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# Determination of passenger load factor: The case of Thai airlines

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## Abstract

This research aims to investigate the relative factors affecting level of passenger loading factor for Thai airlines. Through literature review, factors affecting passenger loading factor were identified. Researcher included airline alliance status, number of global air incidents, number of flight departures airlines' selling and advertising expenses, revenue passenger kilometers, and number of passenger seats in the multiple linear regression model. Secondary data were collected from three major airlines of Thailand which are listed in the Stock Exchange of Thailand. By using ordinary least squares estimation, at 95 percent confidence level, the airline alliance status, air incidents, revenue passenger kilometers, and number of passenger seats are the significant variables that explain the passenger load factor.

**Keywords:** Passenger Load Factor (PFL), Airlines, Air Incidents,  
Airline Alliances, Thailand

## Introduction

One of the key operating statistics of an airline is load factor, which determines the efficiency in carrying passengers and freights. High passenger load factor reflects well-managed available seats sold to passengers. In March 2016, International Air Transport Association (IATA) announced the strong passenger demand for air transport for international passenger market. The average international PFL was 79.7% in 2015 and rose by 1.0% in January 2016 (IATA, 2016).

Since passenger load factor (PFL) is a very important key performance figure, airlines target to produce high PFL while minimizing operating costs. It is interesting to explore relative factors affecting level of PFL and utilize them to determine PFL for Thai airlines to visualize opportunities for operating cost and performance efficiency's improvement. Benefits of this study is clearly contributed to Thai airlines. Realizing the factor influencing the load factor would lead them to better planning and forming necessary strategies in order to maintain or reach the desire level of future load factor.

This research aims to determine relativity of airline operating performances, expenses, and external factors to PFL of Thai major airlines by using multiple linear regression with ordinary least squares estimation. The first section dedicates to research's introduction and objective. The second section provides literature review on PFL and methodologies used to quantify PFL. The third section proposes a multiple regression model for PFL. The forth section describes data characteristics and

data collection. The fifth section presents regression results, model improvement and discussion of results. The last section summarizes the research findings as well as offers recommendations.

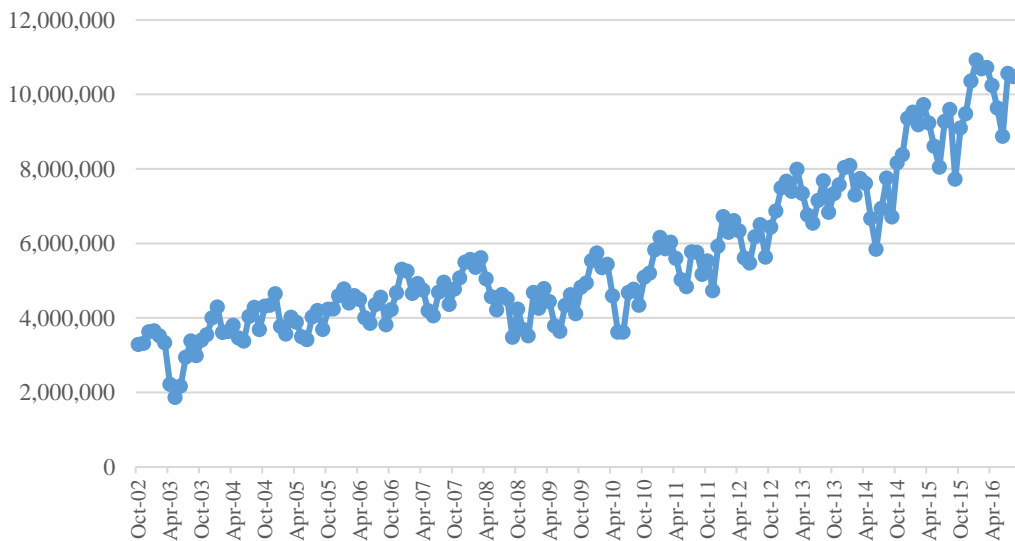
## Literature review

Commercial airlines service in Thailand took place during 1910s, with Don Muang airfield (nowadays Don Muang International Airport) the major air hub. Thai Airways International Public Company Limited (THAI) was founded in 1959 as Thai Airways Company. The company was operated jointly between Thai government and Scandinavian Airlines System to provide international passenger air transport service. As a flag carrier of Thailand, THAI offers aviation related business services range from full-service passenger air transport, ground service, inflight-catering, air cargo service, and aircraft repairs and maintenance (THAI, 2015). Nine years after the foundation of THAI, Bangkok Airways Public Company Limited (BA) was established as Sahakol Air to provide contracted private air-taxi services. The company started offering schedule flight services in 1986 and changed airline's name to Bangkok Airways in 1989 (BA, 2015). The expansion of commercial airlines services was not appeared until the beginning of 2000s. As of 2016, there are 11 commercial airlines that offer domestic flight services and five commercial airlines that offer international flight services (Department of Civil Aviation, 2016).

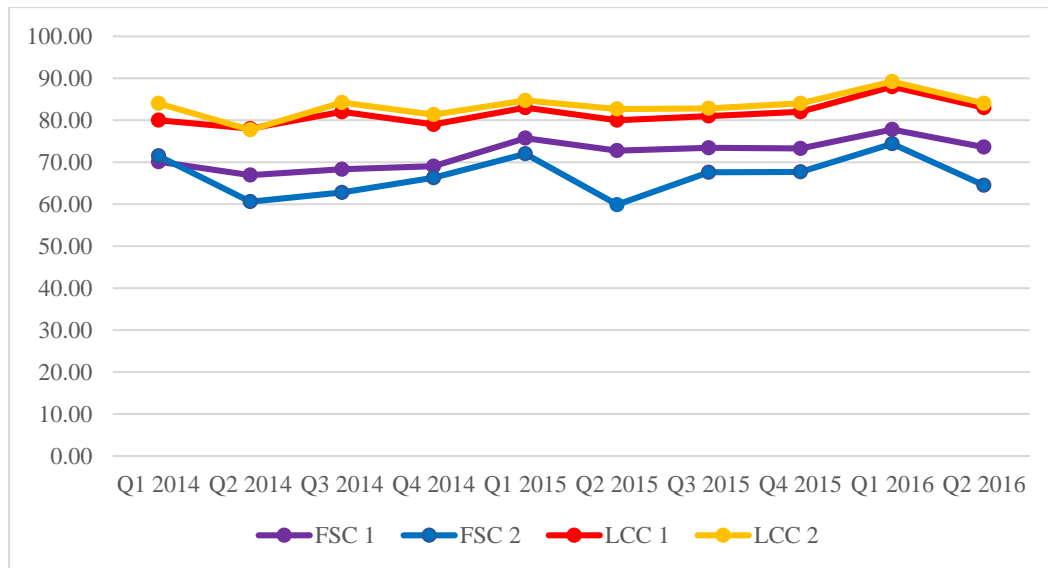
Airport of Thailand Public Company Limited (AOT) has reported continuous growth in air traffic in terms of aircraft movement and number of passengers

from 2009 to 2015 (AOT, 2015). Figure 1 presents passenger movement in six major international airports of Thailand during 2002 – 2016. Both growth in airlines services and passenger movements resulted in more intense competition between airlines, not only in Thailand but also worldwide. Figure 2

illustrates PFL comparison of four major airlines in Thailand: two full-service carriers (FSCs) and two low cost carriers (LCCs) during 2014 - 2016. Average PFLs for FSCs is 73.19 and average PFLs for LCC is 81.77, indicating better operating performance for LCC.



**Figure 1** Air passenger movement during 2002 – 2016



**Figure 2** PFL comparison between FSCs and LCC

Literatures concerning PFL in early period focused on airlines' costs and operating performance impact toward average PFL. Caves, Christensen, and Tretheway (1984) described that "higher load factor is associated with higher productivity levels". This means productivity factors such as number of seats and destination choices should played significant roles in determination of PFL.

Wensveen (2007) also described that "one of the most vital statistics in the airline business is load factor", which express "the relationship between available seat-miles and revenue passenger miles realized". PFL can also be influenced by economic recession, traffic growth, capacity limitation agreement, and seasonality.

PFL is also associated with airline scheduling and network planning. According to Mathaisel (1997), PFL was one of the schedule performance statistics. Cadarso and Marín (2013) also

included PFL as part of their Integrated Robust Airline Scheduling Model. Evans and Schäfer (2014) used PFL to develop an airline network optimization model as a seat constraint.

According to literature review research carried out by Zuidberg (2014), most of PFL studies indicated negative relationship between the load factor and total airline costs. A number of studies also found that PFL has positive impact on operating margin. In the same research, one of the hypothesis was constructed as "A higher load factor leads to lower operating costs per aircraft movement". Based on econometric results in the work of Zuidberg (2014), it was concluded that increase in PFL does not affect aircraft operating cost.

PFL was applied as part of airline's cost and performance analysis in many ways. Tsai and Kuo (2004) included PFL as one of the variable to identify expected idle of passenger capacity, marketing variance and production variance for

aircraft renewal and composition decisions. Due to the nature of operations, low cost carriers generally has higher PFL when compare with full-service carriers (Morrell, 2005). McLean (2006) claimed that PFL has relatively high effect toward operating efficiency, along with aircraft utilization, fuel efficiency, and yield management, which led to a suggestion that an airline can improve the poor PFL by withdrawing aircraft from service.

In terms of alliance, PFL was viewed as part of success factors. Chen and Chen (2003) concluded that parallel code-sharing of airlines resulted in higher PFL. Iatrou and Alamdari (2005) also explored the impact of alliances on airline operations by using five-scale ratings. PFL, which has been identified as one of the impacts, was positively influenced by the alliances on airline operations in general.

Apart from cost and operating performance, price also reflects PFL. Research conducted by Clark and Vincent (2012) revealed that in some airlines, prices are responsive to PFL as well as prices of competing airlines. Mumbower, Garrow, and Newman (2015) identified PFL as one of factors affecting passenger purchasing behavior for premium coach seats.

Safety is another issue that could have affected the PFL. Barnett and Curtis (1991) has investigated the association between domestic jet accidents in the

United States and increasing PFL. Statistical results from 10 randomly chosen aircrafts showed that the higher the load factor, the greater the death risk per flight. Safety was also identified as one of attributes for flight choice (Hagmann, Semejin, and Vellenga, 2015). Out of 12 attributes, flight choice preferences are heavily dominated by non-stopover and safety, respectively. The researchers concluded that people prefer to travel with airlines that offer direct flights and have good safety records.

PFL was also applied to the Forecast of Aircraft Movement (FoAM) model proposed by Kölker, Bießlich, and Lütjens (2016). By putting the certain load factors into FoAM model, future frequency of flight segments can be calculated, under an assumption that the maximum PFL has to be 90% with decreasing growth of 0.01% per annum.

Different approaches were used to quantify PFL. In 2007, two researchers determined factors affecting load factor in airline industry. According to Jenatabadi and Ismail (2007), PFL is a measure of an airline's passenger carrying capacity. Researchers used data from seven Iranian commercial airlines with time span between 1997 and 2006; resulting in total of 70 observations, for the regression model. They defined mathematical definition of load factor as follows.

$$\text{Load Factor} = \sum_{i=1}^r \left( \frac{\text{Number of carried passengers} \times \text{distance}}{\text{Available seat} \times \text{distance}} \right) \times 100\%$$

Where  $r$  = the number of routes.

*Number of carried passenger* = number of passengers carried in the route between two cities or stations; either in one country or two different countries

*Distance* = distance between two stations and is measured by kilometer.

*Available seat* = number of available seats in the which depends on the kind of aircraft

Jenatabadi et al. (2007) developed a model for load factor including independent variables as follows.

- *Computerized System* is the number of agencies using computerized reservation system. It is labeled as System Location by Duliba, Kauffman and Lucas (2001) and it is lagged one year to take into account the learning curve of the travel agency, expecting that the full impact of automating a travel agency should be felt during the year after the automation occurs.
- *Average length* is the average distance in kilometer of the airline's flights between the city pairs.
- *Departures* is the number of departures in a year.
- *Organization* is a binary variable where 1 denotes private organization and 0 denotes governmental organization.
- *Advertising expenses* is the sum of expenses for each airline in a year.
- *Subsidy* is the amount of subsidy in US dollar given by Iran government to the airline companies.
- *Inflation rate* is the rate of increase of the average price level
- *Number of Seat* is the total number of seats for every airline
- *Change in Vehicle Kilometers* is the first difference of air transportation

vehicle kilometers between year  $t$  and  $t-1$ .

The researchers computed generalized least squares solution for the model. Result showed that *Computerized System*, *Average Length*, *Organization*, *Subsidy* and *Change in Vehicle Kilometer* are significant while *Departures*, *Advertising Expenses*, *Inflation Rate* and *Number of Seats* are not significant in explaining the variation in the load factors. Researchers also suggested that Iranian airlines should increase their investment in computerized reservation system and have proper operation planning.

Devriendt, Burghouwt, Derudder, de Wit, and Witlox (2009) use demand and supply data to compute PFL for transatlantic airlines. The data was derived from the Official Airline Guide (OAG) and Marketing Information Data Transfer (MIDT) database. Data set from OAG was treated as supply data while data from MIDT was treated as demand data. Variables associated with the load factor are origins and destinations of the direct flights; operating alliances that was active in 2001; total number of passengers that book flights; seat capacity; and flight frequency. By using the combined OAG-MIDT database, the calculated load factors underestimate the actual the load factor by approximately 10%.



## The regression model

Researcher developed multiple regression model by using factors defined or discussed by Iatrou et al. (2005), McLean (2006), Jenatabadi et al. (2007), Devriendt et al. (2009), Zuidberg (2014), and Hagmann et al. (2015). Researcher introduced *Air incident* as one of independent variables to verify the pattern proposed by Barnett et al. (1991),

since this research was conducted by using only 10 incidents occurred during 1975 – 1989. Researcher developed a regression model based on the regression model proposed by Jenatabadi et al. (2007) by dropping some outdated and/or invalid independent variables and adding new independent variables, resulted in total of six independent variables. The multiple regression model for PFL can be written as follows.

$$PFL_t = \beta_0 + \beta_1 AirIncident_t + \beta_2 Alliances_t + \beta_3 Departures_t + \beta_4 Expenses_t + \beta_5 RPK_t + \beta_6 Seats_t + \varepsilon_t$$

Where

*PFL* is the passenger efficiency ratio. It is calculated by dividing number of carried passengers by total available seat.

*Air Incidents* represents the number of worldwide air accidents and incidents. The accidents and incidents, either investigated or under investigation, are concerned with the safety issue in air transport. This variable is an experimental external factor that could have affect the load factor and was discussed by Hagmann et al. (2015).

*Departures* represents the number of departed flights. This variable is an internal factor that presents airlines' operations and was defined by Jenatabadi et al. (2007).

*Alliances* is a binary variable where 1 denotes the airlines with alliance (Part of Star Alliance, Oneworld, SkyTeam, Vanilla Alliance, U-FLY Alliance, and Value Alliance) and/or affiliations (airlines with subsidiaries, being subsidiary of an international airline or

part of international airline group) and 0 denotes airlines without alliance. Airlines with code share agreement are considered as non-alliance. This variable was discussed by Iatrou et al. (2005).

*Expenses* represents total selling and advertising expense of the company (unit in millions). This variable is an internal factor that indicates airlines' operating costs and was used by Jenatabadi et al. (2007) and Zuidberg (2014).

*RPK* stands for revenue passenger kilometers. The variable represents the total revenue passenger kilometers (unit in millions) which calculate by multiplying number of passengers that generate revenue to the airline by the distance travelled in kilometers. This variable directly reflects productivity of the airline and was discussed by McLean (2006).

*Seats* represents the total number of passenger seats in each period. This variable is an internal factor that exhibits

airlines' operations and was mentioned by Jenatabadi et al. (2007) and Devriendt et al. (2009).

## Data collection

This research used secondary data from four leading airlines in Thailand that yield highest number of passengers at Suvarnabhumi International Airport and

Don Muang International Airport (AOT, 2015). All airlines are registered as Thai organization and listed in the Stock Exchange of Thailand. Characteristics of airlines are described in Table 1. Airlines were ranked by number of passenger movement for international and domestic flights at Suvarnabhumi International Airport and Don Muang International Airport (AOT, 2015), with exclusion of non-Thai airlines.

**Table 1** Characteristics of airlines

Airlines Ranking*	Type	Organization	Listed Year	Major Shareholder	Alliances and Affiliations
1	FSC	Public Company	1991	Government	Part of airline alliance Owned two affiliated airlines
2	LCC	Public Company	2012	Family shareholders	Part of airline group Affiliated airline of international LCC
3	LCC	Public Company	2013	Public Company	Affiliated airline of Thai FSC
5	FSC	Public Company	2013	Family shareholders	None

*\*4<sup>th</sup> ranking airline is a privately held company. Due to data availability and reliability issues, researcher excluded the airline from the analysis.*

The data were collected in quarterly manner. Because one of the airlines was listed in the Stock Exchange of Thailand in the last quarter of 2013, data set were limited. Observations are data from the first quarter of 2014 to the second quarter of 2016. Financial and operating statistics data are publicly available in each airline's investor relation websites. Air Incidents data were obtained from SKYbrary. All data, despite being time-series data, were treated as cross-sectional data.

## Regression results and discussions

### Multiple linear regression

By using ordinary least squares estimation with 95% confidence level, the regression result is displayed in Table 2.

**Table 2** Multiple linear regression result

Source	SS	df	Ms	Observations	=	40
Model	2070.0136	6	345.0023	F(7, 67)	=	40.34
Residual	282.2109	33	8.5518	Prob. > F	=	0.0000
Total	2352.2245	39	60.3134	R-squared	=	0.8800
				Adj. R-squared	=	0.8582
				Root MSE	=	2.9244

PFL	Coefficient	Std. Err.	t	P> t	[95% Conf. Interval]	
<b>Air Incidents</b>	-0.3589	0.1261	-2.8500	0.0080	-0.6154	-0.1023
<b>Alliances</b>	14.3921	2.1224	6.7800	0.0000	10.0741	18.7102
<b>Departures</b>	0.0000	0.0001	-0.4700	0.6440	-0.0001	0.0001
<b>Expenses</b>	-0.0024	0.0042	-0.5700	0.5730	-0.0110	0.0062
<b>RPK</b>	0.0036	0.0012	3.0900	0.0040	0.0012	0.0060
<b>Seats</b>	-0.0029	0.0009	-3.2100	0.0030	-0.0047	-0.0010
<b>Constant</b>	70.6451	1.8418	38.3600	0.0000	66.8979	74.3922

Since Prob. > F= 0.0000, this mean the model itself is significant and all variables explain 88.00% of the variance in PFL.

Out of six variables, four variables are significant in explaining PFL, which are *Air Incidents* (p-value = 0.0080), *Alliances* (p-value = 0.0000), *RPK* (p-value = 0.0040) and *Seats* (p-value = 0.0030). This also shows that the number of flight departures and selling and advertising expenses is not significant in explaining the PFL and thus, coincide with the model and conclusion of Jenatabadi et al. (2007).

## Correlation test

We need to identify if there is any high correlation among variables. As presented in Table 3, it can be observed *Seats* and *RPK* is the most extreme positive correlated pair ( $R = 0.9968$ ), follows by *Seats* and *Expenses* ( $R = 0.9768$ ), and *RPK* and *Expenses* ( $R = 0.9704$ ). *PFL* and *Expenses* ( $R = -0.3719$ ) is the most negative correlated pair. Zero value of  $R$  for *Air Incidents* and *Alliances* means there is no relationship between these two variables.

**Table 3** Pearson's correlation matrix

	<b>PFL</b>	<b>Air Incidents</b>	<b>Alliances</b>	<b>Departures</b>	<b>Expenses</b>	<b>RPK</b>	<b>Seats</b>
<b>PFL</b>	1						
<b>Air Incidents</b>	-0.2165	1					
<b>Alliances</b>	0.6960	0.0000	1				
<b>Departures</b>	0.3058	-0.1334	0.3059	1			
<b>Expenses</b>	-0.3719	-0.0305	0.2318	-0.0835	1		
<b>RPK</b>	-0.1887	-0.0339	0.4248	-0.0029	0.9704	1	
<b>Seats</b>	-0.2330	-0.0140	0.3986	-0.0166	0.9768	0.9968	1

Because of extreme positive correlation between *Seats* and *RPK*, *Seats* and *Expenses*, and *RPK* and *Expenses*; researcher eliminated each variable at a

time, as well as all three variables from the model to see if the model can be improved. The multiple linear regression results are compares in Table 4.

**Table 4** Comparisons of multiple linear regression results

<b>Modification</b>	<b>Dropped Variables</b>	<b>Prob. &gt; F</b>	<b>R-squared</b>	<b>Root MSE</b>
<b>1</b>	Expenses	0.0000	0.8788	2.8952
<b>2</b>	Expenses, RPK	0.0000	0.8453	3.2247
<b>3</b>	Expenses, Seats	0.0000	0.8271	3.4088
<b>4</b>	RPK, Seats	0.0000	0.8403	3.2758
<b>5</b>	Expenses, RPK, and Seats	0.0000	0.5359	5.5067

It can be seen that, without *Expenses*, All independent variables are significant in explaining PFL. Value of r-squared is slightly lower than the r-squared of the original model, indicating the lower significant of each factors to PFL. Root mean square error (Root MSE) is also slightly improved. Dropping *Expenses* and *RPK*, *Expenses* and *Seats*; and *RPK* and *Seats* also resulted in lower r-squared values and higher root mean square

errors. Dropping all three variables yielded significantly lower r-squared values and higher root mean square errors. Since it can be proved that the elimination of *Expenses* does not affect the model as a whole, researcher will continue to use the model that exclude *Expenses* (Modification 1) for further analysis.

## Tests for heteroscedasticity

Because the time-series data are treated as cross-sectional data, tests for heteroscedasticity are required. There are several tests for heteroscedasticity but this research applied the two most popular tests: Breusch-Pagan test and White test. Both tests were deployed with the model without *Expenses* variable.

For Breusch-Pagan test for heteroscedasticity, the null hypothesis is defined as  $H_0$ : Constant variance. The variables are fitted values of the load factor. The chi-square (1) or  $\chi^2$  (1) is 3.90 and Prob.  $> \chi^2$  is 0.0483. Therefore, the null hypothesis have to be rejected.

Another test for heteroscedasticity is Cameron & Trivedi's decomposition of IM-test or White test. By setting the null hypothesis as  $H_0$ : homoscedasticity, against  $H_a$ : unrestricted heteroscedasticity. The chi-square (19) or  $\chi^2$  (19) is 18.15 and Prob.  $> \chi^2$  is 0.5125. Therefore, the null hypothesis cannot be rejected.

Since in Breusch-Pagan test for heteroscedasticity, the null hypothesis have to be rejected, it can be concluded that the variance of the error terms is not constant. However, White test revealed

that heteroscedasticity does not exist. Conflict in test results suggested that the regression model should be further revised.

## Model improvement

Because there are heteroscedasticity in data, researcher tried to improve the model by dropping variables that cause heteroscedasticity and inconstant variance of the error terms. The test results are displayed in Table 6. Modification 1 are tests for heteroscedasticity of the original model. In both tests, the null hypothesis cannot be rejected. Similarly, by dropping the variable *Expenses* and *Seats*, the null hypothesis in both tests cannot be rejected. On the other hand, dropping out the variable *Expenses* and the variables *Expenses* and *RPK* resulted in rejecting the null hypothesis in the Breusch-Pagan Test. Interestingly, by dropping out *RPK* and *Seats* (Modification 5), which are significant variables in explaining PFL in the original model, the model is not only pass both tests for heteroscedasticity but also resulted in having *Expenses* as one of significant variable in explaining PFL (p-value = 0.0000).

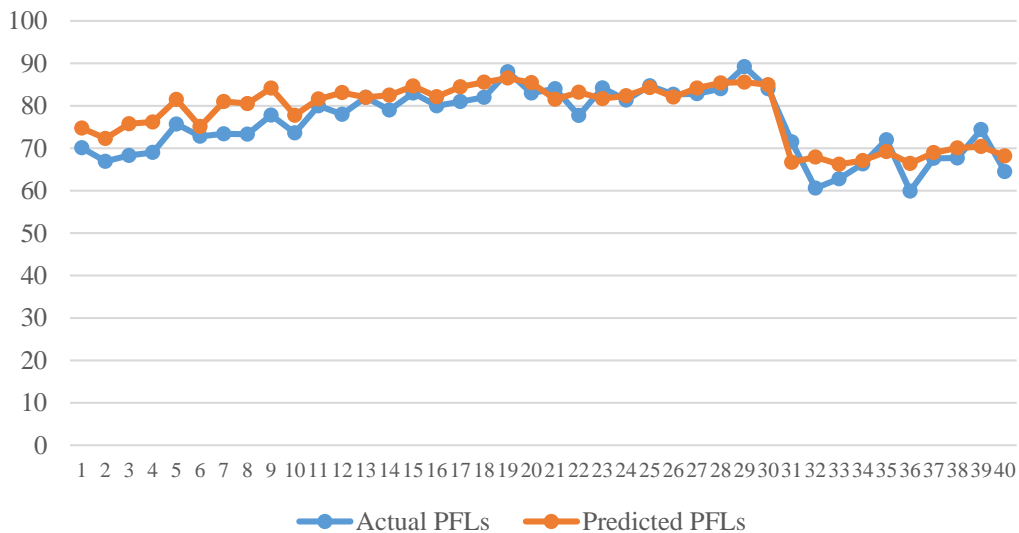
**Table 6** Comparisons for test for heteroscedasticity

Modification	Dropped Variables	Test for Heteroscedasticity					
		Breusch-Pagan Test			White Test		
		$\chi^2$	df	Prob. $> \chi^2$	$\chi^2$	df	Prob. $> \chi^2$
1	-	3.77	1	0.0521	25.39	26	0.4970
2	<i>Expenses</i>	3.90	1	0.0483	18.15	19	0.5125
3	<i>Expenses, Seats</i>	3.50	1	0.0614	12.78	13	0.4652
4	<i>Expenses, RPK</i>	3.85	1	0.0498	12.09	13	0.5207
5	<i>RPK, Seats</i>	3.52	1	0.0606	15.47	13	0.2792

Therefore, the researcher will continue using the original model since the model yields the highest r-squared value and the lowest root mean square error. The tests for heteroscedasticity confirmed that the variance of the error terms is constant and heteroscedasticity does not exist. It can be concluded that *Air Incidents*, *Alliances*, *RPK*, and *Seats* are significant in explaining the PFL for Thai airlines.

