The Dynamics between Intrusiveness of Disruptive Ads, Behavior to Seen Disruptive Ads and Brand Response: A Case Study on a Selected Arabic Youth

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ABSTRACT

Through Structural Equation Modelling, the study shed light on the interplay between the intrusiveness of disruptive advertisements, their behavior towards them, and brand preference. The study sought to understand the interrelationships between these three variables instead of limiting the study to using and measuring the level of intrusion and behavior as a precursor to brand preference. In this study, brand preference is measured using four variables i.e., brand recall, message recall, call to action, and brand liking. These variables are adopted from Keller's Brand Equity Model.

The variable intrusiveness was represented by 4 exogenous variables-obtrusiveness, intrusiveness, invasiveness, interference, and distraction [1]. The quasi-experimental research was done involving students in an Arab university to measure these variables. The experiment was done by showing a video clip to the respondents where a disruptive ad pops up randomly. After watching the video, the respondents were asked to answer a questionnaire developed specifically for this reason.

The researchers subjected the data through exploratory factor analysis and a two-stage confirmatory factor analysis before arriving at a hypothesized model. Interestingly, it was found out that the respondent's attitude towards a disruptive advertisement has a weak association with both their behavior towards them and brand preference. A significant association, however, was seen between behavior and brand preference.

Keywords: behavior, brand response, disruptive advertisements, intrusiveness.

I. INTRODUCTION

Marketing promotions are vital for a business. Especially in this day and age where competition is everywhere and consumers have easy access to products and information, marketers have to make sure that their product, service, brand, and company stay relevant. From generating awareness or converting a non-product user to a customer, marketing promotions will be and always have to be involved.

Advertising is one of the core elements of marketing promotions. Generally defined as paid, non-personal means of informing and persuading consumers to buy a product or service, advertising, throughout history, has played a key role in creating the biggest brands all over the world.

However, as great as advertising has been, the advertising industry as a whole faces certain dilemmas. The number of media platforms, promotional tactics that are available to businesses have significantly increased and have become sophisticated and complicated. Ironically, this has made it even more difficult for a marketer to reach its target audience.

Today, a typical consumer can be exposed to hundreds of different marketing messages, but only a few of them will be perceived by the consumer. Hsu [2] quoting Jay Pattisal of the research agency Forrester, mentioned in her New York Times report, – “It’s harder to reach audiences, the cost of marketing is going up, the number of channels has exponentially proliferated and the cost to cover all of those channels has proliferated.”

While many advertising agencies are putting tons of effort into the creative side of advertisements, others ponder on the application of radical changes in advertising execution. One of these radical and controversial techniques is disruptive advertisements.

Disruptive advertising has been in the toolbox of many companies for years, particularly in the western regions. However, applications of these forms of advertisements in products and brands that are relevant to the chosen area of study are somewhat limited at least up to the time of the research period. Unofficially but commonly defined as ads that distract people from important or pleasant activities, or
may even disrupt these activities entirely, many companies, notably those that are relatively new, result to use these advertisements, more often on online advertisements.

Disruptive advertisements are products of the disruptive marketing revolution. Disruptive marketing hinges on the notion that marketers need to take risks and apply unconventional but more personal ways on how to reach consumers. This may involve developing communication messages that are bold, unconventional but realistic or implementing out-of-the-box techniques. Disruptive advertising applies the same ideologies. Several studies have been conducted related to the use and impact of these advertisements.

However, opinions and perceptions about disruptive advertising and its unconventional wisdom are divided. Some people perceive these kinds of advertisements as rude and annoying. According to some reports, the same people who saw these advertisements have higher recall and preference on these brands that were advertised using disruptive means. This conundrum is the reason why the present research is conducted.

A. Objectives of the Study

Disruptive advertising is a highly debated topic in the world of advertising. Numerous studies have been conducted about it. Most of these studies delved into the perception of consumers about the advertising technique and how they relate to brand response. Some of the studies conducted revealed that respondents view these ads as rude or annoying but at the same time found no conclusive evidence that disruptive advertisements adversely affect the advertised brand. Bell and Buchner [3] even showed clear evidence against the hypothesis that the negative response to the ads is transferred to the brands via evaluative conditioning because this hypothesis predicts that new brands are preferred over advertised brands.

