

Impact of Advergimes on Consumer Behaviour: A Study Based on Flow Theory

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Abstract

This study aimed to investigate the impact of advergimes on consumer behavior from the perspective of flow theory. The analysis was quantitative, and 482 participants from a university in Saudi Arabia and the United Kingdom were recruited using a random sampling technique. A survey questionnaire was designed to collect data, which were analyzed using the Statistical Package of Social Sciences version 23.0 (SPSS). Descriptive statistical analysis using means and standard deviations was performed. A multiple regression test was used to check the relationships between the independent and dependent variables. The study found that factors such as skill activation, challenge, persuasion, interactivity, and flow experience significantly impacted consumer behavior while playing advergimes. The study concluded that while designing advergimes, these factors of flow theory should be kept in mind to make consumers more susceptible to advertising messages.

Keywords: advergimes, consumer behavior, skills, challenges, persuasion, interactivity, flow experience

1. Introduction

In recent times, the use of mobile advertising has increased, leading to a corresponding upturn in the sales of mobile devices (Pansari & Kumar, 2017). The consumer-oriented marketing has become mainstream, and businesses have begun to think of novel ways to devise marketing strategies based on creative gamification (Nicholson, 2015). Gamification is the process whereby ordinary and unpleasant concepts are changed into entertaining processes that individuals actively engage in by using people's natural preferences for joy, fun, and characters of inspiration in games. Gamification is applicable in many fields, and many organizations use it for crowdsourcing or personnel training. These games offer incentives and rewards and combine elements of fun, joy, and excitement to motivate or encourage consumers to engage and interact with the brand actively, which leads to the attainment of marketing goals and positive changes in consumer behaviors. Advergimes help build relationships with consumers (Schöbel et al., 2020). Therefore, they can be regarded as communication tools that help organizations get into close contact and interact with their target audience. By doing so, they build value for their brand and strengthen the organization in terms of growth (Burke, 2016).

In this context, the increase in the popularity of gaming has caught the attention of advertisers, who have found new methods to use video games. Advertisements in advergimes can provoke consumers' interest, leading to the intention to purchase (Chen, 2017). These advertisements are also designed to change the attitudes and behaviors of consumers (Vyvey et al., 2018). For example, advertisers can incorporate brand identifiers, such as brand logos, into games, such as product placement in movies and television shows. Moreover, advertisers can also make use of social media gaming to promote services and products or incorporate brands into digital games available on various social media platforms.

To do so, a notable theory in the psychology of science called flow theory may prove valuable. According to this theory, flow is a state in which individuals absorb themselves so that they do not even recognize that time is passing by quickly. In the state of flow, individuals are very pleased and satisfied with whatever they are doing and are eagerly involved in whatever behavior they are engaged in. As a result, the flow experience frequently leads to

creativity and productivity (Csikszentmihalyi, 1988). Therefore, this study aims to investigate the impact of advergames on consumer behavior from the perspective of flow theory.

1.1 Research Question

Based on the aim of the study, the following research question has been formulated:

Q1. Based on flow theory, how do advergames impact consumer behavior?

2. Literature Review

Mihaly Csikszentmihalyi originally proposed flow theory in 1988. According to initial formulations, when an individual is actively engaged in an activity in which the skills and challenges are balanced, the individual attains an optimum state of experience called flow. Many conditions contribute to this psychological state of mind. Games are considered a flow activity par excellence (Csikszentmihalyi & Csikszentmihalyi, 1990). For this reason, in recent years, a new form of advertising known as 'advergames' has emerged, which refers to video games centered around a brand and its products. These are usually child-oriented marketing tools that merge video games with advertising (Hofmeister-Tóth & Nagy, 2011). However, to attain the optimum experience, a balance should be maintained between the skills required for the game and how challenging the behavior can be. This experience is not easy to attain, and few advergames provide suboptimal solutions in this respect (Hamet Bagnou et al., 2021).

Therefore, advergame can be more challenging than players can handle; this induces anger and anxiety in the players toward the game. Alternatively, games can be less challenging, which can lead to boredom. In both cases, players are unhappy and do not reach the state of flow (Granic et al., 2013). When players are not in their state of flow, they are little inclined to pay attention to advergames. On the other hand, if the game can provide a state of flow, the players concentrate completely on the game. Therefore they are more susceptible to the persuasive messages of advergames (Vanwesenbeeck et al., 2016).

