A Study of Exploring Listening Willingness and Media Effect on Podcast

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ARTICLE INFO	ABSTRACT
Keywords: *Podcast,* *listening willingness,* *media effect*	Under the wave of digital transformation, starting from creating more diverse experiences and listening to the voice of users. Podcast, which has flourished in the Taiwanese social media in recent years, will be a significant change in the future operation. The main purpose of this study is to explore listeners motivation, Podcaster characteristics and Podcast contents induce the influence on listeners' listening willingness and media effects. The results are shown that when listeners' use media to achieve entertainment satisfaction, it has a positive impact on listening willingness. Podcast make listeners feel that the Podcaster is around, as well as the unique, high-quality, and diverse content of the program will make listeners want to listen to Podcast, lead to multitasking and media substitution. In addition, the behavior of listening to Podcast every day and media substitution by Podcast with more desirable features will result in listeners' message acceptance to affect behavior and have a positive advertisement attitude. Finally, this study will verify that the questionnaire results were correct and valid through CCA, and use PLS to test parameter estimation, causal relationship between dimensions and overall validity. According to the research findings, we hope the suggestions for the implication and research can contribute to future development in Podcast.

1. Introduction

1.1. Motivation and Background

A term coming from "iPod" and "broadcast," 'podcast' is a digital media that receives audio signals through network. Simply put, podcast is an audio program. However, it is still different from the traditional FM radio in terms of how the programs are created. Podcasting became popular in Taiwan because it fills the void of concentration beyond visual perception.

SoundOn (2021) teamed up with sound economy platforms, such as Chunghwa Telecom, to publish the "2021 Sound Economy Report," the first report summarizing the industrial data in this field. It reported the growth of podcast programs and how the audience developed their

listening habits, as follows:

There are more than 2,500 active podcast programs in 2021; in the second half of 2021, the number and hours of podcasts both grew slightly more than the first half of the year;

Up to 90% of these programs were not longer than 60 minutes and most of them were between 11 and 30 minutes; obviously, the demand for short podcasts was increased;

The number of single, non-repeated downloads increased rapidly in 2021; the growth was more than 200% in the second half of 2021 than the first, indicating an explosive growth in the listening needs.

With these survey results in mind, the market of podcast is rising in Taiwan, where there are nearly 3,000 podcasts and increasing, and the programs are developed in an audience-oriented way. For the audience, the number of single downloads indicates that the listening needs are growing fast. This suggests that podcast is a rising media with great potentials in Taiwan and worth an in-depth investigation into its development trends.

1.2. Questions

It is an eternal fact in the media and broadcasting business that advertisement is where people are. For example, it is predicted that YouTube will be embedded with massive advertorial videos and more and more of media providers and brands are diving into this completely competitive market. Whether it comes in the form of direct advertorial or the video clip is homemade, everything is possible.

Previous podcast studies in Taiwan were focused on the performance of podcasting in educational applications and how learning by listening is accepted, but the further research on podcast audiences' willingness to listen to programs and their media effects is still relatively incomplete.

1.3. Objectives

Therefore, this study is aimed to investigate the podcast's audience's listening willingness to programs and the media effects (media substitution, media influence and advertisement attitude). In addition, the impacts from the future podcast operation models are studied to shed some light on business operations for those who are podcasting and those who are eager to enter the market. The impacts of new media podcasting on the media and broadcasting business, be it self-media or mass communications, are all expected to correspond to previous theories or lead to new academic research results.

2. Theoretical Background

2.1. Media Use Motivation

2.1.1. Uses and Gratifications Theory

The selection of use scenario plays a key role in satisfying users' needs. For this, Katz et al. (1973) proposed the uses and gratifications theory (UGT) in the attempt to understand how the mass communications are used. They believed that the listeners select to use a media actively with a target-oriented purpose, rather than being passive receivers. The ideas centered on

"active listeners" stress the voluntariness with media as the audience selects actively an appropriate media to meet their needs.

The dimensions considered in many previous studies pertaining to UGT as mentioned above include entertainment, social interactions, information seeking and convenience. When talking about convenience, Haridakis and Hanson (2009) and Kim et al. (2012) believed that it should be considered the same dimension as "information seeking."

1. Entertainment: Enginkaya and Yılmaz (2014) and Gros et al. (2017) pointed out that people use media for the need for pleasure and for entertainment satisfaction. Lee and Hong (2016) indicated that entertainment is one of the reasons that students join social networks, as the motivation for entertainment is to relax, run away from problems or life, calm themselves down, experience different cultures or enjoy aesthetic satisfaction (Muntinga et al., 2011).

2. Social interactions: Rubin (1983) and Rubin and Rubin (1982) suggested that the contents that people learned from watching media serve as the materials for interacting with others. For example, some live streamers aim to create a social group where they enjoy the interactions with the group members and even hope that their efforts are recognized and even applauded (Hamilton et al., 2014).

3. Information seeking: Bondad-Brown et al. (2012) believed that people's behavior of video and audio use can be predicted from their desire for information. In order to obtain information, understanding and knowledge, people educate themselves via social media (Korgaonkar & Wolin, 1999; Papacharissi & Rubin, 2000). In addition, Lee and Lee (2011) found that people watch advertisements online to gain new information and to catch up with the ever-changing marketing environment. As a result, social media become a major source that allows people for reliable information (Enginkaya & Yılmaz, 2014).

2.1.2. Social Presence

Social presence refers to the degree that a media allows users to feel the existence of media broadcaster during the use. Therefore, the diversified perceptions of social presence vary between media.

Different media have different ways of operating, but it is the same among all media that they all focus users' level of use and their interactions with the broadcasters. Therefore, by categorizing social media by their use, it is learned that the greater the existence of social presence, the more influences created by the interactions with users (Kaplan & Haenlein, 2010). Fortin and Dholakia (2005) concluded that the advertisements over rising media creates greater social presence provided that the interactions with users are boosted appropriately.

When talking about the "social interactions" dimension in the UGT, it is believed in this study that it is similar to the interactions between "social presence" media and their audience. For the purpose of this study, the dimensions of "entertainment," "information seeking" and "social presence" are selected to investigate the motivation for broadcasting media use.

Hypotheses 1 and 2 are proposed as follows according to the motivation of the people to use media and to meet people's needs, while considering the factors of who, what, when, where and how, which affect their listening willingness and change the time allocation of media use.