*Alliances* is one of the variables with positive coefficient, which means PFL will decrease in absent of airline alliance and coherent with the study of Chen et al. (2003) and Iatrou et al. (2005). *RPK* also has positive coefficient. The coefficient number is quite small and the variable has negative correlation with PFL. Negative coefficient of *Air Incidents* can

be interpreted that the higher the number of global air incident, the lower the PFL for Thai airlines. Additionally, *Seats* has negative coefficient. The coefficient number is also small and the variable has negative correlation with PFL. Negative correlations between *RPK* and PFL; and *Seats* and PFL is still rational because both variables are the determinations of PFL. Decreasing in both value can still yield higher PFL. When passenger traffic and number of available seats of airlines negatively reacted with PFL but PFL increases, this means revenue-generating passengers (numerator) decrease in smaller proportion in compare with number of available seats of airlines (denominator).



**Figure 3** Comparison between actual PFLs and predicted PFLs

Figure 3 compares the actual PFLs with the predicted PFLs, which can be observed that the predicted PFLs resemble the data pattern of the actual PFLs. Although the four independent variables can explain only 88% of dependent variable, and root mean square error is 2.9244, the average error in this model is approximately -3.36%, indicating slight underestimations for PFLs in this model. On average, the model perform better determinations for LCCs than FSCs.

## Conclusion and recommendations

PFL for Thai airlines can be determined by using four variables: air incidents; airline alliance status; RPK; and number of seats, which lead to a conclusion that decreasing number of global air incidents, existence of airline alliance, and slight increase in RPK with small drop in number of available seats of airline will resulted in higher PFLs. Despite the fact that low cost variable was excluded from the regression model, it is undeniable that low cost carriers will generally yield higher PFL than full-service carriers (Morrell, 2005).

By taking a closer look into the air incidents data, it can be observed that out of 591 air incidents over the past ten years. There are only one major incidents that cause severe casualties occurred in Thailand during that period. The incident of MD-82 aircraft crashed at Phuket International Airport in 2007 was operated by One Two Go Airlines, which is not part of this research. Because the air turbulence experience of a flight bounded from Hong Kong to Bangkok,

and the runway excursion of a flight bounded from Guangzhou to Bangkok are not taken in to account (both of them occurred in 2013), it is undeterminable whether the non-severe air incidents influence the PFL or not. Therefore, as long as the air incident exists, it can be presumed that the higher the number of global air incidents, the more passengers will be attracted to Thai airlines. Because people prefer to travel with airlines that have good safety (or air incident) records, it is recommended that the airlines should strictly follow safety rules and regulation in accordance with safety standard set by International Civil Aviation Organization (ICAO) to maintain the desirable level of PFL.

There are some remarks about the analysis of PFL. First, researcher is unable to obtain code share seat in proportionate to seat sold by Thai airlines. The data should support the proposition that the airline alliances have positive affect the passenger load factor because the cooperation between airlines should have increased number of passengers and the load factor. In this research, only the existence of airline alliances is known and the variable was set as binary, detailed data concerning code share seats should provide more insightful analysis.

Another factor that researcher did not take into account is the pricing strategies of airlines. It would be interesting to quantify the effect of price in various situations such as prices of the airlines against their rivals; pricing and zero fare promotion; and prices comparison between incumbent airlines the new comer airlines; to see whether this factor have any significant effect to PFL.

The last remark concerned with data issue. Due to availability of data of a commercial airline that was listed in the Stock Exchange of Thailand in the last quarter of 2013, researcher can obtain only 10 observations from the airline, resulted in using the data from the same period of the other three airlines. Future research when there is more data available is recommended to ensure model's reliability. Additionally,

researcher limited scope of research to airlines that were listed the Stock Exchange of Thailand, not only because data concerning financial and operations are thoroughly verified by the Securities and Exchange Commission, but also the accessibility of data. Research can also be extended to cover global airlines, particularly for FSCs and LCCs, which the later focus heavily in maintain high level of PFL.

## References

- Airport of Thailand Public Company Limited. (2015). *2015 Traffic Report*. Bangkok: AOT
- Arul, S. (2014). Methodologies to monetize the variations in load factor and GHG emissions per passenger-mile of airlines. *Transportation Research Part D*, 32, 411 – 420.
- Bangkok Airways Public Company Limited. (2015). *Annual Report B.E. 2558*. Bangkok: BA.
- Barnett, A., & Curtis, T. (1991). An Unfortunate Pattern Observed in U.S. Domestic Jet Accidents. Flight Safety Foundation. *Flight Safety Digest*, October 1991, 1 – 8.
- Cadarso, L. & Marín, Á. (2013). Robust passenger oriented timetable and fleet assignment integration in airline planning. *Journal of Air Transport Management*, 26, 44 – 49.
- Caves, D., Christensen, M., & Tretheway M. (1981). U.S trunk air carriers, 1972 – 1977: A multilateral comparison of total factor productivity. T. Cowing, R. Stevenson, eds. *Productivity Measurement in Regulated Industries*. New York: Academic Press.
- Chen, F. C.-Y., & Chen, C. (2003). The effects of strategic alliances and risk pooling on the load factors of international airline operations. *Transportation Research Part E*, 39, 19 – 34.
- Clark, R., & Vincent, N. (2012). Capacity-contingent pricing and competition in the airline industry. *Journal of Air Transport Management*, 24, 7 – 11.
- Department of Civil Aviation (2016). *Airlines: Domestic Airlines*. Retrieved October 4, 2016, from [www.aviation.go.th/en/content/19413/1202.html](http://www.aviation.go.th/en/content/19413/1202.html).
- Devriendt, L., Burghouwt, G., Derudder, B., de Wit, J., & Witlox, F. (2009). Calculating load factors for the transatlantic airline market using supply and demand data – A note on the identification of gaps in the available airline statistics. *Journal of Air Transport Management*, 15, 337 – 343.





- Evans, A., & Schäfer, A. (2014). Simulating airline operational responses to airport capacity constraints. *Transport Policy*, 34, 5 – 13.
- Hagmann, C., Semejin, J., & Vellenga, D.B. (2015). Exploring the green image of airlines: Passenger perceptions and airline choice. *Journal of Air Transport Management*, 43, 37 – 45.
- International Air Transport Association (2016). *Demand for Air Travel in 2015 Surges to Strongest Result in Five Years*. Retrieved June 14, 2016, from <http://www.iata.org/pressroom/pr/Pages/2016-02-04-01.aspx>.
- International Air Transport Association (2016). *Fact Sheet – Industry Statistics*. Retrieved June 14, 2016, from [http://www.iata.org/pressroom/facts\\_figures/fact\\_sheets/Documents/fact-sheet-industry-facts.pdf](http://www.iata.org/pressroom/facts_figures/fact_sheets/Documents/fact-sheet-industry-facts.pdf)
- International Air Transport Association (2016). *Strong Passenger Demand Continues into 2016*. Retrieved June 14, 2016, from <http://www.iata.org/pressroom/pr/Pages/2016-03-08-01.aspx>.
- Iatrou, K., & Alamdari, F. (2005). The empirical analysis of the impact of alliances on airline operations. *Journal of Air Transport Management*, 11, 127 – 134.
- Jenatabadi, H. S., & Ismail, N. A. (2007). The Determination of Load Factors in the Airline Industry. *International Review of Business Research Papers*, 3, 125 – 133.
- Kölker, K., Bießlich, P., & Lütjens, K. (2016). From passenger growth to aircraft movements. *Journal of Air Transport Management*, 56, 99 – 106.
- Mathaisel, D.F.X. (1997). Decision Support for Airline Schedule Planning. *Journal of Combinatorial Optimization*, 1, 251 – 275.
- McLean, D. (2006). The operational efficiency of passenger aircraft. *Aircraft Engineering and Aerospace Technology*, 78, 32 – 38.
- Morrell, P. (2005). Airlines within airlines: An analysis of US network airline responses to Low Cost Carriers. *Journal of Air Transport Management*, 11, 303 – 312.
- Mumbower, S., Garrow, L.A., & Newman, J.P. (2015). Investigating airline customers' premium coach seat purchases and implications for optimal pricing strategies. *Transportation Research Part A*, 73, 53 – 69.
- Thai Airway International Public Company Limited. (2015). *Annual Report B.E. 2558*. Bangkok: THAI.
- Tsai, W.-H., & Kuo, L. (2004). Operating costs and capacity in the airline industry. *Journal of Air Transport Management*, 10, 271 – 277.
- Wensveen, J. G. (2007). *Air Transportation: A Management Perspective*. 6<sup>th</sup> Edition. Hamshire, UK: Ashgate.
- Zuidberg, J. (2014). Identifying airline cost economies: An econometric analysis of the factors affecting aircraft operating costs. *Journal of Air Transport Management*, 40, 86 – 95.



# Factors related to consumer behavior on luxury goods purchasing in China

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## Abstract

The study on luxury consumers is always connected to their drives behind consumption. Why Chinese people like purchasing luxury goods is an interesting question. A better understanding of the Chinese consumption of luxury goods may assist the luxury industry when targeting China as the soon-to-be largest consumer market. This research is designed to study factors related to consumer behavior on luxury goods purchasing in China. And four research hypotheses are proposed in this research. Based on 446 samples, this study explores the factors such like demographic, motivation, cultural factor and brand equity affect consumer behavior on luxury goods in China.

The purpose of this study is to analyze consumer behavior on luxury goods in China and determine the factors that affect luxury consumption.

The study focuses on motivation, cultural factor and brand equity of Chinese luxury consumer. Quantitative research method via survey was used for this research. Using a survey among a large sample of people in four cities via questionnaire by hard copies, chose an investigation website to make an formal questionnaire through online channel, and use Wechat scanned the questionnaire QR code by mobile phone.

The results show that Chinese consumer is motivated to purchase luxury goods by interpersonal effects that the way influence consumer is perceived by others, and purchase luxury goods for personal effect that consumer individual preference oriented and free of external interference. Face saving, gifting, and social status are the highlight in Chinese culture. Also the reference group influence people when they make a decision and fit friend circle. The results also show that brand equity may affect Chinese consumer behavior on luxury goods.



Limitation is amount of time is a constraint in this research, also limited to four major first-line cities in China by hard copy questionnaire. From a practical point of view, this study has certain inspiration for business and consumer. It is benefit for marketer to develop marketing strategy for luxury goods in China market.

Western scholars started do research on luxury goods earlier based on western culture; the proposed model is not entirely applicable in China. This study based on the Chinese traditional culture to analyze the factors related to consumer behavior on luxury goods purchasing in China.

**Keywords:** Consumer Behavior, Luxury Goods, Motivation, Cultural Factor, Brand Equity

## Introduction

According to the rapid development of national economy and the enhancement of the purchasing power, the luxury consumption Chinese people also get a certain development. In 2006, there were 320,000 Chinese millionaires and Chinese consumers' spending on luxury products accounted for 10% of global luxury brand sales. Six years later, these numbers have doubled or even tripled. In 2012, the global luxury market valued EUR212 billion, representing a year-on-year increase of 10%. Chinese consumers became the world's largest consumer group of luxury goods and they spent RMB306 billion in the world, most of which was done in Hong Kong, Macao and other countries, while only 39.28% in Mainland China (Source: Bain Survey of Luxury Goods Consumers in Mainland China). Data from World Luxury Association official report for Chinese overseas luxury goods consumption during the 2013 spring

festival show that Chinese overseas luxury goods consumption totaled \$8.5 billion, compared with last year's total of \$7.2 billion, an increase of 18%.

For another way, Chinese online luxury shopping increases 68.8% in 2011. From iResearch, the market scale of China luxury online shopping in 2010 (including C2C and B2C) is 6.36 billion yuan; the number in 2011 is estimated to be 10.73 billion yuan with an annual growth of 68.8%. In the whole market scale of China online shopping, transaction size of online luxury shopping keeps percentage of 1%-2%: it account for 1.38% in 2010 and is estimated to be 1.41% in 2011. From the view of proportion of online luxury shopping transaction size in luxury shopping, the penetration rate in 2010 is 3.16% and is estimated to be 4.37% in 2011 and 8.03% in 2015. Only market scale of online luxury shopping in mainland China is calculated, excluding online luxury consumption in Hong Kong, Macao, Taiwan and overseas.

## Problem statement

An interesting appearance is a lot of Chinese travelling to overseas countries, while Chinese tourist splash out a lot of money for luxury good, they save on food and hotels. They travel in groups, prefer to stay in budget hotels and do not want to spend too much on (Chinese) food. In the mainland China, some young office ladies, every day they eat noodle, cram onto the bus and subway, just after two or three months, they have enough to buy a Louis Viutton handbag or Chanel, it is completely can not understand. As the matter of fact, the price of luxury goods is much higher than people's salaries. Why Chinese people are so crazy to purchase luxury goods? Chinese consumers are also becoming younger and more individualistic. Released 2010- 2011 World Luxury Association Annual Report, China's luxury consumers are younger than world average. The report shows that 73% of Chinese luxury consumers are under the age of 45 years old, and 45% of Chinese luxury consumers are between 18 to 34 years old. This ratio in Japan and Britain are 37% and 28 % respectively. There must be great changes in their behavior.

Thus, a further research of Chinese luxury consumption motivation and behavior is necessary.

## Objectives

- 1) To study demographic factor affecting consumer behavior.
- 2) To study motivation affecting consumer behavior.
- 3) To study cultural factor affecting consumer behavior.

- 4) To study brand equity affecting consumer behavior.

## Literature

### Definition of luxury

Luxury is derived from the Latin word "luxus", which implies indulgence of the senses, regardless of cost (Mootee, 2004). Luxury goods are a wide concept, but it has three basic elements: good, expensive and not necessarily. "Luxuries are the extras in life that make it more fulfilling, more rewarding, more comfortable, more enjoyable" (Danziger, 2005, p.56). Luxuries have high quality is perceived as a fundamental attribute associated with luxury goods (Garfein, 1989; Roux, 1995).

### Motivation

"Motivation refers to the process that lead people to behave as they do (Solomon, 1994)." Understanding consumer's motivation for buying luxury goods and services is important to marketers (Danziger, 2002). Vigneron and Johnson (2004) proposed modify luxury consumption motives that, consumer motivation can be divided into the interpersonal perception motivation, including the conspicuous, uniqueness, bandwagon and personal motivation, including hedonic and quality.

### Conspicuousness

Luxury goods are high-designed, Chinese consumer wants to buy the product to make them more attractive. "China is at the show off stage (Chadha

and Husband, 2006)”, that people are tripping over each other trying to acquire the symbols of wealth and displaying them in the most conspicuous manner (Chadha and Huband, 2006). Hence the measure of conspicuousness includes items such as ‘extremely expensive’ or ‘for wealthy’ that tap into perceptions of price and social status associated with the brand.

## Uniqueness

“Uniqueness is sought to enhance one’s self-image and social image by adhering to one’s personal taste, or breaking the rules, or avoiding similar consumption (Vigneron and Johnson, 2004).” “Items that are in limited supply have high value, while those readily available are less desirable. Rare items command respect and prestige” (Solomon, 1994). Rare products have more affect on consumer demand even perceive the product unique, popular and expensive (Verhallen and Robben, 1994).

## Bandwagon

Bandwagon motivation refers as represents consumers who purchase luxury goods because they wish to fit in with a particular group. Berry (1994) states that people purchase fashionable and stylish products to associate themselves to similar people. More over, the education of the affluent lifestyle is applied and imitated in reality by purchasing similar luxury goods that is televised (Dittmar, 1994). Consumers will choose the same buy luxury goods group values to identity and make the self-consistent with the group, showed the group internal rules of obedience.

## Hedonic

Hedonic usually refers to the luxuries reflected by sensory gratification and sensory pleasure expected from the consumption (Vigneron and Johnson, 2004). Luxuries bring people subjective intangible benefits. “Hedoniest consumers are more interested in their own thoughts and feelings, thus they will place less emphasis on price as an indicator of prestige (Vigneron and Johnson, 1999).” Buy luxury goods make consumer feel fun from products and gain emotional pleasure. For example, reward for good work or celebrate some events.

## Quality

Consumer influenced by the quality dimension of luxury may perceive that luxury brands have superior characteristics compared with non luxury brands (Vigneron and Johnson, 2004). Pursuit of refined quality motivation, consumer purchase expensive luxuries because they enjoy this remarkable product quality, including high quality, unique design, artistic value, long cultural connotation and exquisite workmanship. Chadha and Husband (2006) conducted that Chinese consumers loving buy luxury goods because luxuries show good taste. Consumers who seek perfect willing to perceive more value from a luxury brand, because they may have a greater brand quality and reassurance (Aaker, 1991).

## Cultural factors

“Face” is the Chinese traditional culture, traditional values, and personality traits,

social and cultural syntheses of combined action of the shame of orientation. Chinese are concerned with their images among in group members and often seek the inclusion of a certain social group through owning luxury brands (Yang, 1981). Refers as “the positive social value a person effectively claims for himself by the line others assume he has at akin during a particular contact (Goffman, 1967, p.5).” “Face” in China also implies a group value orientation. For example, the face of family refers to the family honors or ensures that looks good, is an important aspect of Chinese culture (Braxton, 1999). People attempt to get and keep face rather than losing face (Hwang, 1987).

In China, gifting is necessary for establishing relationships, the Chinese call “guanxi” (Chadha and Husband, 2006). Asians often purchase luxury goods for families and “package” families with luxury brands to show off family wealth and status (Ger and Belk, 1996). As a typical collectivist culture, Chinese society emphasizes harmonious interpersonal relationships. Exchanging gifts in maintaining and expanding relationship play an important role (Bond, 1991, 1996; Bond and Lee, 1981; Gu, Hung, and Tse, 2008). Nothing is possible in China if without guanxi (Ju, 1995).

A major influence on one's purchasing habits and consumer behavior is the social class in which one finds him or herself. Social class is considered an external influence on consumer behavior because it is not a function of feelings or knowledge. Social class defined as social groups, the people don't need to shown in a formal process of similar lifestyle show

are groups formed by individuals (Wayne and Deborah, 1997). The behavior of members have similar social class structure, education levels, attitudes, values and communication styles, and these characteristics are different from other social class members (Williams, 2002). Across social class levels could be expected to lead to variations in consumer information processing and decision-making styles within and across social strata (Fisher, 1987; Komarovskiy, 1961). Social class focus on buying and consumption processes as opposed to consumption objects, i.e. products and services (Holt, 1998).

## Brand equity

There are two aspects academic perspectives of brand equity, financial and customer based. This research reviews the definitions and dimensions of brand equity and focus on customer-based context that includes the dimensions of brand equity.

## Brand loyalty

Brand loyalty defines as “the attachment that a customer has to a brand” (Aaker, 1991). Commitment and repeated purchase behavior are considered as necessary conditions for brand loyalty followed by perceived value, satisfaction, and brand trust (Punniyamoorthy and Raj, 2007). As the study by Jung and Sung (2008) revealed the positive correlation between brand loyalty and purchase intention, this dimension of brand equity is directly linked to future profits. Because quality



of products and customer service are emphasized for promoting luxury brands, consumer brand loyalty toward luxury brands would be greater than that toward the general merchandise.

## **Brand awareness**

Brand awareness defines as “the customers’ ability to recall and recognize the brand as reflected by their ability to identify the brand under different conditions and to link the brand name, logo, symbol, and so forth to certain associations in memory” (Keller, 2003). Aaker (1996) defines brand awareness as “a consumer’s ability to recognize or recall a brand in a certain product category”; in other words, the brand is called to mind when a consumer thinks about the category. Consumers may link the related brand knowledge to the brand name, which finally constitutes brand equity (Aaker, 1991; Keller, 1993). Consumers’ purchase and subsequent usage experience may predict brand awareness better, rather than the vice versa (Olshavsky and Granbois, 1979). Brand awareness is an essential part of brand development, helping the brand stand out from competitors, it plays a major role in a consumer’s buying decision process.

## **Perceived quality**

Perceived quality can be defined as the customer’s perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives. Perceived quality cannot necessarily be objectively determined, because it is a perception and judgments about what is

important to consumers are involved. Perceived quality is an intangible, overall feeling about a brand (Aaker, 1991). Perceived quality of a particular branded product cannot be based only on consumers’ own experience from the actual consumption but on others’ feedback, such as the reference group or celebrity endorsement. It has been shown that the price of a product may have a positive relationship with the perception of high quality or prestige (Groth and McDaniel 1993). Indeed, Aaker suggested that consumers may associate luxury products with a superior quality, which can lead to a greater perceived value for a brand. However, as the perception of price can be subjective, the perceived quality and its importance placed on quality of a product for assessing a brand value is expected to vary across different cultures.

## **Brand association**

Brand association refers as all things involve consumer’s imagination, product’s features and the usages about brand in the mind, the associations related to the organization, personality and symbols (Jung and Sung, 2008). A brand association is the most accepted aspect of brand equity (Aaker, 1992). Associations represent the basis for purchase decision and for brand loyalty (Aaker, 1991). Brand associations consist of all brand-related thoughts, feelings, perceptions, images, experiences, beliefs, attitudes (Kotler and Keller, 2006) and is anything linked in memory to a brand. Brand association derives from a consumer’s past experience of using a particular brand. According to Keller (2009), luxury branding typically

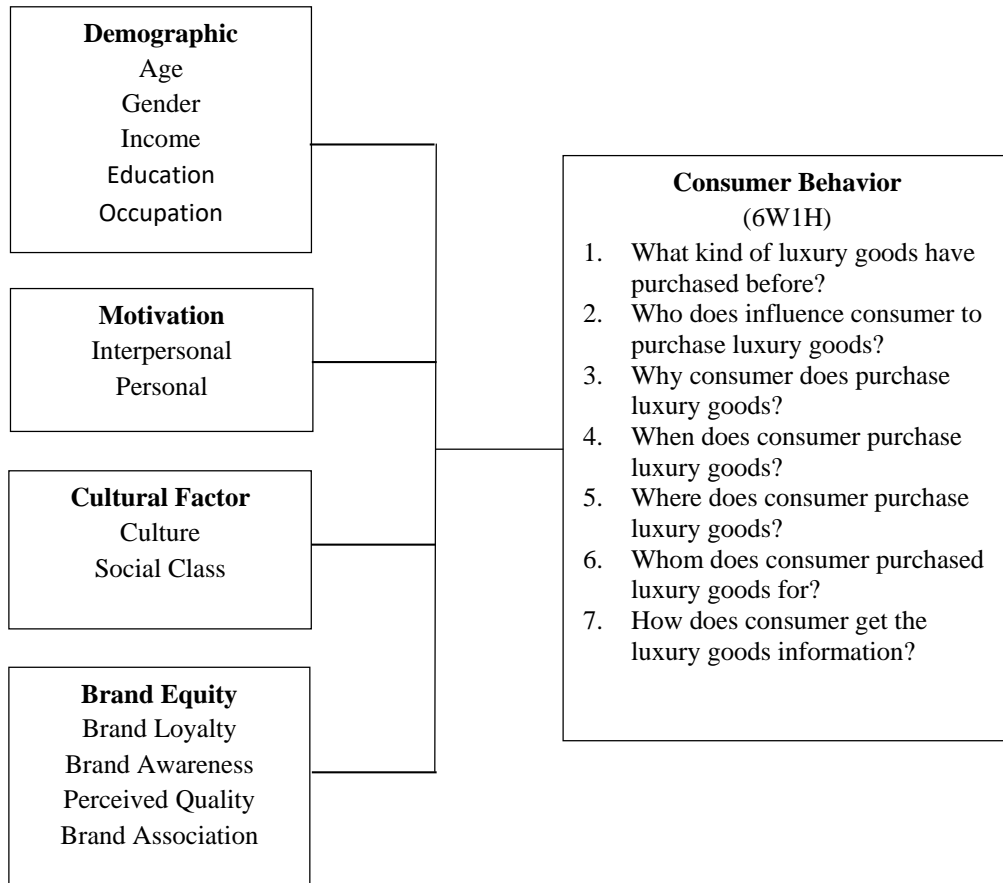




involves the creation of many intangible brand associations, as a luxury brand can deliver various meanings to consumers. Keller also noted the importance of

maintaining a premium image for luxury brands that is strong, consistent, and cohesive over time.

## Conceptual framework



## Methodology

### Research design

This study aims to analyze luxury consumer behavior, which focuses on motivation as well as cultural factors and brand equity toward purchasing luxury

goods. The questionnaire is developed first in English and then translated into Chinese. The survey collected data to examine the influence of consumer behavior toward luxury goods. The respondents answered all questions on the questionnaire which list up five parts contents according to literature review.

