Effect of Marketing Communication on Income Levels and Lottery Purchasing Behavior in Central Thailand

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ABSTRACT

The objectives of this study were to analyze marketing communication's perception of three groups of income levels (low, middle, and high) and to examine the impact of marketing communication in terms of mass media advertising and word of mouth (WOM) from family, colleagues, and friends on lottery purchasing behavior. The study was conducted using a quantitative research method (MANOVA analysis and MIMIC model), based on a questionnaire completed by 400 volunteers from central Thailand recruited by stratified-sample random method. Results demonstrated that the low income group had the highest perception in mass media advertising regarding lottery purchasing behavior, which was at a significant level in comparison to the middle and high income groups. Similar patterns were seen for WOM. In addition, mass media advertising had a strong impact on lottery purchasing behavior both in terms of frequency and expenditure, whereas the correlation of WOM to these two variables was very low and had no significant impact on behavior. Results confirmed that income levels and marketing communication perception were in a significant reversed relationship. Moreover, mass media communication can directly influence frequency and expenditure of lottery purchasing in the central region of Thailand.

Keywords: lottery purchasing behavior, income groups, mass media advertising, word of mouth (WOM)

1. INTRODUCTION

Previous research indicates that the poor spend a large proportion of their income on lottery tickets in comparison to the affluent (Beckert & Lutter, 2012; Sonsuphap & Tetiruk, 2011; Blalock, et al., 2004). Marketing communication messages are commonly sent to whoever has potential to think or to act in a certain way (Duncan, 2002). It is entirely possible that low income earners might receive some influence from these marketing tools and change their behavior. Lottery in this study is defined as a Thai government sponsored lottery (not an illegal lottery), which is popular in Thailand. In Thailand, lottery trading and communication are dissimilar to that found in other countries, primarily because the majority of lottery activities are controlled by the government (Government Lottery Office Act, 1974). In particular, communication in Thailand is not considered to be propaganda as it may be in other countries (Consumer Protection Act, 1979). Therefore, the study of marketing communication on income levels and lottery purchasing behavior should be exposed in order to increase the understanding of income groups' perception and behavior about mass media and word of

mouth (WOM). Additionally, increased understanding of marketing context in relation to lottery consumption habits may lead to more effective solutions that deal with the social lottery issue, especially with the low income earners. Therefore, this study investigates two hypotheses. H_1: Three groups of income levels (low, middle, and high) perceive different perception in marketing communication regarding lottery purchasing. Marketing communication can be measured from mass media advertising and WOM from family, colleagues, and friends. H_2: Marketing communication can directly impact on lottery purchasing behavior, which can be measured by both frequency and expenditure.

2. Literature Review

2.1 Lottery Purchasing Behavior

Government-sponsored lotteries can generate lucrative income for governments around the world (WLA Global Lottery Data Compendium, 2015). Worldwide lottery-ticket sales continuously increase (Government Lottery Office, 2015; Lee et al., 2013). The lottery topic has been researched by academics for more than two decades; and its study is not yet complete (Beckert & Lutter, 2012; Lam, 2007; Ariyabuddhiphongs & Chanchalermporn, 2006; Blalock, et al., 2004; Adams, 2001; Clotfeler & Cook, 1990; Miyazaki, et al., 1999). Evidence from previous research about economic, social and psychological perspectives, for instance demographic factors, ethnic group, education, and income showed an influence on lottery purchasing behavior (Beckert & Lutter, 2012; Lam, 2007; Clotfeler & Cook, 1990). In addition, marketing activities aim to stimulate new campaigns to keep existing customers and generate new customers (Ariyabuddhiphongs & Chanchalermporn, 2006; Clotfelter & Cook, 1990).

Within the context of Thailand, Sonsuphap and Tetiruk (2011) reported that people from the Northeast, the lowest-income region, purchased the highest number of national lottery tickets compared to other regions. The lottery expenditure was negatively correlated with social class and education (Beckert & Lutter, 2012). In the United States, the affluent spend a smaller proportion of their income on lottery tickets in comparison to the poor (Blalock, et al., 2004).   Furthermore, Los Angeles Time Poll in 1986 found that 25% of those whose income was lower than $30,000 responded that they purchased lottery for money rather than entertainment (Clotfelter & Cook, 1990; Blalock et al., 2004). However, Clotfelter and Cook (1990) found the income level range to be broader.