H1: the greater motivation to use media, the more positive influence on the listening willingness;

H1a: the greater the entertainment is as the motivation of media use, the more positive influence on the listening willingness;

H1b: the greater the information seeking is as the motivation of media use, the more positive influence on the listening willingness;

H1c: the stronger the social presence is as the motivation of media use, the more positive influence on the listening willingness.

H2: the greater motivation to use media, the more positive influence on media substitution of podcast;

H2a: the greater the entertainment is as the motivation of media use, the more positive influence on media substitution of podcast;

H2b: the greater the information seeking is as the motivation of media use, the more positive influence on media substitution of podcast;

H2c: the stronger the social presence is as the motivation of media use, the more positive influence on media substitution of podcast.

2.2. Podcaster's Characteristics

Broadcasting media creates better experiences to listen to what clients have to say, and it is up to the hosts to stimulate the audience's motivation to listen. The source credibility is the level of belief that that an information receiver has on the information provider. Kiecker and Cowles (2002) believed that the information gains extract ability, experience or knowledge during the information receiving, and believes that the source of the information is correct. A spokesperson who has a greater source credibility is more persuasive than one who as less credibility (Sternthal et al., 1978).

The following three dimensions are developed by summarizing the spokesperson credibility study by Ohanian (1990):

1. Expertise: this indicates that a spokesperson has professional knowledge and is capable of presenting a product based on his/her ability personal experience, professional qualifications and sense of authority.

2. Trustworthiness: this suggests a spokesperson who has integrity and honesty, has no personal agenda or purpose when there is dispute in communicating, stays impartial, does not exploit public resource for personal interests, and listens to both sides of a story. Therefore, a spokesperson produces better persuasive results if he/she is considered trustworthy.

3. Attractiveness: means that a spokesperson has his/her own unique personality, loving, charming and sexy properties. A spokesperson like this attracts listeners' attention based on his/her energy and enthusiasm displayed in any way and, thus, creates a positive impression.

The dimensions above are about the characteristic of a podcaster, where the expertise is similar to the use scenario of "information seeking" in Section I of part 1 above from which information, understanding and knowledge are obtained. For this, the "expertise" is included in the "information seeking" for investigation.

It is believed in this study that the characteristics of a podcaster, such as trustworthiness and attractiveness, have influence on the listening willingness of users to podcasts and change the time allocation of media use. Therefore, Hypotheses 3 and 4 are proposed, as follows.

H3: the greater a podcaster's characteristics, the more positive influence on the listening willingness;

> H3a: the greater a podcaster's trustworthiness, the more positive influence on the listening willingness;
>
> H3b: the greater a podcaster's attractiveness, the more positive influence on the listening willingness.

H4: the greater a podcaster's characteristics, the more positive influence on media substitution of podcast;

> H4a: the greater a podcaster's trustworthiness, the more positive influence on media substitution of podcast;
>
> H4b: the greater a podcaster's attractiveness, the more positive influence on media substitution of podcast.

2.3. Podcast Contents

The contacts with audience become more and more frequent with the rising of podcasting. The contents will inevitably become daily talk topics, which results in perceived value (Zeithaml, 1988), the value that customers are willing to pay for a product after comprehensive effect evaluation. Jen and Hu (2003) also verified that the cognitive evaluation of consumers on a product or service represents the perceived value; i.e., the perceived cost that a consumer pays and the result of perceived benefits gained.

Sheth et al. (1991) came up with the buying behaviors of the general consumers affected by 5 value dimensions, including functional value, social value, emotional value, scenario value and novelty value. For this purpose of this study, therefore, 2 of the 5 values proposed by Sheth et al. (1991) are selected, where the scenario value is defined as timeliness and novelty value as uniqueness.

Rauniar et al. (2013) mentioned in their assessment on a social media website that the website facilitates the ability of instant message exchanges between social media users. Any non-real-time application procedure or function in a social media website may generate negative influence on satisfaction. Chan-Olmsted and Wang (2022) discovered that podcasts are not just the movements of advertisement. They have been developed into rather sophisticated and unique media, as they have different user groups and provide communications and marketing activities a substitution and unique platform for voice conveyance. Such a transformation may be enhanced because other platforms not designed specifically for voice transmission are used as a substitution media for listening to podcasts, such as YouTube.

It Is believed In this study that "he a'dience's evaluation on podcast contents has influence on the willingness of users to listen to podcasts and change the time allocation of media use. Therefore, Hypotheses 5 and 6 are proposed, as follows.

H5: the greater perceived value the contents of a podcast has, the more positive influence on the listening willingness;

> H5a: the greater the timeliness the content of a podcast has, the more positive influence on the listening willingness;
>
> H5b: the more unique the content of a podcast is, the more positive influence on the

listening willingness.

H6: the greater perceived value the contents of a podcast has, the more positive influence on media substitution of podcast;

H6a: the greater the timeliness the content of a podcast has, the more positive influence on media substitution of podcast;

H6b: the more unique the content of a podcast is, the more positive influence on media substitution of podcast.

2.4. Listening Willingness

The focus is placed on the realization of audience's needs in the era of new-generation technological changes. It is necessary to help audience find their resonance, and characterize the development model of new information technology products using a macro perspective. By integrating 8 theories of social psychology analysis proposed in the academic society, Venkatesh et al. (2003) proposed the Unified Theory of Acceptance and Use of Technology (UTAUT), which has greater power than previous models in terms of explaining new information technology products of services.

While investigating music streaming media, Pinochet et al. (2019) reported that the intention to use a music streaming media has the greatest relation with habits, which is to say that the behavior of listening to music every day has influence on the intention to use a music streaming media. The study also indicated that interviewees believed that the best environments to use these applications are at home and on public transportation, suggesting that this practice is becoming more and more common in daily life. Perks and Turner (2019) also found that a rising and unique media like podcast is capable of multitasking as the users are listening to it, which is also to say that those who tend to multitask are more likely to be attracted by podcast, as listening helps them finish their jobs or at least makes them feel productive (Perks et al., 2019).

For the purpose of this study, therefore, the unified technology acceptance model is used to explore the listening willingness as a new information technology product. It is believed in this study that listening to podcast programs has influence on listeners and their attitudes toward advertising behavior based on their listening willingness and their usage habits. For this, hypotheses 7 and 8 are proposed, as follows.

H7: the greater the listening willingness the audience has, the more positive influence on media influence of podcast programs;

H8: the greater the listening willingness the audience has, the more positive influence on advertisement attitude of podcast.

