Take it on the Chin! Advertising Acceptance on Mobile Platforms - A Review of Literature

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Abstract

This study consolidates existing literature through a systematic review to develop a comprehensive conceptual framework. This study followed Pollock and Berge's (2018) six-stage systematic review methods to achieve the aims. We conducted a bibliometric and content analysis using 48 articles from six databases: Science Direct, Emerald Insight, Wiley online Library, Sage Pub, Springer Link, and Taylor & Francis. The content analysis discloses three major categories of the antecedent: advert attributes, personal factors, and environmental factors that affect mobile advertising value, attitude, and acceptance. We found the antecedents to mobile advertising acceptance are not the same for all. They vary across age groups, regions, advertising types, and cultures. The study concludes with theoretical implications and future research directions. The study identified some regions where more research on mobile advertising is needed. These consolidated findings are useful for advertisers in planning future mobile advertising campaigns.

Keywords: *Mobile advertising attitude, mobile advertising value, location-based advertising, permission-based advertising, app-based advertising, mobile platforms.*

Introduction

Nearly 3.8 billion people, 50% of the world, own a smartphone. There has been a 40% increase in smartphone ownership since 2016 (Turner, 2021). Because of this increased usage, mobile apps have attracted marketers' attention. Researchers expect

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mobile internet advertising to grow from $189 bn in 2019 to $247 by 2022. It is the highest spending compared to other media worldwide (Guttmann, 2021). Most of this advertising budget is allocated to the applications (Guttmann, 2022). Mobile apps fall into six categories: music, assistance, videos, information, games, and social media apps. A mobile advertisement is a form of digital advertising delivered through mobile phones (Baik et al., 2014). The concept of mobile advertising began with SMS advertising in 2001 (Barwise, 2001; Carroll et al., 2007; Muk, 2007). With the advent of smartphones in 2007, mobile advertising transformed into advertising through apps and notifications through the internet (Bidmon & Röttl, 2018; Graham et al., 2021; Sung & Cho, 2012). Over time, the promotion through multimedia messaging services (MMS) became a component of mobile advertising (Wong et al., 2015), along with the advertising through phone calls (Enwereuzor, 2017).

Mobile advertisements have serval benefits, including cost-effectiveness, real-time connection, and different engaging options. These factors have allowed mobile advertising to become an alternative viable communication medium (Wong et al., 2015). Frequent engagement with mobile advertising promotes brand-related cognition. Hence, it increases brand awareness and positive brand attitudes (Bidmon & Röttl, 2018). In addition, numerous academic studies have shown a considerable potential for mobile advertising (Wang & Genç, 2019). Mobile advertising acceptance is the readiness of mobile users to receive advertisements (Hanley & Becker, 2009). It is one of the most serious issues for the marketer since consumers have negative attitudes towtowardbile advertising (Gao & Zang, 2016).

It has been a challenge for marketers to improve advertising acceptance among mobile users because of scams, the novelty of the advertising model, and the acceptance of mobile technology (Gao & Zang, 2016). The existing body of literature indicates that mobile advertising acceptance influences numerous marketing areas: brand awareness (Bidmon & Röttl, 2018), behavioral intention (Shih & Schau, 2011; Wang et al., 2009; Wong et al., 2015), purchase intention (Kurtz et al., 2021). Over the last decade, there has been a major increase in research on the reception of smartphone ads (Ashari Nasution et al., 2021).The literature is now rich on mobile advertising acceptance. Many studies found different factors that can lead to mobile advertising acceptance or rejection(Liu et al., 2019; Nwagwu & Famiyesin, 2016; Parreño et al., 2013). The studies on mobile advertising acceptance have utilized various methods, including qualitative (Bakare et al., 2017; Wong et al., 2015), qualitative and mixed methods (Muk, 2007). Although these studies have explored a broad range of concepts, techniques, and contexts, they have not focused on the theory related to this area. This dispersion of knowledge poses a challenge in pragmatic processing and integrating knowledge, theories, and previous

outcomes. Hence, this study's underlying research question: what factors increase acceptance of mobile advertising?

This study includes the research articles published in renowned journals from January 2007 till March 2021. Since mobile advertising is a global phenomenon, we included studies published in different regions in this review. This study makes several contributions to the body of knowledge. First, this systematic literature review consists of a comprehensive compilation of mobile advertising studies in several databases, being the first of its kind. Second, as reported in several dispersed research, the researchers have explored the critical variables in determining mobile advertising performance. Third, our systematic review will help future researchers to extend the framework developed in this study. Moreover, the findings will help the decision-makers develop well-received mobile advertising campaigns. Hence, allowing marketers to spend their budget on mobile advertising productively.

Methodology

This study used a six-stage method of writing a systematic review prescribed by (Pollock & Berge, 2018). The primary aim of this research paper is to conduct a systematic review of the literature to:

- To identify the factors affecting mobile advertising acceptance.
- To develop a probable research model describing how acceptance of mobile advertising can be increased.

This study aims to identify the variables that influence mobile advertising acceptance. We intend to develop a comprehensive model that defines the relationship between the variables identified.

Formulating Eligibility Criteria

This literature review is based on the quantitative, qualitative, and mixed-method studies published in recognized peer-reviewed journals. All the studies reporting factors affecting mobile advertising are included in this review.

The articles included match the following criteria:
- Written in English.
- Studies focused on defining mobile advertising through mobile apps and their notifications.
- Studies published in peer-reviewed journals
- Studies conducted after the launch of smartphones, i.e., 2007

- Studies including factors of mobile advertising acceptance, attitude or value

The articles with the following characteristics will be excluded:
- The studies define mobile advertising as advertising through SMS, MMS or calls.
- Articles published in other languages.
- Studies published before 2007.
- Articles with only outcomes of mobile advertising acceptance
- Conference proceedings, newspaper, magazine reports

Literature Search

Defining Search Strategy

We used the databases and search engines that publish marketing and advertising studies to identify the literature for this study. The study used the following databases: Elsevier, Sage Publication, Wiley Online, Springer, Emerald, Taylor & Francis, IEEE Xplore. The expression used for the search were: ("Mobile Advertising" OR "in-app Advertising" OR "Mobile Advertisement" OR "in-app advertisement") AND Acceptance. This study retrieved 1527 articles: 702 from the databases and 825 from the manual search. The inclusion period was from January 1, 2007, until March 31, 2021.

Selection of Abstract and Full-Text Article

We retained the studies matching the inclusion criteria. At the same time, we dropped studies matching the exclusion criteria. We filtered the literature based on titles, abstracts, and introductory sections at the initial stage. The study managed the search results through an open-source manager, Mendeley. After this shortlisting, we "Mixed-Method Assessment Tool" for further refinement. We dropped articles with a low score on MMAT. Based on the above-discussed methodologies, we retained 63 articles for further analysis. We have summarized the process of record selection in the PRISMA flowchart in Figure 1.
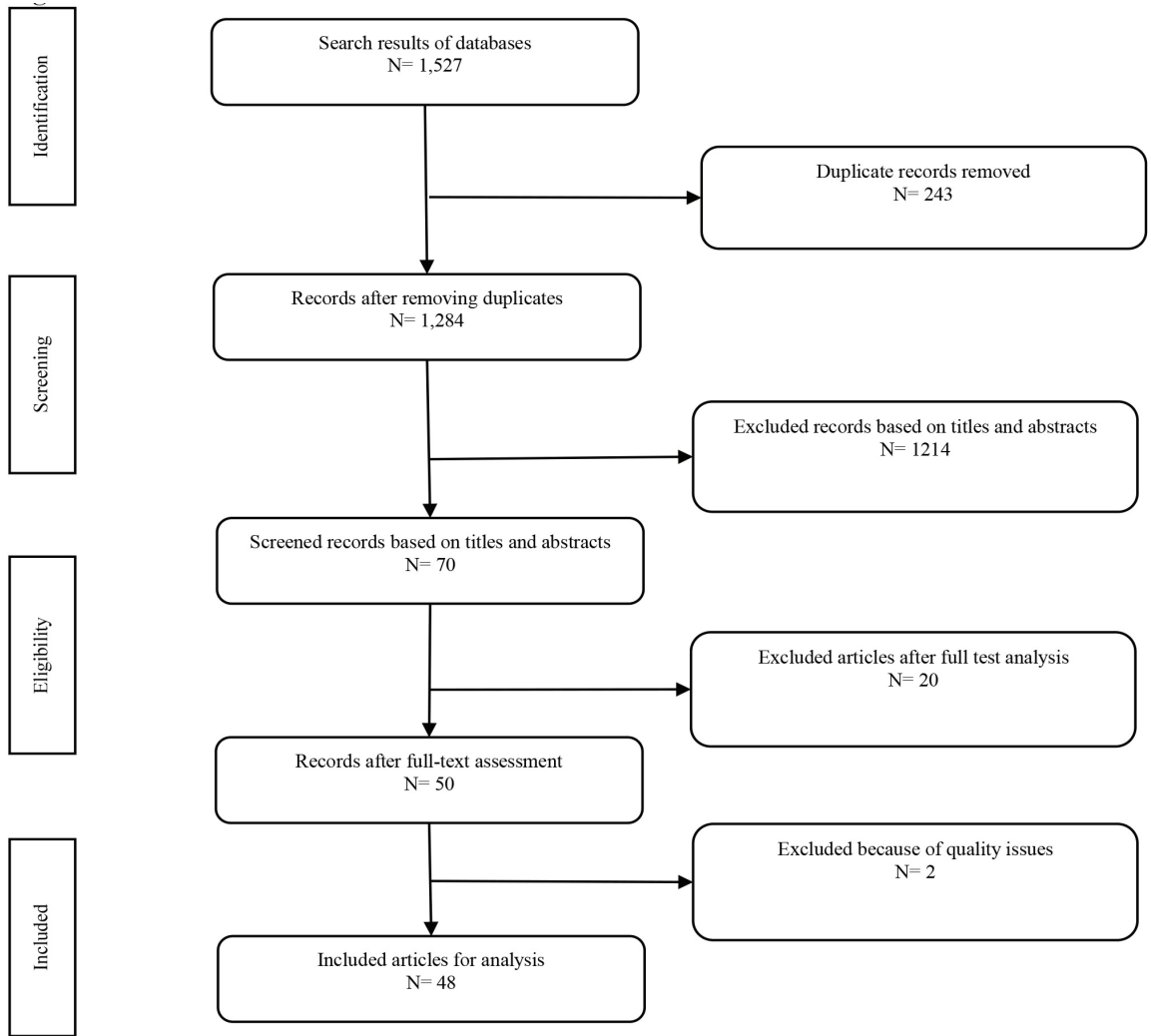
Figure 1: PRISMA

Quality Assessment

Quality assessment of the shortlisted articles is an essential element of a systematic review since the findings depend on the studies' quality. Therefore, we assessed the quality of all the articles using the Method Appraisal Tool (Hong et al., 2018). The studies are categorized as qualitative, quantitative, mixed-method study, randomized control trials, and non-randomized control trials. Accordingly, we evaluated each article on specific criteria. We excluded two studies as they didn't meet the criteria from the analysis. They had low methodological quality.

