toward online advertising</i> , ad clicking, and shopping frequency	Five belief factors that underlie Chinese consumers' ATOA were identified: entertainment, information seeking, credibility, economy, and value corruption. Information seeking, economy and value corruption were significant predictors of ATOA. ATOA was significantly predicted of ad clicking and online shopping frequency.	
Yeu <i>et al.</i> (2013)	Are banner advertisements in online games effective? Recall, recognition, and implicit memory.	Banner ads have the ability to be noticed and either explicitly or implicitly remembered in the context of an online advergaming. Both explicit and implicit memory does not vary based on achievement level in the game.	<i>Future research could:</i> <ol style="list-style-type: none"> 1. examine a affective and behavioural responses in addition to the cognitive measures. 2. Consider alternative methods of encouraging involvement.
Ying <i>et al.</i> (2009)	Effects of ad value, placement and execution on intrusiveness of web advertising: Ad value (content congruence, entertainment) ad placement (frequency and quantity), ad execution (sound, size, and animation), and intrusiveness.		<i>Future research could:</i> <ol style="list-style-type: none"> 1. consider broader samples of internet users beyond students as well as large sample sizes and control for demographics. 2. use real-life surfing situations to better capture user reactions and investigate whether the degree of involvement in the ad moderates intrusiveness.

Note: *Italicized*=Mediator **Bold**=Moderators



Appendix B: Survey Instrument

UNIVERSITY OF GHANA BUSINESS SCHOOL DEPARTMENT OF MARKETING AND ENTREPRENEURSHIP SURVEY INSTRUMENT

Dear Sir/Madam,

I am a PhD candidate at the University of Ghana Business School examining *Consumer behavioural responses to online display advertising in Ghana*. Information provided for the purposes of this research will be treated confidentially and used for academic purposes only. I would be grateful if you would take a few minutes (approx.: 7-10 mins) to fill out this questionnaire by ticking (✓) where appropriate. For any further clarifications and enquiries, kindly contact me via this email address – pmensah047@st.ug.edu.gh

NB: Online display advertising or display ads are graphic (visual) advertisements that are shown on websites, apps, and social media sites (e.g. Facebook, Twitter, YouTube etc.). They are mostly made of images, animations, flash, video, audio and text etc., and are meant to deliver general brand advertising messages to website visitors or internet users.

Section A: Internet Usage Information

1. How often do you use the Internet?

- Never or almost never
- Once or twice a month
- Several times a week
- Every or almost every day
- Several times a day

2. What is your major motive or reason for using the Internet?

- I go online to make purchases and buy things - Shopping
- I use the internet to search for any kind of information – (Re)searching
- When online, I'm mostly browsing for fun or exploring new sites -
Surfing
- I go online to chat with friends, send and check emails – Communication

3. How familiar are you with advertising on the internet (online advertising)?

- Not familiar
- Slightly familiar
- Somewhat familiar
- Familiar
- Very Familiar

4. How often are you exposed to online display ads while using the internet?

- Never
- Rarely
- Sometimes
- Often

Always

5. How long ago did you view an online display ad and/or make a purchase after viewing one?

- Below 1 month
- 1-2 months
- 3-4 months
- 5-6 months
- Above 6 months

6. What is the nature of the web page/site on which you saw the ad?

- Informational website (e.g. blogs, news site etc.)
- Social media site (e.g. Facebook, Twitter, Instagram, YouTube etc.)
- Commercial website (e.g. Tonaton, Jumia, OLX, Kaymu Amazon etc.)
- Search engine (e.g. Google Adwords)

7. What was the nature of the advertised brand?

- Product
- Service

8. Kindly state the specific product or service (e.g. mobile phone, clothing, restaurant, telecom)

Section B: On a scale of 1-7, please indicate by ticking (✓) or circling, the extent to which you agree or disagree with the following statements regarding the online display ad you recently saw and/or for which you made the purchase.

1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree

No.	Statement	Scales						
		Strongly Disagree			Strongly Agree			
Interactivity: the online ad I saw...								
1.	had interactive features	1	2	3	4	5	6	7
2.	had links I could click for further information	1	2	3	4	5	6	7
3.	provided opportunity for me to give my feedback	1	2	3	4	5	6	7
4.	gave instantaneous information when I requested	1	2	3	4	5	6	7
5.	made me feel the advertiser wants to listen to customers	1	2	3	4	5	6	7
6.	allowed me a lot of control over my ad viewing experience	1	2	3	4	5	6	7
7.	allowed me to choose the timing of the ad	1	2	3	4	5	6	7
8.	provided two-way communication	1	2	3	4	5	6	7
Placement: the online ad I saw...								
1.	was a good fit/match for the webpage/site on which it appeared	1	2	3	4	5	6	7
2.	was consistent with the webpage/site on which it was featured	1	2	3	4	5	6	7
3.	and the webpage/site on which it appeared belong together	1	2	3	4	5	6	7
4.	had a lot in common with the webpage/site on which I saw it	1	2	3	4	5	6	7
5.	matched the content of the webpage/website	1	2	3	4	5	6	7
6.	was made more credible by the webpage on which it was featured	1	2	3	4	5	6	7
7.	was similar to other ads on the webpage/site	1	2	3	4	5	6	7