2.5. Media Substitution

Facing the arrival post-pandemic era, there is always a competitive and substituting relationship between media in terms of limited resources, such as listeners' time and the budget of advertising companies. Over the decades of mutual thriving and existence of multiple media, however, none of these media is completely replaced or even disappeared, since every media is unique.

McCombs (1972) proposed the concept of "relative constancy." Listeners use media to obtain as many resources as possible during their disposable time, which affects the allocation of listening time. The number of old media decreases and that of new ones increases, but media consumption remains relatively unchanged. Tang and Chen (2020) pointed out that people tend to stay loyal to the current media they are using when they believe that substituting the ones that they are using makes no difference or is not as attractive as they thought. Therefore, substitution leads to changes in time allocation, which is to say that the arrival of new media leads to relative less time spent on old media (Dutta-Bergman, 2004; Kayany & Yelsma, 2000).

Jeffres (1978) and Kayany and Yelsma (2000) suggested that listeners can evaluate media and choose one that meets their needs the most. This is the idea of functional similarity, which is based on the theory that new media will replace old ones and provide similar functions that old media provide or meet listeners' needs. Therefore, it happens frequently that new media provide more satisfactory functions that old ones (Lin, 1994).

For the purpose of the study, media substitution is selected to investigate whether changes of podcast listening time originate from the substitution of other media. It is believed in this study that the changes in media use time allocation by audience have influence on listeners and their attitudes toward advertising behavior. For this, hypotheses 9 and 10 are proposed, as follows.

H9: the stronger the podcast media substitution effects, the more positive influence on media influence of podcast programs;

H10: the stronger the podcast media substitution effects, the more positive influence on advertisement attitude of podcast.

2.6. Media Influence

The rise of a broadcasting media means that it has a certain level of influence. The presentation by program host and contents often deepens the behaviors or perspectives of users, which comes from the messages that people use the media to distribute. Cheung et al. (2008) pointed out that the use of message means that "the comments and points of view generated by the message provided will be accepted by message receivers and, hence, affect their decisions to buy."

When people collect information about a service or product, people will accept the contents and suggestion in the message found if they recognize the message they see, thus affecting their intention and behaviors (McKnight & Kacmar, 2007). Cheung et al. (2008) proved in their study that it helps if people read online comments, as it is possible that people are willing to accept the comments they see and change their intension to buy. Cheung et al. (2009) found in the consumers' acceptance of words of mouth that consumers tend to accept word of mouth suggestions when they agree with the online words of mouth. Arora and Lata (2020) implied that people tend to believe the information shared by tourists and distributed by media more than what is provided in official website when they are searching for travel information. These tourists provide information of tourist destinations in the form of video clips on YouTube and attract the attention of potential travelers.

As a result, it is believed in this study that information provided by podcasts will affect the intention and behaviors of audience.

2.7. Advertisement Attitude

Various services are provided through a wide diversity of channels. Advertisements are designed into multiple type of new services in response to the change of generations. Consumers "respond to their tendency to advertisements by feeding back likes or not" (Lutz, 1985). The advertisement attitude is the attitude of like or dislike as evaluation when a person receives an advertisement message and is stimulated(Bauer & Greyser, 1968).

Mehta (2000) indicated that consumers' perceived reactions toward advertisement are shown in their thoughts, which affects their attitudes toward advertisement and, thus, produces positive or negative influence. However, consumers usually question that a celebrity speaks for a product just to make the advertisement more appealing, but the product does not have convincing quality since that is beyond the expertise of the celebrity. As a result, if a company chooses an expert celebrity to promote their product, the persuasive power of the brand and costumers' advertisement attitudes will be subject to more active influence (Ha & Lam, 2017).

Therefore, to determine whether an advertisement has its effectiveness, the consumers' advertisement attitudes is a key indicator.

2.8. Regulation Effects

Podcasts come in many types; some talk about finance and investment and share their personal points of view about the general market, while pointing the directions of investment for audience; some talk about news events and focus on the hottest topics and what is happening around the world; some talk about entertainment and share the bits and pieces in life as if they are making small talks; some tell stories and share complicated knowledge in books in a casual and pleasant way; some talk about gender issues, elaborate the differences between genders and advise on how to improve intimate relationship through the talks about gender topics; while others invite who's who in various field and stimulate sparks in the interviews.

For product advertorial, different products give people different cognitions and perceptions and therefore, they are divided into search items, experience items and trust items. A search item is one that a customer gets to evaluate it is good or bad before buying or using it; an experience item is one that a customer is unable to evaluate it is good or bad until he/she buys it; and a trust item is one that a customer has no way to evaluate before buying or using.

For the purpose of this study, therefore, podcast programs and advertorial product types are selected as variables for regulation of podcast listening willingness and media effect. Hypothesis 11 is proposed as follows.

H11: Podcast types and product types have a regulation effect on podcast listening willingness and media effects.

3. Methodologies

3.1. Conceptual Framework

Hypotheses are developed based on empirical documents to arrive at the hypothetical relationship between dimension and, thus, establish the conceptual framework accordingly, as shown in Figure 1.
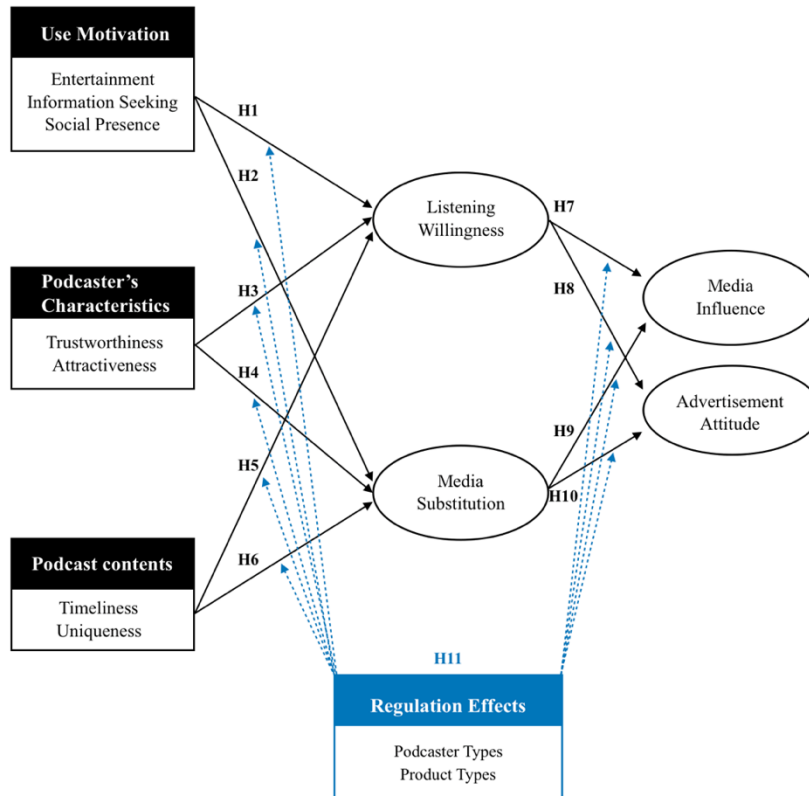