Data Extraction

The study developed a data extraction form to summarise information from the finalized articles. The information collected includes title, authors, year of publication, journal name, main findings, sample size, country of research, nature of the study, statistical analysis type, scoring, theory used, type of mobile advertising, and antecedents of mobile advertising value, attitude, and acceptance. The data collected on antecedents also included the direction of the relationship to prepare a nomological network of the variables related to mobile advertising acceptance.

Analyze and Synthesize Evidence

After data extraction, we analyzed and synthesized the retrieved documents. Analysis of the documents involves examining the characteristics of the articles, identifying the related aspects, and deriving possible reasoning. On the other hand, the synthesis process involves combining the knowledge extracted from individual articles to create new insights, which are not possible through the findings of one article. Based on the data extracted from the articles, the study carried out: bibliometric analysis and content analysis.

Bibliometric Analysis

As a first step, bibliographic information was utilized for analysis to identify the authors, documents, and sources most cited. Such articles are more valuable from the study's perspective. We retained a total of 48 studies for analysis after the quality assessment.

Distribution of Articles

This study retained those studies for a further analysis whose distribution was across various attributes. The articles meeting inclusion criteria were mostly from Science Direct, Emerald insights, and Taylor and Francis. Within Science Direct, the maximum number of articles came from Computers in Human Behaviour, Journal of Business Research, and Telematics and Informatics.
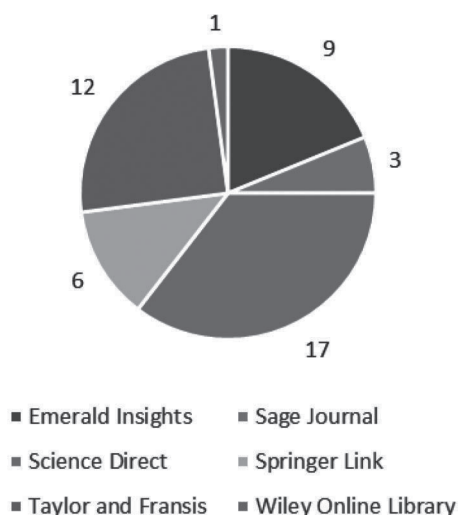
Distribustion of articles across databases

- Emerald Insights
- Science Direct
- Taylor and Fransis
- Sage Journal
- Springer Link
- Wiley Online Library

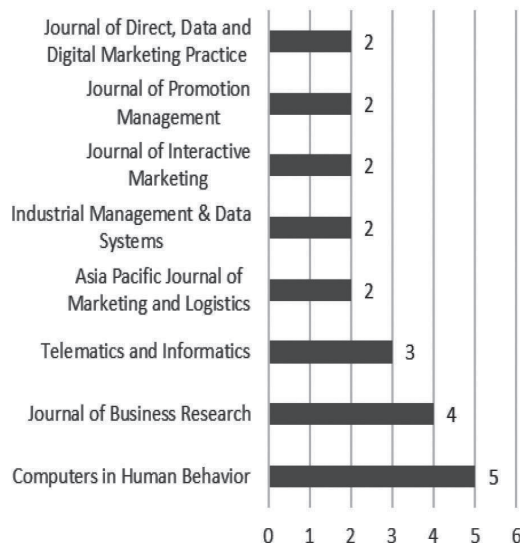**Figure 2: Database Distribution**

Journal distribution

Figure 3: Journal Distribution

Although mobile advertising has been an interest of research for around two decades, the publication on factors of smartphone mobile advertising has made its way to the body of literature since 2009. Therefore, the most publications included in this review are from 2016.

Chronological Distribution

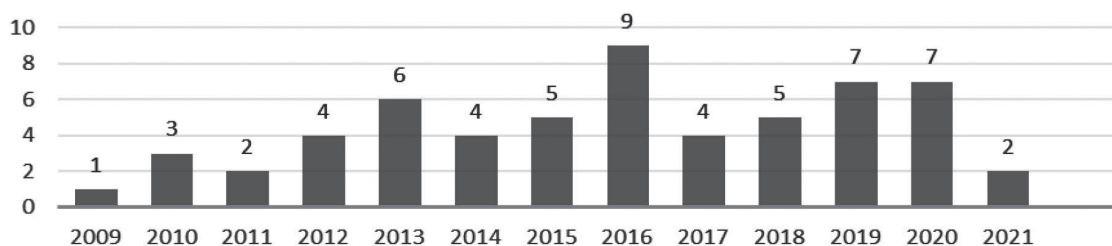**Figure 4: Chronological distribution**

Authors and Co-authors

The bibliometric analysis revealed that the authors included in the review are 128, of which 11 are the most-cited authors illustrated in Figure 5. Among these authors, Gao, (Tao) Tony; Rohm, Andrew; Sultan Fareena; and Pagani, Margherita have co-authored

Documents (Figure 6).
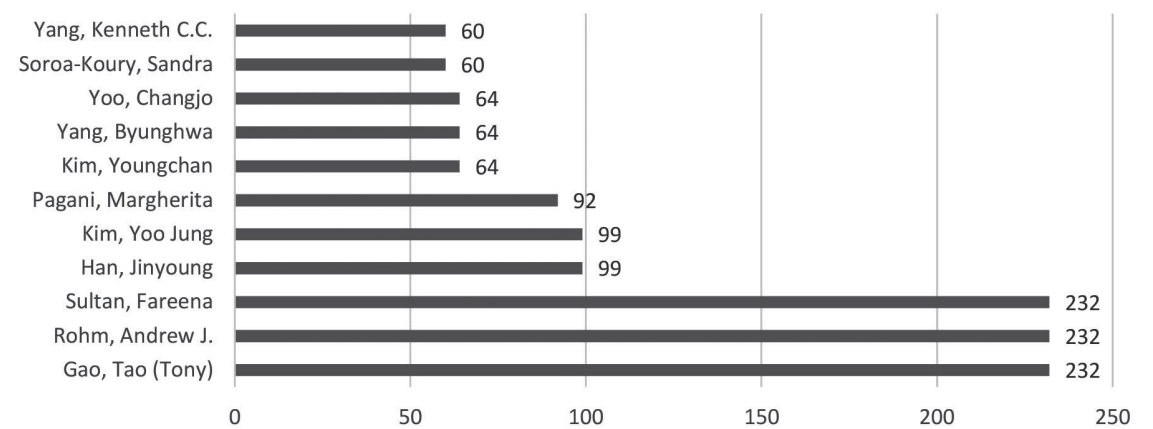
Figure 5: Authors' Citations
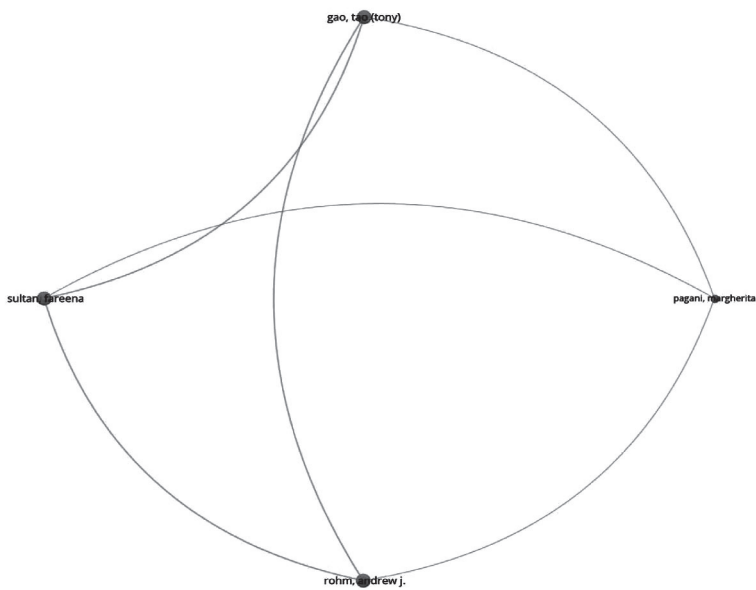
Figure 6: Co-Authors

The article citations revealed that most of the documents included in the review received ample citations. The most highly cited articles in this review are by Sultan (2009), and Yang (2013). The chart summarizes the number of citations of the ten most cited articles.

Documents' Citations
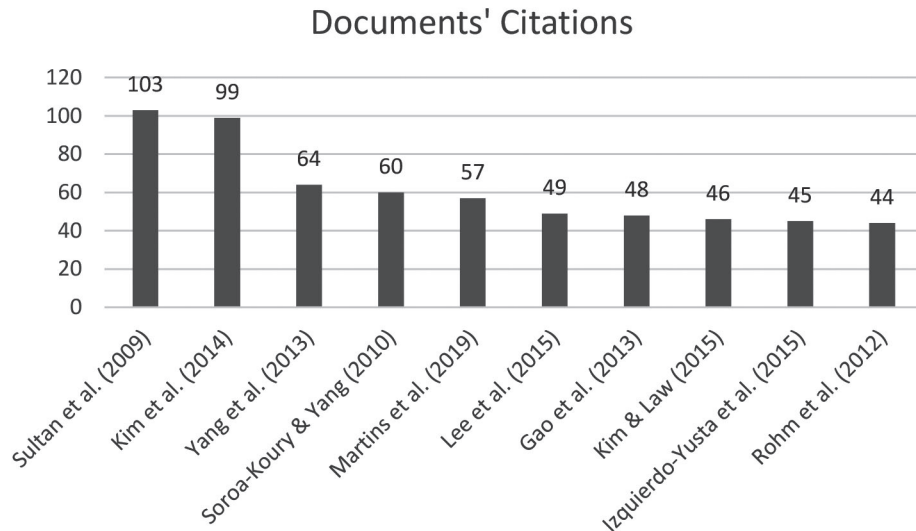
Figure 7: Documents' Citations

Geographical Coverage

The studies covered 25 countries from all six continents. Most of the studies are from Asia, Europe, and North America. However, the literature is quite scant from Oceania, South Africa, and South America on the factors affecting smartphone mobile advertising.