The lottery market in Thailand is very different to that of other countries. There is only one legal lottery organizer, which is a government-sponsored lottery. Lottery activities are controlled by a committee, formed by the government and some ministerial officers (Government Lottery Office Act, 1974; Sonsuphap & Tetiruk, 2011). The government controls the sales of lottery tickets via a range of activities including ticket production, price setting, numbers of selling channels (number of authorized agencies), number of available tickets, and prizes (Government Lottery Office Act, 1974; Sonsuphap & Tetiruk, 2011); however, no propaganda is permitted and less media communication is involved than found elsewhere. The lottery in Thailand takes place 24 times a year, twice a month, on the 1st and 16th of each month, except in December, which is held on the 30th.   In 2009, 1,548,334,588 tickets were sold, an average of 64,513,941 ticket per time, an average of 23.1 tickets per person per time (Sonsuphap & Tetiruk, 2011). In Thailand, state-sponsored lottery generated about 1.38 billion US dollars for the government treasury in 2014 (Government Lottery Office, 2014).

Lottery purchasing behavior can be measured from two components (Ariyabuddhiphongs & Chanchalermporn, 2006), which are the frequency or intensity of lottery purchase (Felsher et al., 2003; Miyazaki et al., 1999; Clotfelter & Cook, 1990) and expenditure of the lottery purchases (Clotfelter & Cook, 1990).

Frequency of the lottery purchase: Frequency of the lottery purchase or play can be defined by participation rate (Felsher et al., 2003; Clotfelter & Cook, 1990). Felsher et al. (2003) separated the participant rate into three groups: none, occasional and regular. In addition, Miyazaki et al. (1999) indicated the participant rate is the level of playing intensity; and the researcher classified 229 subjects in Georgia into three groups: non-player, light player and heavy player.

Expenditure of the lottery purchase: Clotfelter and Cook (1990) used the average expense of each time lottery purchase to measure the lottery buying behavior. Whereas, Ariyabuddhiphongs and Chanchalermporn (2006) used frequency, amount of lottery purchase, and chasing of particular numbers behavior to indicate the behavior variable.

2.2 Marketing Communication (MC)

Duncan (2002) gave the definition of marketing communication (MC) as the combination of all the communication patterns used in marketing an offering, which included mass media advertising, public relations, sales promotion, point-of-purchase material, direct response, events, sponsorship, and tradeshows. The goal of MC is to add value to a product for both customers and the company (Duncan, 2002). The organization sends brand messages to customers, potential customers, or whoever needs to be persuaded to believe or behave in a certain way (Duncan, 2002). MC is used with all types of customers in order to sell all types of products and ideas (Duncan, 2002).

The lottery MC in Thailand can be best described as a one-way communication. One-way communication messages are designed by a firm or organization to be delivered to a target audience following a path that has some desired impact, such as establishing awareness or motivating a purchase (Duncan, 2002). Because the government lottery committee does not promote activities regarding lottery, such as sales promotion, point-of-purchase material, direct response, events, sponsorship, and tradeshows, these activities do not have high effect in Thai society regarding lottery. While, mass media and communication among groups of friends or family are more important and have more influential impact in lottery purchasing. Thereby, marketing communication in this study defines as a combination of mass media advertising and word-of-mouth communication from friends, colleagues, and family.

2.2.1 Mass Media Advertising

Mass media are all broad-based communication channels able to send messages to numerous and heterogeneous populations (Duncan 2002). Media can classify into six groups: Broadcast (Television and Radio), Print (Newspaper and Magazine), Out-of-home (Billboards, Street furniture, and Transit station), Digital media (Website and email), In-store (Point-of-purchase and Packaging), and Other (Cinema, Exhibition, Events, and Guerrilla) (Fill, 2013). Even though the cost of mass media can be tremendously high, it can communicate effectively with a national audience, and a large and diverse range of people can be reached by a message (Fill, 2013).