Figure 1. Conceptual framework

3.2. Questionnaire Design and Data Collection Method

3.2.1. Questionnaire Design

The variable measurement questionnaire was evaluated using the Likert's 6-point scale. This study was designed to investigate audience's listening willingness and media effects based on people's motivation, podcaster characteristics and podcast contents. For this, listeners who have listened to podcasts were selected as the subject for data collection. During the conceptual framework design, the subjects of study were limited to those who have listened to popular podcasts in Taiwan, including "Gooaye" and "Bailingguo News" for comparison of results between different types of podcasts, and different types of advertorial product (search item and trust item) were also chosen for comparison. 4 versions of questionnaires were developed with two control groups.

3.2.2. Data Collection Method

An online questionnaire was adopted to collect data. The questionnaire came in two parts, the pilot study and official questionnaire. Stage 1 was the pilot study, which was conducted based

on the dimensions derived from literature review and 25 copies of the questionnaire were distributed. Stage 2 was the official questionnaire, which was carried out according to the results of pilot study with necessary adjustments and supplements. A total of 437 copies were distributed for the verification of hypotheses proposed herein.

3.3. Data Analysis Method

The study was carried out in two stages; stage 1 was the pilot study and stage 2 the official questionnaire analysis.

3.3.1. Pilot Study

A pilot study was performed before the questionnaire was designed in order to allow the questions provided in the official questionnaire to represent the concept more accurately. The pilot study is a study focusing on a smaller range or topic related to the main topic of the study before the official works start. It is performed to adjust future study topic, properties and purposes or focus more on the topic to help the phenomenon studied converge and future study go well. The pilot study results were analyzed using descriptive statistics for the importance and goodness of fit of the dimension questions, which served as the basis for modification of official questionnaire.

3.3.2. Official Questionnaire

1. Descriptive statistics analysis

Demographic variables, such as gender and age, were used to present the distribution of percentage and number of times. The data attributes were studied to provide details of the characteristics of sample structure and their distribution. As the questionnaires were retrieved, the means and standard deviations of every question were determined to demonstrate the sample profiles and distribution of answers to the questions.

2. Reliability analysis

The Cronbach's α reliability coefficient was selected as the measurement indicator to ensure the consistency of questionnaire results and stability of measurement tool used. A reliability test was performed during the official questionnaire stage. The Cronbach's α at 0.7 or higher reached the minimum threshold for reliability; 0.8 indicated good reliability and 0.9 or greater suggested extremely high reliability (Cooper Donald et al., 2006).

3. Confirmatory composite analysis (CCA)

To verify that the questionnaire results were correct and valid, if the analysis results displayed high validity, they demonstrated the characters of the tested. In general, the validity analysis verifies a result based on content validity and construct validity.

CCA is a systematic method and process to check a measurement model in PLS-SEM. In recent year, the measurement model in PLS-SEM has been widely applied based on CCA. CCA is used to improve the reliability of items and scales. It identifies and provides indications of items that require modification or, in some cases, elimination of content validity, facilitates the achievement of convergent and discriminant validity, and eliminates error variance (Hair Jr et al., 2020).

4. Partial least square (PLS)

PLS was adopted in this study to test parameter estimation, causal relationship between dimensions and overall validity. PLS focuses on predicting the relationship between dimensions. It incorporates several important statistical techniques, such as multivariate linear regression and principal component analysis. PLS is often used to process a series or groups of independent variables and causal relationship between variables, as well as test hypotheses (Chin et al., 2003).

3.4. Pilot Study Results

A measurement scale was introduced in the pilot study to determine the importance and goodness of fit of every dimension and every question. The pilot study was performed by distributing online questionnaires. All questions were multi-choice questions for interviewees to choose their answers. With results obtained from the test sample, the modification comments on qualitative items and descriptive statistical analysis were used, including calculating the mean and standard deviation of each dimension item, before the questionnaire questions were adjusted based the pilot study analysis results above.

4. Empirical Study Findings And Analysis

4.1. Sample Structure of Official Questionnaire and Descriptive Statistical Analysis

Comparison of podcast types (Bailingguo and Gooaye) and product types (search items and trust items) was performed for the study. 4 versions of questionnaire were developed. For the first round, copies of questionnaire were distributed to those who have listened to Bailingguo or Gooaye for the advertorial search item (Rhino Shield cell phone case) and, for the second round, to those who have listened to Bailingguo or Gooaye for the advertorial trust items (Richvita vitamins and Bayer Berocca vitamins).

437 valid copies of questionnaires were retrieved for the effectiveness of questionnaire. These copies were previously distributed to those who have listened to podcasts in the last 3 months, those who listen to podcasts at least once every month and those who have listened to Bailingguo or Gooaye. For the authenticity of the questionnaire, those with a non-podcast program for answer were eliminated for the accuracy of data analysis.

4.1.1. Sample Structure of Official Questionnaire

The sample analysis indicated that there was one woman more than there were men. More than half of the interviewees were between the age of 21 and 30 years. They were mostly office workers. The last time to listen to a podcast was one to three days ago, and most of the cases were 1 to 14 days ago. On average, they listened to podcasts once or more every week. The sample structure of the questionnaire is presented below.

4.1.2. Descriptive Statistical Analysis

The statistics program, SPSS, was used to the analysis of the means and standard deviations of every variable measurement question, as to present how these questions were answered. There were 3 to 5 questions in average for every dimension, totaling 40 questions. The analysis results indicated that the mean for most of the questions answered was 4 or more with the standard

deviation distributed between 0.8 and 1.3.