The results of the experiments were found to be consistent with a weaker version of this hypothesis, according to which annoying advertising leads to both positive effects (increased liking of the advertised brands due to their prior presentation) and negative effects (decreased liking of the advertised brands due to their association with an annoying experience).”

The current research wants to adopt and confirm the findings of the abovementioned research by associating a disruptive advertisement with the brand response. More specifically, the research intends to understand the dynamics that exist between people's attitudes and their behavior to disruptive advertisements and how these variables link with brand preference.

II. LITERATURE REVIEW

A. From Disruptive Innovations to Disruptive Advertisements

Disruptive marketing evolved slowly since the 1990’s when the world entered the digital age[4]. Many researchers, writers, and consultants use “disruptive innovation” to describe any situation in which an industry is shaken up and previously successful incumbents stumble [5]. In a nutshell, this philosophy entails out-of-the-box thinking and challenging widely accepted norms to come up with radical solutions, strategies, and tactics that revolutionizes an industry and transform the business dramatically. They also describe disruptive innovation as a process whereby a smaller company with fewer resources can successfully challenge established incumbent businesses.

As a phenomenon, disruptive innovations are both praised and criticized. Experts are divided as to how beneficial and feasible the concept is. A study made by Govindarajan et al. [6], revealed that senior executives in 128 strategic business units in 19 of the 200 Fortune 500 companies believe that disruptive innovations have contrasting effects. To quote, “Mainstream customer orientation has a positive impact on the introduction of radical innovations but a negative impact on disruptive innovation, while emerging customer orientation has a positive effect on disruptive innovation and is unrelated to radical innovations. Technology scanning is positively related to radical innovation but not on disruptive innovation, supporting the idea that disruptive innovation may not require new technology”.

Overall, disruptive innovations as a concept is a well-accepted one, albeit being ambiguous, as some experts have noted. To illustrate, Markides [7], argues that Christensen defined disruptive innovations loosely and vaguely although there are glaring differences in the application of disruptive innovations.

B. Disruptive Advertising

As it went its course, disruptive innovations have influenced marketing, thus the birth of disruptive marketing. Disruptive marketing, as described by Kirchner et al. [8], “is a strategic approach that attempts to eliminate product and market boundaries and allows creativity to take center stage in the development of a radical new vision of the organization's product, brand, or service. These disruptive marketing activities can center on administrative, process, and/or product/service innovations [9], [10].

In another study conducted for non-profit organizations, Kirchner et al. [8], addressed the current paucity of research on the topics of disruptive marketing and unintended consequences in the nonprofit arts sector. Both academic/practitioner literature and input from arts organization managers suggest that disruptive marketing, a component perspective of entrepreneurial marketing [11], may foster significant positive effects for the arts organization which uses it, although negative unintended consequences may also result.

Disruptive advertising is used in the advertising industry for online promotions in particular. A great number of websites use a variety of new techniques to make and present a sponsored message that sometimes demands users’ immediate attention and action. These sophisticated techniques still interrupt and attract attention, away from their original media use goal. As “rich media” advertising, or ads that contain both audio and video elements increases, so too will the interruptions to information seeking and the level of user annoyance. These issues merit more systematic and further examination for future research [1].

Disruptive advertising predominantly exists in the online world. Typically, advertisers sneak in these ads in the middle of a video, music, games, websites, or other online platforms.
This creates a possible contradiction between the negative feelings brought by the advertising and the positive feelings the consumers are supposed to develop towards the advertised products. This assumption was tested in research that was published in the Journal of Interactive Marketing [3]. In the mentioned study, the research participants were disrupted by annoying pop-up ads while playing a popular computer game and were subsequently required to choose between advertised and new brands. The advertised brands were preferred over the new brands, even though the ads were perceived as annoying.

Contemporary research suggests that the positive effects of disruptive advertising can be linked to the enhanced fluency of advertised brands. These findings demonstrate that disruptive advertising can be effective in soliciting positive brand responses, which may help to explain the widespread use of this type of advertising in practice.

Mann [12] said that another reason disruptive advertising is successful is that it simply solves an obvious problem no one else has thought of.

The study of Bell and Buchner [3] demonstrates that disruptive advertising can be effective in increasing brand preferences which may help to explain the widespread use of this type of advertising in practice. However, before recommending the use of disruptive advertising, it should be taken into consideration that it may also have undesirable side effects such as increasing advertising avoidance.