Distribution of studies across continents
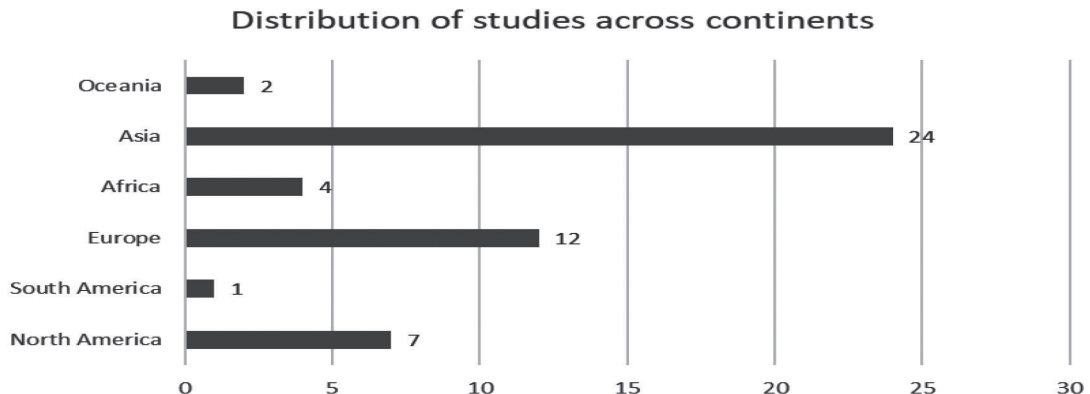
Figure 8: Continent Wise Distribution

Further analysis of studies based on varying internet penetration and cultural dimensions strength revealed notable findings. The studies equally covered the contexts with different uncertainty avoidance and indulgence levels. However, the literature on low internet penetration, masculinity, and power distance is scant. Refer to Figure 9 for the summary of results.

Internet penetration and cultural dimentsions
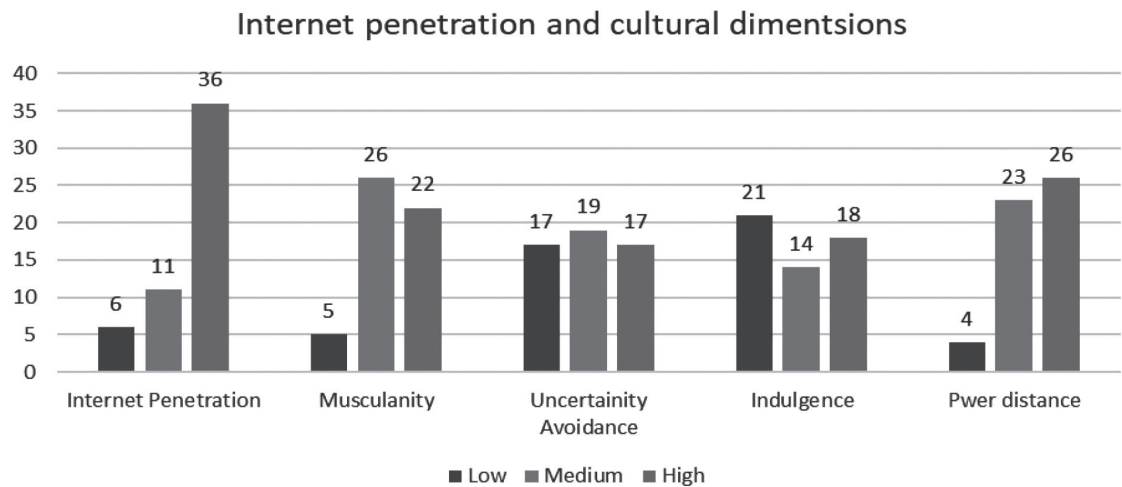
Figure 9: Internet penetration and cultural dimensions

Content Analysis

Despite the heterogeneity of studies included in this review, the study developed common themes based on the content analysis.

Type of studies

Most of the research studies on mobile advertising acceptance, value, and attitude were quantitative. However, qualitative studies have been quite a few compared to quantitative studies (Enwereuzor, 2017). Moreover, some quantitive studies have also focused on cross-regional comparisons.
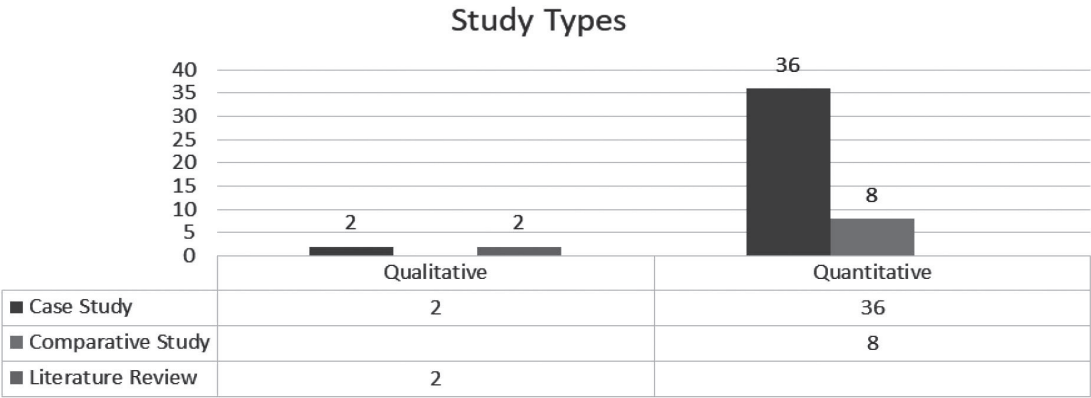
Figure 10: Study Types

The quantitative studies used five main types of statistical analysis: Partial Least Squared Structural Equation Modelling, Covariance based Structural Equation Modelling, ANOVA, MANOVA, and Regression Analysis. To apply these statistical analyses, the software utilized were mainly LISEREL, SmartPLS, AMOS, and SPSS. The study design utilized in these studies was either experimental, a questionnaire survey, or a combination of the two. All studies utilized a cross-sectional data collection design. Although some of the studies employed regional comparison, none of the research had a longitudinal design. The qualitative studies included in this review were either interview-based thematic analysis or reviews of the previously published research papers.
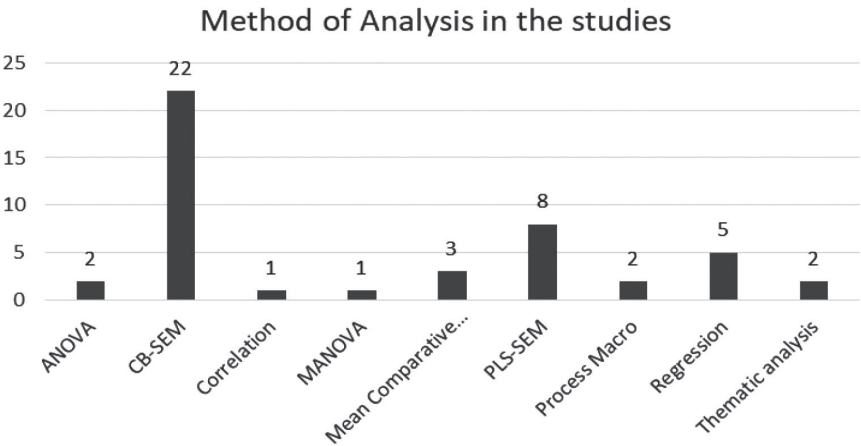
Figure 11: Analysis method used in studies

The Theoretical Framework Utilized

A strength of included studies was the pervasive use of theory to guide research. Some of the studies integrated more than one theory for the conceptual framework development (Achadinha et al., 2014; Gao et al., 2010; Gao et al., 2013; Hashim et al., 2018; Hühn et al., 2017; Krouwer et al., 2019; Kurtz et al., 2021; Le & Wang, 2020; Lee et al., 2017; Parreño et al., 2013; Sang-Ryu & Murdock, 2013; Sigurdsson et al., 2018; Soroa-Koury & Yang, 2010; Sultan et al., 2009; Wang & Lee, 2020; Wang et al., 2009; Wang & Genç, 2019; Wu et al., 2012; Yang et al., 2013). The most commonly studied theories include the technology acceptance model, theory of reasoned action, Uses and Gratification Theory, The Web Advertising Model, Theory of Advertising Value, Theory of Planned Behavior, and Theory of perceived reactance (Table 2). Some of the studies lacked an underpinning theory despite developing the hypothesis based on existing literature (Bauer & Strauss, 2016; Bhatia, 2020; Boateng et al., 2016; Kim & Law, 2015; Lee et al., 2015; Lu et al., 2019; Park et al., 2020; Rohm et al., 2012; Yousif, 2012).