Most lottery organizers communicate the "value" of a lottery to the targeted market by focusing their media advertisements on the possibility of winning (Jenkins, 2015; Clotfelter & Cook, 1990). A large number of lottery agencies in the United States

attempted to advertise that they had the largest prize. For instance, Kentucky's lottery slogan was "Somebody's gotta win, might as well be you", and California's advertisement was "Imagine what a buck could do" (Jenkins, 2015). Moreover, approximately 100 of 151 televisions and radio advertisements displayed a least one person who won the prize previously (Clotfelter & Cook, 1990). These messages from the mass media seem to trigger audiences' attention and purchasing behavior.

The lottery industry in Thailand however is quite dissimilar, as mentioned earlier. Not only the lottery committee can interfere with the communication process, but legislation can also be enacted to restrict MC. The law does not allow propaganda as is permitted in the United States, where exaggerated lottery advertising is commonplace. Only lottery news, such as the news of the launch of a lottery, the results numbers, who won and the amount of money that had been won can be presented freely. The media channels cannot exaggerate lottery advertising, which seems to lure and mislead people for the sake of increasing sales. In addition, there was only one television channel, government owned, that can broadcast the lottery number in real-time. After the real-time broadcast, other media channels, such as other television channels, newspapers, radio stations, and websites, can announce the result as well. Before the day the lottery is held, other intermediaries, such as television channels, newspapers, lottery predicting number magazines, lottery leaflets, SMS, and phone calls are typically used to promote lottery sales with appropriate messages, again not considered to be propaganda. These messages were considered as MC, the mass media advertising, which can influence audiences' attention and lottery ticket purchasing behavior (Ariyabuddhiphongs & Chanchalermporn, 2006). Thus, mass media advertising in this study refers to all broadcast media (television and radio), print advertising (newspaper, leaflets and Magazine), digital media (website, SMS, phone calls, and email), that can reach the lottery purchasers and potential customers.

2.2.2 Word of Mouth (WOM) Communication

WOM communication is an interpersonal communication that is usually takes the form of informal, unplanned, and unsolicited conversations; it contains information and purchasing support to reinforce a person's buying decision (Fill, 2013). Helm and Schlei (1998) gave the definition of WOM as verbal conversations in both positive and negative ways between groups, for instance, manufacturers, professional experts, family, friends, and actual customers. WOM is also pervasively used in the digital media to influence others in terms of online product reviews and blogs, which can go viral (Fill, 2013). Fill (2013) mentioned that WOM is relatively cost-free, but creditable and can increase the conversational nature of MC. WOM can impact the strength of a message greatly. WOM in this study means the communication about the lottery comes from people close to the individual including family members, friends, and peers, which can influence people around them in terms of their lottery purchasing decisions.

A person whose family and friends are lottery players have a higher tendency to purchase lotteries more than a person outside circles of lottery consumers (Adams, 2011). Ariyabuddhiphongs and Chanchalermporn (2006) stated that friend's play and mass media communication are the environmental variables on lottery gambling. They showed that the lottery gambling behavior was significantly impacted on by the environmental factor. On contrary, from their research friend and family's play and mass media variables do not directly impact on lottery gambling behavior. They explained that this environmental variable had a direct effect on the superstitious beliefs held by the

individual and passed though the hope variable before impacting the lottery gambling behavior. Therefore, friend and family's play and mass media variables had to pass other two variables before impacting on the lottery purchasing behavior.

2.3 Research Framework and Hypothesis development

Past research has mentioned that the poor spend a large proportion of their income on the lottery tickets in comparison to the affluent, a phenomenon found to be widespread in the United States, Germany, and Thailand (Beckert & Lutter, 2012; Sonsuphap & Tetiruk, 2011; Blalock et al., 2004; Clotfelter & Cook, 1990). This study would analyze whether the difference between these two income groups relates to different perceptions of MC. Therefore, the groups of income levels (low, middle, and high) are tested on Marketing Communication, including Mass media and WOM influences. (See Figure 1)

Figure 1: Research framework illustrates the relationship between income-earner groups and marketing communication (H_1), and between marketing communication and lottery purchasing behavior (H_2).

H_1: Different groups of income levels (low, middle, and high) have different perception in Marketing Communication regarding lottery purchasing behavior.

H_{1a}: Low income group has the highest perception in mass media advertising regarding lottery purchasing behavior compared to the middle and high income groups.