### C. The Intrusiveness of Disruptive Advertising

Generally, there are notable studies that have been conducted about the intrusiveness of online (disruptive) advertisements. Yang [13] found out that people have positive attitudes towards online advertisements that use a human-like navigation interface. Using an eye-tracking device, Dreze and Hussen [14] found out that even if people do not click on online banner ads, they still notice them. This implies that somehow these disruptive ads may still be effective and viewers may not have negative attitudes toward disruptive ads. A group of Pakistani consumers have shown positive attitudes toward online advertisements and even concluded that social media advertising might be effective for young consumers, - results which were found to be the opposite of the case for a group of Finnish consumers according to Virkala [15], who found these kinds of advertisements to be disturbing and would most likely do everything just to avoid them.

Other studies that support the findings that people have a positive attitude towards online advertisement are also mentioned. Ducoffe [16] found in his study that online advertising is perceived as valuable, informative, entertaining, and important, while Gordon and De Lima-Turner [17] found that consumers favor online advertising that is entertaining.

While there are studies that support a positive attitude towards online disruptive advertisements, there are also quite a handful that says otherwise. Cronin [18], said that if an advertisement is perceived as a "noise", this will cause the audience to develop negative perceptions about them. Commonly, these advertisements are perceived as intrusive and disruptive. Li and Lee [19] even reported that pop-up advertisements are rated as the most annoying type and it leads to irritation in most internet users. They even claim that these ads are quite distracting. Cho et al. [20] claim that people are irritated about internet ads that are not related to the subject and theme of the site and that they think of these ads as irrelevant and intrusive. Zhao [21] found in similar studies that intrusiveness and major advertising annoyance comes with poorly designed websites, badly executed ads, and the presence of too many pop-up ads.

However, while advertisers still employ intrusive tactics for the obvious reason that they garner people’s attention, these types of ads tend to elicit negative responses. They still need to be careful since more and more viewers display avoidance behaviors towards these forms of advertisement. Li et al. [19] presented a 7 measure of intrusiveness of a disruptive advertisement to which this study is anchored on: distracting, disturbing, forced, interfering, intrusive, invasive, and obtrusive. These measurements are also used in this research.

### D. Behavior toward Disruptive Advertisements

The bulk of literature about viewer behavior on seen disruptive advertisements reveals that there are definite variations on how people respond to disruptive advertisements. Focusing on users’ perception of web credibility, Fogg et al. [22] discovered that almost 14% of the comments were about online ads and most of them were negative ones. In a study about people’s opinion about online advertising and audience targeting, Choistream [23] showed that more than 60% of the participants of the survey ignored online ads, while merely 2.5% clicked through and purchased the advertised product. When asked about why they have a poor recall or are even ignorant about an advertised brand, online, 60% of the consumers said online ads annoyed them which prompted them to either block or do something else just to avoid them. This finding concurred with the result of a previous study by Benitez [24] who reported that 41% of online users would not return to a website due to the annoying effects of disruptive ads. Concerning calls to action which are critical components of an advertisement, Acquisti and Speakeerm [25] found out that a consumer’s willingness to pay for a product significantly decreases after being exposed to interruptive ads.

### E. Brand Response

Brand response refers to the third of the four steps of the Brand Equity Model which was designed in the Keller’s Brand Equity Model. The Brand Equity model suggests that to build a strong brand, companies must shape how customers think and feel about their products. They have to build the right type of experiences around the brand so that customers have specific, positive thoughts, feelings, beliefs, opinions, and perceptions about it [26]. This model is also referred to as the Customer-Based Brand Equity Model.

The first step in the model is called brand identity, whose goal is to create brand salience or awareness and making sure that the customers develop the right perceptions about the company’s product or brand. This is preceded by the second step- brand meaning. In this step, the goal is to communicate what the brand means or what it stands for. Performance and imagery are the building blocks of this model. Performance defines how well the product meets customers’ needs.
According to the model, performance consists of five categories: primary characteristics and features; product reliability, durability, and serviceability; service effectiveness, efficiency, and empathy; style and design; and price.

On the other hand, imagery refers to how well the brand meets customers’ needs on a social and psychological level. The brand can meet these needs directly, from a customer's own experiences with a product; or indirectly, with targeted marketing, or with word of mouth [27].

Brand response, which is the focus of the study, falls on the third step of Keller's CBBE model. The judgments and feelings about the brand are unearthed in this stage. Customers respond to the brand according to how it makes them feel. The brand may evoke feelings directly, but they also respond emotionally to how a brand makes them feel about themselves. According to the model, there are six positive brand feelings: warmth, fun, excitement, security, social approval, and self-respect.