4.2. Measurement Model Analysis

4.2.1. Reliability Analysis

In general, Cronbach's α is used in most cases as the reliability coefficient in reliability analysis. The Cronbach's α was 0.8 or more for all questions in the study, indicating good reliability. When testing the reliability of the confirmatory factor model, the level of internal consistency was tested using composite reliability (CR). In the case of this study, the composite reliability was greater than 0.7 for all dimensions investigated in the study.

4.2.2. Validity Analysis

In the PLS-SEM model, the confirmatory composite analysis (CCA) was introduced to measure a greater number of structure item indicators, thus improving the content validity and construct validity. CCA may be performed according to the following indicators (Hair Jr et al., 2020).

The standardized factor loadings were all 0.708 or more for all questions, thus verifying the consistency of dimensions and questions. The validity of the confirmatory factor model was tested using average variance extracted (AVE). For the study, the AVE reached 0.5 or higher, suggesting that the measurement model had a certain level of goodness of fit and there was no need to remove any question.

The Heterotrait Monotrait Ratio criterion (HTMT) was adopted to test the correlation ratio between the dimensions for the discriminant validity. The analysis results indicated < 0.9, meaning good discriminant validity overall.

4.3. PLS Model Analysis

The smartPLS program was used for PLS-SEM analysis on the structure function model which was estimated by repeatedly taking samples from the same samples using bootstrapping based on the suggestion of Hair et al. (2016). The bootstrapping works by selecting a large number of samples randomly from raw data for analysis in place of raw samples.

Bootstrapping was performed to select randomly 1,000 samples to test whether the hypotheses proposed stand and explain the relationship between dimensions via path coefficient (β) and significance. The path coefficient is a standardized value between -1 and 1. A path coefficient close to 1 suggests that two dimensions are highly positively correlated; on the other hand, a path coefficient close to -1 indicates that two dimensions are highly negatively correlated; a path coefficient close to 0 implies no correlation between two dimensions. For significant testing, the proposed hypotheses were very specific and, therefore, one-tailed t-test was adopted. When $t > 1.645$, p was 0.05, indicating significant level in bold and marked with an asterisk (*). For collinearity test, the VIF value was smaller than the threshold value of 5 for all dimensions, suggesting the absence of collinearity in the structure model examined and, therefore, no influence on the path coefficient.
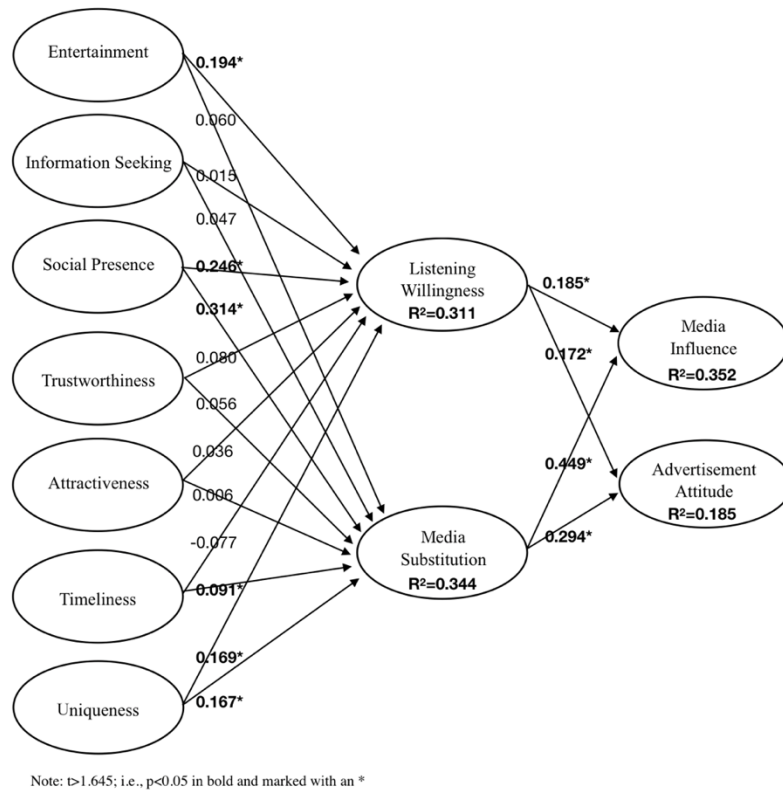
Note: t>1.645; i.e., p<0.05 in bold and marked with an *

Figure 2. PLS sample analysis results

First of all, the stronger the entertainment as the media use motivation, the more positive influence on the podcast listening willingness (β=0.194, t=3.243, p<0.05, hypothesis stands); however, this cannot be said for podcast substitution (β=0.060, t=1.042, p>0.05, hypothesis fails); therefore, hypothesis H1a stands and H2a fails. The stronger the information seeking as the media use motivation, the less positive influence on the podcast listening willingness (β=0.015, t=0.267, p>0.05, hypothesis fails), and the same for podcast substitution (β=0.047, t=0.893, p>0.05, hypothesis fails); therefore, both hypotheses H1b and H2b fail. The stronger the social presence as the media use motivation, the more positive influence on the podcast listening willingness (β=0.246, t=4.275, p<0.05, hypothesis stands) and the same for podcast listening willingness (β=0.314, t=5.658, p<0.05, hypothesis stands); therefore, both hypotheses H1c and H2c stand.

Next, for the effects from podcaster's characteristics, higher trustworthiness of a podcaster does not bring positive influence on either the podcast listening willingness (β=0.080, t=0.972, p>0.05, hypothesis fails) or podcast substitution (β=0.056, t=0.700, p>0.05, hypothesis fails); therefore, both hypotheses H3a and H4a fail. Again, the attractiveness of a podcaster does not bring positive influence on either the podcast listening willingness (β=0.036, t=0.372, p>0.05, hypothesis fails) or podcast substitution (β=0.006, t=0.064, p>0.05, hypothesis fails); hence, both hypotheses H3b and H4b fail.

For the influence of podcast contents, greater timeliness of a podcast does not have positive influence on podcast listening willingness (β=-0.077, t=1.240, p>0.05, hypothesis fails) but has positive influence on podcast substitution (β=0.091, t=1.699, p<0.05, hypothesis stands); thus, hypothesis H5a fails but H6a stands. The more unique a podcast is, the more positive influence it has on the podcast listening willingness (β=0.169, t=2.082, p>0.05, p<0.05, hypothesis stands)

and it is the same for podcast substitution (β=0.167, t=2.464, p<0.05, hypothesis stands); as such, both hypotheses H5b and H6b stand.