Table 1A: Underpinning Theories

	TA	TRA	UG	WAM	TAV	TPB	TPR	MT	IAT	PCT	CLT
Achadinha al.(2014)	X	X									
Ashari-Naution et al. (2021)	X										
Yang et al.(2013)	X			X							
Baker and Badin (2014)	X										
Bauer and Strauss (2016)											
Bhatia, (2020)											
Boateng et al. (2016)											
Lee et al. (2017)					X	X					
Enwereuzor (2017)			X								
Feng et al. (2016)								X			
Gazley et al. (2015)									X		
Gutierrez et al. (2019)										X	
Kim and Law (2015)											
Yang et al. (2010)						X					
Hashim et al. (2018)					X	X					
Hühn et al. (2017)							X				X
Izquierdo-Yusta et al. (2015)	X					X					
Jiménez & San-Martín (2017)											
Ketelaar et al. (2018)											
Krouwer et al. (2019)			X								
Kurtz et al. (2021)		X								X	
Le & Wang. (2020)			X			X					
Limpf and Voorveld (2015)							X				
Lin and Bautista (2020)			X								
Liu et al. (2019)											
Maduku. (2020)							X				
Martins et al. (2019)					X						
Nwagwu and Famiyesin (2016)		X									
Okazaki et al. (2012)											
Park et al. (2020)											
Parreño et al. (2013)	X	X	X								
Rohm et al. (2012)											
Gao & Zang, (2016)											
Lee et al. (2015)											
Sang- Ryu and Murdock (2013)	X		X								
Shin et al. (2020)											
Sigurdsson et al. (2018)		X	X								
Soroa-Koury and Yang, 2010)	X	X									
Srisawatsakul and Papasratorn (2013)		X									

	TA	TRA	UG	WAM	TAV	TPD	TP	MT	IAT	PCT	CLT
Sultan et al. (2009)	X		X								
Gao et al. (2013)	X	X		X							
Gao et al. (2010)	X										
Wang and Genç (2019)	X	X									
Wang et al. (2020)	X	X									
Wu et al. (2012)	X										
Lee (2016)											
Kim and Han (2014)				X							
Yousef (2012)											
Total	14	10	9	3	3	5	3	I	1	2	1

Note: Note: TA is Technology Acceptance; TRA is Theory of Reasoned Action; UG is Uses and Gratification; WAM is Web advertising; TAV is Theory of Advertising Value; TPD is Theory of Planned Behavior; TP is Theory of Perceived Behavior; MT is Motivation Theory; IAT is Interactive Theory; PCT is Privacy Calculus Theory; CLT is Contractual Level Theory

Table 1B: Underpinning Theories

	TSP	SPT	IET	IUT	SCT	FET	SNT	SCP	IUI	CST	IDT	NS
Achadinha et al.(2014)												
Ashari-Naution et al. (2021)												
Yang et al.(2013)												
Baker and Badin (2014)												
Bauer and Strauss (2016)												X
Bhatia, (2020)												X
Boateng et al. (2016)												X
Lee et al. (2017)												
Enwereuzor (2017)												
Feng et al. (2016)												
Gazley et al. (2015)												
Gutierrez et al. (2019)												
Kim and Law (2015)												X
Yang et al. (2010)												
Hashim et al. (2018)												
Hühn et al. (2017)												
Izquierdo-Yusta et al. (2015)												
Jiménez & San-Martín (2017)	X											
Ketelaar et al. (2018)		X										
Krouwer et al. (2019)			X	X	X							
Kurtz et al. (2021)												
Le & Wang. (2020)												
Limpf and Voorveld (2015)												
Lin and Bautista (2020)												
Liu et al. (2019)												X
Maduku. (2020)												
Martins et al. (2019)						X						
Nwagwu and Famiyesin (2016)												
Okazaki et al. (2012)									X			

Study	TSP	SPT	IE	IU	SCT	FET	SNT	SCP	IUI	CS	IND	NS
Park et al. (2020)												X
Parreño et al. (2013)												
Rohm et al. (2012)												X
Gao & Zang, (2016)												
Lee et al. (2015)												X
Sang- Ryu and Murdock (2013)												
Shin et al. (2020)										X		
Sigurdsson et al. (2018)												
Soroa-Koury and Yang, 2010)								X				
Srisawatsakul and Papasratorn (2013)												
Sultan et al. (2009)												
Gao et al. (2013)												
Gao et al. (2010)												
Wang and Genç (2019)												
Wang et al. (2020)												
Wu et al. (2012)											X	
Lee (2016)									X			
Kim and Han (2014)												
Yousef (2012)												X
	1	1	1	1	1	1	1	1	I	1	1	19

Note: TSP is Theory of Shopping Preference ; SPT is Self-Persuasion Theory; IE is Intentional Exposure Theory; IU is Information Utility Theory; SCT is Source Creditability Theory; FET is Flow Experience Theory; SNT is Social Norm Theory; SCP is Social Capital Theory; IUI is Internet User Information ; CS is Consumer Socialization Theory; IND is The Innovation Diffusion Theory ; NS is no Specific Theory

Types of Mobile Advertising

The studies included in this review covered mainly six types of mobile advertising: permission-based advertising, location-based advertising, app-based advertising, QR code advertising, mobile web-based advertising, and smartphone advertising (Table 3). Notably, the researchers' interest in location-based advertising has increased substantially in the recent past (Bauer & Strauss, 2016; Gazley et al., 2015; Gutierrez et al., 2019; Hühn et al., 2017; Ketelaar et al., 2018; Kurtz et al., 2021; Le & Wang, 2020; S. Lee et al., 2015; Lee, 2016; Limpf & Voorveld, 2015; Lin & Bautista, 2020; Wu et al., 2012). However, despite being an important type of mobile advertising, very few studies matching inclusion criteria covered native or app-based advertising, and none covered reward-based advertising.

Table 2: Taxonomy of Mobile Advertising

Author, year	PBA	LBA	QR	APB	MC	WB	GA
Achadinha et al. (2014)					X		
Ashari Nasution et al.(2021)							X
Yang et al. (2013)							
Bakar and Bidin, (2014)							X
Bauer and Strauss (2016)		X					
Bhatia (2020)	X						
Boateng et al. (2016)							X
Lee et al. (2017)							X
Enwereuzor (2017)							X
Feng et al. (2016)							X
Gazley et al. (2015)		X					
Gutierrez et al. (2019)		X					
Kim & Law (2015)							X
Yang et al. (2010)							X
Hashim et al. (2018)							X
Hühn et al. (2017)		X					
Izquierdo-Yusta et al. (2015)	X						
Jiménez and San-Martín, 2017)							X
Ketelaar et al. (2018)		X					
Krouwer et al. (2019)				X			
Kurtz et al. (2021)		X					
Le & Wang (2020)		X					
Limpf and Voorveld (2015)	X	X					

	PBA	LBA	QR	APB	MC	WB	GA
Lin and Bautista (2020)		X					
Liu et al. (2019)							X
Maduku. (2020)							X
Martins et al. (2019)							X
Nwagwu and Famiyesin (2016)							X
Okazaki et al. (2012)							X
Park et al. (2020)				X			
Parreño et al,(2013)							X
Rohm et al. (2012)							X
Gao & Zang, (2016)							X
Lee et al. (2015)		X					
Sang- Ryu and Murdock (2013)			X				
Shin et al. (2020)				X			
Sigurdsson et al. (2018)				X			
Soroa-Koury and Yang (2010)							X
Srisawatsakul and Papasratorn,(2013)						X	
Sultan et al. (2009)							X
Gao et al. (2013)	X						
Gao et al. (2010)							X
Wang & Genç (2019)							X
Wang et al. (2020)							X
Wu et al. (2012)		X					
. Lee (2016)		X					
(Kim and Han, (2014)							X
Yousif (2012)							X
	4	12	1	4	1	1	25

Note: PBA is Permission Based Advertising; LBA is Location Based Advertising; QR is QR Codes; APB is App Based Advertising; MC is Mobile Coupon Advertising; WB is Web Based Advertising, GA is GA

## Antecedents of Advertising Acceptance

Mobile Advertising Acceptance is substantially explained by a positive attitude towards Advertising (Achadinha et al., 2014; Gao & Zang, 2014; Gao et al., 2010; Gao et al., 2013; Izquierdo-Yusta et al., 2015; Limpf & Voorveld, 2015; Nwagwu & Famiyesin, 2016; Okazaki et al., 2012; Parreño et al., 2013; Sigurdsson et al., 2018; Soroa-Koury & Yang, 2010; Srisawatsakul & Papasratorn, 2013; Wang et al., 2020; Wang & Genç, 2019; Wu et al., 2012; Yang et al., 2013). Besides other factors, Mobile advertising attitude is affected by mobile advertising value (Izquierdo-Yusta et al., 2015; Lee et al., 2017). It is worth noting that mobile advertising acceptance is positively affected by advertising value (Lin & Bautista, 2020). Although the literature has not shown serial causation of mobile advertising value and attitude towards mobile advertising for mobile advertising acceptance, future research can test the indirect relationship between advertising value and mobile advertising acceptance through attitude towards advertising (Figure 12). To understand the determinants of mobile advertising acceptance, an in-depth analysis of factors of advertising value and attitude towards mobile advertising is necessary.
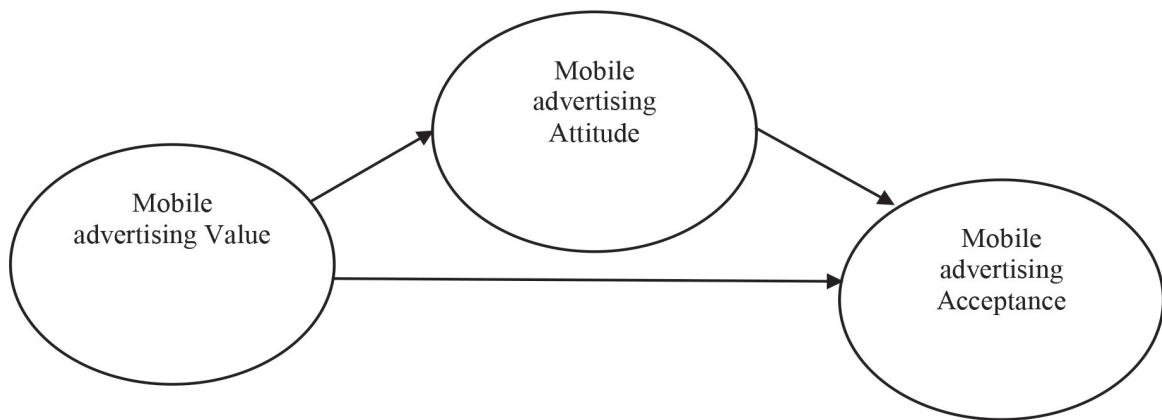
Figure 12

Informativeness

Informativeness of advertising content has a positive impact on advertising value (Kim & Han, 2014; Lee et al., 2017; Martins et al., 2019), attitude towards advertising (Hashim et al., 2018; Krouwer et al., 2019; Sigurdsson et al., 2018; Wang et al., 2020; Wang & Genç, 2019; Yousif, 2012) and advertising acceptance (Nwagwu & Famiyesin, 2016).
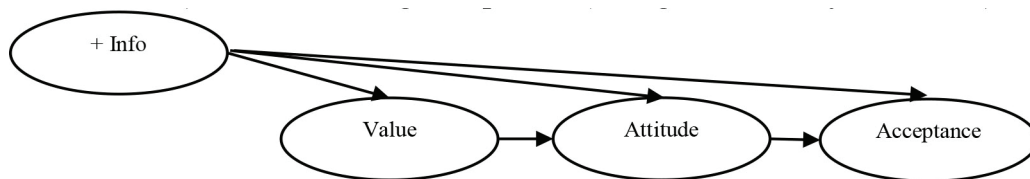