## Experiments and data collection

The data was collected primary data via questionnaire by three ways. First, the researcher chose an investigation website to make a formal questionnaire, and distributed via online channel, such as BBS, blog and social network. Second, the respondents used WeChat to scan the questionnaire QR code to complete questionnaire by mobile phone. Third, the questionnaires were sent by hard copy to respondents in different cities. There are 385 respondents as the sample size which according to Suzie Sangren (1999) to calculate.

## Data measurement and analysis

There have three parts resectively are consumer motivation, cultural factors and brand equity to measure consumer behavior and might ask them to specify their feelings as either “Strongly Agree” “Agree” “Neutral” “Disagree” “Strongly Disagree”. The items in this scale are ordered, ranging from most agree to least. The test method depends on what scale used. The first part is ordinal scale, part two to part four are interval scale, and the fifth part on questionnaire is nominal scale. Data from questionnaire processed by statistical program and used Chi- Square methods to analyze data.

## Results and analysis

**Table 1** Level of Agreement

Description	N	Mean	Std.Deviation	Level of Agreement
<b>Motivation</b>				
Interpersonal Motivation	446	2.9888	0.76812	Neutral
Personal Motivation	446	3.4372	0.76123	Agree
<b>Cultural Factor</b>				
Culture	446	3.2152	0.79982	Neutral
Social Class	446	3.2534	0.91660	Neutral
<b>Brand Equity</b>				
Brand Loyalty	446	3.4013	0.87879	Neutral
Brand Awareness	446	3.4798	0.80423	Agree
Perceived Quality	446	3.3733	0.78195	Neutral
Brand Association	446	3.3565	0.92447	Neutral
<b>Valid N (listwise)</b>	<b>446</b>			

Motivation was classified by interpersonal motivation and personal motivation. Interpersonal motivation has the mean as 2.9888 and standard deviation as 0.76812, which agreement level is “Neutral”. Personal motivation has the mean as 3.4372 and standard deviation as 0.76123, which agreement level is “Agree”. Cultural factor concluded two dimensions, in which were culture and social class. The level of agreement both of them are “Neutral”. The mean of culture is 3.2152 and the standard deviation is 0.79982. The mean

of social class is 3.2534 and the standard deviation is 0.91660. Brand loyalty has the mean as 3.4013 and standard deviation as 0.87879, which is consider as “Neutral”. Brand awareness has the mean as 3.4798 and standard deviation as 0.80423, which is consider as “Agree”. Perceived quality has the mean as 3.3733 and standard deviation as 0.78195, which is consider “Neutral”. Brand association has the mean as 3.3565 and standard deviation as 0.92447, which is consider as Neutral.

## Hypothesis testing

Hypothesis 1: Demographic affects Chinese luxury consumer behavior.

**Table 2** Chi-square test results of demographic related to consumer behavior

Consumer Behavior	Demographic									
	Gender		Age		Education		Occupation		Income	
	$\chi^2$	Result	$\chi^2$	Result	$\chi^2$	Result	$\chi^2$	Result	$\chi^2$	Result
What the main kind of luxury goods have you ever purchased?	0.000	Accept	0.000	Accept	0.007	Accept	0.000	Accept	0.000	Accept
Where did you often purchase luxury goods?	0.001	Accept	0.000	Accept	0.009	Accept	0.000	Accept	0.000	Accept
How did you get luxury goods information mostly?	0.000	Accept	0.000	Accept	0.083	Reject	0.038	Accept	0.046	Accept
Why did you purchase luxury goods (main reason)?	0.000	Accept	0.000	Accept	0.000	Accept	0.000	Accept	0.000	Accept

Whom did you often purchase luxury goods for?	0.000	Accept	0.000	Accept	0.555	Reject	0.000	Accept	0.016	Accept
When did you usually purchase luxury goods?	0.000	Accept	0.001	Accept	0.303	Reject	0.000	Accept	0.001	Accept
Who did frequently influence you to purchase luxury goods?	0.000	Accept	0.000	Accept	0.006	Accept	0.000	Accept	0.000	Accept

Hypothesis 2: Motivation affects Chinese luxury consumer behavior.

**Table 3** Chi-square test results of motivation related to consumer behavior

Consumer Behavior	Motivation			
	Interpersonal Motivation		Personal Motivation	
	$\chi^2$	Result	$\chi^2$	Result
What the main kind of luxury goods have you ever purchased?	0.013	Accept	0.454	Reject
Where did you often purchase luxury goods?	0.040	Accept	0.039	Accept
How did you get luxury goods information mostly?	0.122	Reject	0.889	Reject
Why did you purchase luxury goods (main reason)?	0.000	Accept	0.000	Accept
Whom did you often purchase luxury goods for?	0.973	Reject	0.005	Accept
When did you usually purchase luxury goods?	0.028	Accept	0.638	Reject
Who did frequently influence you to purchase luxury goods?	0.008	Accept	0.117	Reject

Hypothesis 3: Cultural factor affects Chinese luxury consumer behavior.

**Table 4** Chi-square test result of cultural factor related to consumer behavior

Consumer Behavior	Culture		Social Class	
	$\chi^2$	Result	$\chi^2$	Result
What the main kind of luxury goods have you ever purchased?	0.000	Accept	0.652	Reject
Where did you often purchase luxury goods?	0.097	Reject	0.371	Reject
How did you get luxury goods information mostly?	0.000	Accept	0.293	Reject
Why did you purchase luxury goods (main reason)?	0.000	Accept	0.311	Reject
Whom did you often purchase luxury goods for?	0.000	Accept	0.150	Reject
When did you usually purchase luxury goods?	0.000	Accept	0.175	Reject
Who did frequently influence you to purchase luxury goods?	0.000	Accept	0.000	Accept

Hypothesis 4: Brand equity affects Chinese luxury consumer behavior.

**Table 5** Chi-square test result of brand equity related to consumer behavior

Consumer Behavior	Brand Loyalty		Brand Awareness		Perceived Quality		Brand Association	
	$\chi^2$	Result	$\chi^2$	Result	$\chi^2$	Result	$\chi^2$	Result
What the main kind of luxury goods have you ever purchased?	0.174	Reject	0.141	Reject	0.231	Reject	0.007	Accept
Where did you often purchase luxury goods?	0.488	Reject	0.178	Reject	0.280	Reject	0.031	Accept
How did you get luxury goods information mostly?	0.372	Reject	0.356	Reject	0.655	Reject	0.017	Accept
Why did you purchase luxury goods (main reason)?	0.000	Accept	0.272	Reject	0.348	Reject	0.039	Accept
Whom did you often purchase luxury goods for?	0.716	Reject	0.023	Accept	0.915	Reject	0.006	Accept
When did you usually purchase luxury goods?	0.390	Reject	0.002	Accept	0.187	Reject	0.031	Accept

Who did frequently influence you to purchase luxury goods?	0.016	Accept	0.085	Reject	0.271	Reject	0.000	Accept
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There are a decision rule when to accept or reject the hypothesis in a chi-square test. Accept the hypothesis, if the calculated value < predetermined alpha level of significance (0.05); Adject the hypothesis, if the calculated value > predetermined alpha level of significance (0.05) (McClean, 2000).

Hypothesis 1 state demographic has relation with consumer behavior on luxury goods purchasing. The results show that gender, age, occupation and income have positive relation with consumer behavior on luxury goods purchasing. Education also affects consumer behavior except “How did you get luxury goods information”, “Whom did you puechase luxury goods for” and “When did you purchase luxury goods”, which  $\chi^2$  are 0.083, 0.555 and 0.303. (Table 2)

Hypothesis 2 state motivation has relation with consumer behavior on luxury goods purchasing. Motivation has two orientation respectively are interpersonal motivation and personal motivation. According to Table 3, interpersonal motivation has positive effect on consumer behavior. The items include “What the main kind of luxury goods have you ever purchased?” which  $\chi^2 = 0.013$ , “Where did you often purchase luxury goods?” which  $\chi^2 = 0.040$ , “Why did you purchase luxury goods (main reason)?” which  $\chi^2 = 0.000$ , “When do you usually purchase luxury goods?” which  $\chi^2 = 0.028$ , “Who did frequently influence you to purchase luxury goods?” which  $\chi^2 = 0.008$ . Chinese consumer is motivated to purchase luxury goods by interpersonal effects that the way influence consumer is perceived by others. Conspicuousness,

uniqueness and bandwagon, which are care more from others’ eyes, such as face saving, earn more respect and better the face saving of the reference group or family as gifting, these people purchased luxury goods with distinct characters goods and easy to identify. Personal motivation affects consumer behavior, the items include “Where did you often purchase luxury goods?” which  $\chi^2 = 0.039$ , “Why did you purchase luxury goods (main reason)?” which  $\chi^2 = 0.000$ , “Whom do you often purchase luxury goods for?” which  $\chi^2 = 0.005$ . Chinese consumer is motivated to purchase luxury goods for personal effect which consumer individual preference oriented and free of external interference. These people purchase luxury goods mostly for self-reward, reflect personal good taste and improve the quality of life; they chose what they prefer. Thus, different groups of people have different motivations then need different categories luxury goods.

Hypothesis 3 state cultural factor has relation with consumer behavior on luxury goods purchasing. Cultral factor contains culture and social class. According to test results Table 4, culture has positive relation with consumer behavior, the item except “When do you usually purchase luxury goods?” which  $\chi^2 = 0.097$ . Culture affects consumer decision making, Face saving, gifting,

and social status are the highlight in the Chinese culture. Expensive luxury goods are the symbol of wealth and success, people are likely to purchase luxury goods to make themselves and their sociality counterparts have face. There are 48.43% respondents purchased luxury goods in normal, 26.91% respondents purchase luxury goods during the festival. Gifting links to build relationship in the Chinese society, they believe more expensive gain more recognition and more face. Thus, usually send luxury goods in the special events or purchase luxury goods in special day to others, such as festival, birthday, and business events and among others. Social class affects consumer behavior which “who did frequently influence you to purchased luxury goods?” ( $\chi^2=0.000$ ). There are 48.88% respondents purchased luxury goods influence on friends. Chinese people are group orientation, thus influenced by the reference group when they make decisions and fit friend circle. (Table 4)

Hypothesis 4 state brand equity has relation with consumer behavior on luxury goods purchasing. There are four dimension in brand equity respectively are brand loyalty, brand awareness, perceived quality and brand association. Brand loyalty has relation with consumer behavior, the items include “Why did you purchase luxury goods (main reason)?” which  $\chi^2 = 0.000$ , “Who did frequently influence you to purchase luxury goods?” which  $\chi^2 = 0.016$ . Brand awareness has relation with consumer behavior, the items include “Whom did you often purchase luxury goods for?” which  $\chi^2 = 0.023$ , “When did you usually purchase luxury goods?” which  $\chi^2 = 0.002$ . The results indicate that perceived

quality has no relation with consumer behavior which  $\chi^2$  greater than 0.005. Brand association has relation with consumer behavior, the items include “What the main kind of luxury goods have you ever purchased?” which  $\chi^2 = 0.007$ , “Where did you often purchase luxury goods?” which  $\chi^2 = 0.031$ , “How did you get luxury goods information mostly?” which  $\chi^2 = 0.017$ , “Why did you purchase luxury goods (main reason)?” which  $\chi^2 = 0.039$ , “Whom did you often purchase luxury goods for?” which  $\chi^2 = 0.006$ , “When did you usually purchase luxury goods?” which  $\chi^2 = 0.031$ , “Who did frequently influence you to purchase luxury goods?” which  $\chi^2 = 0.000$ . Chinese consumer considered goods value as a part of brand value dimension. Perceived quality value remains the main type of brand value perceived by consumers. As the matter of fact, in luxury, brand name, logo, symbol or color, shapes distinct consumer perceptions forming emotional links to the brand, as well as secondary links to product quality. There are 48.43% respondents purchased luxury goods in normal. Brand awareness affects people perceptions and attitudes, which drive consumer brand choice and brand loyalty. With the vigorous development of China's luxury market, Chinese luxury consumers are gradually mature. They have no longer blindly worship luxury logo and more brand awareness. (Table 5)

## Discussion

In previous studies, Chinese consumer purchased luxury goods to make them more attractive, pay more attention on

extrinsic self, that is the image of himself in the eyes of others (Smith, 1983), Chinese young people prefer to use luxury brands to build their uniqueness (Roberts, 2007), but in this survey, the respondents' choice agreement level is neutral, and a quiet of disagree with them. Those respondents prefer disagree with bandwagon. And more and more people interested in their own thoughts and feelings, purchase luxury goods show good personal taste and seek delicate life. Now young people are the main power of Chinese luxury consumer, they focus on the independent preference; their consumption concept is changing that close to western country concept and become mature in the future.

Expensive gift is necessary for build important relationship. In this survey, luxury goods bring consumer "face" and used for gifting, the agreement level is neutral. And the main reason of consumer purchased luxury goods only 14.35% for face and 10.09% for gifting.

In the previous study, most Chinese consumers do not know the behind story of brand, usually they focus on the luxury brand logo and blindly follow the trend and fashion. In this survey, the main reason of the respondents purchased luxury goods, because of brand culture is 5.16%, design is 11.88%, good quality and service is 15.7%, personal taste is 14.8%, follow the trend only is 2.02%. Chinese wealthy consumers have exceptionally limited knowledge about luxury brands compared to their counterparts in other countries. A McKinsey and Company report indicates that over half of Chinese consumers who own luxury fashion goods started purchasing them in the past four years, and most of them can only name one or

two luxury brands in a category. The mean of brand awareness is 3.4798 and agreement level is Agree. It means Chinese consumer increased brand awareness on luxury goods.

## Implication for business

From a practical point of view, this study has certain inspiration for businesses and consumers. Luxury companies need to improve luxury the brand equity and individuality characteristic of cognition, which can change consumer attitude when they buy luxury goods. It can be achieved by raising consumer's perception of luxury in conspicuity and scarcity which is important to consumers' face and gifting. It can affect consumer behavior. Luxury brand marketing is no longer just to sell product, but to guide consumers agree with luxury brand craft and the concept of brand value, and willing to pay for it. Thus provide emotional satisfaction and experience for consumers, it seems to be luxury brand marketing comes in. Luxury companies can from the following several aspects to improve consumer behavior.

First, enhance the brand value of luxury goods, cultivate consumer brand loyalty. Base on the result of this study, there are only 5.16% respondents who purchased luxury goods because of brand culture. That means most Chinese consumers do not know the behind story of luxury goods, and just match luxuries to fortune. Luxury brand sales staff can deliver brand story even brand benefit to consumers when they make purchasing decision. Also luxury brand companies





should create a good corporate image, so that consumers understand the brand positioning is consistent with their social status. Luxury brand companies should develop a reasonable price. High price will reduce consumer desire to purchase luxury goods. According to the result of this study, one-third of Chinese consumers prefer to go abroad to purchase luxury goods. One of the most important factors is the price of a same product in mainland China much higher than overseas. This study found that 15.7% respondents purchased luxury goods because of good quality and service. Product quality is the basis of consumer brand loyalty. The consumers are loyal to brand because of the high quality of the products. The basic way to improve brand loyalty and win the consumers' favor and trust is to meet consumers' demand for service.

Second, this research found that social symbol is the second large reason prompted Chinese to purchase luxury goods. With consumer spending that conveys some meaning and expression and information, including the status of consumers, identity, personality, taste, and identity. Consumption process is not only to meet people's basic needs, but also social performance and social exchange process. The marketer should manage brand as a key point, make the brand concept is deeply rooted in the people's heart, set up the brand of distinct character and the symbolism of the full performance product, which match consumers' characteristics towards their behaviors. For example, Louis Vuitton ever the past 150 years has been to advocate refined, quality, and comfortable "travel philosophy", as the starting basis for the design, each product have become irreplaceable classic. It will

not only apply the product to their ideas, but his ideas into a culture, to meet the aristocratic in the past, now the upper class pursuit of ornaments. The first flat trunk lid production is changing the way people symbolizing the pain of travel, perhaps people see a few simple pieces of cloth or leather mixed bag, but because of this simplicity, it is consistent with the pursuit of simple people, simple symbols of life.

Third, only one third Chinese consumer purchase luxury goods in mainland China because of limited styles, retailers are supposed to keep step with Europe in product style. The marketer should attach great importance to Chinese who has become the largest group of luxury consumers in the world, and accounted for a quarter of the total amount of world luxury consumption. Furthermore, luxury goods design should be more humanization, can be combined with Chinese cultural elements, from the perspective of target customers to develop products, in order to meet the different needs of different consumers, yet subtle enough to suit the moderate and balanced life style associated with Chinese.

Forth, to consider different levels on the pricing consumer psychological motivation, in order to achieve consumers, only one third consumers purchased luxury goods in mainland China, an important reason is the price higher than abroad. For example, a part of Chinese purchase luxury goods by motivation of bandwagon or hedonic even they couldn't afford it. They are not often proud to tell others if they have bought a luxury item in a sale. Finding also showed, a part of Chinese consumers focus more good quality and service while Chinese consumers place



higher importance on social symbol, gifting and face reason in luxury purchasing. The marketers should try and create innovation promotional strategies to successfully market their goods, retailers could provide gift samples or VIP treatment gift vouchers when purchases have been made.

## Limitations

Time constraint is a limitation of this study. The respondents did not spend enough time on completing the questionnaires, even did not pay attention to each question. The researcher conducted the survey only in first-line cities which include Shanghai, Beijing, Tianjing, Shenzhen and Guangzhou, these sent the hard copy questionnaire. The results cannot be generalized to second-line cities, especially those in less developed regions, because consumer behaviors differ greatly in those places.

## Further research

For next study, they should focus on customer satisfaction which is the emotional response that consumer feel after making a purchase. It will be a big contribution for luxury goods industry. Consumers' individual differences such as previous experiences in purchasing luxury goods might have a different effect on their attitude towards and purchase intent of luxury. Try to find deeper reason behind Chinese luxury consumer behavior, otherwise, should do comparing between Chinese consumers with western country, examine forces behind luxury consumption. From the cultural perspective, different cultural traditions and cultural characteristics of Chinese and western, lead to different consumer behavior. Finally, the future researchers should further explore the role of knowledge in understanding individual differences in luxury consumption.

## References

- Aaker, D. A. (1991). *Managing brand equity: capitalizing on the value of a brand name*. New York: The Free Press.
- Aaker David.A. and A. Biel eds. (1992). *Building strong brands*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Aaker, David. A. (1996) *Measuring brand equity across products and markets*. California Management Review. 38(Spring): 102-120.
- Berry, C. J. (1994). *The Idea of Luxury: A Conceptual and Historical Investigation*, New York: Cambridge University Press.
- Bond, M. (1991). *Beyond the Chinese face*. Hong Kong: Oxford University Press.
- Bond, M., and Lee, P. W. (1981). *Face saving in Chinese culture*. In: A. King & R. P. Lee (Eds), *Social life and development in Hong Kong* (pp. 288–305). Hong Kong: Chinese University Press.



- Braxton, R. (1999). Culture, family and Chinese Korean American student achievement: commercials. *Journal of Advertising Research*, 36, 27-45.
- Chadha, R. and Husband, P. (2006). *The Cult of the Luxury Brand: Inside Asia's Love Affair with Luxury*, London, Nicholas Brealey.
- Danziger, P. N. (2002). *Why people buy things they do not need*. Ithaca, NY: Paramount Market Publishing.
- Danziger, P. N. (2005). *Let Them Eat Cake: Marketing Luxury to the Masses-As well as the Classes*, Chicago, Dearborn Trade Publishing.
- Dittmar, H. (1994). Material Possessions as Stereotypes: Material Images of Different Socio-Economic Group, *Journal of Economic Psychology*, 15(December):561-585.
- Fisher, J. E. (1987). Social class and consumer behavior: the relevance of class and status, *Advances in Consumer Research*, 14:492-6.
- Garfein, R. T. (1989). Cross-cultural perspectives on the dynamics of prestige, *Journal of Services Marketing*, 3(3), 17-24.
- Ger, G., and Belk, R. W. (1996). Cross-cultural differences in materialism. *Journal of Economic Psychology*, 17:55-77.
- Goffman, E. (1967). *Interaction ritual: Essays on face to face behavior*. Garden City, NY: Anchor.
- Groth, J., and S. W. McDaniel. 1993. The exclusive value principle: The basis for prestige pricing. *Journal of Consumer Marketing*, 10:10-16.
- Gu, F. F., Hung, K., and Tse, D. (2008). When does Guanxi matter? Issues of capitalization and its dark sides. *Journal of Marketing*, 72:12-28.
- Holt, D. B. (1998). Does cultural capital structure American Consumption?, *Journal of Consumer Research*, 25( June):1-25.
- Hwang, K. K. (1987). Face and favor: The Chinese power game. *American Journal of Sociology*, 92(4), 944-974.
- Jung, J. and Sung, E. Y. (2008). Consumer-Based Brand Equity: Comparisons among Americans and South Koreans in the USA and South Korea in Korea, *Journal of Fashion Marketing and Management*, 12(1):24-35.
- Keller, K. L. (2009). Managing the growth tradeoff: Challenges and opportunities in luxury branding. *Journal of Brand Management* 16:290-301.
- Keller, K. L. (1993). "Conceptualizing, Measuring and Managing Customer-Based Brand Equity", *Journal of Marketing*, 57(1), 1-22.
- Keller, K. L. (2003). *Strategic brand management: Building, measuring, and managing brand equity*. Upper Saddle River, NJ: Prentice-Hall.
- Komarovsky, M. (1961). Class differences in family decision making, in Foote, N.N. *Consumer Behavior: Household Decision Making*, New York University Press, 255-65.



- Kotler, P. and Keller, K. L. (2006). *Marketing Management* (12th ed.). Upper Saddle River, Prentice Hall International, New Jersey.
- McClean, P. (2000). *The Chi-Square Test*. Retrieved from <http://www.ndsu.edu/pubweb/~mcclean/plsc431/mendel/mendel4.htm>
- Mootee, I. (2004). *High Intensity Marketing*, Canada, Strategy Architects Press.
- Olshavsky, R. W., and Granbois, D. H. (1979). Consumer decision making — fact or fiction? *Journal of Consumer Research*, 6(September):93-100.
- Punniyamoorthy, M., and Prasanna, M. Raj., (2007). An empirical model for brand loyalty measurement", *Journal of Targeting, Measurement and Analysis for Marketing*, 15(4), September :222-233(12).
- Roux, E. (1995). *Consumer evaluation of luxury brand extensions*, EMAC Conference proceedings, May, ESSEC, Paris.
- Solomon, M. R. (1994). *Cosumer Beavior*, (2nd ed.), Boston, MA: Allyn and Bacon.
- Williams, T. G. (2002). Social Class Influence on Purchase Evaluation Criteria, *Journal of Consumer Marketing*, 19(spring): 250.
- Verhallen, T. M., and Henry, S. R. (1994). "Scarcity and Preference: An Experiment on Unavailability and Product Evaluation," *Journal of Economic Psychology*, 15 (June):315-331.
- Vigneron, F., and Johnson, L. W. (1999). A Review and a Conceptual Framework of Prestige-Seeking Consumer Behavior. *Academy of Marketing Science Review*, Vancouver, 1999:1.
- Vigneron, F., and Johnson, L. W. (2004). "Measuring Perception of Brand Luxury," *Journal of Brand Management*, 11(6): 484–506.
- Wayne, D. H., and Deborah, J. M. (1997). *Consumer Behavior*, Houghton Mifflin Company, Boston, spring: 325.
- Yang, K. (1981). Social orientation and individual modernity among Chinese students in Taiwan. *Journal of Social Psychology*, 113(2): 159–170.

# **The influence of personal and environmental factors on business start-ups: A case study in the district of Dili and Oecusse, Timor-Leste**

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## **Abstract**

Small enterprise has been playing important role in economic development of every country. Small enterprises participation in economic development gave direct impact on creating jobs, creating competitive advantage, and an important career option. This paper aims to investigate the influence of personal (demographics and personal traits) and environmental factors on business start-ups in Dili and Oecusse Districts, Timor-Leste. Sample of this population came from small enterprises in both districts, 178 small enterprises have been identified as target population, only 134 sample size used for this study. Linear structural relationship statistics provide a systematic understand of the effect of personal and environmental factor on business start-ups. Under significant analysis, the result pointed that variables of demographics, personal traits, and environmental factors have influenced business start-ups. The most important is government and business and professional service providers should create appropriate facilities and professional assistance for entrepreneurial development.

**Keywords:** Entrepreneurship, Small businesses, Entrepreneur, business start-ups, Economics, start-up motivation, demographics, personal traits, environmental determinants.



## Introduction

The focus of this study is about the influencing of personal and environmental factors on business start-ups. New business play important role in creating new job. Based on national report in many counties, include Thailand national report, shown that in some specific number of jobs came from small enterprise and medium enterprise. Second, new business also creates competitive advantage. New firms often come up with new ideas or new model of quality of product and services. By new firm's presence, it is also challenging existing enterprise to improve their product and service quality. Third, starting a business is an important career option. In this term, starting a business is one way how to maximize freedom of economic opportunity

Previous researchers have found the important variable such demographics (gender, age, education level, and working experience), personality traits (desire for independence, need for achievement, locus of control, risk taking propensity, and recognition of opportunity), and environmental factors (financial support, government support, education and training, business and professional infrastructure, access to physical infrastructure, and cultural and social norms), all these variables have been identified as factors influencing entrepreneurial activity. However, this study has been developed in different testing procedures, sampling and country specific factors. Furthermore, this is the first research related business start-ups in Timor-Leste, which enterprises development target has been part of The

Strategic Development Plan after restoration independence in 2000.