Finally, for the listening willingness and media substitution, the more willing audience is to listen, the more positive influence there is on podcast program influence (β=0.185, t=2.842, p<0.05, hypothesis stands) and the same for the podcast advertisement attitude(β=0.172, t=2.470, p<0.05, hypothesis stands); consequently, both hypotheses H7 and H8 stand. The stronger the podcast substitution, the more positive influence on podcast program influence (β=0.449, t=6.773, p<0.05, hypothesis stands) and the same for podcast advertisement attitude (β=0.294, t=4.216, p<0.05, hypothesis stands); thus, both hypotheses H9 and H10 stand. The overall sample PLS analysis results are summarized in Table 4-1.

The explanatory power of a model is an indicator to evaluate the quality of the model. Based on the goodness of fit of model analysis result and with R Square representing the explanatory power, the analysis results suggest that the degree of confidence is 31.1%, 34.4% and 35.2% for listening willingness, media attitude and media influence, respectively; the explanatory power for advertisement attitude is less than the other three dimensions but still is 18.5%.

5. Conclusions and Suggestions

5.1. Study Findings and Implications

The entertainment as the motivation has positive influence on listening willingness of audience. This indicates that the use of podcast for the need of pleasure provides the satisfaction with entertainment, such as relaxing, running away from problems or life, experiencing different cultures or enjoying aesthetic satisfaction, as pointed out by Enginkaya and Yılmaz (2014), Gros et al. (2017) and Muntinga et al. (2011), which in turn increases the performance expectation to keep audience listening to podcasts. However, entertainment does not lead to media substitution, as time spent on old media does not reduce because of listening to podcasts (Dutta-Bergman, 2004; Kayany & Yelsma, 2000).

For the information seeking as the motivation, the effects on listening willingness and media substitution are not significant, despite the argument of Enginkaya and Yılmaz (2014) that social media seems to become a main source when people are looking for information. However, people listen to podcasts just to look for the information or knowledge they need. Providing a wide diversity of podcasts does not keep people listening or change the time allocation for using existing media.

For the social presence as motivation, the influence is positive for listening willingness and media substitution. As pointed out by Kaplan and Haenlein (2010), the greater the existence of social presence, the greater influence the user interrelationship causes. This leads to a finding that podcasts are powerful to make audience feel their presence around them, which affects their willingness to listen to podcast and media substitution. Therefore, this effect is often observed when a new media provides more satisfying functions than old ones (Lin, 1994).

For trustworthiness and attractiveness as podcaster characteristics, the influence on listening willingness and media substitution is not significant. This suggests that people do not keep listening to a podcaster's shows just because he/she has integrity and honesty or a unique, charming, sexy or attractive personality, and there is no media substitution. As Chan-Olmsted

and Wang (2022) indicated that people tend to stay loyal to existing media when they believe that substitution does not make too much difference or is not appealing to them. Therefore, it is safe to say that a character of trustworthiness or attractiveness in a podcaster can be found also in other media and, therefore, this does not affect audience.

For the timeliness of podcast contents, the influence is not significant on listening willingness but positive to media replacement, meaning that podcasts bring audience information or response in real time. The influence on the four dimensions for UTAUT proposed by Venkatesh et al. (2003), including performance expectation, expected efforts, social influence and facilitating conditions, is not significant, leading to no influence on listening willingness. For media substitution, Jeffres (1978) and Kayany and Yelsma (2000) reported that media that meets the needs the most is often selected, which is the idea of functional similarity; i.e., the timeliness may not affect the listening willingness, but a media featuring timeliness is the one that meets the needs the most when other media has functional similarity in terms of timeliness.

For the uniqueness of podcast contents, the influence on listening willingness and media substitution is positive, suggesting that unique contents, high quality and wide diversity make people want to listen podcasts. Perks et al. (2019) pointed out that it is possible for audience to perform multiple tasks while listening to podcasts, since listening helps then finish their jobs or at least makes them feel productive. In addition, the audience will use media in their disposable time for massive resources, thus increasing the percentage of time to listen to new media (McCombs, 1972).

Listening willingness has positive influence on media influence and advertisement attitude, indicating that the music streaming theory proposed by Pinochet et al. (2019) works on podcast; i.e., the behavior of listening to podcasts every day affects the intention to use podcasts. Therefore, people will accept the contents and suggestions found in the messages provided and, thus, change their intentions and behaviors (McKnight & Kacmar, 2007), which is positive for the advertisement attitude.

Media substitution has positive influence on both media influence and advertisement attitude, suggesting that the booming development of podcast brings influence on audience's behaviors with the ideas in the programs, since podcasts provide satisfying functions. As Arora and Lata (2020) proposed that people tend to trust the information shared by tourists over media more than official websites as they are searching for travel information. In addition, audience reflects the cognitive reaction toward advertorial in their thoughts and, therefore, change their attitudes toward advertising, which is a positive influence (Mehta, 2000).

5.2. Study Contributions

1. Theoretical contributions

A rising self-media, podcast, was investigated in this study and compared with previous self-media theories and points of view. The theoretical contributions come from three ways. First, the UGT was brought into the study to show that people are entertained and satisfied thanks to the use of media and the greater the existence of a social media is, the greater the influence of user interrelationship brings. The use of podcasts leads to the same conclusion in terms of media use motivation. Secondly, it is proven from podcast that the timeliness of social media and uniqueness of media are the key dimensions of influence that support the satisfaction. Thirdly, users evaluate media and select the view point of media that fits their needs the most,

which in turn makes users trust the information spread by media more and triggers favorable advertisement attitudes whether or not users are paying attention to advertisements. This is proven in podcasts.

On the other hand, this study started from the theoretical point of view of spokesperson with trustworthy source in terms of podcaster characteristics and found no significant influence of trustworthiness and attractiveness in podcasting, which may indicate no further need to investigate a podcaster's characteristics from the spokesperson point of view.

Therefore, this study defined the dimensions generated in the media usage motivation, podcaster characteristics and podcast contents, as well as the level of their influences on listening willingness and media effect. Important factors of influence were identified in this study, while the research on podcast programs and advertorial products indicated that adjustment is necessary, which further makes up for the previous podcast studies and will probably be helpful for the understanding and application of relevant variables in the future.