Entertainment

Entertainment of the advertising content is one of the most studied factors in mobile advertising acceptance. The entertaining advertising content positively impacts advertising value (Kim & Han, 2014; Lee et al., 2017; Lin & Bautista, 2020; Martins et al., 2019). Although entertainment leads to a positive attitude towards mobile advertising in general (Bhatia, 2020; Enwereuzor, 2017; Gao & Zang, 2016; Hashim et al., 2018; Parreño et al., 2013; Sang Ryu & Murdock, 2013; Sigurdsson et al., 2018; Wang et al., 2020; Y. Wang & Genç, 2019; Wu et al., 2012; Yousif, 2012). For LBA, the impact of entertainment is inconsistent on attitude towards advertising (Le & Wang, 2020; Wu et al., 2012), although we found entertainment is more influential in comparison with informativeness (Bauer & Strauss, 2016). However, only one study, conducted on public service employees in the LBA context in Nigeria, analyzed the impact of entertainment on advertising acceptance; it found that the effect of entertainment on the acceptance

was insignificant (Nwagwu & Famiyesin, 2016). Therefore, further researches should analyze the effect of entertainment element of advertising content in LBA context.
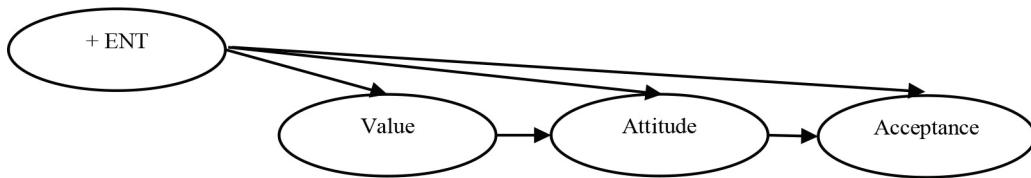

Credibility and Trust

Mobile advertising content that is believable, convincing, and credible leads to the higher value of mobile advertising (Kim & Han, 2014; Lin & Bautista, 2020; Martins et al., 2019). Mobile users have a positive attitude towards trustworthy and credible ads (Krouwer et al., 2019; Le & Wang, 2020; Wang et al., 2020). However, in a low internet penetration country like India, the impact of credibility on attitude is insignificant. At the same time, in the UK, the credibility of the advertisement improves mobile users' attitudes towards app-based advertising (Sigurdsson et al., 2018). In terms of advertising acceptance, the credibility of the advertisements improves their acceptance (Liu et al., 2019). However, a study in Nigeria on public sector employees concluded that credible advertisements negatively impact ad acceptance (Nwagwu & Famiyesin, 2016).
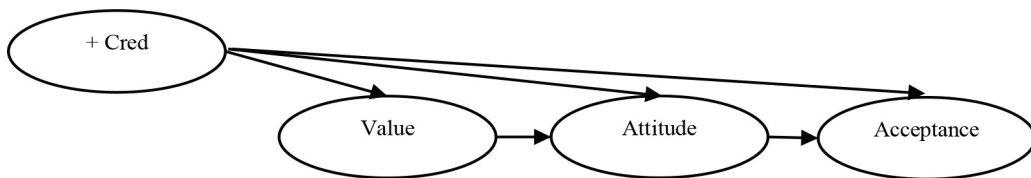

Irritation

Marketers believe irritating or annoying ads are perceived as less valuable (Lin & Bautista, 2020; Martins et al., 2019). One study in South Korea among students found that irritation has an insignificant effect on ad value (Kim & Han, 2014), whereas another study of South Korea with a similar sample showed a negative impact on advertising value (Lee et al., 2017). Although the two studies' context was similar, the set of variables in them was different. Notably, in the study in which the impact of irritation was insignificant, the credibility of the advertisement has the largest effect size. Mobile users have a negative attitude towards annoying and irritating ads (Boateng et al., 2016; Gao & Zang, 2014; Parreño et al., 2013; Wang & Genç, 2019). However, some of the studies found irritation to have an insignificant impact on attitude towards the advertisement (Hashim et al., 2018; Lee, 2016; Sigurdsson et al., 2018).
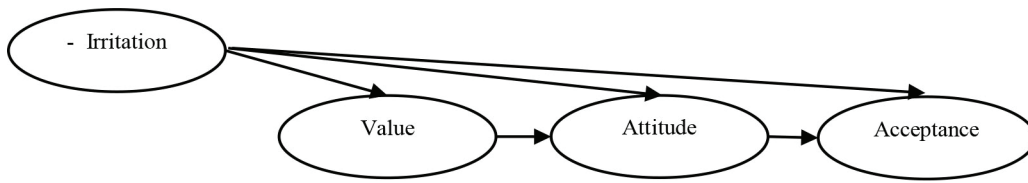
Intrusiveness

The mobile advertisements at times felt at impeding and intruding the mobile users' activities; the impact of intrusiveness on attitude towards mobile advertising is found insignificant in some of the studies (Bhatia, 2020), while negative in other contexts (Enwereuzor, 2017; Gazley et al., 2015; Ketelaar et al., 2018). Likewise, if an advertisement is intrusive, its acceptance among mobile users suffers (Gutierrez et al., 2019; Maduku, 2020).
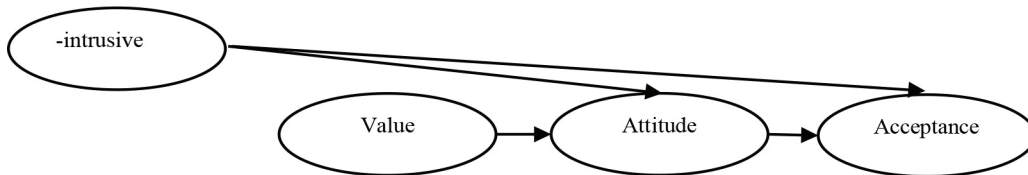

Ubiquity

Ubiquity, being available anywhere, is a distinguishing factor of smartphones compared to personal computers. Although this factor positively impacts attitude towards mobile advertising (Okazaki, 2005), it insignificantly impacts mobile advertising acceptance (Okazaki, 2005).
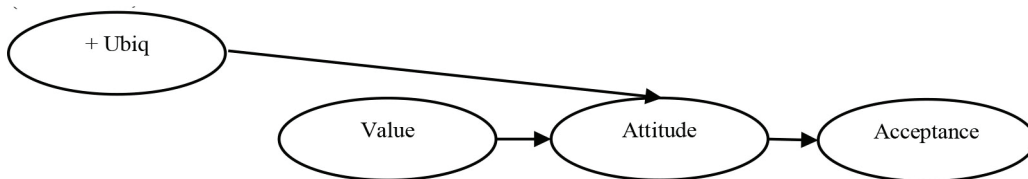
Personalization

The mobile advertisements that have personal relevance to the mobile users leads to better attitude towards the ads (Bhatia, 2020; Enwereuzor, 2017; Gao & Zang, 2014; Gao et al., 2013; Jiménez & San-Martín, 2017; Kurtz et al., 2021; Le & Wang, 2020; Park et al., 2020; Rohm et al., 2012). The advertisements that align with mobile users' preferences are more highly valued (Lee et al., 2017; Lin & Bautista, 2020). Moreover, personalized advertisements have more acceptance among mobile users (Gutierrez et al., 2019).
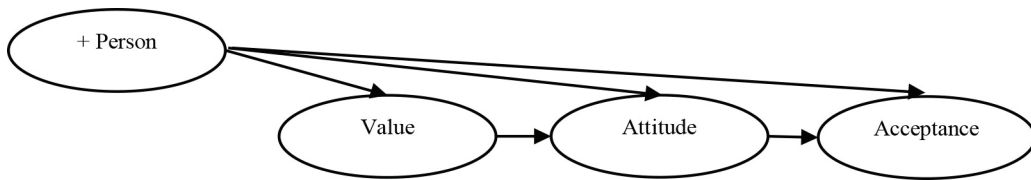
Customization

Mobile users, who customize the information that they allow to receive, have a more positive attitude towards mobile advertising (Gazley et al., 2015; Lee et al., 2015) and show higher acceptance for mobile advertising (Gao et al., 2010; Sultan et al., 2009). Moreover, mobile users display more liking for customized ads when the consumers are involved with the product advertised (Lee et al., 2015). However, a study in Germany showed a statistically insignificant effect of granting permission to provide information on attitude towards advertisements (Kurtz et al., 2021)
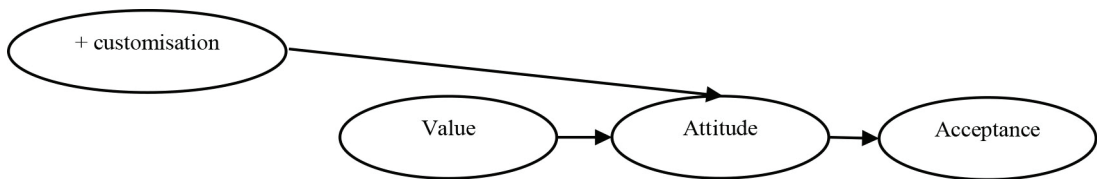
Incentive

The advertisements that offer gifts, coupons, discounts, or other benefits to mobile users hold more value for mobile users (Kim & Han, 2014; Martins et al., 2019). Moreover, the incentives lead to a positive attitude towards mobile advertising (Kurtz et al., 2021; Le & Wang, 2020). When mobile users expect to receive monetary benefits from receiving the advertisements, they like the advertisements more (Achadinha et al., 2014; Bhatia, 2020). In addition, the incentives in general (Wang & Genç, 2019) and in monetary form (Gutierrez et al., 2019) also increase acceptance of mobile advertising.
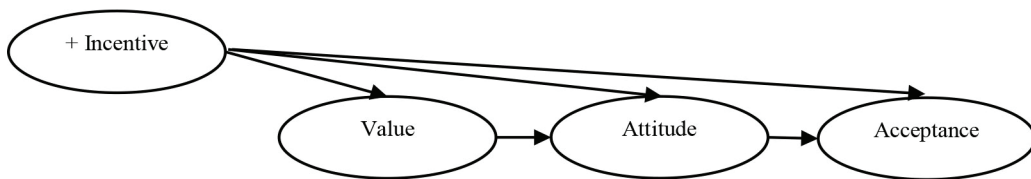
Contextualization