These feelings are the product of the two earlier steps in the brand equity model and the marketing initiatives taken by the company for the brand and the product itself. These perceptions may be anything ranging from quality, credibility, consideration, and superiority perceptions about the brand and/or the product.

Most of the previous researches conducted about disruptive advertising isolated on issues such as perceptions and impact of these advertisements. However, most of these studies were conducted in the western part of the world, whose culture may be different from the eastern or middle-eastern part of the world. While the current study will not incorporate the impact of culture on disruptive advertising, the findings of the study will imply whether the feelings, behavior, and impact of disruptive advertisements are universal.

The current research, however, focuses on the research gap that studies the direct impact of feelings on the behavior of respondents about disruptive advertising and how both feelings and behavior affect the brand being advertised.

It is also pointed out, that only a specific portion of the Keller’s Brand Equity Model i.e. brand response is studied in this research. Given this, how the prior steps in Keller’s Model play out in the current research will not be determined.

III. RESEARCH METHODOLOGY

A. Research Design

The research follows a quasi-experimental design which was meant to obtain insights that could be used as determinants or exogenous variables for the three latent variables which the research intended to demystify. Primary data collection using the questionnaire was taken from randomly selected respondents after viewing certain advertisements during an online video that showed a disruptive advertisement randomly during the time it was being played.

The advertisement was placed arbitrarily in the middle of the video to mimic how disruptive advertisements are played in a real advertising setting. Through the questionnaire, the respondents were able to invoke their feelings and responses to the video.

B. Data Gathering Instrument

Guided by literature about the intrusiveness of advertising, behavior, and brand response, the researchers developed a questionnaire that contained four demographic questions and 13 questions that were associated with the research variables. For the variable intrusiveness, the respondents were asked about the level of intrusiveness that they felt after watching the video. These variables were taken from the work of Li [19]. Behavior towards disruptive ads bore questions related to their intentions during the time that they encountered the disruptive advertisement. Thus, they were asked whether they wanted to skip the ad, block it entirely, or just completely ignore it. Finally, the respondents were asked whether they remember anything about the brand or message that the disruptive advertisement was endorsing and whether they will respond to the ad’s call to action. The instrument was subjected to rigorous reliability and validity tests after a critical mass was obtained.

C. Research Participants

The research involved 278 respondents who were studying in a well-known Arabic university in the middle east. The population size was roughly around 1000. Thus, at a confidence level of 95% and a margin of error of 0.05, the appropriate sample size is 278 [28]. Of the 278 gathered responses, three were ruled out to be unengaged responses and were therefore eliminated. One missing response was also determined and was resolved by imputing values i.e. assigning means.

D. Exploratory Factor Analysis

Since the observed variables are not supported by literature, it was necessary to subject the 13 variables to exploratory factor analysis (EFA). The process enabled the researchers to check such things as the adequacy and reliability and validity of data. The results of the EFA are presented below.

E. Reliability of Data

Table I presents that trimmed Total Variance Explained by the 13 variables that were observed. During analysis, it was discovered that there was a convergent validity issue with one of the variables, which prompted the researchers to eliminate that variable. However, it is also duly noted that the cumulative percentage of the extracted sums of squared loadings are all below 60% which is not an ideal scenario. In Principal Component Analysis (PCA), this suggests that there is little to no variance in the matrix, which means- there are chances of high collinearity in data and thus may cause discriminant validity issues.

To make sure that the data is fit for factor analysis, a KMO-Bartlett’s Test of Sphericity was performed. the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that factor analysis may be useful with the data while values that are less than 0.50, indicating that the data is useless.
Bartlett's test of Sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that factor analysis may be useful with the data [29]. The result of the test is shown in Table II.

| TABLE II: KMO AND BARTLETT'S TEST |
|-----------------------------------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | 0.803 |
| Bartlett's Test of Sphericity | |
| Df | 66 |
| Sig. | 0.000 |

The KMO test reveals a statistic of 0.803 which positively indicates that the variance in the variables is caused by the underlying factors in the study. Furthermore, since the obtained p-value is <0.05, it is concluded that the underlying factors are fit for further factor analysis. Cronbach alpha statistics for each of the latent and observed variables were also computed and their results are presented in Table III.