## Review of the literature

Apart from economic development, the entrepreneur has been approached under of different perspectives. Since the beginning of the century, the entrepreneurs and entrepreneurship became enthusiasm of many aspects. This interest has related in the academic activities, which are an impressive increased in the number of study that relate this subject. Researchers have identified that new firm creation is an important factor for economic growth, creating many new jobs (Birley, 1987; Reynolds, 1987; Dyck and Ovaska, 2011), and creating competitive advantage.

Previous studies have identified the entrepreneur's personal and environmental play critical role in entrepreneurial formation. Not surprisingly, many researchers concept of entrepreneurship based on the definition of Low and McMillan (1988) as the "creation of new enterprise" (p. 141). This concept came from a growing awareness that entrepreneurship is a "process of becoming rather than state of being" (Bygrave, 1989, p. 21). Surely that starting a business is a process that takes many years to develop gradually and come to successfully.

The process of starting a business is the focus of this research. This process related to two perspectives:

(1) The influence of the personal factors on business start-ups;

(2) The influence of the environment factors on business start-ups.

## **Some definitions of entrepreneurship**

Low and McMillan (1988) stated good science has to begin with good definitions. However, some empiricists believe they can go forward (function) without appropriate definitions, but many researchers are questioning it. The problem is how can empiricists know what phenomenon they are studying if they cannot define what they have observed? Some researchers believed only theorists function if define with exact definitions. After all, both models and theories can predict the result of operations. As Bygrave and Hofer (1991) stated it is impossible to operationalize a concept if it cannot be defined. Bridgman (1927) and Dewey (1929) wrote: "the concept is synonymous with the corresponding set of operations."

As Low and MacMillan (1988) that the phenomenon of entrepreneurship is interrelation with complex issues such as management of change, innovation, technological and environmental turbulence, new product development, small business management, individualism and industry evolution. Furthermore, the phenomenon can be investigated from varied disciplines such as economics, sociology, finance, history, psychology, and anthropology, each of this discipline uses its own concepts and operates within its own terms of reference.

The definition of entrepreneurship for this study related with statement of Low and MacMillan (1988) that

entrepreneurship as the "creation of new enterprise", it mean that entrepreneurship seeks to explain and simplify the role of new enterprise in bring forward economic progress. "Explanation" it pushes researchers not only staying in descriptive studies, but also to follow causal inference. Through "facilitation" it pushes researchers to maintain relevance factor for practice and to consider both micro and macro perspectives. Entrepreneurship is a process that evolves with time, which is changing over time, and only can understands within observe what happening in the field.

## **The model and studies related demographic**

Under personal factors, numerous factors have identified relation with demographic, such as gender, age, education level, working experience.

According to studies in different countries, it has found that there are determining the links between demographic and entrepreneurship. Previous researchers have found the gender differences are not significant with business start-ups (Bergmann and Sternberg, 2007; Rosti and Chelli, 2005; Williams, 2004; Remeikiene and Startiene, 2008).

Some specific age can be representative of person maturity in making decision to become an entrepreneur (Blanchflower and Meyer, 1994; Bergmann and Sternberg, 2007). As Ritsilä (2002) stated that the age of 26 to 40 can be considered a period of readiness the choice of occupation. People at these ages are possibilities to come success.



However, as Parker (2004) stated age can positive correlation if its connected with the professional experience, self-reliance, availability of capital increase.

Enter business activities with sufficient knowledge are needed. Researchers have found that knowledge and information are basic elements for initial self-confidence of individuals in an entrepreneur venture (Minniti and Bygrave, 1999; Aldrich and Martinez, 2001). With sufficient knowledge, transferring idea into an organization can make entrepreneur obtain resources.

Attitudes are usually formed by previous experience, it was logical that entrepreneur who direct experienced with entrepreneurial activities in the past would have stronger entrepreneurial attitudes (Harris and Gibson, 2008). Moreover, Harris and Gibson found students who have experience with family business are possible to be an entrepreneur. Students whose family owned a business had a greater sense of achievement, innovation, and personal control as a result of interacting and working within the business.

## **The model and studiesa related personal traits**

Trait theory argues that individual always have the personality traits to determine which action should be taking. Under the content of entrepreneurship, personal characteristics or traits became focused of many researchers that make distinguish entrepreneurs from the general population (Low & MacMillan, 1988). Five factors were decided to be part of this study:

- (1) Desire for independence
- (2) Need for achievement
- (3) Locus of control
- (4) Risk taking propensity; and
- (5) Recognition of opportunity.

Some researchers found person decides to become an entrepreneur is because they want to be independence and not to work for other (Kirkwood and Walton, 2010; Lee, 1997). These studies showed the basic difference between the role of a person become entrepreneur and a person working for others.

McClelland (1967) pointed achievement motivation is an important factor provide some light to the entrepreneurship mindset and challenges, especially for the motivational disposition of the entrepreneurs. A person have characteristics of high need for achievement that appreciates and willing to take responsibility, prefers solving problem without any assistance, taking risk, and respect all outcomes of their own decision (McClelland, 1967; Sesen, 2013).

Under the personal characteristic theory, locus of control has been one of the focus studies. Locus of control is a complex individual phenomenon which has concerned with determining the effects of the perception of an individual to control all events that implies to their lives.

Risk-taking propensity is another psychological characteristic often related to entrepreneur intention of starting a new business venture. Ability for risk-taking also a significant dimension under content of entrepreneurship. In responding to the risks, entrepreneurs always learn how to handle it from their previous mistake attitude, environment,



and from other experience (Stokes and Blackburn, 2002; Harrison and Leitch, 2005).

Shane and Venkataraman (2000) in their study suggest two factors implies a person to recognize particular opportunities: 1) congruent information from previous and current can affect a person on recognizing a business opportunity, 2) the cognitive characteristics are needed to evaluate these opportunities and later make a decision to exploit them. Every person has different abilities to recognize specific opportunities, it's depend on availability of information. Availability of information defines mental structure, which provides process of recognizing new information. To recognize an opportunity, every entrepreneur should congruent with previous information and new information. Under cognitive science, Researchers pointed people always combine existing concept and information into new ideas based on their ability.

## **The model and studies related envtironmental factors**

Personal decision to become an entrepreneur is not only personal factor issues, but also environment factor issues as well (Bird, 1988). As Stevenson and Jarill (1990) stated that environmental factors are also relevant because environments conducive can direct influence to new business success.

Studies about environmental factors influencing business start-ups come from difference macro economics, institution and cultural characterizing the country or from macro or regional in time period, or

specific issue of industries. Even though, a topic related to environmental factors are very abroad and diverse to integrate effectively. As Gnyawali and Fogel (1994) stated there is no integrated scheme to identifying environmental conditions conducive for business activities. Based on literatures, there was many research highlighted different environmental factors on business start-ups, but for needs of this study only six factors considerable.

- (1) Financial support
- (2) Government (policy and programs),
- (3) Education and training,
- (4) Business and professional infrastructure,
- (5) Access to physical infrastructure; and
- (6) Cultural and social norms.

Formation of new organization requires resources include financial resources. When an entrepreneur transforms their idea into a firm, financial resources are important factors to be considered such as financial institution, investors and others. This financial resource use for financing operation such as security deposits, transaction, and others, or for investment such as loans (Evans and Jovanovic, 1989). However, Kim *et al.* (2006) stated that for many reasons, get money from bank loan or investors can be difficult because they just start and it might faced high risk, lenders are usually do not want to provide capital and some compensate through cost of borrowing.

Under the social development theory, government policy and programmes play an important role to ensure quality change in the structure and framework of society that helps the society to realize aim and objectives of life. As previous

studies pointed that government policy, institutions, and programmes can influence business start-up in many ways (Reynolds *et al.*, 1994; Yusuf, 1995).

Through cognitive test with student samples (who have studied at a university), Peterman and Kennedy (2003) pointed education is an important factor influencing students cognitive to be an entrepreneur. Feasibility and desirability perceptions also consider as factor influence individual intention to make the decision to be an entrepreneur, especially when they finished their study at university or any education level (Krueger, 1993; Shapero and Sokol, 1982). As Greene and Brown (1997) noted, a certain amount of knowledge that a person obtains from formal education, working experience or additional training is measurement for a new business venture.

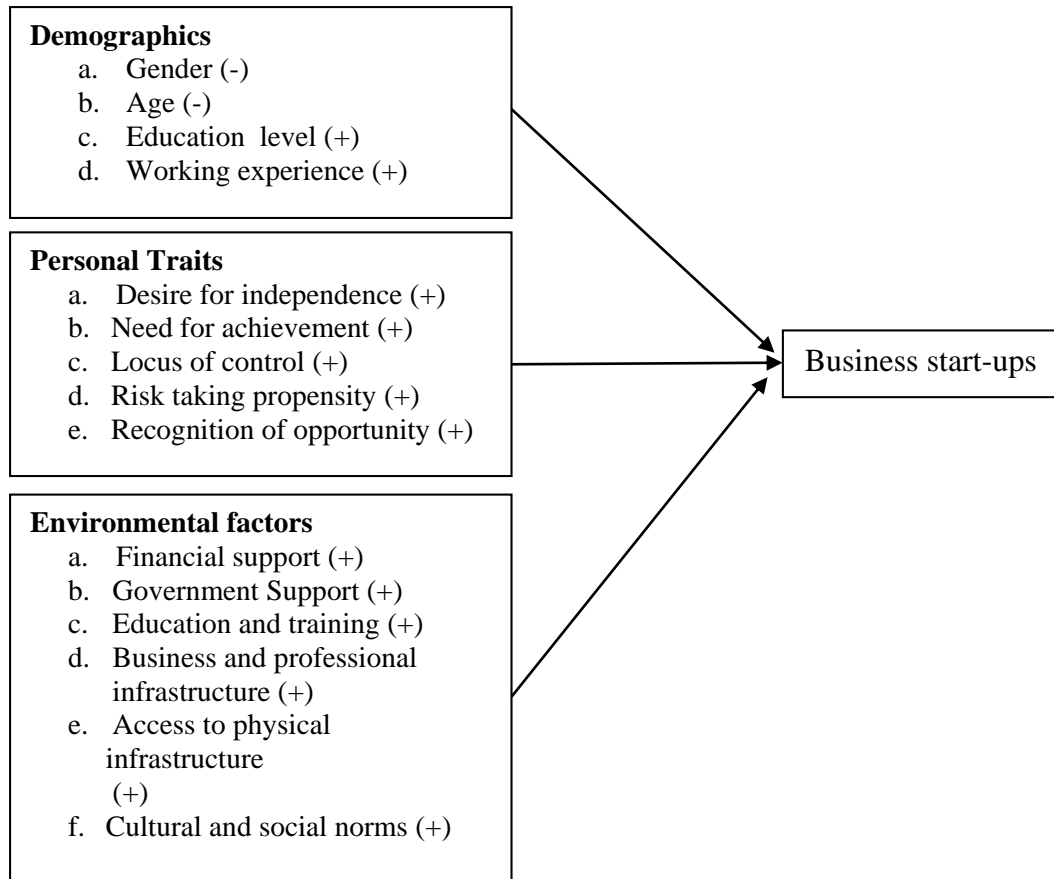
Business and professional services defined as technical and/ or unique functions performed by independent contractors/ consultants provide professional assistance on business success. Grimaldi and Grandi (2005) stated that Business and Professional infrastructure play important role in providing support services and assistance in business activities.

Infrastructure influencing economic development has been well recorded in the academic studies and in the policy debate (Aschauer, 1989; Munnell, 1990; World Economics Forum, 2013). Moreover, the World Economics Forum

reported that good infrastructure plays an important role in macro and micro level enhance effective functioning of economic growth. If at macro level physical infrastructure is an important factor, then at micro level also consider as an important factor. Sahoo *et al.* (2010) stated that good physical infrastructure has been effected on (i) production facilities; (ii) minimizing cost of the transaction and cost of trade can create and improve the competitive; and (iii) provides employment opportunities.

There also appears in society that people often respect for those who have hard work and success started their own business. Through environmental where persons success, potential entrepreneurs and entrepreneurs, where both can discuss ideas, challenges and solutions, new business will be produced (Gomezelj and Kušce, 2013; Ajzen, 1991).

Previous subsections were identified that personal and environmental factors influencing business start-ups. Researchers have proposed conceptual framework of creating new venture which both factors are considerable. Bird (1988) stated that in business creation both personal and environmental define entrepreneurial intentions. Greenberger and Sexton (1988) stated that personal characteristics collaborate with environmental factors determining new venture creation. Thus this study proposed a specific model of the personal and environmental factors influencing business start-ups.



## Methodology

### Research design

The sample has selected based on the enterprises information in the district of Dili and the district of Oecusse. The enterprise information has been collected based on enterprises categorized such as company registration year, number of employment, and type of industry/business. The result showed there are 178 small enterprises became the target of studies, however, only 134 used for the analysis.

### Research tool: quantitative research

This exploratory research will choose quantitatively. The study has investigated the personal and environmental factors on business start-ups.

Part one, the questionnaire form has started with personal information, such as age, gender, education level, and working experience. This information has been considered as factors affecting a person to create a business venture.

Part two, this part related assessment of the important factors were effected a

person's decision to start their own business such as personal traits with variable desire for independence; need for achievement; locus of control; risk taking propensity; and recognition of opportunity. This questionnaire also relation to characteristics of the business environment such as financial support, government support, education and training, business and professional infrastructure, access to physical infrastructure; and cultural and social norms.

Part three, this part related company information, such as type of industry or business, year of establishment, and number of employees. This part has related to small enterprises categorized.

## Data measurement and analysis

This study sets a different statement for each of those dimensions using Likert scale. Each question has a statement followed by a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree'

This study also used two procedure model to analyze the correlation between personal information with factors and also correlation independent factors and dependent factors. For first model, A chi-square analysis of the relationship between demographics and business start-ups. For the second model, the ANOVA procedure will use to analyze the significant level among independent variable and dependent variable.

## Analysis

### Demography characteristics

The sample represented a diversity of gender, age group, education level, and working experience group. In the category of gender participation, there are male participated in the survey by 90.3% than female participated by 9.7%. Under age category, there are 47.8% of respondent from age 25 to 40 years old, by 41 % of respondents in the range 41 to 50 years old, 6.7% of the respondents from age 51 and above years old, and 4.5% in the range 15 to 24 years old.

In terms of education level, the most responded sample came from participants who finished their Senior High School by 40.3%, following by 37.3% of Junior High School, by 19.4% of Bachelors Degree, by 3.0% of Primary School, Masters Degree and PH.D., was not participating in this study. Most of entrepreneurs who had started their own business has working experience with humanitarian organizations (local or international NGOs) by 32.1%, by 31.3% of profit organization (local or international companies) and unemployed, and by 5.2% with government.

Respondent in the sample came from different business activities, restaurant companies were dominated with 27.6%, by 19.4% of agriculture, by 10.4% of electronic companies, by 9.7% of construction and furniture companies, by 9.0% of health care companies, by 3.7% of hotels, by 5.3 of music, by 3.0% night clubs, by 1.5 of education, and 2.2% have considered as missing date.

## Analysis of level of agreement

Each question has a statement followed by a five-point Likert scale ranging from 1=strongly disagree, 2=somewhat disagree, 3=neither agree or disagree, 4=somewhat agree, and 5=strongly agree. The levels of the important value are calculated as follows:

$$\frac{5 - 1}{5} = 0.80$$

The mean of each score as following explanation:

4.21 – 5.00 are considered as strongly agree

3.41 – 4.20 are considered as agree

2.61 – 3.40 are considered as neutral

2.81 – 2.60 are considered as disagree

1.00 – 1.80 are considered as strongly disagree

**Table 1** Analysis of level of agreement

	DI	NA	LC	RTP	RO	FS	GS	ET	BPI	API	CSN
Mean	4.197	3.609	3.597	3.689	4.244	4.241	4.299	4.343	4.259	4.246	3.264

The mean value of the desire for independence (DI) showed the apparently turned out to be approximately 4.197 which shows the agree level of agreement, the mean value of the need for achievement (NA) apparently turns out to be about 3.609 which shows the agree level of agreement, the mean value of the locus of control (LC) which the apparently turned out to be about 3.597 which shows the agree level of agreement, the mean value of the risk taking propensity (RTP) which the apparently turned out to be approximately 3.689 which shows the agree level of agreement, the mean value of the recognition of opportunity (RO) which the apparently turned out to be approximately 4.244 which shows the agree level of agreement, the mean value of the financial support (FS)

which the apparently turned out to be approximately 4.241 which shows the strongly agree level of agreement, the mean value of the government support (FS) which the apparently turned out to be approximately 4.299 which shows the strongly agree level of agreement, the mean value of the education and training (ET) which the apparently turned out to be approximately 4.343 which shows the strongly agree level of agreement, the mean value of the Business and professional infrastructure (BPI) which the apparently turned out to be approximately 4.259 which shows the strongly agree level of agreement, the mean value of access to professional infrastructure (API) which the apparently turned out to be approximately 4.246 which shows the strongly agree level of agreement, the

mean value of the cultural and social norms (CSN) which the apparently turned out to be approximately 3.264 which shows the strongly agree level of agreement.

## Correlation analysis

Correlation analysis also statistic tool used to analyze the strength and direction

of a linear relationship between two variables. There are a number of different statistical that available, depending on level of measurement. For this study, analysis had focused on a bivariate Pearson product-moment correlation coefficient. A value of the correlation coefficient  $r$  is used to describe the magnitude of the relationship of two variables.

**Table 2** Correlation analysis

	DI	NA	LC	RTP	RO	FS	GS	ET	BPI	API	CSN	BSU
DI	1											
NA	.430**	1										
LC	.493**	.684**	1									
RTP	.354**	.305**	.554**	1								
RO	.650**	.376**	.480**	.388**	1							
FS	.707**	.330**	.324**	.367**	.595**	1						
GS	.814**	.408**	.462**	.334**	.588**	.728**	1					
ET	.806**	.210*	.274**	.275**	.541**	.707**	.766**	1				
BPI	.860**	.295**	.358**	.260**	.531**	.683**	.793**	.825**	1			
API	.791**	.390**	.427**	.351**	.613**	.710**	.818**	.763**	.798**	1		
CSN	.372**	.214*	.213*	.178*	.222**	.288**	.466**	.355**	.371**	.337**	1	
BSU	.733**	.626**	.612**	.354*	.570**	.424**	.516**	.438**	.455**	.550**	.213*	1

The correlation matrix analysis showed that all the variables specified above were related and significant with each other such as desire for independence, need for achievement, locus of control, risk taking propensity; recognition of opportunity, financial support, government support, education and training, business and professional infrastructure, access to physical infrastructure; and cultural and social norms. Moreover, factors under personal and environmental have positive correlation with business start-ups.

## Hypothesis Testing

Since measurement relationship was consistent with the data, the structure model has evaluated. An examination of the structure model involves significant model to estimate coefficient, which give as basic decision to accept or reject the proposed relationship between latent structure.

Table 2 pointed the result of the model estimate with parameter estimate of the hypothesized chi-square. The results of the model testing with chi-square has showed  $\chi^2$  statistic, degrees of freedom,

significant level has been pointed and it has given a basic decision. Based on result, education level and working experience was significant level at 0.05. Two other factors, gender and age, was negative influence on business start-ups.

**Table 3** Chi-Square Tests between demographics and business start-up

	Gender	Age	Education level	Working experience
Pearson Chi-Square	5.839 <sup>a</sup>	16.151 <sup>b</sup>	30.271 <sup>b</sup>	30.180 <sup>a</sup>
Df	6	18	18	18
Asymp. Sig.	.441	.582	.035	.036

- a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 67.0.
- b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.5.

Hypothesis1 demographics were significant relation with business start-up in different way.

Analysis of variance test in table 4 provides the degree of freedom and the significance level of the population;  $df1$

is one less than the number of sample each of variable, and  $df2$  is the difference between the total sample size and the number of sample each variable, F statistical and also highlighted significant level at 0.01 and 0.05.

**Table 4** ANOVA Tests of personal traits and environmental factors on business start-up

		Sum of Squares	df	Mean Square	F	Sig.
<b>DI</b>	Between Groups	21.058	4	5.265	54.861	.000
	Within Groups	12.379	129	.096		
	Total	33.437	133			
<b>NA</b>	Between Groups	13.910	5	2.782	18.235	.000
	Within Groups	19.527	128	.153		
	Total	33.437	133			
<b>LC</b>	Between Groups	15.895	6	2.649	19.178	.000
	Within Groups	17.542	127	.138		
	Total	33.437	133			
<b>RTP</b>	Between Groups	4.519	5	.904	4.001	.002
	Within Groups	28.918	128	.226		
	Total	33.437	133			
<b>RO</b>	Between Groups	12.307	6	2.051	12.328	.000
	Within Groups	21.130	127	.166		
	Total	33.437	133			
<b>FS</b>	Between Groups	6.456	4	1.614	7.717	.000
	Within Groups	26.981	129	.209		
	Total	33.437	133			
<b>GS</b>	Between Groups	9.154	4	2.289	12.158	.000
	Within Groups	24.283	129	.188		
	Total	33.437	133			
<b>ET</b>	Between Groups	7.518	3	2.506	12.569	.000
	Within Groups	25.919	130	.199		
	Total	33.437	133			
<b>BPI</b>	Between Groups	7.946	4	1.987	10.053	.000
	Within Groups	25.491	129	.198		
	Total	33.437	133			
<b>API</b>	Between Groups	10.815	4	2.704	15.419	.000
	Within Groups	22.622	129	.175		
	Total	33.437	133			
<b>CSN</b>	Between Groups	3.214	5	.643	2.722	.023
	Within Groups	30.223	128	.236		
	Total	33.437	133			

Based on the result analysis of variance in table 4, the decision has been made as follows:





Hypothesis 2 Personal traits were positive relation with business start-up.

Hypothesis 3 Environmental factors were positive relation with business start-up

## Conclusion

### Conclusion

Small enterprise has been playing an important role in the economic development of every country. Small enterprises participation in economic development provided direct impact on creating jobs, creating competitive advantage, and an important career option. However, there are different characteristics of entrepreneurs and the reasons behind them to build an enterprise.

1. In four factors of demographic, there are only two factors affecting on business start-ups. If the education level and working experience are not part of the initial process (preparation), self confidence for business start-ups will change with different direction. Two other factors of demographics are gender and age are no statistical significant, so no conclusion can draw with this relationship with business start-ups.
2. Personal traits have positive relation with business start-ups. Individuals with personal traits will adapt every challenge and find a way to do the right things. Strong characteristics are needed to start a business venture.
3. Environmental factors have positive relation with business start-ups. environmental factor play important role to protect and facilitate economic movement through institution and regulation. Lack of facilities,

professional services and regulation can change with different direction.

### Implication of the study

The outcomes of this study pointed a successful utility the concept of personal and environmental factors as a conceptual framework to identify how a person creates their own business.

Previous researches were pointed that demographics, personal traits, and environmental factors are important factors for business start-ups. Related studies were held in many countries, but all these researchers focused on existing entrepreneurs and potential entrepreneurs. Measurement for potential entrepreneurs are somewhat “fuzzy” due there is no available information related potential entrepreneurs. Therefore, this study focused on existing entrepreneurs.

This study is the first study related with Timor-Leste context. The contribution of this study is to provide and initiate information for next interest study. Based on behavioral theory, personal interest comes because there was available and comprehensive information, and this study can contribute in this content. Moreover, this study also contributes to potential entrepreneurs to aware personal and environmental factors, education institutions as service institutions should aware of these factors and design learning curriculum based on practical issues, financial service providers are needed to improve their quality and accessibility services, government as a public servant should develop regulation, provide capacity building to potential entrepreneurs to participate in economic activities.

## References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2): 179-211.
- Aldrich, H. E. and Martinez, M. A. (2001). Many are called, but few are chosen: An evolutionary perspective for the study of entrepreneurship. *Entrepreneurship theory and practice* 25(4): 41-56.
- Aschauer, D. A. (1989). Is public expenditure productive?. *Journal of monetary economics*, 23(2): 177-200.
- Bergmann, H., & Sternberg, R. (2007). The changing face of entrepreneurship in Germany. *Small Business Economics*, 28(2-3), 205-221.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of management Review*, 13(3): 442-453.
- Birley, S. (1987). New ventures and employment growth. *Journal of Business Venturing*, 2(2): 155-165.
- Blanchflower, D. G., Meyer, B. D. (1994). A Longitudinal Analysis of Young Self-Employed in Australia and the United States. *Small Business Economics*, 6, 1-19.
- Bridgman, P. W., et al. (1927). *The logic of modern physics*. New York:Macmillan.
- Bygrave, W. D. and Hofer, C. W. (1991). Theorizing about entrepreneurship. *Entrepreneurship theory and practice*, 16(2): 13-22.
- Bygrave, W.D. (1989). The entrepreneurship paradigm: a philosophical look at research methodologies. *Entrepreneurship Theory and Practice*, Vol. 14 No. 1, (pp. 7-26).
- Dewey, J. (1929). *The quest for certainty*. New York: J.J. Little and Ives Company
- Dyck, A. and Ovaska, T. (2011). Business Environment and New Firm Creation: An International Comparison. *Journal of Small Business & Entrepreneurship*, 24(3): 301-317.
- Evans, D. S. and Jovanovic, B. (1989). An estimated model of entrepreneurial choice under liquidity constraints. *The Journal of Political Economy*, 97(4): 808.
- Evans, D. S. and Leighton, L. S. (2002). Some empirical aspects of entrepreneurship. *Entrepreneurship: Critical Perspectives on Business and Management*, 1: 146.
- Gnyawali, D. R. and Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship theory and practice*, 18: 43-43.
- Gomezelj, D. O. and Kušce, I. (2013). The influence of personal and environmental factors on entrepreneurs' performance. *Kybernetes*, 42(6): 906.
- Greenberger, D. B. and Sexton, D. L. (1988). An interactive model of new venture initiation. *Journal of Small Business Management*, 26(3): 1-7.