H_{1b}: Low income group has the highest perception in WOM communication regarding lottery purchasing behavior compared to the middle and high income groups.
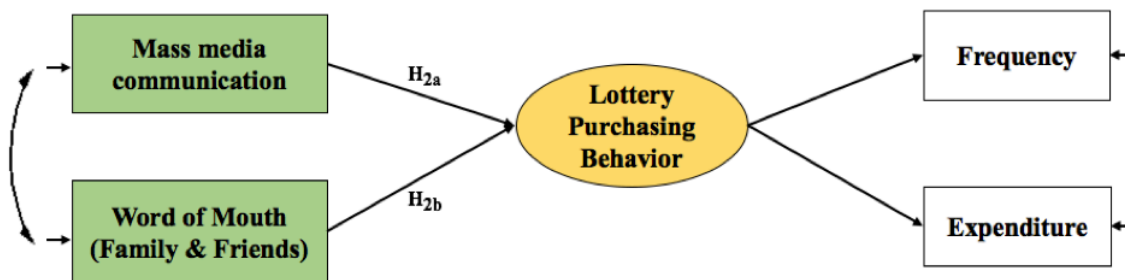
Figure 2: Conceptual model between two group of Marketing Communication (Mass Media Advertising and Word of Mouth (WOM) from close people) and Lottery Purchasing Behavior (Frequency and Expenditure)

H_2: Marketing communication, which are mass media advertising and word of mouth (WOM), can directly impact on lottery purchasing behavior.

H_{2a}: Mass media advertising can directly impact the lottery buying behavior.

H_{2b}: Word of mouth (WOM) from friends, colleagues, and family can directly impact the lottery buying behavior.

As mentioned above, even though lottery activities in Thailand are controlled by the government, marketing communication still exists. Ariyabuddhiphongs and Chanchalermporn (2007) studied the influence of mass media and friend and family's

behavior as environmental factors that could indirectly affect lottery purchasing behavior. However, the current study investigated whether it was possible to have direct effects from the marketing communication on the behavior. Additionally, the current study aims at illustrating that the two communication variables can directly impact the lottery buying behavior, which the lottery buying behavior can be measured by the frequency and expenditure. (See Figure 1 and 2)

3. Methodology
3.1 Research design

This research used a quantitative research methodology that consisted of a self-reported questionnaire. The questionnaires were designed based on a review of the literature and were rated on a 5-point Likert scale (1=Totally disagree, 5 = Totally agree). The questionnaires passed the examination of the content validity by Index of Item-Objective Congruence (IOC) from three academic experts. Only the questions that had an IOC value more than 0.5 were selected, and were improved once again according to experts' advice. Then, a modified questionnaire was used to test a sample of 30 participations to determine factors' reliability (Cronbach's Alpha Coefficient). Mass media advertising factor was measured by three questions, with a Cronbach's Alpha Coefficient of 0.798. WOM factor from family and friends was examined by four questions, with a Cronbach's Alpha Coefficient of 0.930. This means that each element of the questionnaire is reliable.

Next, 400 participants were recruited to complete the questionnaire. The first part of the questionnaire contained a short introduction to the study objectives and the screening questions. The participants had to have bought least one lottery ticket within the last year and were asked to reveal the average amount of money that they spent each time. In addition, all participants were 18 years old and above. The study used the stratified-sample random method by selecting participants to answer the questionnaires in three provinces located in the central region of Thailand, which were Bangkok, Nonthaburi, and Chonburi. After collecting the data, univariate tests (Levene's test) for the two dependent variables (Frequency and Expense) showed a nonsignificant value (0.963 and 0.796 respectively), implying the univariate homogeneity of variance across the three groups of areas in the central of Thailand. The Box's M test for equality of the covariance matrices also showed a nonsignificant value (0.178), indicating no significant difference between the three groups of areas where the data were collected on the two dependent variables collectively. Furthermore, participant's income levels were distributed and classified into three groups, including low, middle, and high income earners. The low income earners meant people who receive revenue less than 15,000 Baht, which is below or just equal to Thailand bachelor's degree graduated student minimum income level. This level targets people who just meet the legislated minimum labor cost per day (300 Baht per day) (Wages Committee Announcement, 2016). The middle revenue earners were classified as those who earn 15,001- 40,000 Baht per month, while high income earners were those who received more than 40,001 Baht monthly.