| TABLE III: RELIABILITY STATISTICS |
|----------------------------------|
| Variable | Cronbach's Alpha | Number of Items |
| Intrusiveness | 0.693 | 4 |
| Behavior | 0.846 | 4 |
| Brand Preference | 0.887 | 4 |

The performed Cronbach-Alpha for the three groups of variables reveals values that are close to 0.7 with two variables even having values higher than 0.70. By conventional wisdom, Cronbach alpha values that are higher than 0.70 are considered as good and are interpreted as reliable. This means that the items being measured have a high degree of internal consistency. The obtained Cronbach coefficients if rounded-off, meets the prescribed reliability requirements and therefore it is concluded that there is an acceptable level of internal consistency among the data.

F. Communalities and Pattern Matrix

Tables IV and V summarizes the communalities and pattern matrix of the observed variables.

Communalities indicate the amount of variance in each variable that is accounted for and are presented both in their initial and extracted values. Initial communalities are estimates of the variance in each variable accounted for by all components or factors. Extraction communalities are estimates of the variance in each variable accounted for by the components [29]. Field [30] recommended that factors that have communality values less than 0.3 should be eliminated. For this reason, the factor "Obtrusive" is eliminated in further analysis.

| TABLE IV: COMMUNALITIES |
|--------------------------|
| Item | Extraction |
| Ignored and did something else | 0.641 |
| Clicked skip | 0.649 |
| Minimized screen | 0.582 |
| Blocked the advertisement | 0.551 |
| Remember the brand | 0.658 |
| Remember the message | 0.730 |
| Respond to call to action | 0.649 |
| liked the advertisement | 0.655 |
| Distracting | 0.376 |
| Interfering | 0.531 |
| Intrusive | 0.442 |
| Obtrusive | 0.229 |

| TABLE V: PATTERN MATRIX (TRIMMED) |
|-----------------------------------|
| Item | Factor Loadings |
| Ignored and did something else | 0.754 |
| Clicked skip | 0.786 |
| Minimized screen | 0.821 |
| Blocked the advertisement | 0.687 |
| Remember the brand | 0.765 |
| Remember the message | 0.849 |
| Respond to call to action | 0.853 |
| liked the advertisement | 0.797 |
| Distracting | 0.602 |
| Interfering | 0.737 |
| Intrusive | 0.669 |
| Obtrusive | 0.405 |

Item communalities whose values are 0.8 or greater are known as "high" [31] although it is unlikely to happen in real data. More common magnitudes are 0.40 to 0.70 and are known as low to moderate communalities. If the item would not be related to other items or additional constructs need to be explored, then the item communality will be less than 0.40.

Tabachnick [32] mentioned that instrument items should load at 0.32, which equates to approximately 10% overlapping variance with the other items in that factor. A “cross-loading” item is an item that loads at 0.32 or higher on two or more factors. If there are several cross-loaders, the items may be poorly written or the a priori factor structure could be flawed [33]. While other researchers such as Laura J. Burton and Stephanie M. Mazzerolle [34] emphasized 0.50 or higher as a good rule of thumb for the minimum loading of an item with no cross-loadings.

Using the Maximum Likelihood estimation, the
communalities extraction statistics were obtained for the 12 items measured. It was found out that the obtained statistics fall under the common magnitudes i.e. between 0.4 to 0.7 which indicated low to moderate communality which further means that there is a good convergent validity among the data. This can be seen in Table IV.

Table V intended to categorize the observed variables or factors. This was accomplished by factor rotation. Factor rotation attempts to rotate the factor axes (dimensions) identified in the initial extraction of factors, to obtain simple and interpretable factors [35]. The factor rotation results are presented in the pattern matrix which shows the variance in an observed item accounted for by the components identified factor analysis.

It is duly noted that there is no standard on how to interpret the factor loadings and researchers vary in their interpretation on the matter. For example, on a conventional liberal-to-conservative continuum, setting the cutoff at 0.40 (i.e., items with a factor loading of 0.40 or greater is retained) is normally treated to be the lowest acceptable threshold, whereas 0.60 or 0.70 would be the limit of the conservative end. Other researchers examine both the highest and second-highest factor loadings. To illustrate, in several social scientific studies, the 0.5/0.2 or 0.6/0.3 is typically practiced, though studies employing a 0.6/0.4 criterion are not uncommon [36], [37]. As such, an item will be retained if the factor loading is greater than 0.5-0.6 and also if its second-highest factor loading is smaller than 0.2-0.3 [38].