- Greene, P., and Brown, T. (1997). Resource needs and the dynamic capitalism typology. *Journal of Business Venturing*, 12(3), 161–173.
- Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: an assessment of incubating models. *Technovation*, 25(2), 111-121.
- Harris, M. L. and Gibson, S. G. (2008). Examining the entrepreneurial attitudes of US business students. *Education+ Training*, 50(7): 568-581.
- Harrison, R. T. and Leitch, C. M. (2005). Entrepreneurial learning: researching the interface between learning and the entrepreneurial context. *Entrepreneurship theory and practice*, 29(4): 351-371.
- Hornaday, J. A. (1982). Research about living entrepreneurs. *Encyclopedia of entrepreneurship*: 20-34.
- Hung, D. K. M., *et al.* (2004). A Preliminary Study of Top SMEs in Malaysia: Key Success Factors vs Government Support Programs. *Journal of Global Business and Economics*, 2(1): 49-58
- Kim, P. H., *et al.* (2006). The impact of financial, human, and cultural capital on entrepreneurial entry in the United States. *Small Business Economics*, 27(1): 5-22.
- Kirkwood, J. and Walton, S. (2010). What motivates ecopreneurs to start businesses? *International Journal of Entrepreneurial Behaviour & Research*, 16(3): 204-228.
- Krueger Jr, N. F., *et al.* (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5): 411-432.
- Krueger, N. F. and Carsrud, A. L. (1993). Entrepreneurial intentions: applying the theory of planned behaviour. *Entrepreneurship & regional development*, 5(4): 315-330.
- Lee, J. (1997). The motivation of women entrepreneurs in Singapore. *International Journal of Entrepreneurial Behaviour & Research*, 3(2): 93-110.
- Low, M. B. and MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of management*, 14(2): 139-161.
- McClelland, D.C. (1967). *The achieving society*. New York: Free Press
- Minniti, M. and Bygrave, W. (1999). The microfoundations of entrepreneurship. *Entrepreneurship theory and practice*, 23: 41-52.
- Munnell, A. H. (1990). Why has productivity growth declined? Productivity and public investment. *New England Economic Review*(Jan): 3-22.
- Parker, S. C. (2004). *The economics of self-employment and entrepreneurship*. Cambridge University Press.
- Peterman, N. E. and Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship theory and practice*, 28(2): 129-144.



- Reynolds, P. D. and White, S. B. (1997). *The entrepreneurial process: Economic growth, men, women, and minorities*. Quorum Books Westport, CT.
- Reynolds, P. D., (1987). New firms: societal contribution versus survival potential. *Journal of Business Venturing*, 2(3): 231-246.
- Reynolds, P.D. (2005). Understanding business creation: Serendipity and scope in two decades of business creation studies. *Small Business Economics*, 24, 359–364.
- Reynolds, P.D., *et al.* (1994). Cross-national comparisons of the variation in new firm formation rates. *Regional Studies*, 28(4). 443–456.
- Ritsilä, J., & Tervo, H. (2002). Effects of unemployment on new firm formation: Micro-level panel data evidence from Finland. *Small business economics*, 19(1), 31-40.
- Rosti, L., & Chelli, F. (2005). Gender discrimination, entrepreneurial talent and self-employment. *Small Business Economics*, 24(2), 131-142.
- Sahoo, P., *et al.* (2010). Infrastructure development and economic growth in China. *Working paper*.
- Sesen, H. (2013). Personality or environment? A comprehensive study on the entrepreneurial intentions of university students. *Education+ Training*, 55(7): 1-1.
- Shane, S. and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management Review* 25(1): 217-226.
- Shapero, A. (1982). Some social dimensions of entrepreneurship. In C. Kent, D. Sexton, and K. Vesper (Eds.), *The encyclopedia of entrepreneurship*. Englewood Cliffs, NJ: Prentice Hall.
- Startienė, G., & Remeikienė, R. (2008). Gender gap in entrepreneurship. *Engineering economics*, 5(60), 95-103.
- Stevenson, H.H. and Jarillo, J.C. (1990). A paradigm of entrepreneurship research: Entrepreneurial management. *Strategic Management Journal*, 11, 17–27.
- Stokes, D. and R. Blackburn (2002). Learning the hard way: the lessons of owner-managers who have closed their businesses. *Journal of Small Business and Enterprise Development*, 9(1): 17-27.
- Williams, D. R. (2004). Youth self employment: Its nature and consequences. *Small Business Economics*, 23(4), 323-336.
- Yusuf, A. (1995). Critical success factors for small business: perceptions of South Pacific entrepreneurs. *Journal of Small Business Management* 33: 2-68.
- La'o Hamutuk Report. (2011). *Timor-Leste's Economy and State Budget*. Retrieved February 26, 2014, from <http://www.laohamutuk.org/econ/training/PresentUNT-LVUEn.pdf>

# **A psychological model of residential property purchasing decision in Thailand**

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## **Abstract**

Research interest in residential property consumer purchase decision has widely conducted over the past years. The majority of the research was conducted based on the external influencing factors such as marketing mix and product attribute. It has overlooked the importance of the internal or psychological factors that play an important role in a customer mind before making a purchase decision.

The purpose of this paper is to study the factors that influencing a residential property purchase decision in another perspective, which focuses on psychological factors including attitude, motivation, personal value and belief in Thailand context. The quantitative approach was used to conduct this research. The data were gathered from 178 respondents and translated into a useful knowledge though the statistical techniques such as descriptive statistic, independent t-test and chi-square.

The result reveals that two main psychological factors that impact purchase decision are motivations and personal values. The consumers purchase a residential property with the intention to satisfy their self-esteem and self-actualization needs. Furthermore, seven out of nine personal values were involved in decision to purchase residential property. The personal values include Sense of belonging, Self-fulfilment, Security, Self-respect, Sense of accomplishment, and fun and enjoyment in life. The customer tends to emphasize on their self-interest over the others. The value of warm relationship with others and being well-respect were not important to their purchase intention. However, belief and attitude have not influenced the purchase decision. Findings of this study will benefit the developers and marketers who have an interest in the residential property business in Thailand as it provides guidance for better understanding customer insights in order to formulate an effective strategic decisions on product development and marketing strategies.

Psychological factor might interpret purchase decision and intention. However, the purchase decision of a residential property is tied heavily with the financial ability of that person which were not take into consideration in this research.

**Keywords:** Psychological Factors, Purchase Decision, Residential Property, Housing, Real Estate

## Introduction

The residential property refers to a place or a zone for single-family homes, multi-family apartments, townhouses, and/or condominiums. The residential property market in Bangkok was growing rapidly since 2010 and the housing boom continues. New supplies were likely added 50,000 units in 2015 and keep adding up in the following years while predicted price rise upwards of seven percent each year. This was mainly the result of government spending and expansion of mass-transit. (Paha, 2016) and (Bangkok's condo index up 14%, despite the politics, 2015). Referring to SorPaha (2016) the demand and supply of high-rise property (condominium) were fast growing and the gap is getting bigger. This can be translated that high-rise market is nearly oversupply. In additional, it has further mentioned about the market growth of the low-rise segment (townhouse, house, townhome). The low-rise segment is not growing as fast as condos due to less liquidity. However, its demand is increasing year by year. Therefore, the competition is getting tougher both low-rise and high-rise market. Furthermore, in the current situation of residential market in Bangkok, the unsold inventory has risen sharply from 130,300 units in 2011 to 167,400 at the end of 2014 and it would take about more than two years to absorb

these entire unsold units according to a report by Agency for Real Estate Affairs (AREA). Various developers reported cancellation rates ranging between 15% and 20% in previous years. (Paha, 2016: Yu & Thongpan, 2015)

In the past, one customer might have just a few alternative choices before making a decision to purchase but not anymore. The large number of unsold units allows the customer to have more choices together with the digital age that offers availability of the abundant information everywhere. The customers can easily search for information, compare and contrast before choose with lesser effort. Property investor faces a great challenge and proper strategic plan needs to apply.

Not only improving the product attributes to answer customer's needs but various marketing tactic were used by the property providers in order to position themselves and also to influence purchaser. By understanding customer psychological (attitude, motivation, belief or personal value), it helps the business to be innovated. They can understand the different ways in which customers value products. Therefore, provide product that satisfy the customer not just functional but into the emotional and psychological level. The marketing become more efficient when they really understand customer insight how they live

their life and how they make decision. “Successful marketers are able to drive sales by appealing to customer psychology” (Patel & Puri, n.d.)

## Problem statement

In this fierce competitive environment, it is important for the investor to know what really influence customer to buy a residential property. As mentioned in Hall (2012) knowing a customer in depth is one of the key characteristics of highly successful business entrepreneurs. It is not only about their need but also what drive their decision. The residential property purchase decisions are different from other business decisions due to “the innate, durable and long-term characteristic of real-estate” together with its fixed in location and uniqueness in each specific site. (Kinnard, 1968, p.10-16)

The previous studies in this field try to identify the key factors that influencing customer buying decision in Bangkok. Sanichwannakul (2009) reveals trustworthiness of the company ranks highest, follows by facilities, price, location, marketing and promotion respectively. Although other relevant studies such as Chedsadawarangkul, Waweewanich and Saransom (2010) and Myra (2016) reports that location is the biggest factor affecting consumers’ decision to purchase a residence. However, what if there are still much more choices at that same location provided by few trustworthiness companies. There are a dearth of study that evaluates the role of psychological thinking and attitudes in the decision to own a residential property. The internal force of the person or the real purpose of purchasing a particular

residential property has not analyzed. Thus, every firm is still driving to the same direction by providing just to satisfy external factors. The problem of unable to sell the house still remains. Additionally, as a property provider, it is important to understand the customers’ real intention to purchase a particular product and tries to satisfy them rather than just trying to influence them to purchase a product that might not add value or even match their need. Consequently, in terms of residential property purchase decision of customers, the research questions of this paper are raised as the following question:

What are the psychological factors that influencing a residential property purchase decision?

The objectives of this research are to study the psychological factors that influencing a residential property purchase decision and to give recommendation on the possible strategy or marketing tactic to property providers or marketer in order to achieve business goals.

## Literature review

### A model of buyer behavior

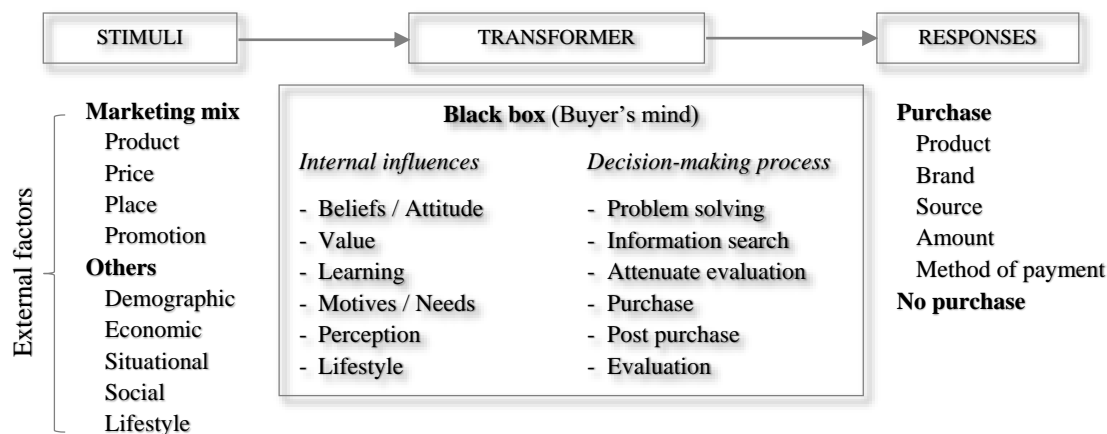
The analysis of customer behavior by observing and researching on consumer buying behavior and characteristics in order to understand the needs, motives and step to purchase is the basis for marketing strategy formulation. (Kotler,1997; Hawkins, Best & Coney, 2004).

Figure 1 shows the black box model of consumer behavior, it is a well-developed model that shows the interaction of stimuli, customer characteristics, decision process and customer responses. The final



customer decision is derived from various factors. It considers both external (4P's, PEST) and internal (Buyer characteristic) stimuli. The black box likes a customer's head that shows whys of buying behavior take from. The marketing tactic and other stimuli enter into the customer "black box" and produce certain responses whether to purchase or not. This reaction is based on 1)

the buyer's characteristics 2) the buyer's decision process. The critical stage is to discover customer's mind. The first step in understanding buyer behavior is to focus on the factors that determine their characteristics in the black box model. The broadly major factors are cultural, social, personal, and psychological. (Tintin, 2016; Perreau, 2016).



Source: Kotler & Keller (2009)

**Figure 1** Kotler's buyer behavior model or the 'black box' model

## Psychological factors

Psychological factor is one of the important factors that change how a person thinks and acts. It is more deeply into the individual level. Furaiji, Łatuszyńska and Wawrzyniak (2012) mention that the research on factors influencing consumer behavior reveals that the psychological factors have the strongest correlation including attitude, motivation, personal value and belief. It represents its strongest affect on consumer behavior compared to other factors like social, cultural or marketing mix.

## Attitude

According to Eagly & Chaiken (1993) defines attitude as "...a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p.1) It allows a person to develop a coherent behavior against a class of similar objects or ideas. (Perreau, 2016) Previous studies shows that the positive attitude towards behavior plays an important role in predicting changes in residential property purchase decision. (Sangkakoon, Ngarmyarn & Panichpathom, 2014; Huang, 2012). The result reveals that even the economic



recession, people develop negative attitude toward owning a house only in that short period of time. Their positive attitude remains and still wishes to buy a house in the future time. (Rohe & Lindblad, 2013) In additional, Al-Nahdi, Nyakwende, Banamah and Jappie (2015) mention that the intention to purchase a residential property is influenced by attitude.

H1: There is difference in terms of attitude between those who wanted to purchase a residential property versus those who did not.

### **Motivation**

Motivation is “the driving force within individuals that impels them to action”. (p.83) Motivation views as a psychological force that stimulates response. It is a reason for behavior. (Hawkins, Best & Coney, 2001 p.362) Maslow’s hierarchy of need is widely used in the decision making based research to study customer motivation to purchase a property as it can provide the environment which can encourage a person to express their ability and potential. (Abdullah, Jumadi, Nor & Arshad, 2012) The Maslow’s hierarchy of need, based on the idea that human actions are directed toward goal accomplishment. It represented in a hierarchy pyramid with five levels such as physiological, safety, belongingness, esteem, and self-actualization need. The lower one must be satisfied before the higher-order need. (Sheth & Mittal, 2004) Previous study regarding motivation to own a house in Hong Kong reveals that the respondents are mostly purchase a house because they wish to meet housing needs, improve quality of life and security need respectively. And only 4 percent purchase

a house just to raise their social status. (Tang & Freda, 1996)

H2: There is difference in terms of motivation between those who wanted to purchase a residential property versus those who did not.

### **Personal values**

Values are a major motivating force for people because it gives you a sense of importance, standard and quality toward something. Comparatively, Aron (2001) also reports that consumer’s value systems and involvement have been recognized to be the potential influencing which directly linked to an individual’s lifestyle. It produces direct energy and activities of an individual’s lifestyle and consequently their consumption behavior. Further discusses by Aron (2001) that the values also affect consumption motives that partially set the choice criteria. Personal values tend to play more important factor in decision making especially for the product with high involvement. Hawkins, Best & Coney (2004) mentions homes are frequently have high purchase involvement. Therefore, values play a critical role on home buying decision.

H3: There is difference in terms of personal value between those who wanted to purchase a residential property versus those who did not.

### **Beliefs**

A belief is a trust or confidence that a person has on something. It may derived from his/her experience, learning or even from external influences such as family and friends. The beliefs will be developed and eventually influence his/her buying behavior. (Perreau, 2016). Previous study shows that a personal

with strong beliefs in the benefits of ownership are more likely to expect to buy own asset in the future compare to those without such belief.

H4: There is a association between belief and decision to purchase.

## Demographic

Demographics describe a population in terms of size, structure and distribution. Size involves the number of people in the society while structure describes the society concerning age, income, education and occupation. Distribution includes physical location of that group of people such as rural, suburban and urban location. (Hawkins, Best & Coney, 2004). The demographic data is considered reasonable predictors of buyer behavior and other marketing activities. (Pol, 1991) In addition, demographic clearly influences consumption behavior both indirectly and as by individual influencing factors such as personal value and decision style. (Hawkins, Best & Coney, 2001). According to previous studies, the study on what drive consumer's intention to own or rent. The result shows that

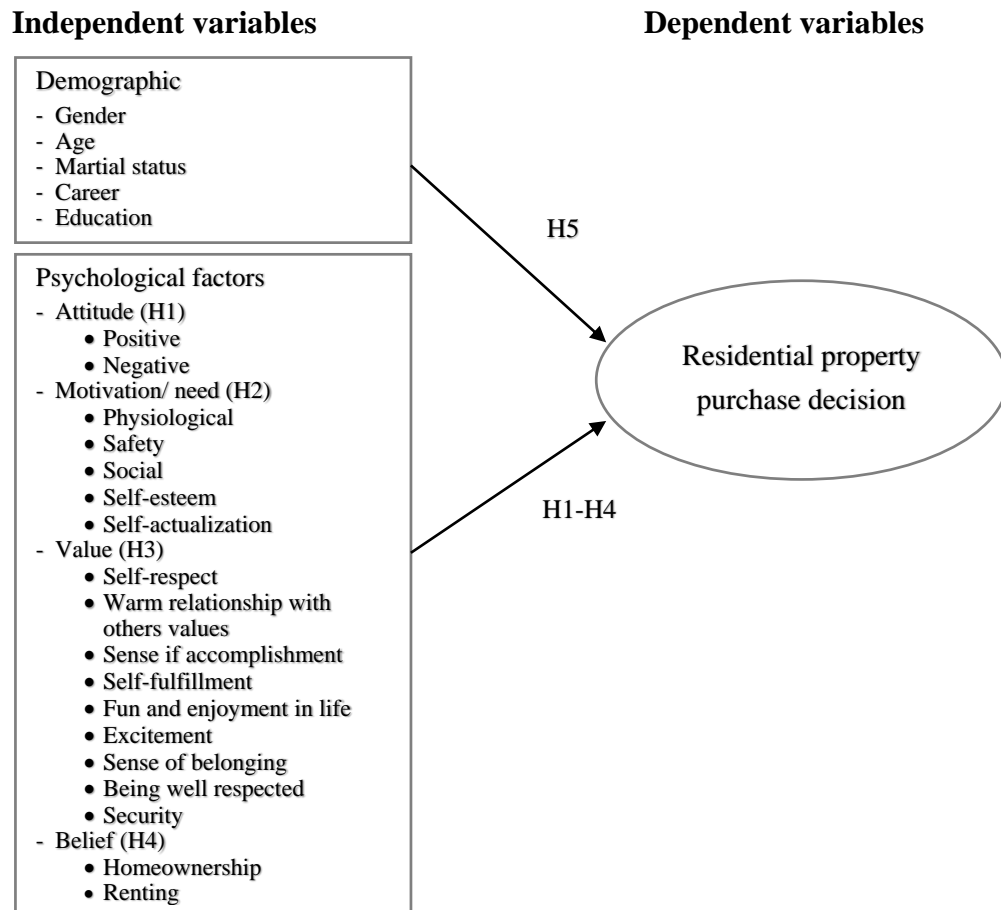
demographic (income, age, marital status, employment status) is the primary driver towards intention to purchase a house for current homeowner. Their housing choice preference is driven more by thier demographics, specifically income and employment status. Conversely, demographic factor is less important for those who is looking for a house. (Huang, 2012)

H5: There is an association between demographic variables and decision to purchase a residential property.

## Psychographic and demographic profiles

Psychographic factors and demographic profiles are highly complimentary approached that work best when they are applied together. The knowledge from both approaches is provided strong and insightful information about target market. For example, it helps the advertiser/marketer to know who is their audience, what should the advertisement say and where should they say. (Schiffman & Kanuk, 2007, p.62)

## Conceptual framework of psychological model of residential property purchase decision in Thailand



## Research methodology

The quantitative survey was used to gather data and translated into a useful information and knowledge. The total sample size was 178 respondents from convenience sampling method. Considering 90% confidence level in sampling from population of Yamane (1967), sample size shall be more than 100 respondents. Thus, 178 respondents are considered sufficient and good representation of population. The analysis

will conduct mainly on two groups of people for those who wanted to buy new residential property versus those who did not want to buy soon and further analyze its statistical to identify significance differences between these two groups in terms of their psychological factors. Several statistical techniques were employed to test the hypothesis. The descriptive statistics were used to describe demographic profiles of the respondents. Independent t-test was employed to identify significance differences between

those who wanted to purchase a residential property versus those who did not want to purchase soon in terms of their attitudes, motivations, and personal value. Additionally, chi-square test was used to test relationship between beliefs, demographic profiles and decision to purchase a residential property. All of the significance tests in this study were performed at 90% and 95% confidence level. Five hypotheses have been proposed and tested.

## Research findings

### Descriptive analysis

The survey reports the demographic profile of the respondents in this survey. Total sample size was  $n=178$ . The majority of the participants were female (70%), aged between 20-30 years (63%), single (76%), studied or finished bachelor degree (53%), most of them worked as employees (57%), had monthly personal income 24,001-35,000 baht (30%) and had monthly household income 85,001-160,000 baht (29%).

The question whether the respondent want or likely to purchase a residential property soon was asked in order to categorize the respondents into two groups which are first who wanted to buy new residential property versus second those who did not want to buy soon before comparing its significance differences among them. The result shows the minor group of 56 respondents (33%) of the sample size was not want to purchase a new residential property soon while 122 respondents (67%) wanted to purchase a new residential property.

### A residential property purchase decision

#### Reason to purchase a residential property

Only the respondents who are willing to purchase a residential property were eligible to answer this question to observe their reason to purchase. More than half of the respondents (55%) were looking for a new residential property because they want to own it by themselves. 16% were searching for a residential property to get a bigger living space. 14% and 12% were giving the reason of family expansion and investment purpose accordingly. However, only 3% were mentioning about relocation.

#### Reason for postponing purchase decision

The majority of the respondents that accounted for 37% were postponing their decision due to financial condition. 21 % of the respondents were unable to find a good choice. 20% of the respondents were postponing their decision due to economy condition. 13% of the respondents were mentioned about interest rate. Only 7% were mentioned that influencers such as friends or families were stopped them from making a purchase decision. And only 2% were derived from other reasons.

### Reliability analysis

Cronbach's alpha was used to measure the internal consistency of the questionnaires. The reliable of 0.830 and all factors in the questionnaire are greater than 7, which explain that this set of questions is reliable to be used and tested in the research.

## Independent t-test analysis

### Independent t-test on attitudes

**Table 1** Independent t-test on attitudes

Items	Group	Mean	t	p-value
<b>Positive attitudes</b>	Buy	4.18	1.516	0.133
	Not buy	3.97		
<b>Negative attitudes</b>	Buy	3.16	0.077	0.939
	Not buy	3.15		

Table 1 reports the mean responses of positive and negative attitudes towards buying new residential property between those who wanted to buy versus those who did not want to buy. The list of statements were set and grouped into the positive and negative attitude based on the literatures. For example, “Buying a house is reasonable” represents the positive attitude, whereas “Buying a house is too much responsibility involve.” represents the negative attitude. The respondents were

rated in scale according to their level of agreement on each statement. The results show that the differences in attitude scores between these groups were not statistically significant at 95% confidence level as p-values were greater than 0.05. Therefore, finding was not consistent with hypothesis1, which could conclude that there is no difference in terms of attitude between those who wanted to purchase a residential property versus those who did not.

### Independent t-test on motivations

**Table 2** Independent t-test on motivations

Items	Group	Mean	t	p-value
I purchase a house or want to own a house because I want a place to stay. (Physiological need)	Buy	4.15	1.039	0.301
	Not buy	3.93		
I purchase a house or want to own a house because I want a stable place. It means security and nobody can take from me. (Safety need)	Buy	4.28	-0.728	0.468
	Not buy	4.41		
I purchase a house or want to own a house because it is one step closer to the complete family. (Love and belonging need)	Buy	4.33	-0.066	0.948
	Not buy	4.34		

I purchase a house or want to own a house because I feel like it is a milestone that everyone should reach for and it signifies that I am successful in life. (Self-esteem need)	Buy	3.99	2.199	0.030*
	Not buy	3.38		
I purchase a house or want to own a house because I want to be able to earn extra income and owning a real estate property is an active investment that would give me that. (Self-actualization need)	Buy	3.90	4.578	0.000*
	Not buy	2.82		

Table 2 also reports the independent t-test results comparing the motivation scores between the two groups. Regarding the test statistics, the higher mean of those who wanting to buy a residential property revealed that this group of people had statistically significantly greater motivation factors in terms of **self-esteem need** ( $t = 2.199$ ,  $p\text{-value} = 0.030$ ) and **Self-actualization need** ( $t = 4.578$ ,

$p\text{-value} = 0.000$ ) than the other group at 95% confidence level. This finding was consistent with hypothesis2 thus it could conclude that there is difference in terms of motivation between those who wanted to purchase a residential property versus those who did not especially in terms of self-esteem need and self-actualization need.