The participant's lottery purchasing behavior was observed from their purchasing frequency and expenditure by using open-ended questionnaire. Both purchasing frequency and expense were measured as continuous variables. Purchasing frequency factor was measured through two questions, which the number of time to purchase lottery within a one-year period and within the last three months, in order to confirm the consistency of the answer. The average lottery purchasing frequency of the 400

participants is 10.823 times per year. Purchasing expenditure is the average amount of money that spent each time for lottery tickets. The average lottery expense found in this study is 231.250 Baht per time. (See Table 1) One lottery ticket costs about 80 Baht ($2.3 US. dollars). This means a lottery purchaser usually buys about 3 tickets per a time and joins about 11 times out of 24 times per a year.

Table1: Correlation and descriptive statistics of Key Constructs.

Constructs	Mean	St. Dev.	1	2	3	4	Skewness	Kurtosis
Frequency per year	10.823	14.541					10.274	155.577
Expense per a time(Baht)	231.250	372.276					4.376	22.462
Log(Frequency)	0.857	0.391	1.00				0.016	-0.192
Log(Expense)	2.149	0.368	0.504**	1.00			0.883	4.289
Media	2.597	0.862	0.271**	0.129**	1.00		0.257	-0.288
WOM	2.973	0.893	0.215**	0.117*	0.569**	1.00	-0.102	-0.414

   *. Correlation is significant at the 0.05 level.

**. Correlation is significant at the 0.01 level.

3.2 Measures
3.2.1 MANOVA Analysis Measure

Homoscedasticity across the groups was analyzed by the SPSS 18 Program. The two groups of dependent variables were passed the analysis assessed the univariate homogeneity of variance. Levene's test for both mass media and WOM variables were nonsignificant, at 0.242 and 0.159, respectively. It also passed the assessment the dependent variables collectively by testing the equality of the entire variance-covariance matrices. Box's M test for equality of the covariance matrices between the groups of independent variables showed a non-significant value at 0.553. (See Table2)

Table2: Multivariate and Univariate Measures for Testing Homoscedasticity of Income earner types

Multivariate Test of Homoscedasticity

Box's Test of Equality of Covariance Matrices	
Box's M	4.983
F	.821
df1	6
df2	160294.484
Sig.	.553

Univariate Test of Homoscedasticity

Levene's Test of Equality of Error Variances

Dependent variable	F	df1	df2	Sig.
Mass Media	1.422	2	396	0.242
WOM	1.850	2	396	0.159

3.2.2 MIMIC Model Measure

From technique's limitation, SPSS program can examine only a single relation at a time; however, Structural Equation Model (SEM) can simultaneously examine a series

of interrelated dependence relationships among the measured variables and constructs (variants) as well as between several latent constructs (Hair et al., 2012). Thereby, in this study prefer to use MIMIC model to investigate the two dependent variable of lottery purchasing behavior simultaneously. Multiple Indicators and Multiple Causes Model (MIMIC Model) is one of the SEM, which has only one latent variable that receives the effects from several observable independent variables and impact on several dependent variables simultaneously. In other word, MIMIC model is model that has several casuals and can be measured from several indicators (Wiratchai, 1999). This study used LISREL program (Joreskog & Sorbom, 2012) 9.10 version to analyze. However, before using SEM, the data has to pass all the following criteria.

Normality: all independent and dependents variables need to be in normal distribution. Skewness and Kurtosis values of purchasing frequency and expense were higher than SEM assumption. Therefore, those two values were take logarithm to meet the normality. "Log(Frequency)" is an abbreviation for "Logarithm of Purchasing Frequency" instead of the previous Frequency. "Log(Expense)" is an abbreviation for "Logarithm of Purchasing expenditure" instead of the expense. (See Table 1)

Linearity: by using Pearson Correlation analysis, it showed there is linear correlation in each pair of all variables significantly.   (See Table 1)

Multicollinearity: Pearson Correlation analysis indicated the correlation of two independent variables (Mass Media and WOM) are lower than 0.6. In addition, Tolerance of media and WOM both were 0.676, respectively. Variance Inflation Factor (VIF) of media and WOM both were 1.479, respectively. Condition Index of those two variables are less than 30. The two dependent variables were passed all collinearity statistics, which indicated that there is no multicollinearity between media and WOM variables.