Smartphone users value advertisements that are well-adjusted with the time and location of the mobile users (Hashim et al., 2018; Lin & Bautista, 2020). Contextual

synchronization makes a positive impact on the attitude towards mobile advertising for location-based advertising (Gazley et al., 2015; Kim & Law, 2015; Kurtz et al., 2021; Le & Wang, 2020; Lee et al., 2015; Srisawatsakul & Papasratorn, 2013). However, it doesn't make a statistically significant impact on advertising acceptance in general advertising (H. Yang et al., 2010). Although contextualized advertising positively influences the ad value, attitude, and acceptance, mobile users are cautious about sharing their location with the marketers (Bauer & Strauss, 2016).
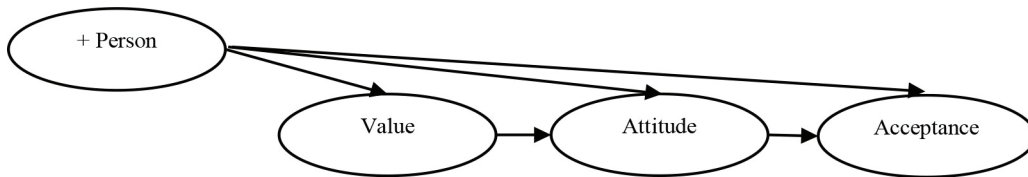

Perceived Ease of Use

The mobile users who believe that it is easy to use mobile phones have a positive attitude towards mobile advertisements (Achadinha et al., 2014; Bakar & Bidin, 2014; Parreño et al., 2013; Sang-Ryu & Murdock, 2013; Wang et al., 2020; Wang & Genç, 2019). Similarly, when mobile users feel that the devices are triable, they like the advertisements Wu et al., 2012). Similarly, in permission-based advertising, mobile users' liking of advertisements is lower, requiring effort in registration for receiving ads (Bhatia, 2020). However, some studies show that ease of use does not affect the attitude towards mobile advertisements (Izquierdo-Yusta et al., 2015; Shin et al., 2020; Soroa-Koury & Yang, 2010; Wu et al., 2012). Since there is inconsistency in the effect of ease of use on attitude, there is a need for more studies by incorporating demographic and psychographic factors as moderators or mediators into the relationship.
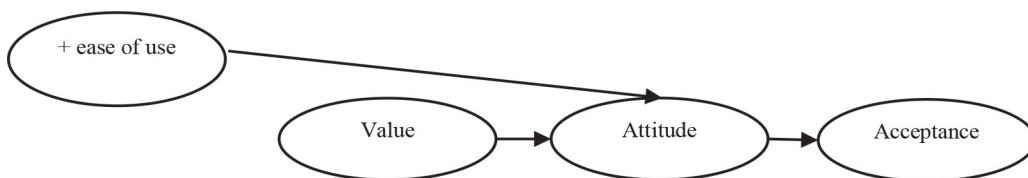
Perceived Usefulness

The advertisements perceived as useful by mobile users lead to a positive attitude towards mobile advertisements (Ashari-Nasution et al., 2021; Bakar & Bidin, 2014; Rohm et al., 2012; Sang-Ryu & Murdock, 2013; Soroa-Koury & Yang, 2010).The perceived utility of the advertisements increases their acceptance (Liu et al., 2019; Srisawatsakul & Papasratorn, 2013; Yang et al., 2010). Moreover, when mobile users perceive emotional value for the advertisements, they like the advertisements more (Yang et al., 2013). For

LBA, navigation support also positively enhances advertising attitude (Kurtz et al., 2021). However, in Vietnam, a study showed an insignificant impact of perceived usefulness on attitude towards advertisements where the sample of this study comprised older respondents from a lower uncertainty avoidance culture compared to other studies where respondents were younger.

```
 ( + usefulness and utility )      ( Value ) → ( Attitude ) → ( Acceptance )
```
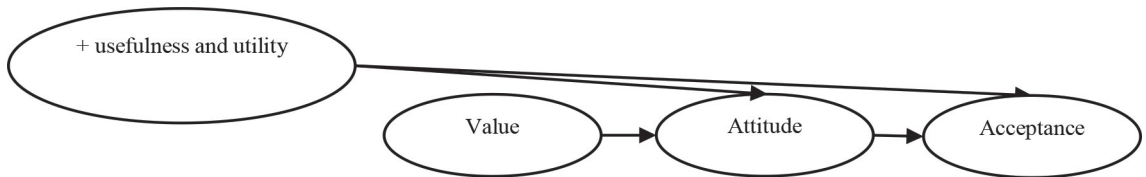
Privacy Concerns and Risks

Mobile users are highly sensitive about privacy concerns (Bauer & Strauss, 2016). Therefore, me users usually harbour negative feelings towards the advertisements that seem to hamper their privacy by having access to their personal information such as their contacts, messages, browsing history, etc. (Lee, 2016; Limpf & Voorveld, 2015; Wang et al., 2020). Similarly, mobile users dislike advertisements that have certain elements (Ashari-Nasution et al., 2021; Gao et al., 2013; Le & Wang, 2020; Okazaki, 2005). In addition to this, the privacy concerns (Gutierrez et al., 2019; Limpf & Voorveld, 2015; Maduku, 2020) and risk in general (Ashari-Nasution et al., 2021; Gao et al., 2013; Le & Wang, 2020; Okazaki & Taylor, 2013; Yang et al., 2010) can lead to lower acceptance of the mobile advertisements.

```
 ( -privacy concern )      ( Value ) → ( Attitude ) → ( Acceptance )
```
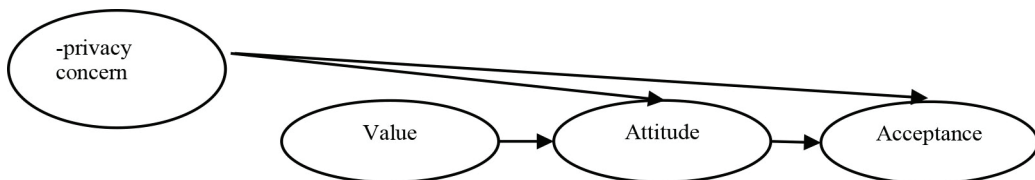
Consumer Autonomy and Permission

Mobile users have a positive attitude towards advertisements when they grant permission to receive them (Enwereuzor, 2017; Gazley et al., 2015; Krouwer et al., 2019). The mobile users in uncertainty-averse cultures show a lack of readiness to receive mobile advertisements when they control the commercial messages. In contrast, mobile users from low uncertainty avoidance countries have a positive attitude towards mobile advertising when they feel in control (Jiménez & San-Martín, 2017). Mobile users who feel they have control over receiving the mobile promotional materials show lower acceptance for mobile advertising (Yang et al., 2010).

Mobile Users and Technology Acceptance

The innovative mobile users have a positive attitude towards mobile advertisements (Boateng et al., 2016; Gao et al., 2013; Rohm et al., 2012). Furthermore, tile users, who accept mobile technology (Jiménez & San-Martín, 2017), spent more time on mobile phones (Gazley et al., 2015) and show attachment with mobile devices (Gao et al., 2013; Rohm et al., 2012) have a positive attitude towards the advertisements. Moreover, the mobile users, who access information and provide information about the product on social media (Gao et al., 2010; Sultan et al., 2009), and believe that mobile devices offer interactivity (Liu et al., 2019), have higher acceptance for mobile advertisements.
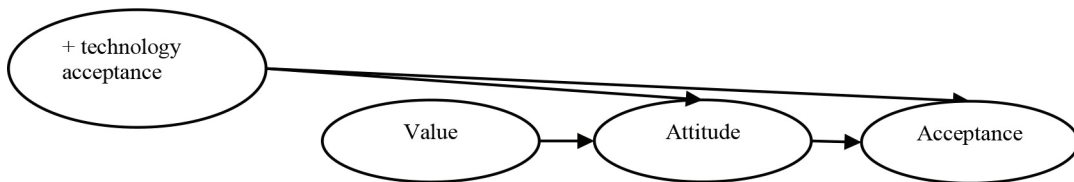
Social value and Social Norms

Studies suggest that the social environment of mobile users affects their attitudes. Mobile users happily receive advertisements if they believe they will enhance their social interaction (Wang et al., 2009; Wang & Genç, 2019) and positively affect their social influence (Jiménez & San-Martín, 2017; Le & Wang, 2020). These positive social elements also increase mobile advertising acceptance (Nwagwu & Famiyesin, 2016; Srisawatsakul & Papasratorn, 2013). However, the political affiliation of the mobile promotional material reduced its acceptance (Maduku, 2020). However, the nativity of the advertisement (the promotional posts that look like friends or contacts in the messenger apps) does not influence the attitude of mobile users towards the ads (Park et al., 2020).
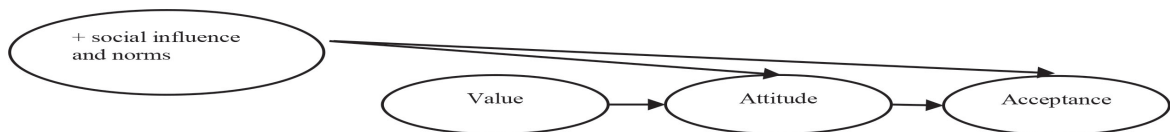
Both intrinsic (determined by innovativeness and entertainment) and extrinsic (timeliness, localization, and personalization) motivational factors have a positive impact on the attitude towards mobile advertising (Feng et al., 2016).