In the case of the analyzed variables, it appears that the item “Obtrusive” does not meet the criteria for factor loading having only a coefficient of 0.405. It also has a weak communality coefficient (0.229). These weak coefficients may prompt the researchers to delete this item in future statistical analyses that will be performed. Table V also shows that there is no more evidence of cross-loadings among the variables. No cross-loadings of higher than 0.32 or multiple cross-loadings among the groupings of the variables.

IV. RESULTS AND DISCUSSIONS

The research intended to understand the interplay between intrusiveness of disruptive advertisements, behavior towards them, and the audience’s brand response. Using SPSS-AMOS, measurement models are created first to further validate the research data, specifically to determine its model fit. Two measurement models are presented to illustrate the iterations that needed to be made on the first measurement model. The iteration was needed to be made to improve the model fit. These measurement models are presented in Fig. 1 and 2. These models show factor loadings, coefficients of determination, and covariance. In the first Measurement model, not many explanations were given since the overall model was subjected to modification.

| Fitness Indices | Index | Acceptable Value | Obtained Values |
|-----------------|-------|------------------|-----------------|
| P-Value         | 0.000 | 0.000            |
| RMSEA           | <0.08 | 0.94             |
| GFI             | >0.90 | 0.91             |
| AGFI            | >0.90 | 0.87             |

Fig. 1. Measurement Model for Attitude and Behavior about Disruptive Advertisements and Brand Preference.

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Fig. 2. Modified Measurement Model for Attitude and Behavior about Disruptive Advertisements and Brand Preference.

The factors that were used in the initial measurement model were derived from the Exploratory Factor Analysis performed for all of the constructs of the research. The factor loadings, which can be seen above the one-headed arrows are
all presented in their standardized estimates. It was predicted that the variable “obtrusive” might be removed in the further statistical analysis since it has a weak factor loading. After running an initial confirmatory factor analysis, the same variable appeared to be problematic since it only has a factor loading of 0.41—falling short of the cut-off coefficient of >0.60 [39]. This low factor loading affected model fit as evidenced by the low Root Mean Square of Error Approximation (RMSEA) of 0.09 and average goodness of fit index of 0.87. Although this figure is still close to the acceptable values, the researchers decided to omit the factor “obtrusive” and introduced another measurement model which is shown in Fig. 2. The final measurement model variable names are replaced by their respective labels for clarity purposes. After modification i.e., deletion of one factor, a slightly better model fit was achieved. All reliability and model fit indices namely P-value, RMSEA, GFI, and AGFI met the prescribed values for factor analysis. This modified measurement model is further analyzed. After modifying the measurement model, all of the factor loadings of the observed variables have made the cut-off value of 0.60, with the variable “intrusive” having the lowest standardized factor loading at 0.62 and the variable “remember the message” having the highest standardized factor loading at 0.85. Adjusted R-squared values, which are located on top of each of the 11 variables are also illustrated. Again, the variable “intrusive” has shown the lowest coefficient (0.38). Adjusted r-squared values are coefficients of determination. Usually presented in a percentage form, these values explain how much of the change in one variable can be explained by another.

Finally, the covariance among the three latent variables i.e., intrusiveness, behavior, and brand response (shown in the top part of the double-headed arrows) are all below the cut-off value of 0.85. High covariance among these latent variables indicates poor discriminant validity. According to Awang [40], if the covariance between the latent variables is higher than 0.85, this means that the correlation between the latent variables is too high and thus does not meet the discriminant validity criteria. In this case, all of the covariance fall below 0.85, the measurement model fits to pass the discriminant validity test. The summary of the covariance is presented in Table VI.

In Table VI, the covariance among the latent variables (intrusiveness and behavior=115, p=0.86), (intrusiveness and brand response=0.12 and behavior and brand response=0.48, p=000) indicate that the model passes the test of discriminant validity. The P column is an approximate two-tailed p-value for testing the null hypothesis that the parameter value is 0 in the population [41]. The table shows that the covariance between intrusiveness and behavior and intrusiveness and brand response is not significantly different while the covariance between behavior and brand response is. The calculation of P assumes that parameter estimates are normally distributed.