Informativeness: the online ad I saw...		Strongly Disagree				Strongly Agree		
1.	was a good source of product/service information	1	2	3	4	5	6	7
2.	was a convenient source of product/service information	1	2	3	4	5	6	7
3.	supplied relevant information which was of value to me	1	2	3	4	5	6	7
3.	had information worth paying attention to	1	2	3	4	5	6	7
5.	gave me new ideas about the product/service	1	2	3	4	5	6	7
6.	helped keep me up to date with the product/service category	1	2	3	4	5	6	7
7.	made product information readily accessible	1	2	3	4	5	6	7
8.	supplied complete product/service information	1	2	3	4	5	6	7
Personalisation: the online ad I saw ...		Strongly Disagree				Strongly Agree		
1.	was tailored to my shopping situation at the time	1	2	3	4	5	6	7
2.	made recommendations that matched my needs at the time	1	2	3	4	5	6	7
3.	made me feel unique as an internet user	1	2	3	4	5	6	7
4.	was related to my search history at the time	1	2	3	4	5	6	7
5.	was useful and meaningful to me	1	2	3	4	5	6	7
6.	provided information based on my real-time location	1	2	3	4	5	6	7
7.	used my personal information (e.g. name & gender)	1	2	3	4	5	6	7
Exposure Condition: the online ad I saw...		Strongly Disagree				Strongly Agree		
1.	permitted me to choose freely what I wanted to see	1	2	3	4	5	6	7
2.	did not interfere with my online activity at the time	1	2	3	4	5	6	7
3.	did not intrude on the content I was accessing	1	2	3	4	5	6	7
4.	was not forced upon me	1	2	3	4	5	6	7
5.	was not repeated while I was on the webpage	1	2	3	4	5	6	7
6.	was not shown more than once during my activities on the webpage							
7.	did not stay on the screen for long	1	2	3	4	5	6	7
8.	was not on the screen for up to 30 seconds	1	2	3	4	5	6	7

Section C: On a scale of 1-7, please indicate by ticking (√) or circling, the extent to which you agree or disagree with the following statements regarding your general disposition toward online advertising, and your reactions to online display advertising

1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree

Attitude toward Online Advertising		Strongly Disagree				Strongly Agree		
1.	My general opinion of online advertising is favourable	1	2	3	4	5	6	7
2.	I consider online advertising very essential	1	2	3	4	5	6	7
3.	Online advertising is interesting and fun to see	1	2	3	4	5	6	7
4.	I appreciate seeing advertising messages on the Internet	1	2	3	4	5	6	7
5.	Overall, I like online advertising	1	2	3	4	5	6	7
Ad Avoidance		Strongly Disagree				Strongly Agree		

<i>Passive Avoidance</i>								
1.	I intentionally ignore online ads when using the internet	1	2	3	4	5	6	7
2.	I look away from online ads when I'm using the internet	1	2	3	4	5	6	7
3.	I wait for online ads to go away, then I continue with what I'm doing	1	2	3	4	5	6	7
<i>Active Avoidance</i>								
4.	I click/scroll away from or leave webpages displaying online ads	1	2	3	4	5	6	7
5.	I skip/close online ads that appear on my screen while I'm online	1	2	3	4	5	6	7
6.	I use ad blockers on my computer	1	2	3	4	5	6	7
Ad Acceptance		Strongly Disagree			Strongly Agree			
<i>Passive Acceptance</i>								
1.	I pay attention to online advertisements	1	2	3	4	5	6	7
2.	I carefully read the content of online advertisements	1	2	3	4	5	6	7
3.	I watch online/read online advertisements to the end	1	2	3	4	5	6	7
<i>Active Acceptance</i>								
4.	I click on online advertisements or links provided in online ads	1	2	3	4	5	6	7
5.	I bookmark online ads when I'm using the internet	1	2	3	4	5	6	7
6.	I sign up or give feedback if the ad provides the option	1	2	3	4	5	6	7

Section D: Demographic Information

Please respond to the following demographic questions, and we are done.

1. Age:
 - 18-30 years
 - 31-40 years
 - 41-50 years
 - Above 50 years

2. Gender:
 - Male
 - Female

3. Educational Level:
 - Basic (Primary up to JHS)
 - Secondary/Vocational/Technical
 - HND/Diploma/Undergraduate Degree
 - Postgraduate Degree
 - Professional Degree

4. Employment Status:
 - Unemployed
 - Self-Employed
 - Salaried worker (Full-time)
 - Salaried worker (Part-time)
 - College/Tertiary Student

5. Nationality:
 - Ghanaian
 - Other, please specify

6. Region of Residence (e.g. Greater Accra, Volta etc.):

Thank you for your time!

Appendix C: Ethical Approval



UNIVERSITY OF GHANA ETHICS COMMITTEE FOR THE HUMANITIES (ECH)

Ref. No.: **ECH 174/18-19**

Pricisilla Mensah
Department of Marketing and Entrepreneurship
University of Ghana
Legon

September 17, 2019

Dear Mrs. Mensah

**ECH 174/18-19: CONSUMER BEHAVIORAL RESPONSES TO ONLINE DISPLAY
ADVERTISING IN GHANA: THE EFFECTS OF AD CHARACTERISTICS, CONSUMER
ATTITUDE AND USER MODE**

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date: 05/09/2020
On Agenda for: Initial submission
Date of Submission: 17/06/2019
ECH Action: Approved
Reporting: Annually

Please accept my congratulations.

Yours Sincerely,

Prof. C. Charles Mate-Kole.
ECH Chair

Cc: Prof. Bedman Nartey, Department of Marketing and Entrepreneurship, UG.



INTEGRA PROCEDAMUS

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