Table 3: Antecedents to Mobile Adverting

Author/Year	IN	ENT	CR	IR	PR	IN	CN
Lee et al. (2017)	P	P		N	P		
Hühn et al. (2017)							P
Lin and Bautista (2020)		P	P	N	P		P
Martins et al. (2019)	P	P	P	N		P	
Kim (Han, 2014)	P	P	P	NS		P	

Note: IN, is in-formativeness, ET is Entertainment, CR=Creditability, IR=Irrational, INT is Intrusiveness PR is personalization, CN= Contextualization. Note: P = Positive Effect, N = Negative Effect, NS = Not Significant

Table 4A: Antecedents of Attitude towards Advertising

Author, year	IN	EN	CR	IR	INT	PER	PEU	PU	PR
Achadinha et al. (2014)									
Ashari-Nasution et al. (2021)								P	N
Yang et al., 2013)									
Bakar and Bidin (2014)							P	P	
Bhatia (2020)		P			NS				
Boateng et al. (2016)				N					
Lee et al. (2017)									
Feng et al. (2016)									
Gazley et al. (2015)					N				
Hashim et al. (2018)	P	P	NS	NS					
Izquierdo-Yusta et al. (2015)							NS		
Jiménez & San-Martín (2017)									
Ketelaar et al. (2018)					N				
Kurtz et al. (2021)						P			
Le & Wang (2020)		NS	P			P			N
Limpf & Voorveld (2015)									
Okazaki et al. (2012)					N				N
Park et al. (2020)									
Parreño et al.(2013)		P		N			P		
Rohm et al. (2012)								P	
Gao and Zang, 2016)		P	P	N		P			
Lee et al. (2015)									
Sang-Ryu and Murdock (2013)		P					P	P	
Chin et al. (2020)							NS, P		
Sigurdsson et al. (2018)	P	P	P, NS	NS		NS			
Soroa-Koury and Yang (2010)							NS	P	
(Srisawatsakul and Papasratorn (2013)									
Gao et al. (2013)								P	N
Wang & Genç (2019)	P	P	P	N			P		
Wang et al. (2020)	P	P	P				P		
Wu et al. (2012)		P					NS	NS	
Lee (2016)				NS					
Yousif (2012)	P	P	P						

Note: IN is Informatiivenes; EN is Entertainment; CR is Credibility; IR is Irritation; INT is Intrusiveness; PER is Personalization; PEU is Perceived Ease of Use; PU is Perceived Usefulness; PR is Perceived Risk

Table 4B: Antecedents of Attitude towards Advertising

Author, year	TR	AMT	EBE	CI	SV	INV	TS	CS	PR	NS
Achadinha et al. (2014)										
Ashari Nasution et al. (2021)										
B. Yang et al., 2013)		P	P							
Bakar and Bidin (2014)										
Bhatia (2020)										
Boateng et al. (2016)				P						
E. B. Lee et al. (2017)										
Feng et al. (2016)										
Gazley et al. (2015)						NS	P	P	P	
Hashim et al. (2018)										
Izquierdo-Yusta et al. (2015)										
Jiménez & San-Martín (2017)		P								
Ketelaar et al. (2018)										
Kurtz et al. (2021)									NS	P
Le & Wang (2020)										
Limpf & Voorveld (2015)										
Okazaki et al. (2012)										
Park et al. (2020)										
Parreño et al.(2013)										
Rohm et al. (2012)				P						
S. Gao and Zang, 2016)										
(S. Lee et al. (2015)						P		P		
Sang Ryu and Murdock (2013)										
(Shin et al., 2020)						NS				
(Sigurdsson et al. (2018)										
(Soroa-Koury & Yang (2010)										
(Srisawatsakul and Papasratorn (2013)										
Gao et al. (2013)				P						
Wang & Genç (2019)					P. NS					
Wang et al. (2020)					P					
Wu et al. (2012)	P									
Y. C. Lee (2016)										
Yousif (2012)										
	1	2	1	3	2	2	2	2	2	1

Note TR is Tradability; AMT is Acceptance of Mobile Technology; EBE is Emotion Based Evaluation; CI is Consumer Innovativeness; SV is Social Value; INV is Involvement; TS is Time Spent on Smart Phone; CS is Customization; PR is Permission; Navigation Support.

Table 4C: Antecedents to Attitude towards Advertising

Author, year	CN	SI	PA	CA	PC	RE	CN	EM	IM
Achadinha et al. (2014)							P		
Ashari Nasution et al. (2021)									
B. Yang et al., 2013)									
Bakar & Bidin (2014)									
Bhatia (2020)				NS	NS	N			
Boateng et al. (2016)									
E. B. Lee et al. (2017)									
Feng et al. (2016)								P	P
Gazley et al. (2015)									
Hashim et al. (2018)									
Izquierdo-Yusta et al. (2015)		P		NS					
Jiménez & San-Martín (2017)		P		N					
Ketelaar et al. (2018)									
Kurtz et al. (2021)	PM								
Le & Wang (2020)	p	P							
Limpf & Voorveld (2015)					N				
Okazaki et al. (2012)									
Park et al. (2020)									
Parreño et al.(2013)									
Rohm et al. (2012)			P						
S. Gao & Zang (2016)									
S. Lee et al. (2015)		P							
Sang Ryu and Murdock (2013)									
Shin et al. (2020)		NS, N							
Sigurdsson et al. (2018)									
Soroa-Koury & Yang (2010)									
Srisawatsakul and Papasratorn, (2013)	p								
Gao et al. (2013)			P						
Wang and Genç (2019)					N				
Wang et al. (2020)									
Wu et al. (2012)									
Y. C. Lee (2016)					N				
Yousif (2012)									

Note: CN is contextualization; SI is Social Influence; PA is Personal Attachment; CA is Customer Autonomy; PC is Privacy Concern; RE is Registration Effort; CA is convenience; EM is Extrinsic Motivation; IM is Intrinsic Motivation

Table 4D: Antecedent of Attitude towards Advertising

Author, year	TA	NA	TS	APM	RPM	IF	MAV	PRC	MT	IN
Achadinha et al. (2014)									p	
Ashari Nasution et al. (2021)										
B. Yang et al., 2013)										
Bakar & Bidin (2014)										
Bhatia (2020)								P	p	
Boateng et al. (2016)										
E. B. Lee et al. (2017)							P			
Feng et al. (2016)										
Gazley et al. (2015)										
Hashim et al. (2018)										
Izquierdo-Yusta et al. (2015)							P			
Jiménez & San-Martín (2017)								P		
Ketelaar et al. (2018)										
Kurtz et al. (2021)										P
Le & Wang (2020)										p
Limpf & Voorveld (2015)	NM									
Okazaki et al. (2012)										
Park et al. (2020)		NS	NS					PM		
Parreño et al.(2013)										
Rohm et al. (2012)										
S. Gao & Zang (2016)										
S. Lee et al. (2015)										
Sang Ryu and Murdock (2013)										
Shin et al. (2020)				NS	N	NS				
Sigurdsson et al. (2018)										
Soroa-Koury & Yang (2010)										
Srisawatsakul and Papasratorn, (2013)										
Gao et al. (2013)										
Wang and Genç (2019)										
Wang et al. (2020)										
Wu et al. (2012)										
Y. C. Lee (2016)										
Yousif (2012)										
	1	1	1	1	1	1	2	3	2	2

Note: TA is Type of Advertising; NA is Nativity; TS is Thinking Style; APM is Active Parental Mediation; Restrictive Parental Mediation; IF is Informational Peer Influence; MAV is Mobile Advertising Value; PRC is Personal Relevance; MT is Monetary/Economic Benefit; IN is Incentive

Table 5A: Antecedents to Adverting Acceptance

Author, year	IN	EN	CR	IR	INT	PER	AMT	EBE	SV	MB	PV
Achadinha et al. (2014)											
B. Yang et al. (2013)							P				
Gutierrez et al. (2019)					N	P				P	
H. Yang et al. (2010)			P								P
Izquierdo-Yusta et al. (2015)											
Limpf & Voorveld (2015)											
Lin & Bautista (2020)											
Liu et al. (2019)			P					NS			P
Maduku (2020)					N						
Nwagwu & Famiyesin (2016)	P	NS	N	P		NS					
Okazaki et al. (2012)					NS						
Parreño et al. (2013)											
S. Gao & Zang (2016)										P	
Sigurdsson et al. (2018)											
Soroa-Koury & Yang (2010)											
Srisawatsakul & Papasratorn, (2013)									P		P
Sultan et al. (2009)											
Gao et al. (2013)											
Gao et al. (2010)											
(Wang & Genç (2019)										P, NS	
Wang et al. (2020)											
Wu et al. (2012)											
	1	1	3	1	3	2	1	1	1	3	3

Note: IN is Informativeness; EN is Entertainment; CR is Creditability; IR is Irritation; INT is Intrusiveness; PER is Personalization; AMT is Acceptance of Mobile Advertising; EBE is Emotional Based Evaluation; SV is Social Value; INT is Incentive Monetary Benefit; PER is Perceived Value.

Table 5B: Antecedents to Adverting Acceptance

Author, year	CN	SI	PA	CA	PC	SC	INT	SI	AI	PI	BC	PE	MA	AT
Achadinha et al. (2014)		NS									P			P
Yang et al. (2013)														P
Gutierrez et al. (2019)					N									
Yang et al. (2010)	NS			N		N								
Izquierdo-Yusta et al. (2015)														P
Limpf & Voorveld (2015)				N										P
Lin & Bautista (2020)													P	
Liu et al. (2019)							P							
Maduku (2020)					N							N		
Nwagwu & Famiyesin (2016)		P									P			P
Okazaki et al. (2012)														P
Parreño et al. (2013)														P
Gao & Zang (2016)														P
Sigurdsson et al. (2018)														P
Soroa-Koury and Yang (2010)														P
Srisawatsakul and Papasratorn, (2013)														P
Sultan et al. (2009)								NS	P	P				
Gao et al. (2013)														P
Gao et al. (2010)								N	P	P				
Wang & Genç (2019)			P		NS									P
Wang et al. (2020)														P
Wu et al. (2012)														P
	1	2	1	1	4	1	1	2	2	2	2	1	1	15

Note: CN is Contactualization, SI is Social Influence; PA is Personal Attachment; CA is Customer Autonomy; PC is Privacy Concerns; SC is Sacrifices; INT is Interactivity; SI Sharing Information; AI is Assissing Information; PI is Providing Information; BC is Behaviour Control, PE is Political Efficacy; MA is Mobile Advertising and AT is Attitude towards Mobile.

Location-based advertising (LBA) and Smartphone Advertising in General (SA)

Entertainment, credibility, personal relevance, and contextualization enhance the value of mobile advertising in the LBA context, whereas irritation of ad content diminishes the value. In terms of mobile advertising attitude, entertainment, personalization, try ability, involvement, time spent on smartphones, customization, contextualization, permission, navigation support, incentive, and trust positively impact mobile users' attitudes. However, intrusiveness and privacy concerns lead to mobile users disliking LBA. Moreover, personalization, economic benefits, and attitude towards LBA advertisements increase acceptance of LBA, whereas privacy concerns and intrusiveness reduce acceptance.