Advergames are an excellent means of communicating information on popular products that fulfill the curiosity aspect of potential customers and gamers who are not necessarily potential buyers. Nonetheless, these active information seekers also play an important role in spreading the word about the brand. For example, in advergames in the automotive industry, players acquire information about brand-new cars through an excellent gaming experience. Similarly, in 2018 a loyalty program app for the mobile device was released by Porsche Austria named BONEO. The app focuses on connecting customers to the brand with a long-term relationship. This car-connected app allows owners to have their avatar and receive "Loot Boxes" (Burmester, 2022). However, it is not so easy to persuade a potential customer to purchase a brand product, especially a high-end car like Porsche.

Nevertheless, by understanding the game, the brand can introduce its car in a way that cultivates awareness in the minds of consumers (Wiemerslage, 2021). On the other hand, the Quora website is a good illustration of successful gamification. It is a question-and-answer internet service that accomplishes the users' need for relatedness. Along with connecting like-minded users, it also provides an additional benefit to users by awarding them with credit points (Burke, 2016). Quora's credit point method is an excellent example of a successful gamification strategy in which there is a perfect alignment of both the business organization's goal and the objective of the customer.

When individuals play advergames, they enjoy and learn about the product, which motivates them to try it (Vashisht et al., 2019). Advergames instill confidence in players as they obtain more information about brands, products, and services. Also, when individuals want to buy products in the same category, the brand is effectively placed and prioritized in the minds of the consumer.

The state of flow is characterized by inducing moments of focused attention directed toward an activity that creates flow. The person spends time, withdraws from self-awareness, feels gratified, and experiences pleasure in having control over actions. As a result, a positive experience is obtained, and the person develops a positive affection for the activity and the elements involved (Waiguny et al., 2012). For the flow experience to be optimal, there must be a balance between the user's skills and the challenges imposed on them (Waiguny et al., 2012)

As previously mentioned, for a game to have proper flow, it must motivate players to challenge their skills and experience improvement as they progress through the game. In the same way, besides the flow experience, sculpting the pleasure of the players of a game, such as the pleasure of exploration and control, is shown to keep both adults and children entertained for a prolonged period (Roettl et al., 2016).

Getting players to reach the state of flow has been shown to improve their attitudes toward advergames and positively impact their perception of the associated brands (Vanwesenbeeck et al., 2016). In a study by Vanwesenbeeck et al. (2016), it was shown that advergames with the good flow have the potential to persuade children by blurring the existing boundaries between entertainment and commercial messages; when playing, children focus so much on the game that they are unaware of the advertising message hidden in it.

In this sense, the constant repetition of the game reinforces the persuasive elements by improving the fluidity with which the effects of the transfer of conditioning and effect occur (Roettl et al., 2016). However, a study by Chia-Wen et al. (2017) found that a positive perception of advergames increases in consumers when the advertising messages are inconsistent with the video game. For example, if a fast food brand places an advertising message in a cooking game, it may be perceived negatively. However, placing it in a racing game may attract more user attention and be perceived positively. Another benefit that games with good flow offer is that they reduce counterarguments and suspicion on the part of the individual because players assign all their cognitive resources to concentrate on the game (Roettl et al., 2016). In addition, advergames are a non-intrusive way for brands to connect with their potential customers because the users have decided voluntarily to interact with the brand's video game. Thus, advergames created with the necessary characteristics for users to achieve a state of flow can help brands improve the perception and recognition of their consumers.

In his research, Csikszentmihalyi suggests that enhancing the time spent in flow makes people's lives happier and more successful since it leads to better performance (Csikszentmihalyi, 1990; 1998). When a person is in a flow state, they are working on mastering the activity. It is thus believed that flow experiences imply a growth principle on the downside. Flow theory has been suggested to be too much of a Western concept, even though it is made to look like it relates to the entire human race. This experience also affects men more than women (Csikszentmihalyi et al., 2005). Furthermore, there need to be clear directions for achieving the flow state.

2.1 Flow Theory and Advergames

Several researchers have used qualitative and quantitative methods to investigate certain aspects of human online interaction (Michailidis et al., 2018; Goethe, 2019; Pallavicini & Pepe, 2019; Leroy, 2021). The results are not certain, as controlling the addicted players is not possible, and the impact of flow experiences on positive affect is also unclear (Hu et al., 2019). Furthermore, studies on the flow experience of players and the characteristics of effective advergames remain scarce (Farnsworth, 2018). There are three possible scenarios for interaction between an internet user and online games. First, when the player's capability does not match the level of difficulty of the advergame, the individual may experience anxiety, stress, and anger and will likely stop playing the game due to negative feelings. Second, if the individual's ability is greater than the level of difficulty of the game, the feeling of boredom may arise, which has a direct effect that would lead the player to exit the game. Third, if the level of ability of the individual and the level of difficulty match, the state of flow is attained, and this results in the motivation of the internet user to revisit the site and play the game again. However, the situation can become more complicated. Once the flow state is induced, its maintenance requires constant evolving challenges for the player, as their ability level will improve after playing the game a few times (Reiner et al., 2017). The psychological basis for this is the inducement and use of a flow state. Psychologists use this idea to explain the mental state in which attention is directed toward a specific process, the environmental information is divided, and the individual experiences a harmonious flow of experience (Csikszentmihalyi, 1991).