Finally, before the Hypothesized Model is presented, the researchers also analyzed the Standardized Residual Covariance. This statistic measures the overall “wellness” of the measurement model. The residual covariance is the difference between the sample covariance and the model-generated covariance. Ideally, the standardized residual values should have a value of less than 2.0 [40]. Residual covariances refer to the difference between the sample covariance and the covariance in the measurement model. This gives a natural estimate of the fit of covariance structure models. If the values of the residual covariance are large then the model fit is not good. However, the magnitude of covariance is difficult to interpret and, as a result, residual covariances are ill-suited as effect sizes of the misfit of a model. To overcome this problem, the residual covariances are divided by their sample standard deviations leading to the standardized residual covariance [42]. It is important to inspect the largest values (in absolute value) of the statistically significant standardized residual covariances (or residual correlations) since this can be used to assess the source of the misfit in a poorly fitting model although they do not immediately suggest how to modify the model to obtain a better fit. 2.58 Joreskog and Sorbom [43] have suggested a coefficient of 2.58 as the cutoff to identify particular covariances which seem associated with significant discrepancies of the given model from a perfect model. Thus values higher than 2.58 is construed as unacceptable.

### TABLE VI: COVARIANCE AMONG LATENT VARIABLES

| Covariance Estimate | S.E.  | P     |
|---------------------|------|-------|
| Intrusiveness <--> Behavior | 0.11 | 0.067 | 0.086 |
| Intrusiveness <--> Brand Response | 0.12 | 0.068 | 0.075 |
| Behavior <--> Brand Response | -0.48 | 0.101 | ***   |

### TABLE VII: STANDARDIZED RESIDUAL COVARIANCE

|      | BP1  | BP2  | BP3  | BP4  | B5   | B4   | B3   | B2   | F1   | F2   | F3   |
|------|------|------|------|------|------|------|------|------|------|------|------|
| BP1  | 0.000|      |      |      |      |      |      |      |      |      |      |
| BP2  | 0.176| 0.000|      |      |      |      |      |      |      |      |      |
| BP3  | -0.437| 0.179| 0.000|      |      |      |      |      |      |      |      |
| BP4  | -0.020| -0.323| 0.448| 0.000|      |      |      |      |      |      |      |
| B5   | -2.908| -1.322| -0.096| -0.879| 0.000|      |      |      |      |      |      |
| B4   | -0.088| 0.755| 1.124| 0.689| 1.470| 0.000|      |      |      |      |      |
| B3   | 0.048| 0.629| 0.728| -1.126| -0.645| -0.229| 0.000|      |      |      |      |
| B2   | -0.030| 0.447| 0.892| 0.442| -0.624| -0.444| 0.635| 0.000|      |      |      |
| F1   | 1.577| 0.849| 0.229| 1.275| -2.123| -0.849| -0.210| -0.251| 0.000|      |      |
| F2   | -0.918| 0.079| -0.815| -0.628| 0.060| -2.018| 0.193| 0.201| 0.017| 0.000|      |
| F3   | -0.186| 0.632| -1.711| -0.726| -0.339| -1.178| 0.564| 2.243| -0.087| 0.044| 0.000|
From Table VII, it can be seen that with the exemption in the residual covariance between BP1 and B5 (-2.908), all residual covariances are below the threshold value of 2.58, which supports the fact that finally, the measurement model is clean and that a hypothesized model may then be presented. This hypothesized model is presented in Fig. 3.

The structural model for intrusiveness, behavior, and brand response presented in Fig. 3 reveals interesting observations. It was hypothesized that the attitude towards disruptive advertisements has a direct effect on brand response and has a mediating effect on behavior. However, looking at the factor loadings, which are correlation coefficients for a variable and a factor, it can be observed that intrusiveness has a weak factor loading as a mediating factor (0.14) to behavior and as an exogenous variable to brand response (0.21). This means that by itself the level of intrusion that a disruptive advertisement is weakly associated with brand response. This is supported by earlier findings of determinance (R squared) among the exogenous variables are also considerably high, except for the observed variables in intrusiveness. This means that the observed variables can adequately explain the endogenous variables i.e., intrusiveness, behavior, and brand response.

On the other hand, there is noticeably a moderate and negative association between behavior and brand response. The negative association is due to how the questions in the questionnaire were framed and thus it is understandable why the results show a negative association. Just the same, the moderate correlation between behavior and brand response may connotate behavior to be an explanatory variable to brand response.