## Independent t-test on personal values

**Table 3** Independent t-test on personal values

Item	Group	Mean	t	p-value
“You believe that buying a house make you become a part of the family” ( <b>Sense of belonging</b> )	Buy	3.38	2.384	0.001**
	Not buy	2.69		
“Buying a house is new and exciting to you” ( <b>Excitement</b> )	Buy	3.68	3.132	0.001**
	Not buy	2.83		
“Buying a house helps you to build closeness within family or your loved ones.” ( <b>Warm relationship with others</b> )	Buy	3.58	1.563	0.121
	Not buy	3.17		
“To you, buying a house is a way to get peace of mind and able to live the way you want” ( <b>Self-fulfillment</b> )	Buy	4.13	3.329	0.001**
	Not buy	3.34		
“Buying or owning a house is a way to earn recognition from others” ( <b>Being well-respect</b> )	Buy	3.18	1.662	0.100
	Not buy	2.76		
“You think it obligated to have a your own house” ( <b>Security</b> )	Buy	3.85	2.630	0.010**
	Not buy	3.24		
“You feel proud of yourself when you can buy your own house” ( <b>Self-respect</b> )	Buy	4.43	2.631	0.010**
	Not buy	3.90		

“By purchasing house, your house represent that you are successful.” ( <b>Sense of accomplishment</b> )	Buy	4.00	1.986	0.050**
	Not buy	3.52		
“Buying a house helps to create pleasure, fun and enjoyment in life” ( <b>Fun and enjoyment in life</b> )	Buy	3.78	3.281	0.001**
	Not buy	2.97		

Table 3 also reports the independent t-test results comparing the personal value scores between the two groups. According to the test statistics, the higher mean of those who wanting to buy a residential property revealed that this group of people had statistically significantly greater personal value in terms of **Sense of belonging** (t = 2.384, p-vale = 0.001), **Excitement** (t = 3.132, p-vale = 0.001), **Self-fulfillment** (t = 3.329, p-vale = 0.001), **Security** (t = 2.630, p-vale = 0.010), **Self-respect** (t = 2.631, p-vale = 0.010), **Sense of accomplishment** (t = 1.986, p-vale =

0.050), **Fun and enjoyment in life** (t = 3.281, p-vale = 0.001) than the other group at 95% confidence level. This finding was consistent with hypothesis3 so it could conclude that there is difference in terms of personal value between those who wanted to purchase a residential property versus those who did not especially in terms of sense of belonging value, excitement value, self-fulfillment value, security value, self-respect value, sense of accomplishment value and fun and enjoyment in life value.

## Chi-square analysis

Chi-square statistic assists the researcher to determine whether a systematic association exists between the two variables. (Malhotra & Birks, 2006)

### Chi-square tests between belief and decision to purchase a residential property

**Table 4** Chi-square tests between belief and decision to purchase a residential property

Item	Chi-square	p-value
“Owning makes more sense because you’re protected against rent increases and owning is a good investment over the long term”	0.717	0.397
“Renting makes more sense because it protects you against house price declines and is actually a better deal than owning,”	0.067	0.796
“Owning a house is a financial suicide. It ties you with a big amount of debt for a long period of time”	0.756	0.385

Table 4 reports the chi-square statistics and its corresponding p-value to test whether there was statistically significant

association between belief and decision to purchase. The result reveals that there is no relationship between belief and

intention to purchase new house because the p-values were greater than 0.05 at 95% confidence level. This result was not consistent with the hypothesis 4. Therefore, it could conclude that there is no association between belief and

decision to purchase. When a person either hold a belief that owning a residential property is good or renting a residential property is better. It does not lead to their decision to purchase.

### Chi-square were employed to determine the association between demographic variables and decision to purchase a residential property

**Table 5** Summary of chi-square tests between demographic variables and decision to purchase a residential property

Intention to buy new houses	Chi-square	p-value
Gender	1.004	.316
Age	2.277	.320
Marital status	3.598	.058*
Education level	3.714	.294
Occupation	3.237	.519
Personal income	3.598	.731
Household income	6.333	.387

Table 5 reports the chi-square statistics and its corresponding p-value to test whether there was statistically significant association between demographic profile and decision to purchase a residential property. The only demographic variable that revealed significant relationship was 'marital status' (chi-square = 3.598, p-value = 0.058) and was significant at 90% confidence level.

### Discussion of the findings

This study intends to evaluate how an individual think of owning a residential property regardless of external stimuli such

as marketing mix, financial condition or home attribute. Firstly, the analysis reveals two out of four psychological factors are significant, which can illustrate the real reason why people want to purchase a residential property. Those mentioned factors are motivation and personal value. Interestingly, those who want to purchase a house and those who did not carries dissimilar motivation and personal value in life. It explains that purchasing a residential property is not a common product that everyone aims to purchase but only persons that hold certain motivation factors or certain personal values are likely to purchase. It



is unlike the conventional thinking that everyone wants to purchase a residential property to satisfy his or her basic need. At this stage, people are looking for more than that.

**Attitude factor**, the result reveals that there is no difference in terms of attitude between those who wanted to purchase a residential property versus those who did not. The positive and negative attitudes do not impact their purchase decision. Positive or negative attitude cannot use to predict a person's intention to purchase a residential property. The result is consistent with the previous study that individual's negative attitude might develop only a short period of time. It depends on situation. For example, during the financial crisis, people might develop a negative attitude and develop a positive one once the crisis is over. (Rohe, Boshamer & Lindblad, 2013)

**Motivation factor**, the research reveals that, those who wanted to purchase a residential property contained different motivation factors in terms of self-esteem need and self-actualization need. The result is not consistent with the previous study in Hong Kong, which states the majority respondents purchased a residential property to satisfy their basic need. (Tang & Freda, 1996) However, the research in Hong Kong was conducted in 1996, which is too old. In addition, Hong Kong faces the problem of limited living spaces. Thus, the major need was just to be able to find a shelter to fit all family members. Surprisingly, supported by the statistic from this study, in Bangkok they think that to purchase a residential property is a milestone that they would like to achieve in life and it represents their success. Moreover, they aim to purchase for a long-

term investment to grow their wealth. Similarly, the Thailand property trend in 2016 is expected to shift toward a super luxury market. They are looking for a residential property that fulfill their successful life and to show others. (Benjarong, 2016) This could be the changing in value within Thai people at the present. We need to admit that the new generations value money over other intrinsic factors. They care about self-image and search for social acceptance. The fact can be seen from the increasing in luxury product consumption and personal debt from credit card. The absorption of the western culture also plays an essential role in Thailand society due to social network and globalization. We are more independent and always seeking to improve our life. The salary earners start to invest in condominium or purchase a second home for investment. The use of social network also creates blended society and skewed self-image. We post pictures of us looking perfect. All these factors build our value and motivate us to purchase a particular product that can help us to satisfy those needs. This paper has shown that a residential property has become one of the products that help the customer to satisfy their self-esteem and self-actualization need as well.

**Personal values**, This paper shows that those who wanted to purchase a residential property contained different personal value factors in terms of sense of belonging value, excitement value, self-fulfillment value, security value, self-respect value, sense of accomplishment value and fun and enjoyment in life value. For example, they think that buying a residential property helps to represent their success (sense of accomplishment) and it makes them proud

(self-respect). Personal value refers to a person life goal. Seven personal values out of nine were considered important for the consumer to purchase a residential property. Surprisingly, warm relationship with others value and being well-respect value were not important to them. So, the result explains that in their point of view owning or purchasing a residential property does not help to improve a family relationship. This result is actually quite consistent with the motivation factors that the customer are more concerning about themselves over the others. When it comes to purchase decision, they do not consider about building closeness within family. This fact might somehow interpret the lesser family closeness within the urbanize society. The changing in culture and lifestyle leads to changing in purchase decision. The result was consistent with the previous study in the US; the respondents intended to purchase a residential property to expand their sense of personal accomplishment and social status. The reason to improve relationship with others was not mentioned. (Rohe, Boshamer & Lindblad, 2013)

Indeed, the result of motivation factor and personal value factor are pretty much the same direction. The customers are no longer looking for just a quality residential property to stay but they want to have a place to represent their success or status in the society. The family is important but when it comes to the purchase decision they tend to emphasis more in the interest of themselves.

**Belief factor,** the result shows that there is no association between belief and decision to purchase. The research was evaluated the belief in benefit of owning

or renting. When it comes to decision making to purchase a residential property, the belief itself was not strong enough to influence a person to buy or not to buy a property. Realizing the benefit of either owning or renting does not imply to purchase decision. This was not consistent with the previous research in the U.S. Huang (2012) observes that renters' belief in homeownership play a major role in decision-making. It even forms an ownership optimistic. However, it can be explained that many Americans hold a mindset of believing in the benefit of owning a house so called an American dream. Most Americans want to own their own home. This belief seems general for them. The belief becomes norm and so results in that pervious research that believes in homeownership plays a major role in decision-making for them. Unlike, in Bangkok, the belief is not as strong as the American. Therefore, it results in dissimilar outcome eventually.

**Demographic factor,** the only noticeable relationship between demographic profiles and decision to purchase a residential property were the consumer change in marital status. The marital status can be used to explain the family life cycle of a person. Needs have changed according to different requirement in life. When the customers are changing their life stage from single to married, the need of new residential property arise due to family expansion. Interestingly, the result was not consistent with previous studies in Malaysia and Jordan. The marital status or family life cycle shows the lowest importance in decision making to purchase a residential property in those countries. In Jordan, the marital status and education were not significant difference in the respondents

answer. Jordan knows as one of the world's lowest rates of female participation in the workforce. (Gender Equality and Female Empowerment, 2016). They tend to concern less about purchase a residential property for themselves or family. Therefore, the marital status seems to have less importance to identify intention to purchase. Furthermore, in Malaysia the marital status was not as important as the financial factor due to higher cost of residential property. Referring to Poo (2015) states the remarkable problem of severely unaffordable housing price in Malaysia especially in the major city like Kuala Lumpur and Penang. Unlike Thailand, the survey were conducted mainly in Bangkok and metropolitan area where people have distinctive lifestyle compared to those who living in poverty. There are still affordable properties available and the shifting in lifestyle of people can explain why the result was not consistent with other countries. In this new era, the smaller family size and the increased smaller condominium space have proved that they tend to move out and live by themselves more. Customers choose a residential property that they can afford in terms of financial and also appropriate space for themselves. Then, they might decide to buy the new one after getting married or having baby to expend the family size later. This is why marital status matters to the intention to purchase a residential property.

Psychological factors are interrelated and largely dealing with culture that a person learn and develop understanding and perception from the surrounded environment overtime. Whenever changes in culture or environment around them have occurred, it will eventually impact people in the society.

## Conclusion

### Research conclusion

The property section once has been contributing large proportion in the world economic expansion and also in Thailand. It is an essential sector that can be both causing country wealth and crises. Currently, the increasingly unsold units have recorded in Thailand property market. Most of the studies were conducting on how external factor such as marketing mix, influencers or home attribute impact purchase decision. In fact, there are more variable involved. The internal or psychological factors are overlooked.

This research aims to study the influencing factor on purchase decision in the other perspective, which is the psychological factor i.e. attitude, motivation, personal value and belief. This perhaps derives to the different useful strategy. As the decision to purchase a residential property considers as a lifetime investment. The individual might tie themselves to the mortgage for more than 30 years. It would be better if the provider understand their real desire or goal to purchase a particular product, help them to make a better choice and satisfy their essential need.

The survey was used to gather data and translated into a useful information and knowledge. The total sample size was 178 respondents. Several statistical techniques were employed to test the hypothesis. The descriptive statistics were used to describe demographic profiles of the respondents, their behaviors, and their attitudes, motivations, and personal values to buy a residential property. Independent t-test was employed to identify significance

differences between those who wanted to purchase a residential property versus those who did not want to purchase soon. Additionally, chi-square test was used to test relationship between demographic profiles and decision to purchase a residential property. All of the

significance tests in this chapter were performed at 90% and 95% confidence level. Five hypotheses have been proposed and tested. Table 6 shows the list of hypothesis with its result after data analysis process.

**Table 6** The list of hypothesis with its result

Hypothesis	Result
H1 There is difference in terms of attitude between those who wanted to purchase a residential property versus those who did not.	Rejected
H2 There is difference in terms of motivation between those who wanted to purchase a residential property versus those who did not.	Accepted
H3 There is difference in terms of personal value between those who wanted to purchase a residential property versus those who did not.	Accepted
H4 There is a association between belief and decision to purchase.	Rejected
H5 There is an association between demographic variables and decision to purchase a residential property.	Accepted

The results show that there are two main psychological factors that impact individual purchase decision which is motivations and personal values. Motivation variables, those who wanted to purchase a residential property contained different motivation factors in terms of self-esteem need and self-actualization need. The motivation was no longer just to satisfy their basic needs. They want to purchase a residential property to represent their successfulness and also want to continuous success by growing their wealth. Personal value variables, those who wanted to purchase a residential property are usually consider this value in their life; sense of belonging value, excitement value, self-fulfillment value, security value, self-respect value, sense of accomplishment value and fun and enjoyment. They think buying a

residential property make them become a part of the family (sense of belonging), Buying a house is need and exciting (excitement), Buying a house allow them to live their own way (self-fulfillment), Buying a house is obligated to do and provide long-term security (security). Buying a house makes them proud (Self-respected), Buying a house represents their successful life (Self-accomplishment), Buying a house helps them to create pleasure and enjoyment in life (Fun and enjoyment). Surprisingly, warm relationship with others value and being well-respect value were not important to them.

The respondents were focus mainly on their self-interest rather then strengthen relationship with others. We need to admit that the new generations value money over others. They care about self-

image and search for social acceptance. This research was conducted in Bangkok so it basically differs from the suburban people. The absorption of the western culture also plays an essential role in society in Thailand due to social network and globalization. We learn to become more independent and always seeking to improve our life. The use of social network also creates blended society and skewed self-image. All these factors build our value and motivate us to purchase a particular product that can help us to satisfy those needs. This paper has shown that a residential property has become one of the products that help the customer to satisfy their self-esteem and self-actualization need as well. Lastly, the attitude and belief variables were found no significant relationship with the residential property purchase decision.

In addition, the marital status is the only demographic profile that has a relationship with decision to purchase a residential property, as evidenced by the survey that the second highest reason for purchasing a residential property was the family expansion purpose. Therefore, the changing in marital status reflected demand. Although, Thailand has a collectivism culture that we are living in a big family with parent, in this new era the smaller family size and the increased smaller condominium space have proved that they tend to move out and live by themselves more. They buy a residential property that fit their present lifestyle and change to a bigger one when they expand their family or reach a later stage of life.

## Implications

The research provides an understanding of customer insights and motive

influencing their purchasing decisions at psychological factors. The paper can serve as a guideline for property developers develop both product and marketing strategy to achieve business goals with the provided customer insights. To be competitive in the market, they should try to satisfy the customer into their intrinsic level. Yet the person's psychological factors are hard to change, the marketer should understand them and try to develop a product that satisfy them and influence them with the right message that matched their value. The customers are no longer looking for just only a quality residential property to stay but they want to have a place that represents their success within the society. The family is important but when comes to purchase decision they tend to emphasis more in interest of themselves.

For property development firms, concept development plays a vital role that will have significant impact to customers' purchase intention. Clear concept representing motivations and personal values of targeted customers shall be thoroughly developed. Then, marketing communication by sales & marketing team shall ensure this concept is well conveyed to the potential customers. The developer should invest in branding, brand concept and clear positioning that allow customer to picture themselves when they are living in the house from that particular brand. The image of the brand or a product represents the image of the buyer.

Product development and product value, since the buyer is looking for a residential property that represents their success and creates sense of accomplishment, the developer should not only focus on

function but also the product appearance such as interior and exterior design. Furthermore, the value that developer can add into their product are investment benefit in long-term to satisfy the customer's self-actualization need. These values shall be emphasis by sales team during customers' contact with the company.

Marketing communication, this is very useful also for the property provider to custom their advertising message to attack the customer personal value. Most people set their personal value as their life goal to achieve. When the property provider can tell them how your product or residential property can help them to achieve their goal. It is more likely to influence their purchase decision. However, the mixture of other marketing mix components and activities should be addressed before sum up with the right strategy. Moreover, the developer can approach the new market that is those who are renting a house at the present. The research shown that the belief in benefit of renting or owning does not impact their purchase decision. Those who preferred to rent now do not mean they will rent forever. In additional, those who have negative attitude towards owning a house or think owning a house is a bad idea now, do not mean that they do not want to buy one in the future.

Lastly, the changing in marital status reflects the customer purchase decision. When people are moving from single to married, they tend to look for a new residential property to expand their

family. The sales and marketing team of developer can view this as an opportunity to create new target segment. People at different life stage might require different product features. The provider can target single people or retirement people with specific facility or architect design.

## Limitations

Limitation of this research is that psychological factor might interpret purchase decision and intention. However, the purchase decision of a residential property is tied heavily with the financial ability of that person which were not take into consideration in this research. (Rohe, Boshamer & Lindblad, 2013)

## Future research

For future research, more variables should involve in the research to compare and see the relationship between the internal or psychological factors and external factors in order to gain more insightful information that will enable them to improve their strategies for attracting more consumers.

Lastly, the future research can also conduct to test these related values or needs on the advertising message whether they are really capable of influencing consumer intention. This could be a useful guideline for the marketer or any related parties to efficiently spend their marketing or media budget.



## References

- Abdullah, L., Jumadi, N., Nor, I. & Arshad, H. (2012). *First-time Home Buyers: Factors Influencing Decision Making*. University Teknologi MARA, Malaysia.
- Al-Nahdi, T., Nyakwende, E., Banamah, A. & Jappie, A. (2015). *Factors Affecting Purchasing Behavior in Real Estate in Saudi Arabia*. Al-Faisal University, Saudi Arabia.
- American Psychological Association. (2016). *Socioeconomic Status*. Retrieved from <http://www.apa.org/pi/ses/resources/publications/minorities.aspx>.
- Aron, O. (2001). "An Exploratory Study of the Influence of Personal Values on Purchase Decision & Advertising Involvement", in *AP - Asia Pacific Advances in Consumer Research*. Volume 4, eds. Paula M. Tidwell and Thomas E. Muller, Provo, UT: Association for Consumer Research, Pages: 67-72.
- Chedsadawarangkul, S., Waweewanich, T. & Saransom, D. (2010). *The Factors Which Affected The Decision Process Making to Buy Townhouses of Wangthong Group (Public) Company Limited*. Rajabhat University Valailongkorn, Thailand.
- Decision Making Confidence. (2016). *Personal values and decision-making clearly explained*. Retrieved from <http://www.decision-making-confidence.com/personal-values-and-decision-making.html>.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers. pp.1.
- Furaiji, F., Łatuszyńska, M. & Wawrzyniak, A. (2012). *An Empirical Study of the Factors Influencing Consumer Behavior in the Electric Appliances Market*. Basra University, Iraq.
- Gallo, M. (2012). *Do Values Influence Strategic Decision Making?* Retrieved from <http://blog.valerisys.com/tilt/do-values-influence-strategic-decision-making/>
- Global Property Guide. (2015). *Bangkok's condo index up 14%, despite the politics*. Retrieved from <http://www.globalpropertyguide.com/Asia/Thailand/Price-History>.
- Hall, A. (2012). *To Succeed as an Entrepreneur, Know Your Customer*. Retrieved from <http://www.forbes.com/sites/alanhall/2012/06/14/to-succeed-as-an-entrepreneur-know-your-customer/#e9fd662755e6>
- Hawkins, D. I., Coney, K. A., & Best, R. J. (2004). *Consumer behavior building marketing strategy*. Boston: McGraw-Hill/Irwin.
- Hoyer, W. D., MacInnis, D. J., & Pieters, R. (2012). *Consumer behavior*. Mason, OH: South-Western, Cengage Learning.
- Huang, L. (2012). Own-Rent Analysis. *What Drives Consumers' Intentions to Own or Rent*, 1-6
- Independent T-Test for Two Samples. (2013). Retrieved from <https://statistics.laerd.com/statistical-guides/independent-t-test-statistical-guide.php>



- Israel, G. (n.d.). *Determining Sample Size*. Retrieved from <https://edis.ifas.ufl.edu/pdffiles/PD/PD00600.pdf>.
- Kahle, L., Beatty, S. & Homer, P. (1986). Alternative Measurement Approachs to Consumer Values: The List of Values (LOV) and Values and Life Style (VALS), *The Journal of Consumer Research*, 13(3), 405-409.
- Kinnard, W. N. (1968). Reducing uncertainty in real estate decisions. *The Real Estate Appraiser*, 34(7), 10-16.
- Kotler, P. (1997). *Marketing management: Analysis, planning, implementation, and control*. Upper Saddle River, NJ: Prentice Hall.
- Kotler, P., & Keller, K. L. (2009). *Marketing management*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Leshetz, M. (2012). *Hierarchy of a Home Self-Actualization for House & Owner* | *livebetter Magazine*. Retrieved from <http://livebettermagazine.com/article/hierarchy-of-a-home-self-actualization-for-house-owner/>.
- Levi, DS., Murphy, LD. & Lee, C. (2008). Influences and Emotions: Exploring family decision-making processes when buying a house. *Journal of Housing Study*, 1-10. Retrieved from <https://researchspace.auckland.ac.nz/handle/2292/13496>.
- Malhotra, N. & Birks, D. (2006). *Marketing Research An Applied Approach* (2<sup>nd</sup> ed.). England, Pearson Education Limited.
- Myra, S. (2016). *The Three Real Reasons People Buy Property*. Retrieved from <http://www.dailymail.co.uk/property/article-3420607/The-three-real-reasons-people-buy-property.html>.
- Paha, K. (2016). *Low-rise housing in Bangkok is in big demand*. Retrieved from <http://www.ddproperty.com/en/property-news/2016/1/115524/low-rise-housing-in-bangkok-is-in-big-demand>.
- Paha, K. (2016). *Steady growth for Bangkok property market*. Retrieved from <http://www.ddproperty.com/en/property-news/2016/3/118819/steady-growth-for-bangkok-property-market>.
- Patel, N., & Puri, R. (n.d.). *The Complete Guide to Understand Customer Psychology – Chapter 1*. Retrieved from <https://www.quicksprout.com/the-complete-guide-to-understand-customer-psychology-chapter-1/>.
- Perreau, F. (2016). The Consumer Factor Consumer Insights, Market Research, Consumer Behavior & Neuromarketing. Retrieved from <http://theconsumerfactor.com/en/4-factors-influencing-consumer-behavior/>.
- Pol, L.G. (1991). Demographic contributions to marketing: An assessment. *Journal of the Academy of Marketing Science*, 19 (1), 53-59.
- Poo, C. (2015). Houses in KL too expensive. Retrieved from <http://www.thestar.com.my/business/business-news/2015/08/25/houses-in-kl-too-expensive/>.





- Sangkakoon, P., Ngarmyarn, A., & Panichpathom, S. (2014). *The Influence of Group References in Home Purchase Intention in Thailand*. Thammasat University, Thailand.
- Sanichwannakul, S. (2009). *Factors Affecting Consumers' Decision Making on Buying Condominium Among People of Different Genders, Marital Status and Incomes*. Thammasat University, Thailand.
- Schieffer, R. (2005). *Ten key customer insights: Unlocking the mind of the market*. Mason, OH: Thomson. pp. 51.
- Shciffman. L & Kanuk. L (2007). *Consumer Behavior* (9<sup>th</sup> ed.). New Jersey: Pearson Prentice Hall. pp.83.
- Sheth, J. N., & Mittal, B. (2004). *Customer behavior: A managerial perspective*. Mason, OH: Thomson/South-Western.
- Tang & Freda, S. (1996). *A high motivation to own: a case study of home ownership in Hong Kong and its social implications in the nineties*. The University of Hong Kong, Hong Kong.
- Thailand Market Research Society (2010). *Standardize of Socio-Economic Status (SES) Classification Thailand Year 2010*. Retrieved from <http://www.slideshare.net/sundaesolutions/ses-thailand-2010>.
- Tintin, R. (2016). *4 major factors that influence consumer buyer bahaviour*. Retrieved from <http://www.superprofesseur.com/19.html>.
- USAID. (2016). *Gender Equality and Female Empowerment Jordan U.S. Agency for International Development*. Retrieved from <https://www.usaid.gov/jordan/gender-equality-womens-empowerment>
- Vilcekova, L. & Sabo, M. (2013). *The influence of demographic factors on attitudes toward brands and brand buying behavior of Slovak consumers*. Comenius University, Slovakia.
- Wang, J., Piron, F. & Xuan, M. (2001). "Faring One Thousand Miles to Give Goose Feathers: Gift Giving in the People=S Republic of China", in *NA – Advances in Consumer Research Volume 28*, eds. 58-63.
- Yamane, T. (1967). *Statistics: An Introductory Analysis*, 2nd Edition, New York: Harper and Row.
- Yu, F & Thongpan, N (2015). *Bubble trouble*. Retrieved July 26, 2016, from <http://property.bangkokpost.com/news/599640/bubble-trouble>



# **A Senge's model on the practical domain for developing team learning skills**

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## **Abstract**

For human resource managers that want to foster a team learning environment that promotes a way for members to rehearse, experiment, assess, and reflect the practice has to see how the tools can be truly integrated. According to Senge, team learning is a team skill that requires practice fields as a concept for team members to practice together so that they can develop their collective learning skills. This study attempts to extend the work of Senge's theory of a practical field with in-depth information so that the model can be utilized by human resource manager for supporting the discipline of team learning. Literature works are done to revise the four practical precepts. The refined model is applied as a case study methodology on an organization resembling the conceptual procedure. An analysis is provided for developing the four team learning skills, along with a discussion and conclusion at the end of the study.