This flow state creates a condition of well-being and increases learning and perception capacity. The state of flow can be attained by performing any activity that is interesting for an individual, such as reading a book, watching a movie, or playing games. Playing games is considered one of the best ways to induce the state of flow in individuals (Cairns et al., 2014). As with any other marketing tool, gaming advertising has to correspond to many factors, such as the target market profile, the characteristics of the medium (e.g., the internet), and the objectives of the communication campaign. In short, the success of advergames is highly dependent upon the design element, which is challenging to accomplish.

In line with this, Csikszentmihalyi (1991) used the experience sampling method with his flow theory to evaluate the balance of experiences in four channels, explained below, with four alternative edges that lead to numerous combinations of skills and levels of challenges.

All games should provide helpful feedback for new game players, as well as for those who may be more experienced. The five Cs to be kept in mind while constructing games are as follows:

Conflict: The players must overcome hurdles or obstacles by performing a challenging task and attaining the goal.

Control: The game should have a clear set of rules.

Closure: The game ending should be time-bound or limited, with a certain number of players.

Contrivance: Making mistakes and going through trial and error is easy, and games use these processes to enhance learning; this works best when the competitive elements are reduced and emphasis is placed on the value of fun and the enjoyment of the experience.

Competency: In some instances, skills may need improvement (Ibrahim et al., 2012).

Capturing attention and learning through digital games is the best way to reach the target audience in their language. Some cultures are less comfortable with games and may require a high degree of team participation and self-disclosure (Godbout & Gréhaigne, 2021).

3. Material and Methods

3.1 Study Design and Setting

This section presents an analysis of the survey, which was conducted with participants from the two countries of Saudi Arabia (S.A.) and the United Kingdom (U.K.).

3.2 Study Sample and Sampling Technique

The total sample size for the survey was 482 people, which included 312 from the U.K. and 170 from S.A. (citizens and current residents). According to Raosoft's online calculator, the recommended sample size was 323, with a 95% confidence level and a 5% margin of error.

3.3 Study Instrument and Data Collection

The survey questionnaire was divided into two parts. The first part comprised demographic details of the participants, whereas the second part focused on constructs such as skills, challenges, persuasion, interactivity, and flow experience. All the item responses were scored on a seven-point Likert scale, where 1 – “Strongly Agree,” 2 – “Agree,” 3 – “Strongly Disagree,” 4 – “Disagree,” 5 – “Partially Agree,” 6 – “Do not Know,” and 7 – “Neutral.” A total of 200 questionnaires were distributed in person among university students, and after two hours, the researchers received 190 forms in return. Out of these 190, 10 were discarded, as they were incomplete; therefore, the final number of responses included in the study was 180. The participants also signed a written consent form before filling out the survey questionnaire, and ethical approval was taken from the intentional review board.

3.4 Validity and Reliability

The validity and reliability of the questionnaire were attained by checking the value of Cronbach's alpha for all the items of the questionnaire, all of which were above 0.7, which made the questionnaire fit for carrying out the study. In terms of language comprehension, three experts from the university's English department were contacted and asked to give their expert opinions about the questionnaire regarding the level of understanding. Once the questionnaire was received and minor changes were made, it was then ready to be distributed among the study participants.

3.5 Data Analysis

The data collected were analyzed using the Statistical Package of Social Sciences (SPSS) version 23.0. Descriptive statistical analysis using means and standard deviations was performed. To check the relationship between the constructs (i.e., skills, challenges, persuasion, interactivity, and flow experience) and consumer behavior, a regression model using the partial least squares (PLS) approach with Smart PLS structural equation modeling (PLS-SEM) software version 3.0 was used.

4. Results

Table 1 shows the descriptive statistical analysis of the items on skills, challenges, persuasion, interactivity, and flow experience. Table 1 shows the mean value of the skill construct of 2.55 and the standard deviation of 1.98. Similarly, the mean value of the challenges construct was found to be 2.44, and the challenge construct's standard deviation was 1.87. Similar close links were revealed among the other constructs. According to the table, all constructs showed standard deviations close to the mean values. The result revealed close associations among the constructs.