2. Practical contributions

This study was designed to investigate the willingness to listen to podcasts as a rising media in Taiwan and the media effects and popular podcasts, Bailingguo, which talks about news events and focus on hot topics and worldwide events and Gooaye, which talks about finance and investment and where the host provides his personal points of view on the stock market and points a direction for his audience. Therefore, these two types of podcasts will be discussed for the practical contribution of this study.

When talking about running a podcast, it is aimed to point a direction for businesses or individuals who are interested in running a podcast now or in the future. A news commenting podcast like Bailingguo intensifies the entertainment effects of the program and the audience feels entertained and become more willing to listen, and it is possible to focus more on social presence, make audience feel pleasant and satisfied and increase their willingness to listen. The uniqueness of the program is increasingly important, which makes the program stand out from others for the interesting comments on news events, distinctive program quality and diversity, which all contribute to the improvement listening willingness and media substitution. For Gooaye, the subject of finance and investment, social presence accounts for a good portion. Gooaye host talks in a light tone of humor as if he was talking to a group of friends. In addition, the timely comments of Gooaye on stock market is one of the key points, as the investment market fluctuates rapidly and timely investment information make the audience more willing to invest more time listening to podcasts. For this type of podcasts, it is possible to intensify the listening willingness and media substitution by focusing more on social presence and timeliness.

The first topic to talk about for advertorial marketing is how to advertise for a specific type of podcast. With a type of podcast at hand, such as Bailingguo, the marketing crew should focus on programs that are popular and frequently listened to for advertorial, as this produces a fairly good result. It is worth noticing, however, that the advertorial product should be consistent with the expertise of the podcaster for better persuasive power. For a finance/investment podcast, Gooaye has demonstrated why it is a popular podcast. The investment messages and comments lead to outstanding effects to the audience and their attitudes toward advertorial are positive. Therefore, a program like this could bring good advertising effects by intensifying the audience's willingness to listen with social presence and timeliness. On the other hand, for the

type of advertorial product, it is better to market a search item to those who are in need of information seeking. Therefore, programs that perform well in information seeking and those that provides social presence are to be considered for advertorial. To market trust items, entertainment and social presence as media use motivations have better influence, suggesting that advertorial on programs that allow audience for entertainment satisfaction and those provide greater social presence are suitable for trust items, and emphasis is also recommended for timeliness and uniqueness. Podcasts featuring timely discussion of recent events or unique contents are better for trust item advertorial.

5.3. Study Limits and Suggestions for Future

This study was focused on the podcast market in Taiwan and foreign podcasts were not investigated. A suggestion can be to study foreign podcast markets and compare them with the Taiwan market. Furthermore, the types of podcasts are limited in Taiwan. Popular programs like Bailingguo and Gooaye were selected from many different podcast types for analysis. It is learned from the study contributions above that the regulation effect ha its significance. However, other types of podcasts, such as entertainment and chitchat, knowledge and storytelling, gender issues and people interviewing, are not included for analysis. It is suggested to investigate other types of podcasts such as those listed above. On other hand, it is a good idea to compare podcast of the same type to intensify the analysis results and develop conclusions that fit more for podcasts.

For the product advertorial, podcasts, as a booming media in recent years, are mostly run by individual podcasters and there are more to be developed for sponsored programs and episodes. Therefore, the product advertorial in individual programs is somewhat in short supply, which could explain the insufficient experience of listeners in advertorial contents shown in the limited results from those who answered the questionnaire, i.e., the audience. Also, with the short supply of advertorials, this study was designed only for search items and trust items. It is a pity not to include experience items, which, however, may be included in future studies to enrich the product types; or, products may be grouped by a different grouping criterion for a second study to verify different effects.

In addition, this study was focused on the influence of media use motivation, podcaster characteristics and program contents on podcast listening willingness, media substitution and media influence and advertisement attitude. Therefore, the influence dimensions on media influence and advertisement attitude were broken down into the dimensions of listening willingness and media substitution. A suggestion for future study is to investigate whether the media use motivation, podcaster characteristics and program contents have influence on media influence and advertisement attitude.

Finally, it is believed that the future podcast market will keep booming and there will be more advertorials than expected. For this, it is a good analysis topic to investigate the influence of positive and negative attitudes toward advertising on listener's willingness to buy advertorial products and their loyalty to the programs.

References

Arora, N., & Lata, S. (2020). YouTube channels influence on destination visit intentions: An empirical analysis on the base of information adoption model. *Journal of Indian Business Research*. https://doi.org/10.1108/JIBR-09-2019-0269

Bauer, R. A., & Greyser, S. A. (1968). Advertising in America, the consumer view.

Bondad-Brown, B. A., Rice, R. E., & Pearce, K. E. (2012). Influences on TV viewing and online user-shared video use: Demographics, generations, contextual age, media use, motivations, and audience activity. *Journal of Broadcasting & Electronic Media*, *56*(4), 471-493.

Chan-Olmsted, S., & Wang, R. (2022). Understanding podcast users: Consumption motives and behaviors. *New media & society*, *24*(3), 684-704. https://doi.org/10.1080/08838151.2012.732139

Cheung, C. M., Lee, M. K., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet research*, *18*(3), 229-247. https://doi.org/10.1108/10662240810883290

Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, *13*(4), 9-38. https://doi.org/10.2753/JEC1086-4415130402

Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research*, *14*(2), 189-217. https://doi.org/10.1287/isre.14.2.189.16018

Cooper Donald, R., Pamela, S., & Jianmin, S. (2006). Business Research Methods, Vol. 9. In: New York: McGraw-Hill.

Dutta-Bergman, M. J. (2004). Complementarity in consumption of news types across traditional and new media. *Journal of Broadcasting & Electronic Media*, *48*(1), 41-60. https://doi.org/10.1207/s15506878jobem4801_3

Enginkaya, E., & Yılmaz, H. (2014). What drives consumers to interact with brands through social media? A motivation scale development study. *Procedia-Social and Behavioral Sciences*, *148*, 219-226. https://doi.org/10.1207/s15506878jobem4801_3

Fortin, D. R., & Dholakia, R. R. (2005). Interactivity and vividness effects on social presence and involvement with a web-based advertisement. *Journal of Business Research*, *58*(3), 387-396. https://doi.org/10.1016/S0148-2963(03)00106-1

Gros, D., Wanner, B., Hackenholt, A., Zawadzki, P., & Knautz, K. (2017). World of streaming. Motivation and gratification on Twitch. Social Computing and Social Media. Human Behavior: 9th International Conference, SCSM 2017, Held as Part of HCI International 2017, Vancouver, BC, Canada, July 9-14, 2017, Proceedings, Part I 9,

Ha, N. M., & Lam, N. H. (2017). The effects of celebrity endorsement on customer's attitude toward brand and purchase intention. *International Journal of Economics and Finance*, *9*(1), 64-77. https://doi.org/10.5539/ijef.v9n1p64

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2016). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In: Sage.

Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101-110. https://doi.org/10.5539/ijef.v9n1p64

Hamilton, W. A., Garretson, O., & Kerne, A. (2014). Streaming on twitch: fostering participatory communities of play within live mixed media. Proceedings of the SIGCHI conference on human factors in computing systems. https://doi.org/10.5539/ijef.v9n1p64

Haridakis, P., & Hanson, G. (2009). Social interaction and co-viewing with YouTube: Blending mass communication reception and social connection. *Journal of Broadcasting & Electronic Media*, *53*(2), 317-335. https://doi.org/10.5539/ijef.v9n1p64

Jeffres, L. W. (1978). Cable TV and interest maximation. *Journalism Quarterly*, *55*(1), 149-154. https://doi.org/10.5539/ijef.v9n1p64

Jen, W., & Hu, K.-C. (2003). Application of perceived value model to identify factors affecting passengers' repurchase intentions on city bus: A case of the Taipei metropolitan area. *Transportation*, *30*, 307-327. https://doi.org/10.1023/A:1023983627092

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, *53*(1), 59-68. https://doi.org/10.1016/j.bushor.2009.09.003

Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *The public opinion quarterly*, *37*(4), 509-523. https://doi.org/10.1016/j.bushor.2009.09.003

Kayany, J. M., & Yelsma, P. (2000). Displacement effects of online media in the socio-technical contexts of households. *Journal of Broadcasting & Electronic Media*, *44*(2), 215-229. https://doi.org/10.1207/s15506878jobem4402_4

Kiecker, P., & Cowles, D. (2002). Interpersonal communication and personal influence on the Internet: A framework for examining online word-of-mouth. *Journal of Euromarketing*, *11*(2), 71-88. https://doi.org/10.1207/s15506878jobem4402_4

Kim, C., Galliers, R. D., Shin, N., Ryoo, J.-H., & Kim, J. (2012). Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, *11*(4), 374-387. https://doi.org/10.1016/j.elerap.2012.04.002

Korgaonkar, P. K., & Wolin, L. D. (1999). A multivariate analysis of web usage. *Journal of advertising research*, *39*(2), 53-53.

Lee, J., & Hong, I. B. (2016). Predicting positive user responses to social media advertising: The roles of emotional appeal, informativeness, and creativity. *International Journal of Information Management*, *36*(3), 360-373. https://doi.org/10.1016/j.ijinfomgt.2016.01.001

Lee, J., & Lee, M. (2011). Factors influencing the intention to watch online video advertising. *Cyberpsychology, Behavior, and Social Networking*, *14*(10), 619-624. https://doi.org/10.1089/cyber.2009.0305

Lin, C. A. (1994). Audience fragmentation in a competitive video marketplace. *Journal of advertising research*, *34*(6), 30-39.

Lutz, R. J. (1985). Affective and cognitive antecedents of attitude toward the ad: A conceptual framework. *Psychological processes and advertising effects*, 45-64.

McCombs, M. E. (1972). Mass media in the marketplace. *Journalism and Communication Monographs*, *24*.

McKnight, D. H., & Kacmar, C. J. (2007). Factors and effects of information credibility. Proceedings of the ninth international conference on Electronic commerce. https://doi.org/10.1145/1282100.1282180

Mehta, A. (2000). Advertising attitudes and advertising effectiveness. *Journal of advertising research*, *40*(3), 67-72. https://doi.org/10.2501/JAR-40-3-67-72

Muntinga, D. G., Moorman, M., & Smit, E. G. (2011). Introducing COBRAs: Exploring motivations for brand-related social media use. *International Journal of advertising*, *30*(1), 13-46. https://doi.org/10.2501/IJA-30-1-013-046

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of advertising*, *19*(3), 39-52. https://doi.org/10.2501/IJA-30-1-013-046

Papacharissi, Z., & Rubin, A. M. (2000). Predictors of Internet use. *Journal of Broadcasting & Electronic Media*, *44*(2), 175-196. https://doi.org/10.1207/s15506878jobem4402_2

Perks, L. G., & Turner, J. S. (2019). Podcasts and productivity: A qualitative uses and gratifications study. *Mass Communication and Society*, *22*(1), 96-116. https://doi.org/10.1080/15205436.2018.1490434

Perks, L. G., Turner, J. S., & Tollison, A. C. (2019). Podcast uses and gratifications scale development. *Journal of Broadcasting & Electronic Media*, *63*(4), 617-634. https://doi.org/10.1080/08838151.2019.1688817

Rauniar, R., Rawski, G., Johnson, B., & Yang, J. (2013). Social Media User Satisfaction—Theory Development and Research Findings [Article]. *Journal of Internet Commerce*, *12*(2), 195-224. https://doi.org/10.1080/15332861.2013.817864

Rubin, A. M. (1983). Television uses and gratifications: The interactions of viewing patterns and motivations. *Journal of Broadcasting*, *27*(1), 37-51. https://doi.org/10.1080/08838158309386471

Rubin, A. M., & Rubin, R. B. (1982). OLDER PERSONS' TV VIEWING PATTERNS AND MOTIVATIONS. *Communication Research*, *9*(2), 287-313. https://doi.org/10.1177/009365082009002005

Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, *22*(2), 159-170. https://doi.org/https://doi.org/10.1016/0148-2963(91)90050-8

Sternthal, B., Dholakia, R., & Leavitt, C. (1978). The Persuasive Effect of Source Credibility: Tests of Cognitive Response. *Journal of Consumer Research*, *4*(4), 252-260. https://doi.org/10.1086/208704

Tang, Z., & Chen, L. (2020). An empirical study of brand microblog users' unfollowing motivations: The perspective of push-pull-mooring model. *International Journal of*

Information Management, *52*, 102066. https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2020.102066

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS quarterly*, *27*(3), 425-478. https://doi.org/10.2307/30036540

Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, *52*(3), 2-22. https://doi.org/10.1177/002224298805200302