To simplify the presentation, the standardized regression weights are reported instead of the unstandardized estimates. Their respective standard errors and critical ratios were also presented to determine their equivalent p-values. Table VIII presents that except for the effect of intrusiveness on behavior, all other factors are statistically significant. This means that their beta coefficients (standardized regression weights) accurately predict their effect on the values they are estimating.

Concerning the three main latent variables, statistically significant values were observed between intrusiveness and between brand response (p=0.004) and behavior and brand response (p=0.000) while intrusiveness and behavior are not statistically significant (0.083). This supports earlier findings of the research regarding the weak factor loading between behavior and intrusiveness. This weak relationship somewhat negates the impact of intrusiveness on a disruptive advertisement to the corresponding behavior to the same disruptive advertisement. This is validated in Table IX which summarized the direct and indirect of the variables to each other.

### TABLE VIII: REGRESSION WEIGHTS

| Variable         | Standardized Regression Weights | S.E. | C.R. | P  | Interpretation      |
|------------------|--------------------------------|------|------|----|---------------------|
| Behavior         | Intrusiveness                  | 0.14 | 0.11 | 1.73 | 0.083   | Not Supported      |
| Brand Response   | Intrusiveness                  | 0.21 | 0.11 | 2.85 | 0.004   | Supported          |
| Brand Response   | Behavior                       | -0.51 | 0.07 | -7.09 | ***     | Supported          |
| F3               | Intrusiveness                  | 0.62 |      |      |         | Supported          |
| F1               | Intrusiveness                  | 0.67 | 0.14 | 7.25 | ***     | Supported          |
| B2               | Behavior                       | 0.79 |      |      |         | Supported          |
| B3               | Behavior                       | 0.81 | 0.08 | 13.18 | ***     | Supported          |
| B4               | Behavior                       | 0.72 | 0.08 | 11.76 | ***     | Supported          |
| B5               | Behavior                       | 0.72 | 0.09 | 11.80 | ***     | Supported          |
| BP4              | Brand Response                 | 0.81 |      |      |         | Supported          |
| BP3              | Brand Response                 | 0.79 | 0.06 | 14.16 | ***     | Supported          |
| BP2              | Brand Response                 | 0.85 | 0.06 | 15.60 | ***     | Supported          |
| BP1              | Brand Response                 | 0.81 | 0.07 | 14.70 | ***     | Supported          |
| F2               | Intrusiveness                  | 0.73 | 0.17 | 7.16 | ***     | Supported          |
The standardized direct and indirect effects of the main variables of the study are presented in Table VIII as support to the findings that the effect size of intrusiveness of a disruptive advertisement to the behavioral consequence is quite negligible. It can be seen that the standardized direct effect of intrusiveness to behavior is only 0.14 and posted no indirect effects. Similarly, while there is a considerable direct (negative) effect between brand response and behavior, there are no reported indirect effects between these variables either.

V. CONCLUSION

Ample statistical treatments applied to the variables have revealed interesting conclusions. Concerning model factor identification, it is concluded that intrusiveness can be explained by the factors intrusive, interfering and distracting. Behaviors to the disruptive advertisement can be effectively represented by skipping the ad, ignoring and doing something else, minimizing the screen, or blocking the ad. The brand response can be effectively measured through the variables “liking the ad, remembering the brand, remembering the message, and responding to the call to action message of the ad. These factors were obtained through exploratory factor analysis.

The confirmatory factor analysis conducted revealed that there is a very weak association between ad intrusiveness and behavior but a moderate association is found between behavior and brand response. Thus, the researchers conclude that the intrusiveness of disruptive advertisements does not have a significant effect on brand response either directly or as a mediating variable.

VI. RECOMMENDATIONS

The study seems to suggest that the perception that disruptive advertisements are intrusive does not wreak havoc on the brand which is being advertised. At this time, it may be possible that viewers have already been desensitized by these advertisements or they may have gotten used to them already. Thus, it is recommended that further research which will try to explain this phenomenon should be done. Furthermore, the inclusion of more antecedents e.g., cultural factors, demographic variables, type of media where that ads are might also be incorporated in the model. These variables may be added in as moderators or mediators.

As for the utilization of disruptive advertisements, given that they do not pose a significant threat to the brands being advertised, their usefulness cannot be underestimated. Using them, however, still requires a great deal of out-of-the-box thinking and unconventional and creative approaches for them to cut through.

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