Table 1. Descriptive Statistical Analysis of Constructs

Constructs	Mean	Standard Deviation
Skills	2.55	1.98
Challenges	2.44	1.87
Persuasiveness	2.79	1.46
Interactive	2.57	1.86
Flow Experience	2.54	1.84

Table 2 shows the reliability and validity of the questionnaire. All the standardized factor loadings were above 0.7 and statistically significant at 0.01, which shows that every item's reliability was appropriate. Also, the internal consistency of all the constructs was more significant than 0.7. They all met the convergent validity criteria, as the average variance-extracted values were above 0.5.

Table 2. Factor loadings and Quality Criteria

Construct	Items	Loading	Composite Reliability	AVE
Skills	SK1	0.92	0.95	0.84
	SK2	0.89		
	SK3	0.99		
	SK4	0.93		
Challenges	CH1	0.78	0.85	0.77
	CH2	0.87		
	CH3	0.75		
	CH4	0.75		
Persuasiveness	PE1	0.92	0.96	0.99
	PE2	0.95		
	PE3	0.96		
	PE4	0.97		
Interactive	IN1	0.95	0.95	0.78
	IN2	0.91		
	IN3	0.96		
	IN4	0.93		

Table 3 shows that the discriminant validity results were all supported. In all cases, the square root of the average variance extracted (AVE) for any two constructs was higher than the correlation estimate among the constructs (Fornell & Larcker, 1981). As a general guideline, an AVE of at least 0.50 and higher is greatly suggested.

Table 3. Discriminant Validity

Constructs	1	2	3	4	5
Skills	0.08				
Challenges	0.06	0.98			
Persuasiveness	0.25	0.18	0.78		
Interactive	0.57	0.16	0.58	0.95	
Flow Experience	0.08	0.24	0.57	0.74	0.97

The results in Table 4 show the value of f to be 8.32 ($P < 0.01$), which indicates that a combination of skills, challenges, persuasion, interactivity, and flow experience predicted the dependent variable of consumer behavior. Table 4 also reveals that the R -value of 0.715 exhibited a linear correlation between the independent variables. The adjusted R square of 0.44 indicates that 44% of the variance could be projected from the independent variable. The beta value shows that all the independent variables strongly contributed to consumer behavior.

Table 4. Multiple Regression Analysis of Skills, Challenges, Persuasion, Interactivity, and flow experience on Consumer behavior

Independent Variable	Beta value	R adj	Adj R sq
		0.715	0.44
Skills	0.45		
Challenges	0.46		
Persuasiveness	0.45		
Interactive	0.45		
Flow Experience	0.56		
ANOVA			
Model	Sum of squares	df	Means square
Regression	19.57	7	3.26
Residual	32.15	81	0.39
Total	51.68	96	
		F	Sig.
		8.32	0.00 ^b

The figure below illustrates how the degree of flow was classified into three categories: distracted (no flow), complete engagement (flow), and enjoyable (strong flow). For respondents who felt distracted by the in-game advertising or commercials during the pause when the game was loading, 40.59% of S.A. respondents agreed, 27.06% disagreed, and 32.35% were neutral. In contrast, most U.K. respondents seemed to be very distracted by the ads, with 71.80% of U.K. respondents agreeing that they were distracted, 9.61% disagreeing, and 18.59% remaining neutral. Engagement /flow was measured by asking the respondents whether they usually felt they were in the game and separate from their actual environment. A higher score given by the respondent represented more agreement, and a lower score indicated more disagreement. In the U.K., 71.80% of the total respondents agreed with the statements, while 53.53% of the respondents for S.A. agreed.

Moreover, for the last category, the respondents were asked whether they enjoyed their selves while playing or not. For this category, 91.03% of U.K. respondents agreed that playing games were enjoyable, and 81.18% of S.A. respondents felt the same. Based on the findings, most Saudi respondents were neutral about feeling distracted by in-game advertising, agreed with having a flow state, and strongly agreed that the games were enjoyable. The difference with the U.K. participants was that most agreed with feeling distracted by in-game advertising. The results suggest that Saudis are more tolerant of in-game advertising than their U.K. counterparts.