**Keywords:** Assessment, Collaboration, Dialogue, Experimenting, Innovation, Performance, Practice, Rehearsing, Reflecting, Team Learning,



## Introduction

For human resource managers that want to foster a team learning environment that promotes a way for members to rehearse, experiment, assess, and reflect the practice has to see how the tools can be truly integrated in order to gain a positive impact, otherwise the learning itself can become utterly redundant and difficult to maintain on a consistent basis. In Peter Senge's *"The Fifth Discipline: The Art & Practice of the Learning Organization"*, he analyzed that team learning is a team skill that requires 'practice fields' as a concept for team members to *practice together so that they can develop their collective learning skills* (Senge, p. 258, 2006). According to Senge, *team skills are more challenging to develop than individual skills*, therefore it's imperative that 'practice fields' need to be established so that colleagues are engaged in an activity that is directed towards *developing their collective learning skills*. He states that the total absence of meaningful "practice" is probably the predominant factor that prevents associates from evolving into an effective learning group. Drawing upon the work from Donald Schon, Senge highlights the idea of practice as a tool for making a diagnosis to see how the facts come to reveal themselves and reconfiguring them to serve the greatest benefit. In addition, he sees practice as a form which allows the freedom to experiment with a phenomenon so that the team can study the phases of action and grasp the consequences of particular actions when they're taken. By manipulating with the actions, Senge believes that the *changes in the environment can be eliminated and complexity can be simplified by*

*uncoupling variables that are interlocked in reality*. Senge applies the analogy of a basketball team and a symphony orchestra to make the assertion of a practice field by saying the following: *"They vary the pace of the action – by slowing down the music, by running plays in slow motion. They isolate components and simplify the complexity – by playing individual sections, by running plays without a competitor. They reverse what is, in the real performance, irreversible – they replay the same section over and over, they rerun the play over and over."* Despite advanced technology and having access to intelligence, Senge believes that this style of practice is lacking for a team to truly become the ideal entity that collectively and collaboratively learns together in permanence within the organization. Senge provided four ideas for his model of a practice field. The first is rehearsal. Under this notion team members can get a better feel of understanding with the abstract, engaging in intellectual debate of ideas, and learn each others' rational thinking. Second is experimentation. Sometimes the team is forced to make a decision on specific situations that is under great time pressure. Experimentation can help make the decision process become a lot more professional. Third is assessment. With an assessment team members are given the opportunity to form their reasons of different decisions. The fourth is reflection. Reflection enables associates to contemplate as a team and ponder on how they might arrive together at making better decisions.

Since the work on the practice field has been written, there has been a scarce source of literary studies that have contributed to the theory; particularly for

the human resources managers to obtain a full understanding on how it should be actually implemented. In this paper, the author attempts to provide a theoretical exposition of Peter Senge's model on the practical domain for developing team learning skills so that human resource managers can get a better idea in designing a team learning environment.

The purpose of this work is to present the idea of 'Senge's discussion on having a practice field' with in-depth information so that human resource manager applies the model for supporting the discipline of team learning. The initiative is to make a contribution to a better understanding of the practical field (which consists of the four ideas) that is related to team learning. The research poses the following four questions to be focused upon:

*"How does a team learn when the course is in the form of rehearsing?"*

*"How does a team learn when the course is on having to do an experiment?"*

*"How does a team learn when the course is in making an assessment?"*

*"How does a team learn when the course is on reflecting?"*

The conjecture of Senge's practical domain is examined in a case study format on a documentary series about pit crews who are seen as playing an important role in helping their driver win a racing competition. First, the study begins with a literary illustration on the four ideas that were mentioned in Senge's model of the practice field. Second, the refined model is applied as a case study methodology on an organization that is engaged in an event

which resembles the concept of the procedure. Third, an analysis of Senge's model for developing team learning skills through the perception of the practical domain is offered. Finally, the author provides a discussion and conclusion for human resource manager's application of Senge's practical domain.

## **The practical domain of team learning through Peter Senge's perspective**

This part of the section showcases the literary details of the four elements that make up the practical domain of team learning. Each of the elements had been theoretically reviewed from scholars who have done an in-depth work with the meaning and how it has been utilized in a team setting. The work incorporates the ideas and concepts in order to provide a greater detail for the human resource manager in designing the application of a team learning environment.

### **Rehearsing**

Rehearsing is about measuring the extent of alignment to see how firm the team is in executing for actual performance in the next event (Kontogiannis and Malakis, 2009). Team leaders or members provide the rating for the ability to execute as a team. Rehearsing provides an opportunity to be engaged in the presence of others by analyzing the movements and coordinating with them (Välikangas and Romme, 2012). In



addition, individuals observe the capabilities of the team and see that if these abilities coincide with the mission or intended outcome (Lloyd, 2009). While engaging in the rehearsal the opportunity presents itself for team mates to evaluate the chosen process and principles that are intertwined for performance as well as to make critical comments (Foverskov and Binder, 2009). As a learning process for a team, the extent of being innovative or creative in performance has to be factored in with the immediate environment, the social environment, and the organizational context in order to realize how much there is to discover before being affirmed to the details (Dobny, 2011). In an example of rehearsing, members of the legendary rock and roll group “KISS” set their sights on being the hottest band in the world by constantly working hard on finding the right set of rhythm and vocals for a song that their audience would appreciate listening to. With the song already a smash hit with their fans, members of KISS would formulate in the studios on ways they would perform the song live on stage so that the concert goers can truly say that this was one of the most memorable events in their lives. With the song as the main selling point, the band would use their costume/makeup, pyro-techniques and smokes, and board lights as added props to spice up the experience of listening to a live song. From timing to ensure that their musical performance is flawless, to getting ideas erupted during the jam session, to having cues that call for certain display of action while making sure that they are directing the raw energy towards the crowd, the rehearsals made KISS developed the mastery on managing stage performance. Not only did the rehearsals provide the

band members a solid confidence in playing the perfect song and making it entertaining for their fans but it also allowed them to seek for ways to doing it a lot better when the next occasion comes (Sharp, Stanley, and Simmons, 2013).

## Experimenting

Doing an experiment as a team means validating or rejecting the stated hypothesis so that decisions can be made whether to move forward with another practical method or to rearrange the working system (Persons, Beckner and Tompkins, 2013). It is an action learning event that assists team members to challenge assumptions, thus enabling them to refine their practical methods of operation for delivering the necessary requirements and assured quality to the intended receiver (Kess, Tong-In, Ayutthaya and Anusornnitisarn, 2014). By experimenting, the facts or truths are presented for further discussion and setting a proper action plan that would help the team state the right frame of mind of getting closer to the desired objectives (Yeganah and Kolb, 2009). Also, flaws can be identified and improvements can be proposed for supporting the current operational concept or make some slight alterations in the idea. With the results from doing a test the team can obtain a complete answer on how and why the situation happened for the aim of discussing about the mistakes in the plan as well as on learning the lessons for preventing any misunderstandings that might occur again in the future (Ramanujam and Goodman, 2011). The information provided from the examination disseminates credibility for making



decisions on policy or strategy (Jain, 2011), thus leading to a better sense of assurance on setting the aims and objectives that would most highly be attainable under a refined scheme. According to a study done by Clements (2010), the Segoku period of Japan was the feudal system that depicted samurais vying to be retainer for a Daimyo (feudal lord). Samurais who represent their clans and schools have to go through an intense period of training to test their knowledge of swordsmanship. Their masters and fellow peers, who possess a high degree of expertise in swordsmanship, demand a strong sense of commitment in reaching the pinnacle status of being a samurai. When the samurais are not carrying out the service functions for the Daimyo they are expected to be at the dojo which is a school for training one's technique in sword handling. First and foremost, they take sparring lessons to see how much they've mastered the basics. The training becomes intense as their teachers create some life and death scenarios that examine their approaches in resolving such these events. By being placed in critical situations the teachers help their young protégé to discover some innovative or creative swordsmanship techniques in attacking or defending. The experiment of putting one's life on the line not only hones the sword fighting skills but also develops the mental fortitude where there's no slight sense of hesitation or fear when knowing that death is imminent in a battle (Clements, 2010).

## Assessment

The team makes an assessment for the purpose of being aware or mindful of

hidden factors that may hinder or support the effort for achieving the aims (Fahey, 2007), once the flaws have been discovered than the team can raise the issue to eliminate or reduce the threat. The idea of an assessment is to make the necessary configurations in designing for a better strategy/ performance (Ullman and Ast, 2011) so that when the actions are executed there is a maximum usage of resources being utilized. As the team takes assessment into account individual members can make an analysis and utilize the viewpoints of fellow colleagues to sustain the official practice of administration (McCann, Selsky and Lee, 2011). Making an assessment is like looking in a mirror to get a reflection and seeing how fully equipped the team is before taking its course towards achieving the goal; if not then questions may be raised on the level of competency in team interaction (Weick and Sutcliffe, 2008). Moreover, the team can offer suggestions for refining or reforming the program/process in use. In a National Geographic presentation on killer whales there was footage of the pod working together to hone their collective hunting skill on a lone seal. The killer whales have come across a lone seal resting on a large ice flow. Before attacking their prey these whales form into a group mode of spy-hopping, which is a technique of raising the head to see what's going above the water. Spy-hopping allows them to scan and see the situation of their prey. The learning point of this event is that the pod is carrying out the mission or targeting an objective (that is clear). As a team they assess the situation at hand to see where the opportunities are presented as well as determining where the advantages are for the team to capitalize on their strengths





(Orcas Attack Seal with Waves, youtube.com).

## Reflecting

When teams reflect on the occurrence of the work performance they want to gain a sense of relativity with the operating procedures and to determine whether the systems may need to be updated or replaced with a new working paradigm (Petraeus, 2006). Team members want to gain an understanding of what had worked and what prevented the desired outcome (Donahue and Tuohy, 2007), thus ensuring themselves that all matters have been taken care of and that they can fully concentrate on the current issue without having to worry about what can go wrong. As members of the team review upon the situation they get a chance to discover any hidden concerns that may need to be addressed for the next operation. Reflecting with the recent episodes allows serendipity to flourish thus leading to innovative or creative thoughts for managing a familiar event (Tjosvold, Yu and Hui, 2004). The critical point for reflecting as a team is to see if the group has to adapt with the working environment and make some necessary changes in performing and executing (Antonacopoulou, 2006). On the case of reflecting professional ice hockey teams sometime have to make some changes into the way they skate, pass, defend, and shoot the puck as a collective unit. Teams that often go into a funk or a long losing streak have to review their tactics so that they can install a sense of competence and confidence among each other. As members are taking part in the practice drills on ice they make inquiries, and seek for

feedback from each other and their coaches to see where they can improve or on determining where their skills can assist in supporting the game plan (Gilbert, 2008).

## Research methodology:

### Application of the model – A case study on the Pit Crews

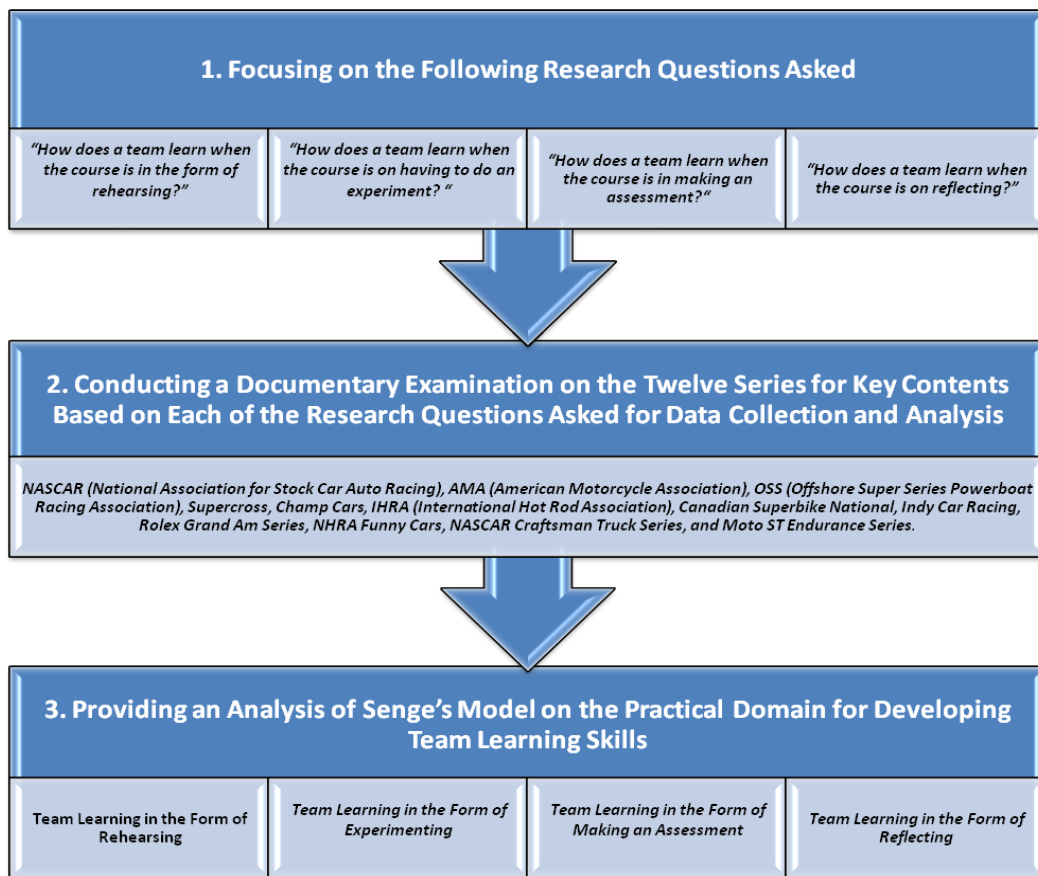
The design of this study is focused on the four research questions as followed:

*“How does a team learn when the course is in the form of rehearsing? How does a team learn when the course is on having to do an experiment? How does a team learn when the course is in making an assessment? How does a team learn when the course is on reflecting?”* From the Discovery Turbo channel, a documentary series called “Pit Crews” was selected as the field for this study. Twelve episodes were chosen to be studied to answer the research questions and to gather the data in the form of key contents for analysis. They were the following: NASCAR (National Association for Stock Car Auto Racing), AMA (American Motorcycle Association), OSS (Offshore Super Series Powerboat Racing Association), Supercross, Champ Cars, IHRA (International Hot Rod Association), Canadian Superbike National, Indy Car Racing, Rolex Grand Am Series, NHRA Funny Cars, NASCAR Craftsman Truck Series, and Moto ST Endurance Series. Each of the series was approximately 45 minutes long. The rationale for choosing the documentary series of pit crews was that the working conditions of racing stressed the importance of not only working as a team, but to also be resilient



in the midst of high pressure, unexpected errors, uncontrollable factors, and being mindful of safety when being engaged in an actual competition. Prior to setting up the racing vehicles for meeting the qualifications of the race and then actually competing in the event the racing team goes through two phases of practice session in order to make sure that they have of what they want, and being confident that it will help them win the

race. When the stakes are high every time used is precious during the practice session to discover what can be right and not to second-guess the plan. Upon gathering the data, an analysis of Senge's Model on the practical domain for developing team learning skills has been provided for each of the four disciplines. The conceptual framework is as followed:



**Figure 1** Senge's model on the practical domain for developing team learning skills

This work was done in the approach of a case study method. The construction of “*Senge’s Model on the Practical Domain for Developing Team Learning Skills*” was examined through each episode of the film in order to draw out the evidence of how the pit crews demonstrated the idea of the practical field. The narrator’s illustration of the team and the participants’ behavior in action from the documentary series were examined to see how the pit crews demonstrated learning as a collective group in the form of rehearsing, experimenting, assessing, and reflecting. The car and motorcycle shall be referred to as a ‘racing vehicle’ in the analysis section of the study.

## **Analysis of Senge’s model on the practical domain for developing team learning skills**

Analysis was conducted from the data gathered in the documents that focused on answering the four research questions. The key contents were screened for and examined to see the parallel connections with the theory. The information from the documentary series was addressed to present the findings for each of the four practical domain.

### **Team learning in the form of rehearsing**

The outcome of the racing event depends on how much the team works together in a manner that is disciplined in being highly focused, minimizing the flaws,

and anticipating for any disruptions and immediately fixing them. Rehearsing is utilized as a process for equipping the pit crew to take a proactive stance to ensure that the operator of the motor vehicle undergoes high performance and safety during the competition. During the practice sessions, team managers conduct a rehearsal with the crew members to let them obtain the know-how of setting-up the form of the racing vehicle, tuning its engine, discussing with the drivers on their needs for performance, and developing a good communicating relationship with each other. So for the human resource manager, the drills and practices done are meant to foster a sense of team chemistry so that everyone is aligned in mind, body, and soul to make a collective effort (Jackson and Delehanty, 2014) in winning the race. For current members and newcomers to the team, rehearsing is about doing things much more efficiently, solving problems quickly, and lessening the potential of risk and damages. In an event where the stakes are high, doing a team rehearsal sends the message out to associates about the desired behavior and attitude that are required to carry out, thus creating a shared value for group members when performing to the best of their capacity (Bartelme, 2005), whereas the human resource manager needs to follow up to develop an ongoing learning behavior amongst team. As the pit crew goes through the motion and emotions of rehearsing they are also taking part in a feedback methodology for management to see the extent of the strategic plan’s hypothetical objectives meeting with the expectations and demands of progress. Rehearsing, as a tool for team learning to be further supported by the human

resource manager, is applied to ensure that everything that had been proposed before actually producing the intended results (Bone and Lintern, 1999), but if that is not the case then the team can always go back to make some necessary adjustments or changes so that the opportunity for winning a race is in their control. Overall, the idea is to expose any critical flaws that may show up during the competition. In this practical mode it allows the team to develop a checklist for making the proper maintenance and requirements that are crucial for the driver to gain a competitive edge. The uniqueness of doing a rehearsal for the pit crew is that it solidifies the psychological infrastructure to identify the mistakes and errors during the practice session so that the team can communicate on correcting the matter right away without ever have the feeling of doubt on whether or not some colleagues are keeping silent due to a fear of unwanted consequences, such as being belittled for speaking up or not wanting to be inconsiderate towards someone's ego (Shojaie, Matin, and Barani, 2011) which would disrupt the teamwork.

### **Team learning in the form of experimenting**

In the mindset of the pit crew there is always room for improvement so that the opportunity for winning the race can be greater than the current action plan. During the practice session qualifying 'mock-runs' are done to see how the racing vehicle and driver can be operated as a complete unit. In the form of a test for the human resource manager to get a better idea of, the mock-runs also provide

a chance to determine whether the assertions of the set-up is leaning towards the standard time in actual competition and then make some efficient adjustments for better anticipated results in the next mock-run. Numbers and data are relayed as information for questioning the adjustments or for proposing ideas to get the racing vehicle to run with absolute speed and agility on the track, this can help the human resource manager to explain the situation with clarity and better understanding of the situation. By doing a test it contributes to crafting a better strategy and making better decisions for the team (Moosa and Lee, 2013) to be much more confident in. Asides from making a discovery for some new or better concepts for a competitive advantage and examining the configurations to ensure the comfort and safety for the driver's performance mock-runs set the condition for the team to perform as a cohesive group. It assists in developing the team to be a tight and coordinated group that is greatly focused on examining the task parameters of promoting efficiency and safety. This mode of testing not only builds the skills of the team members to evolve but it also enlarges their competency to deal with pressure and scrutiny (Ogawa and Piller, 2006) as they are highly expected to get everything all done right with the least mistakes and errors as possible.

It's crucial for the human resource manager to understand that what the team learns from the test run eliminates the tendency to be absorbed in a conundrum which saves time for discussing and deciding to deal with the information at hand rather than speculating on what is not given (Tuulenmäki and Välikangas, 2011). Colleagues are able to be



straightforward with the situation and avoid upholding any previous assumptions. Another form of experimentation is the 'test-fire' which is aimed at making sure that every part of the racing vehicle is working properly and that the details should not be overlooked. This test is conducted with the engine of the racing vehicle turned on in a stationary form. The format provides the opportunity for experts to share knowledge with their fellow team members to understand what is happening and then move into action to resolve any early disturbances or disruptions (Bos, Brown and Farrelly, 2013).

### **Team learning in the form of making an assessment**

Apart from rehearsing and experimenting the team does an assessment to make sure that their racing vehicle pass an inspection test so that they qualify for the actual competition. Prior to making the qualifications the team has to put a lot of effort in making sure that all the details are covered otherwise it could reduce their chances of winning the race. The team takes a survey of the racing track and then determines how they should prepare their equipments for providing the proper maintenance to the tires. Since the tires are critical for enhancing speed the team has to set their skills in changing the tires in the fastest time as possible. An investigation is also done to see what has happened and then illustrating the information for crew members to learn on why it happened so that the motor vehicle can be arranged for another round of proper testing. Doing this type of an assessment helps the team

to find the target points for victory while at the same time identifying their advantages and disadvantages and finding other alternatives for decision-making (Roth, Multer and Raslear, 2006), here is where the human resource manager can design the process for teams to learn in the workplace. An investigation platform can be arranged for team members to offer information from the assessment to support the effective ways for delivering maximum results. With a limited amount of time in the practice session and the focus being on the tires, the operator of the racing vehicle and the pit crew have to work in tandem in order to get the final resolution for the game plan. The driver does some lapse on the track to determine whether the tires are good enough or may need some proper adjustments for the right speed and balance in an actual race. He serves as the feedback for the pit crew to make some changes with the tires' volume, weight, and precision for the track. The team perceives the issues with the same frame of mind so that solutions can be discussed or ideas can be proposed (Barton and Sutcliffe, 2010). By dealing with the facts that are being presented team members obtain a better understanding and knowledge of the structural environment which allow them to find other ways of contriving around the challenges (Sarcevic, 2009), thus providing a better rationale on part of the human resource manager for enhancing the support for the team to keep on learning. Assessment is also carried into the competition itself to assure the driver's chance for winning. Whether it's standing in the highest section of the bleachers with the crowd or on a raised platform, the spotter provides real time information into the driver's headphones



to make a split-second decision and determine which position he should start to accelerate in order to outmaneuver the rival competitors. The spotter also looks out for any threat that may hinder the driving progress and warns the driver of any potential hazards up ahead, therefore allowing the driver on deciding the next course of action to take. In addition, the spotter lets the driver know what's going in the moment so that the driver can anticipate the movements of others to get ahead of the race. This format is about building trust in the strategic plan and confident that fellow colleagues are making a tremendous effort that the outcome is attainable (Covey, 2006). As a learning tool for the team and for human resource managers to utilize it with best intentions, assessment is a way for developing a wealth of information so that there's a foresight for anticipating with the unknown and uncertainties that can disrupt the applied concept (Miller, Riley and Davis, 2009).

## **Team learning in the form of reflecting**

Racing is a seasonal event. Everything done in the practice session translates into either a victory or a setback in the competition. But when it's the latter the experience tests the team's character and will to become resilient in getting another chance to compete for the championship. As the pit crews reflect on their previous shortcoming they get together for a de-briefing on ideas and solutions for powering up the racing vehicle to get more acceleration for quickness. They discuss about the concept of the set-ups and learn where adjustments can be made for greater performance. De-briefing

allows the crew members to target the specific parts of the engine system with a great deal of knowledge and for proposing better ways in making the motor vehicle go faster. As a form of a lesson learned tool, de-briefing not only assures a better sense of confidence for the team to have more faith in their capabilities (Joseph and Heading, 2010) but sets the process of converting the information to become the sources of intelligence for coming up with an effective proposed strategy (Hakkyong, 2013), human resource manager has to examine the necessary factors to set the system to make the initiative occur on a continuous basis. In the face of defeat the pit crews contemplate over the decisions made and the execution methods that failed to help them obtain success in the racing event. Crews go through a dialogue with fellow colleagues about the level of progress from the changes made, re-examining the techniques that had been deployed, and re-configuring the working dynamics for producing efficient results. While a defeat is a bitter pill to swallow it can also serve as a good lesson for realizing the limits and potential that each member of the group has when applying the chemistry for raising the team's performance and meeting the expectations. Although mistakes and errors may occur during an unexpected brief moment the team needs to inspect the level of consistency for making a quick recovery to stay ahead of the competition (Johnstone, Gilmore and Carson, 2008), as for the human resource manager's role he/she has to partake in the role of assisting team members to not be overwhelmed by what went wrong and stay focused throughout the course. At the end of the day the winners and losers go into the record books of the



event. But for the pit crews they have to research their strategic philosophy, the dynamics of working and communicating together, and the concept of rehearsing, experimenting, and doing an assessment in the practice session so that it leads to a better chance for a victory in the future. Dealing with the facts at hand the pit crews encourage everyone to communicate and make a comparison of data for developing information that would help team members make better decisions. With the support from the human resource manager in contributing to the organization strategy for teams to perform at a high level, getting team members to mull over and reframe the organization's mission raises the morale, passion and spirit of individual members to challenge themselves in strengthening their capabilities as an effective faction (Evans, 2009).

## **Discussion and conclusion on human resource manager's application of Senge's practical domain**

From the impression on Senge's theory of the practical domain it may be perceived as finding a particular process for enhancing team learning. However, based on the application the study asserts that when teams are going through a specific practical activity they should also incorporate various learning techniques to help team members go beyond knowing with better insight and a great deal of understanding as a

collective group (Webster et. al., 2008). This information entails that the human resource manager foster learning methods such as knowledge sharing, lessons learned, having dialogues, and other effective techniques to assist members of being equipped with many ways to help their fellow colleagues learn as a team. Rehearsing is an effective format for teams that want to analyze their level of chemistry in being determined and consistent in achieving high performance. The concept is on getting team members to discuss about the proposed strategy, envisioning scenarios, and going into the details of crafting a method to achieve the mission objectives (O' Brien and Meadows, 2013). Rehearsing draws out the challenges that teams are able to see beforehand so that changes or adjustments in the skills and abilities can be made to accommodate the plan as well as determining the amount of resources to be used (Olivier and Verity, 2008). As a methodology, rehearsing calls for experimentation to reveal the facts, doing assessments to develop decision-making, and reflecting to get a better sense of direction to go to. The value should be on informing colleagues to know where they are applying their strengths and where they need to make up for their weaknesses (Edmondson and Mclain, 2006).