4. Analysis and Results
4.1 Income Groups and Perception of Marketing Communication

The group means of the three income groups shown in Table 3 are based on responds to a 5 point Likert scale. The pattern of mass media and WOM's perception increase, while income levels of the buyer decrease. For instance, mass media is the highest (2.819) for the low income group, decreasing to 2.556 for those in the middle income group until it reaches the lowest level at 2.160 for the high income group. Similar patterns are seen for WOM dependent measure.

Table 6 presents three post hoc comparison methods. It shows the difference between several pairs of group comparisons, for example, the difference between the low income group versus the middle income group is 0.2636. All the separate group differences for mass media advertising were significant across all three post hoc test. This indicates that even though much smaller in difference, they are still statistically significant. This result confirms that the lower income group perceives a higher level of mass media advertisement than the middle and high income groups do. In addition, the middle income group also perceives a higher level of mass media advertisement than the high income group. H_{1a} is supported.

For the WOM variable, the comparison between the lower and the middle income earners is very low (0.0478) and not significantly different. This implies that the low and middle income groups equally and similarly perceive the WOM influence from family and friends. Yet, those two group's perception is still significantly higher than the high income group. The other two pairs (Low vs. Middle, and Middle vs. High income groups) are significantly different. Thus, H_{1b} is also supported.

Table 3: Descriptive Statistics of Marketing Communication measure (Mass Media advertising and Word of Mouth) for Groups of Income earner types

	Income Types	Mean	Std. Deviation	N
Mass Media	Low income earner	2.819	.894	129
	Middle income earner	2.556	.811	222
	High income earner	2.160	.796	48
	Total	2.593	.858	399
WOM	Low income earner	3.0523	.870	129
	Middle income earner	3.0045	.853	222
	High income earner	2.5677	1.005	48
	Total	2.9674	.889	399

Table 4:   Multivariate and Univariate Measures for Group differences in Lottery Marketing Communication Measures (Media and WOM) Across Groups of Income earners

Multivariate Tests

Statistical test	Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power[b]
Pillai's Criterion	.064	6.551	4.00	792.00	.000	26.206	.992
Wilks' Lambda	.936	6.591[a]	4.00	790.00	.000	26.365	.992
Hotelling's T	.067	6.631	4.00	788.00	.000	26.524	.992
Roy's Largest Characteristic Root	.058	11.478[b]	2.00	396.00	.000	22.956	.993

[a] Exact Statistic

[b] Computed using alpha = .05

[c] The statistic is an upper bound on F that yields a lower bound on the significance level.

Table 5: Univariate Tests (Between-Subject Effects)

Dependent variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power[b]
Media	15.918[a]	2	7.959	11.368	.000	22.735	.993
WOM	8.904[c]	2	4.452	5.775	.003	11.550	.868

a. R squared = 0.054 (Adjusted R squared = 0.050)

b. Computed using alpha = .05

c. R squared = 0.028 (Adjusted R squared = 0.023)

Table 6: Post Hoc Comparison for Individual Group Differences on Marketing Communication Mearsures (Media and WOM across Groups of Income Earner types

Dependent variable	Groups to be Compared		Mean Difference Between Groups (I-J)		Statistical Significance of Post Hoc Comparison		
	Group I	Group J	Mean Difference	Std. Error	Tukey HSD	Scheffe	LSD
Media							
Low income earner	Middle income earner		0.263566	.092635	.013	.018	.005
Low income earner	High income earner		0.659399	.141470	.000	.000	.000
Middle income earner	High income earner		0.395833	.133192	.009	.013	.003
WOM							
Low income earner	Middle income earner		0.0478	.09721	.875	.886	.623
Low income earner	High income earner		0.4846	.14845	.003	.005	.001
Middle income earner	High income earner		0.4368	.13977	.005	.008	.002