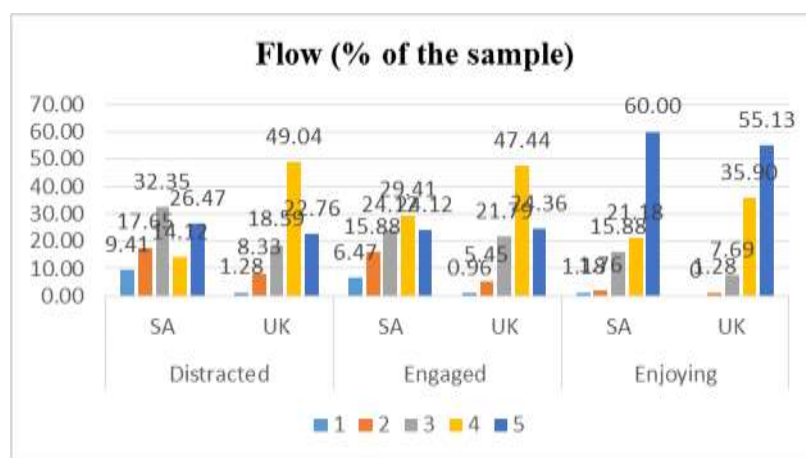


Figure 1. Gaming Intensity

5. Discussion

The present study aimed to investigate the impact of advergaming on consumer behavior from the perspective of flow theory. Based on the aim of the study, the following research question was formulated: “Based on flow theory, how do advergaming impact consumer behavior?” The study found five factors that should be considered before designing advergaming: skills, challenges, persuasion, interactivity, and flow experience, each of which will contribute to the consumer behaving in the desired direction. All these factors identified were represented in the flow theory proposed by Mihaly Csikszentmihalyi (1998). The flow theory states that an individual is in flow when the skills and challenges are balanced. This experience will eventually persuade the consumer to behave in the desired way. The experience is in line with the findings of the current study.

The study found that persuasiveness, along with the design elements, included skills and challenges, played an important role. This finding is in line with those of studies conducted by Granic et al. (2013); Vanwesenbeeck et al. (2016); and Vashisht et al. (2019), as they have shown that advergaming are an excellent means of communication to make new products popular. Specifically, advergaming allow customers to obtain more information about brands, products, and services, thus leading to the intention to purchase. When customers play advergaming, they enjoy themselves and learn about the product or service of a brand, which will lead them to try the product. Advergaming are appealing to both consumers and companies, as they benefit both.

The study's results also showed that a state of low flow experienced during advergaming play was linked to persuasion and interactivity. Persuasion and interactivity are two factors that can help sustain the state of flow alongside skills and challenges. This study predicted that emotions and game flow might also influence consumer behavior. Therefore, future studies should investigate advergaming-related emotions and flow while focusing on attitudinal aspects, such as a change in attitude after playing the game and behavioral intentions like pestering and purchasing. Also, future studies may consider children’s gaming skills as an antecedent to flow and thus strengthen the investigation of the applicability of the theory of limited cognitive capacity.

5.1 Study Implications

The most important implication of the current study is the game-related aspects (skills, challenges, persuasion, and interactivity) that impact consumer behavior. The relationship between flow, skills, challenges, persuasion, and interactivity, which make up flow theory, indicates that the player's mental state is related to the advertising material. According to our findings, players who attain a better flow state while playing advergaming are better equipped to deal with the commercial aspects of the game. Also, players in a flow state maintained a good balance between skills and challenges. Our findings indicate that factors, like the persuasive intent of the advertising, are also critical when designing advergaming. The study results show that understanding persuasive intent may differ between advergaming, as only some of them may induce the same flow level.

When the players reach this balance, a higher understanding of the persuasive intent of advergaming is attained. If asked whether players with high skill levels are better equipped to handle the commercial aspects of advergaming, advertising literacy interventions should aim to work on individuals' persuasion knowledge, precisely their gaming skills, and not their internet skills. In addition, an intervention study can be carried out to compare the effects of advertising literacy training that either includes or excludes gaming and general computer skills. Marketers should focus on aspects such as entertainment, which provides players joy, happiness, and excitement as they reach their optimal experience.

The present study implies that players experiencing a flow state do so because they want a better understanding of the game's intention. To sum up, the findings of this study suggest that when a challenge is posed to a player in balance with his/her capacity, the player will be better equipped to handle the persuasion attempts that are a part of the advergaming. Future research is needed to identify other factors associated with advergaming and how they can be influenced. Nevertheless, the findings of this study contribute to the existing literature and public debate on individuals, flow theory, and advergaming concerning consumer behavior.

6. Conclusion

This study found that skills, challenges, persuasion, interactivity, and flow experience positively impact consumer behavior while playing advergaming. The more skills and challenges the game calls forth will depend upon the player's ability, and a stronger flow state will be attained alongside stronger forms of persuasion and interactivity. These aspects must be kept in the mind of advergaming developers and marketing individuals, as they consider the significance of entertainment, fun, joy, and satisfaction in this context.

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