Overall, mobile users perceive LBA positively, and they have higher acceptance of the LBA when presented at leisure time, in public places, or while they are shopping (Bauer & Strauss, 2016). On the other hand, general advertising that is informative, entertaining, credible, and provides incentive increases the value, while irritation decreases the value of mobile advertising in general. Thus, in addition to mobile advertising value, mobile users like the advertisements that are informative, entertaining, credible, higher perceived ease of use, perceived usefulness, higher acceptance of mobile technology, emotion attachment, consumer innovation, and socially valuable. On the other hand, mobile users dislike annoying, risky advertising. Moreover, informativeness, credibility, ubiquity, social value, interactivity, behavioral control, and attitude towards mobile advertising increase acceptance. In contrast, intrusiveness, customer autonomy, privacy concerns, and sacrifice of personal information reduce mobile advertising acceptance.

Table 6: LBA and General Mobile Advertising

Endogenous Variable	LBA	General mobile advertising
Value	**+ve effect** Entertainment, credibility, personal relevance, contextualization **-ive effect** Irritation	**+ive effect** Informativeness, Entertainment Credibility **-ive effect** Irritation
Attitude	**+ive effect** entertainment, personalization, try ability, involvement, Time spent on phone, Customization, contextualization, Permission, Navigation support, incentive, Trust **-ive effect** Privacy concern Intrusiveness	**+ive effect** Informativeness, Entertainment Credibility, Irritation Ease of Use, Usefulness Mobile tech Acceptance Emotional value Customer Innovativeness Social Value **-ive effect** Irritation, Risk, Customer autonomy
Acceptance	**+ive effect** personalization, economic benefits, attitude towards LBA **-ive effect** Privacy concerns Intrusiveness	**+ive effect** Informativeness, credibility, irritation, ubiquity, social value, interactivity, behavioural control, and attitude towards mobile advertising **-ive effect** intrusiveness, customer autonomy, privacy concerns, and sacrifice

Discussion

The findings of this study revealed several antecedents of mobile advertising value, attitude, and acceptance. Some of the factors are context-specific, while others are generally applicable to various contexts in mobile advertising. These factors can be classified into three main categories: Advert attributes, personal factors, and environmental factors. The advert attributes can be described as the characteristics and features of an advertisement. Personal factors are the feelings and personal characteristics that influence acceptance of the advisements, for example, trust, perceived ease of use, mobile technology acceptance, etc. Moreover, environmental factors are the attributes external to the person and the advertisement; for example, the influence of friends, family, place, and time where ads are received. The antecedents observed in the analysis are summarized under these categories in Figure 13. This study, based on an extensive literature review, has analyzed the significance and direction of the effect of the antecedents on an individualized level.

However, the literature neither consolidates these factors nor assesses their relative

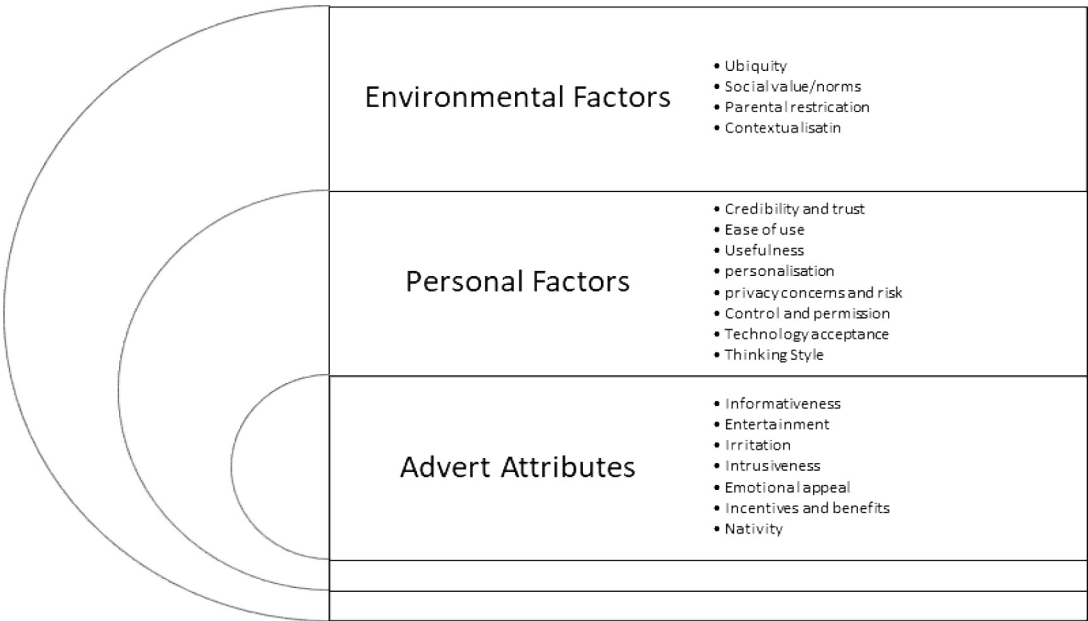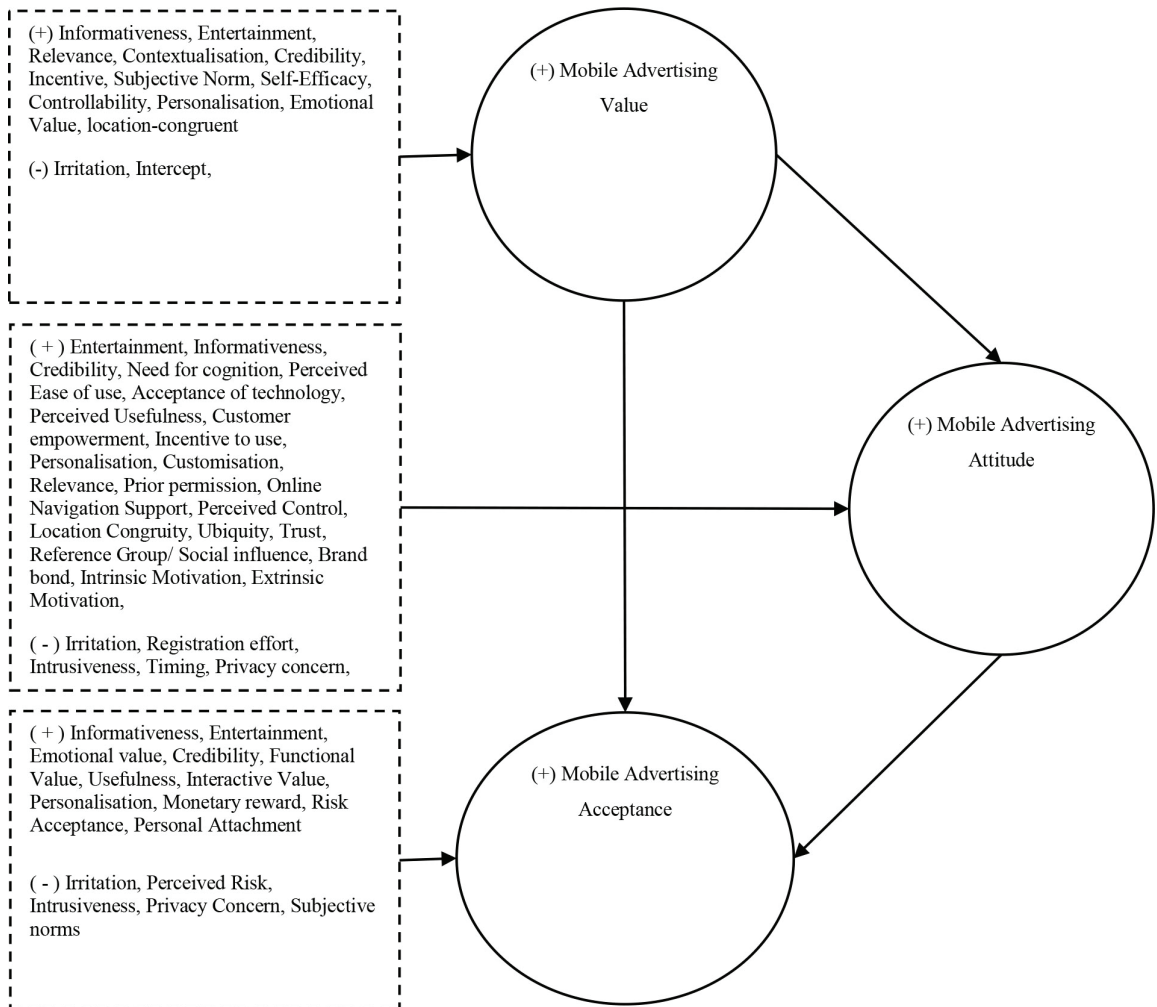importance in accepting mobile advertisements. Figure 13,

Figure 14: Classification of Factors

The antecedents of mobile advertising value, attitude and acceptance, and the relationship among them are summarised in the nomological network in Figure 15.

Figure 15: Nomological Network

Conclusion

The in-depth analysis of the 48 articles included in this review has made several meaningful contributions to the literature. First, the study has consolidated the knowledge of mobile advertising acceptance concerning mobile advertising types, uncertainty avoidance, and indulgence. Moreover, this study has developed a comprehensive conceptual model of the factors that determine mobile advertising value, attitude, and acceptance. Despite its strengths, there are certain limitations of this study. We might have missed some valuable knowledge because of the restricted database search since articles included in this study were from six databases relevant to a marketing publication.

It has also highlighted areas that require further knowledge. First, the existing literature covers the uncertainty avoidance and indulgence dimensions of culture sufficiently—however, we found very few studies from low masculinity and low power distance cultures. Secondly, reward-based advertising seems to be neglected among the mobile advertising types, although every other application offers perks for watching a few seconds of video advertising.

Moreover, previous research has established a pair-wise positive relationship between mobile advertising value, attitude, and acceptance. However, the studies have not empirically tested the serial causation or indirect effect on mobile advertising acceptance through mobile advertising attitude. In addition, the comparative studies so far have focused on age, countries, and other advert attribute comparisons. Future studies should also explore differences among personality types since one of the distinguishing features of mobile advertising is tailoring commercial communication to the mobile user. Another area requiring attention is the assessment of relative importance antecedent category. The studies have not formally categorized the antecedents and assessed their relative role in advert acceptance. Research should explore these contexts to increase the generalisability of the knowledge.

Statement of no-conflict of interests

We all authors confirm no relevant financial or non-financial competing interests to report.

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