4.2 Marketing Communication and Lottery Purchasing Behavior

To examine the construct of mass media and WOM's effect, two variables are put into the model. However, the model indicates that WOM has less correlation and does not significantly impact on the behavior. (bi=0.099, SE=0.065, t =1.538, $p > 0.05$) (see Figure 3) H_{2b} hypothesis is rejected, whereas H_{2a} is accepted. Thereby, WOM has to be eliminated from the model in order to find a more precise loading value. Based on a simultaneous estimation of the measurement, the structural model is required to run once again under the only mass media construct. (see Figure 4) The model is consistent with the findings shown in the literature review and shows that lottery purchasing behavior can be measured by frequency and expenditure. Frequency variable has the highest loading (bi = 0.323) on lottery purchasing behavior, followed by expenditure variable (bi = 0.219, SE=0.020, t= 11.155, $p < 0.01$). Mass media advertising has a positive impact on lottery purchasing behavior (bi = 0.355, SE=0.0660, t=5.367, $p < 0.01$). Mass media factor alone can explain the lottery purchasing behavior at 9.3%. The model indicates an acceptable model fit index (χ^2 = 3.049, df = 2, χ^2/df = 1.5245, P-Value = 0.2177, RMSEA = 0.0362, RMR=0.00744, SRMR=0.0246, NFI= 0.979, NNFI=0.990, GFI=0.995, AGFI=0.985). H_{2a} hypothesis is totally supported.
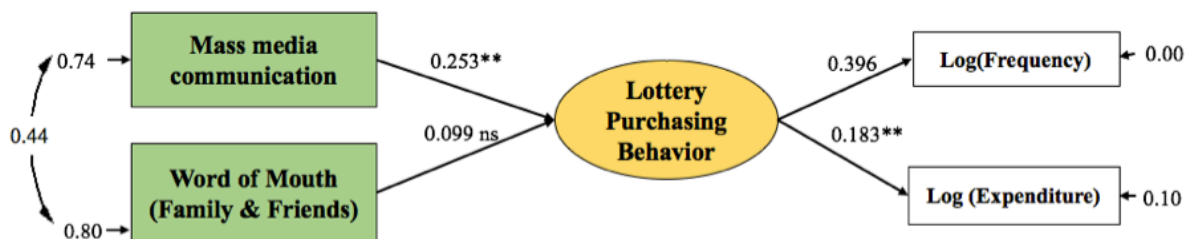

Figure 3: Model of both mass media advertising and WOM on lottery purchasing behavior

Figure 4: Model of mass media advertising and lottery purchasing behavior (Frequency and Expenditure)

5. Conclusion and Discussion

MANOVA analysis revealed that the lower income earners had a higher perception in mass media advertising than do the middle and high income groups. In addition, the middle income group also perceived a higher level of mass media influence than the high income group. H_{1a} was supported. Similar patterns were seen in the WOM variable. The lower income group had a higher perception in WOM influence than the middle and high income groups. The middle income group also perceived WOM at a significantly higher level than the high income group. H_{1b} was supported. However, the low and middle income groups equally perceived the WOM influence from family and friends (non-significant difference).

MIMIC model showed mass media advertisement in terms of MC that can effect lottery purchasing behavior (H_{2a}). Yet, WOM failed to show the relationship on the lottery purchasing behavior. The correlation of WOM to the behavior variable was very low and not significant. H_{2b} was rejected. However, lottery purchasing behavior can be measured by both frequency and expenditure. Thus, these findings of the current research were in alignment with those of previous researchers and theories. The result of the study was more direct and classified than Ariyabuddhiphongs and Chanchalermporn (2006)'s research, who found that mass media advertising was one of external factors that indirectly impact lottery purchasing behavior, but do not have a direct effect. However, this study revealed that mass media advertising has a certain direct effect on lottery purchasing in the central region of Thailand.

These two models can help in the formulation of policy suggestions. For instance, if the government wishes to decrease the lottery purchasing of low income people, decreasing mass media communication about the lottery can be one of the practical solution. Furthermore, this study confirms previous research and enhances the study of the lottery gambling and marketing fields.

Further research can expand the scope of marketing communication and its influence on lottery purchasing behavior into areas other than mass media advertising and WOM. For example, marketing communication channels that were not included in this study are the influences of personal sales (suggestions from the sellers), print media and digital media. These could be investigated in order to understand the extent of each factor's impact. Furthermore, other regions of Thailand could also be researched to gain a more complete picture of the national situation vis-à-vis marketing communication and its relationship to lottery purchasing behavior in these and other areas.

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