Conducting experimentations are about anticipating for any discoveries of unclear issues or obstacles that may hinder the ability of reaching the goal; with the information obtained from the tests teams can go about revising or refining the ways of rehearsing (Miller, 2003). Examining the factors ahead of time is a good way for getting the problems or unwanted/unexpected issues



exposed and solving them right away. Also, it breaks the habit of conducting the current routines for work and fosters the behavior to innovate on other forms of method for obtaining the objectives (Brix and Lauridsen, 2012). Results from the experimentation not only indicates assessing the concept but can also be used for helping and teaching fellow colleagues to obtain the comprehension on why things are happening in a particular situation and to set forth the necessary action for being a bit more innovative or creative to manage the outcome (Distanont, Haapasalo and Vaananen, 2014). After reflecting through a series of tests team members can raise question about the strategy and reframe the working system to support the idea or make some recommendations that would make the plan become more effective (Van Vactor, 2012).

Assessments are learning on what has been learned. Teams deal with what they are given and they try to convert the data into information by inquiring with fellow colleagues to see where the opportunities are for attaining the goal (Postma and Liebl, 2005). What has been learned becomes instant feedback for doing a rehearsal and revising the experimentation. With updated information from the assessment teams can develop intelligence by utilizing rehearsal as a way of seeing how each team member can perform at a certain pace and with precision in producing the required outcome under a limited amount of time. This practice allows the team as a whole to get a feel within the time frame and to moderate their behavior and attitude for effective performance. Overall, an assessment could also be done after the rehearsal to decide whether the ideal working system is actually

promoting the growth of the teams' capabilities or stunting their potential for development (Seligman, 2005). For carrying out experiments an assessment provides a review of previous testing activities by reviewing the procedures that have been done. More questions are added to the testing format so that issues can be further analyzed from researching the hypothesis or doing a trial run for mastering the ways getting close to the truth with the facts being presented at hand (Nicholls-Nixon, Cooper and Woo, 2000). With the issue of reflecting, doing an assessment can bring about a better view of the situation when the phases are studied together to let teams perceive the concerning issues to be addressed upon while also seeking for ways in supporting morale and teamwork so that everyone performs with consistency (Putkonen, 2009).

As for human resource managers that may want to promote the four discipline in Senge's practical domain, no matter what the line of work is there will always be success and failure. Ironically, in the midst of failure there are always lessons to be learned on becoming successful. Human resource managers will have to set the ideas within the foundation that it is always permissible to allow some room for setbacks as long as team members are held accountable for learning what has gone wrong and being responsible to themselves in helping other people learn to keep the process moving towards achieving the desired objectives and goal. Reflecting is a tool for teams to rewind back and see how all the activities have been done in practice and in the actual event led to the results. With the key issue of being much more equipped in the future teams have to redefine the method of raising standards



and reconfigure the ways of working and communicating with each other (Craig, 2007) in order to gain a competitive edge in their vocational field. Reflecting is done to see how teams can raise their collective performance through the process of rehearsing, experimenting, and when making an assessment. While being aware of the emotions displayed under the conditions of a setback the psychological factors have to be addressed so that people don't become caught in a defensive behavior. From a reflective viewpoint, to maintain a good working relationship while members are confident to perform without any level of anxiety of being trapped in a 'goalodicy' when rehearsing this would require the fostering of trust where there's a sense of awareness for meeting the needs of other (Roberto, 2002). To uphold communication and rising to challenges teams should be exposed to experiments so that the facts and information are updated for making decisions in a timely manner (Wooten and James, 2004). Sustaining a behavior in teams that are mindful of the changes that may need to take place while letting people raise issues without having an awkward feeling of disrupting the harmony of teamwork (Noonan, 2009) should be the concept of doing an assessment. Overall, reflecting gives a chance to ponder on the things that have been done and to reframe the methods for better improvement. It's about developing an organizational culture that cultivates a sense of urgency rather than one that is always reacting with a scarce amount of time to take any action at all (Godkin and Alcom, 2008). To keep the idea of Senge's practical

domain applied on a continuous basis for team learning human resource managers must also put the model into practice themselves in order to make sure they understand how the four tools can be effective in achieving the desired results. While team members go through the process human resource managers should also reflect, experiment, assess, and rehearse with the team to identify how the organizational structure can make the necessary adjustments for the team to seek for support and improvement as they take part in upholding the organization's strategy and working within the system towards reaching the goal. This would truly help the intentions of human resource managers being recognized with credibility and trust as they are making an effort towards helping members to learn as a team.

In conclusion, upon conducting this work the study proclaims that the discipline of rehearsing, experimentation, assessment, and reflecting are intertwined to make the concept of team learning fruitful for groups trying to make their plans work or being challenged with the changes to their performance. So for the human resource managers, even if each domain was to act on its own or separated from the team learning model it would still call for other fields to carry out the disciplinary techniques to support its agenda. The practical concepts actually incorporate the ideas from other field to make the learning methodology for teams to be more sound and effective in helping them to achieve their outcomes or goal.



## References

- Antonacopoulou, E. (2006) *"The Challenges and Prospects of Learning-in-Practise"*, OLKC 2006 Conference at the University of Warwick, Coventry on 20th - 22<sup>nd</sup> March.
- Bartelme, L. (2005) *"The view from the Trenches: An Interview with Harvey Seifter and Tim Stockil"*, Journal of Business Strategy, Vol. 26, No. 5, pp. 7-13, © Emerald Group Publishing Limited, ISSN 0275-6668, DOI 10.1108/02756660510620716
- Barton, M. and Sutcliffe, K (2010) *"Learning When to Stop Momentum"*, MIT Sloan Management Review, Vol. 51, No. 3, Spring
- Bone, R. and Lintern, G. (1999) *"Rehearsal versus Map Study as Preparation for a Flight Navigation Exercise"*, Human Factors and Ergonomics Society, Vol. 41, No. 3, September, pp. 467–473.
- Bos, J., Brown, R. and Farrelly, M. (2013) *"A Design Framework for Creating Social Learning Situations"*, Global Environmental Change, Elsevier Ltd., Vol. 23, Issue 2, April, pp. 398-412
- Brix, J. and Lauridsen, K. M. (2012) *"Learning Styles and Organisational Development in Practice: An Exploratory Study of How Learning Styles and Individual Learning Strategies can Facilitate Organisational Development"*, Int. J. of Innovation and Learning, 2012 Vol.12, No.2, pp.181 - 196
- Clements, J. (2010) *"A Brief History of the Samurai: A New History of the Warrior Elite"*, Running Press Book Publishers, Philadelphia, PA, USA, ISBN-978-1-84529-947-7
- Covey, S. (2006) *"The Speed of Trust, The One Thing That Changes Everything"*, Free Press, Simon & Schuster Inc., New York, NY, U.S.A., ISBN-13: 978-1-4165-3816-5
- Distanont, A., Haapasalo, H. and Vaananen, M. (2014) *"Organising Knowledge Transfer in Requirements Engineering Over Organisational Interfaces"*, Int. J. Innovation and Learning, Vol. 15, No. 1, pp.41–64.
- Dobny, B.C. (2011) *"The Relationship Between Innovation Orientation and Organisational Performance"*, Int. J. Innovation and Learning, Vol. 10, No. 3, pp.226-240.
- Donahue, A. and Tuohy, R. (2007) *"Lessons We Don't Learn: A Study of the Lessons of Disasters, Why We Repeat Them, and How We Can Learn Them"*, Homeland Security Affairs, Vol. II, No. 2, July
- Evans, D. (2009) *"Building Leadership Capital"*, Deakin Prime, Reflective Practice White Paper, Vol. 1
- Fahey, L. (2007) *"Connecting Strategy and Competitive Intelligence: Refocusing Intelligence to Produce Critical Strategy Inputs"*, Strategy & Leadership, Vol. 35,



No. 1, pp. 4-12, ©Emerald Group Publishing Limited, ISSN 1087-8572 DOI 10.1108/10878570710717236

- Foverskov, M. and Binder, T. (2009) *"Rehearsing the Future: In and Out of Scenarios in a Reflective Practicum"*, Proceedings of the Nordic Design Research Conference, Oslo School of Architecture & Design
- Gilbert, P. (2008) *"Herb Brooks: The Inside Story of a Hockey Mastermind"*, MBI Publishing Company, Minneapolis, MN, USA, ISBN-978-0-7603-3241-2
- Godkin, L., & Allcorn, S. (2008). *"Overcoming Organizational Inertia: A Tripartite Model for Achieving Strategic Organizational Change"*. Journal of Applied Business and Economics, Vol. 8, Issue 1, pp. 82–94.
- Hakkyong, K. (2013) *"Improving Simulation Exercises in Korea for Disaster Preparedness"*, Disaster Prevention and Management, Vol. 22, No. 1, pp. 38-47, ©Emerald Group Publishing Limited, 0965-3562, DOI 10.1108/09653561311301961
- Jackson, P. and Delehanty, H. (2014) *"Eleven Rings: The Soul of Success"*, Penguin Books, New York, NY, USA, ISBN-978-0143125341
- Jain, N. (2011) *"Entry Deterrence and Experimentation Under Demand Uncertainty"*, International Journal of Industrial Organization, Elsevier Ltd., Vol. 29, Issue 4, July, pp. 464–472
- Johnstone, M., Gilmore, A. and Carson, D. (2008) *"Dealing with Environmental Uncertainty: The Value of Scenario Planning for Small to Medium Sized-Enterprises (SMEs)"*, European Journal of Marketing, Vol. 42, No. 11/12, pp. 1170-1178, © Emerald Group Publishing Limited, 0309-0566, DOI 10.1108/03090560810903628
- Kess, P., Tong-In, D., Ayutthaya, P.S-n. and Anusornnitarn, P. (2014) *"Process Innovation in Pre-stressed Concrete Wire Using Mechanical-based Process Simulator"*, Int. J. Innovation and Learning, Vol. 15, No. 1, pp.95–113.
- Kontogiannis, T. and Malakis, S. (2009) *"A Proactive Approach to Human Error Detection and Identification in Aviation and Air Traffic Control"*, Safety Science, Elsevier Ltd., Vol. 47, Issue 5, pp. 693-706
- Lloyd, A. (2009) *"Informing Practice: Information Experiences of Ambulance Officers in Training and On-road Practice"*, Journal of Documentation, Vol. 65, No. 3, pp. 396-419, ©Emerald Group Publishing Limited, 0022-0418, DOI 10.1108/00220410910952401
- McCann, J., Selsky, J. and Lee, J. (2009) *"Building Agility, Resilience and Performance in Turbulent Environments"*, People & Strategy, Vol. 32, Issue 3, pp. 44-51
- Miller, K., Riley, W. and Davis, S. (2009) *"Identifying Key Nursing and Team Behaviours to Achieve High Reliability"*, Journal of Nursing Management, Vol. 17, pp. 247-255



- Miller, P. (2003) *“Workplace Learning by Action Learning: A Practical Example”*, Journal of Workplace Learning Volume 15 – Number 1- pp.14-23 ISSN 1366-5266
- Moosa, N. and Lee, J. (2013) *“Smart Experimentation: Moving in-market with Maximum Velocity and Minimum Risk”*, Business Strategy Series, Vol. 13, No. 3, pp. 118-123, ©Emerald Group Publishing Limited, ISSN 1751-5637 DOI10.1108/17515631211225251
- Nicholls-Nixon, C., Cooper, A. and Woo, C. (2000) *“Strategic Experimentation: Understanding Change and Performance in New Ventures”*, Journal of Business Venturing, Elsevier Ltd., Volume 15, Issues 5–6, September–November, pp. 493-521
- Noonan, W. (2009) *“Discussing the Undiscussable”*, 61<sup>st</sup> Annual Conference & Exposition, Society for Human Resources Management, New Orleans, Louisiana, June 28 – July 1. O’Brien, F. and Meadows, M. (2013) *“Scenario Orientation and Use to Support Strategy Development”*, Technological Forecasting & Social Change, Elsevier Ltd., Vol. 80, Issue 4, May, pp. 643–656
- Ogawa, S. & Piller F.T. (2006), *“Reducing the risks of new product development”*, MIT Sloan Management Review, Winter, pp 65-71.
- Olivier, R. and Verity, J. (2008) *“Rehearsing Tomorrow’s Leaders: The Potential of Mythodrama”*, Business Strategy Series, Vol. 9, No. 3, pp. 138-143, © Emerald Group Publishing Limited, ISSN 1751-5637, DOI 10.1108/17515630810873375
- Orcas Attack Seal with Waves – accessed 5 Oct 2011: <http://www.youtube.com/watch?v=oxDZW4k8tCY>, *“Untamed and Uncut: Orcas Attack Seal”*
- Persons, J., Beckner, V. and Tompkins, M. (2013) *“Testing Case Formulation Hypotheses in Psychotherapy: Two Case Examples, Cognitive and Behavioral Practice”*, Elsevier Ltd., Vol. 20, Issue 4, November, pp. 399–409
- Petraeus, D. (2006) *“Learning Counterinsurgency: Observations from Soldiering in Iraq”*, Military Review, Jan-Feb, pp. 45-55
- Postma, T. and Liebl, F. (2005) *“How to Improve Scenario Analysis as a Strategic Management Tool?”*, Technological Forecasting & Social Change, Elsevier Ltd., Vol. 72, Issue 2, February, pp. 161–173
- Putkonen, A. (2009) *“Teams Are Not Innovative When Under Constant Time Pressure”*, Int. J. Innovation and Learning, Volume 6, Number 5, pp. 477-492(16)
- Ramanujam, R. and Goodman, P. S., (2011) *“The Challenge of Collective Learning from Event Analysis”*, Safety Science, Elsevier Ltd., Vol. 49, Issue 1, January, pp. 83-89
- Roberto, MA. (2002) *“Lessons from Everest: the Interaction of Cognitive Bias, Psychological Safety and System Complexity”*, California Management Review, Fall, Vol.45, Issue 1, pp. 136-160.



- Roth, E., Multer, J. and Raslear, T. (2006) *"Shared Situation Awareness as a Contributor to High Reliability Performance in Railroad Operations"*, Organization Studies, Vol. 27, Issue 7, pp. 967-987
- Sarcevic, A. (2009) *"Understanding Teamwork in High-Risk Domains Through Analysis of Errors"*, CHI 2009 ~ Spotlight on Works in Progress ~ Session 2, April 4-9
- Seligman, J. (2005) *"Building a Systems Thinking Culture at Ford Motor Company"*, Reflections, The Society for Organizational Learning Journal, Vol. 6, No. 4/5, pp. 5-13, ISSN 1524-1734
- Senge, P. (2006) *"The Fifth Discipline: the Art & Practice of the Learning Organization."*, Currency Doubleday, New York, NY, USA, ISBN- 978-0385517256
- Sharp, K., Stanley, P. and Simmons, G. (2013) *"Nothing to Lose: The Making of KISS 1972 – 1975"*, HarperCollins Publisher, New York, NY, USA, ISBN-978-0-06-213173-7
- Shojaie, S. Matin, H. Z. and Barani, G. (2011) *"Analyzing the Infrastructures of Organizational Silence and Ways to Get Rid of it."*, Social and Behavioral Sciences, Elsevier Ltd., Vol. 30, pp. 1731-1735
- Tjosvold, D., Yu, Z. and Hui, C. (2004) *"Team Learning from Mistakes: The Contribution of Cooperative Goals and Problem-Solving."*, Journal of Management Studies, Vol. 41, Issue 7 November, 0022-2380
- Tuulenmäki, A. and Välikangas, L. (2011) *"The Art of Rapid, Hands-on Execution Innovation."*, Strategy & Leadership, Vol. 39, No. 2, pp. 28-35, © Emerald Group Publishing Limited, ISSN 1087-8572 DOI 10.1108/10878571111114446
- Ullman, D. and Ast, R. (2011) *"Analysis of Alternatives (AoA) Based on Decisions."*, MORS, Phalanx, Vol. 44, No. 3, September, pp. 24-36
- Välikangas, L. and Romme, A.G. (2012) *"Building Resilience Capabilities at Big Brown Box, Inc."*, Strategy & Leadership, Vol. 40, No. 4,
- Van Vactor, J. (2012) *"Strategic Health Care Logistics Planning in Emergency Management"*, Disaster Prevention and Management, Vol. 21, No. 3, pp. 299-309, ©Emerald Group Publishing Limited 0965-3562, DOI 10.1108/09653561211234480
- Webster, J., King, H., Toomey, L., Salisbury, M., Powell, S., Craft, B., Baker, D. and Salas, E. (2008) *"Understanding Quality and Safety Problems in the Ambulatory Environment: Seeking Improvement with Promising Teamwork Tools and Strategies"*, In Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 3: Performance and Tools). Edited by Henriksen K, Battles JB, Keyes MA, Grady ML. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008:1–15.
- Weick, K. and Sutcliffe, K. (2008) *"Organizing for Higher Reliability: Lessons Learned from Wildland Firefighters"*, Fire Management Today, Vol. 68, No.2, Spring



Wooten, L. and James, E. (2004) *“When Firms Fail to Learn: The Perpetuation of Discrimination in the Workplace”*, Journal of Management Inquiry, Vol. 13, Issue 23

Yeganah, B. and Kolb, D. (2009) *“Mindfulness & Experiential Learning”*, OD Practitioner, Vol. 41, No. 3



# Exploring the relationship between the big five personality traits and exhibition shows attendance

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## Abstract

The aim of the present study is to investigate how the Big five Personality traits have an impact on exhibition attendees' behaviors in the exhibition shows in the Bangkok exhibitions. The participants in the study were 400 attendees who attended to exhibition shows in the main exhibition centers in Bangkok area. Employing multiple regression analysis on data, the results indicated that Extraversion and Neuroticism had a positive relationship with the frequency of visit exhibition show; Conscientiousness had a positive relationship with the preference of communication channel about exhibition show; Agreeableness, Conscientiousness and Openness to experience had a positive relationship with the reason to visit the exhibition show.

**Keywords:** Exhibition shows, Exhibition attendance, attendees' behaviors, Personality, Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to experience

## Introduction

Nowadays, the services industry plays an increasingly important role in a country's economic trade activities and becomes a measure of the strength of a country's international competitiveness. The MICE (Meetings, Incentives, Conferences and Exhibitions) industry is a generic term for the conference and exhibition industry sector. Belonging to the service industry, it focuses on organizing conferences and exhibitions in various forms, including large international fair exhibitions, fairs, sports investment and economics seminars. Each year, the MICE industry attracts a large number of business travelers, and promotes the development of the market, not only with technology and information exchange, but also foreign trade and tourism. The industry stimulates the development of the transportation, accommodation, business, dining, shopping, and many other related industries.

Thailand is a very important country that is located in the heart of Southeast Asia. The rapid development of the exhibition industry has achieved remarkable success, and shows a brilliant prospect for the future. In 2015, the ASEAN Economic Community will combine the 10 member countries of ASEAN to become a single market with about 600 million people. They will be one of the biggest markets and host to some of the world's most important business events. It is not only full of opportunities, but also a very big challenge for MICE industry in Thailand. At the same time, Thailand also faces the competition from the 5 new economic countries which include China, India, Russia, Brazil and

Mexico. Their MICE industries are also growing fast in broad areas. They possess a variety of disciplines, strong market potentials and good prospects for development. These countries will then become exhibitors' new choices. Therefore, Thailand must improve itself and prepare for the new changes in the future in order to meet the demand of the market and cope with the competitive conditions in the world.

For exhibition organizers and exhibitors, convention and exhibition attendance is one of the very important measures of effectiveness which generally is used by both exhibitors and organizers. How to improve the attendance in the Exhibitions is very important because it can help to improve the region's competitiveness and creating greater economic benefits. Exhibition organizers should improve their understanding of their attendees. Thus, organizers should try to encourage the exhibitors, retail outlets and leisure facilities to meet the needs of the attendees. Then in this way, they can help to improve the quality of the exhibitor-visitor experience. This can generate a loyal visitor base, which is important for winning a market share, repeat visitation and making not only the exhibition but also the complex revenues (Whitfield, Dioko, Webber, and Zhang, 2012). There are many factors that will affect exhibition attendance. Such as organizers' executive management performance, the exhibition of brand awareness, exhibitors' exhibition experience, the company's influence on product promotion and marketing. Moreover, consumers' purpose, motivation, satisfaction, and their characteristics also have an impact on their attending exhibition behavior.



In marketing, a lot of researchers work on the relationship between personality traits and consumer behavior (Aldemir and Bayraktaroglu, 2004). They continue to work in this direction to discover and improve these theories in order to apply them to actual practice. Therefore we believe that different personality traits are an influence on exhibition attendance and they are also an influence on people's decisions and their motives. This study aims to examine attendees' personality traits as it will help us to understand attendees' needs and behaviors, in order to satisfy them. Thus, the research chose to study the relationship between the Big Five Personality traits (also called the five-factor model) of attendees and exhibition attendance. The five-factor model of personality is a hierarchical organization of personality traits in terms of five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (Costa and McCrae, 1995).

## Literature review

### **The exhibition industry and exhibition attendance:**

Nowadays in a competitive exhibition market environment, exhibition organizers and exhibitors focus on retaining current exhibition visitors or attendees and attracting new attendees (Lee, Yeung and Dewald, 2010). Exhibition shows, also called public shows, are an important function of the promotional mix for industrial products and services. The exhibition shows connect to customers and companies directly. Exhibiting firms exhibit the products and perform their activities at

exhibitions, convey their messages to target traders and potential customers in an effective way. Moreover, they can improve the company's outstanding brand image. This is a very good advertising channel, at same time they can introduce their new products or services to the public (Lee, Yeung and Dewald, 2010).

Severt, Wang, Chen and Breiter (2007) explained that there are five important factors which can impact the attendees in deciding to attend a conference: (1) activities and opportunities, (2) build networking, (3) convenience of the conference, (4) education benefits, and (5) products and deals. These factors are supported by the previous studies about the motives of the attendees to attend the conferences. People regard the conferences as a very good place to find activities, look for new opportunities and build networking for self-enhancement (Severt, Wang, Chen and Breiter, 2007).

Nowadays exhibition planners and exhibitors focus on how to attract more people to attend the exhibitions, because exhibition attendance becomes a very important factor in evaluating the success of exhibitions (Lee and Palakurthi, 2011). In the study which was to examine the Japanese attendees' behaviors and objectives in the trade shows, Smith, Hama, and Smith (2003) also found that seeing new products and industry trends at the domestic shows had a great effect on attendees' interest in future shows and at the offshore U.S. shows. Attendees not only focus on looking for new products and trends, but are also interested in the "buying process" information (Smith, Hama and Smith, 2003).

Mondok (2012) explained that trade shows or fairs become an important

bridge between the companies and customers. For companies, it is their way to exhibit their new products and technology, at the same time to get a good chance to get in touch with old and potential customers, also to develop business partners. A wide variety of exhibitions, namely entertainment and products promotion as a whole, attract people's attention. Not only can people be the first to see the new products on display, but also allow people to experience the interesting and fantasizing entertainment. They also can learn about more extensive product knowledge. Therefore, people who attend the exhibition shows or special events can get pleasure and leisure. They can escape from their boring daily lives, seeing new things, do shopping, learning interesting things, getting social and cultural experiences, which are different from everyday experiences (Hede, Jago and Deery, 2004).

## Personality definition

There are many explanations of personality by previous researchers, but it seems to have little common agreement among personality theorists (Enger, 1999). Triandis and Suh (2002) said personality is included as a configuration of cognitions, emotions, and habits are activated when situations stimulate people's expressions. Personality is used to explain consistency and coherency within the individuals, including their characters, cognitions, motives and behaviors. How the people's feelings, thinking, wants, and reactions can be different in external situations. Personality presents a pattern across situations and can be used to study, recognize, describe and understand a person (Revelle, 2007). Nunes,

Cerriand Blanc (2008) also explained that there is no a common definition of personality in the previous studies. Burger (2000) defines personality as a long-term behavioral pattern and the process of internal self-consciousness. Personality not only shows superficial and physical, but also is stable and predictable. Personality traits can differ psychologically, which are a cluster of human traits (Nunes, Cerri and Blanc, 2008). In general, personality can be defined as the enduring, inner characteristics of individuals that contribute to consistency in people's behaviors. Personalities are within individuals, which can help us to distinguish them from other individuals and make them unique as to attributes of functioning that are common to all humans, such as extravert, shy, aggressive, lazy and etc. (Robbins and Judge, 2007). Personality can be used for measuring and predicting individuals' attitudes, behaviors in the life, and there are numerous previous studies showing strong evidence to support the use of personality assessment in life's event decisions. This is true particularly in personnel selection (Störmer and Fahr, 2010). The aim of this study is to study the relationship between the Big Five Personality traits of people and their decision to attend the exhibition shows.

## Big five personality traits

The Big Five Personality traits are some of the most important concepts in the recent studies of personality traits. Many personality researchers have studied about the five basic dimensions of personality. Previous personality psychologists believed that there are a various number of possible traits. Raymond Cattell emphasized 16 personality factors (cf. Oliver and Srivastava, 1999). Other psychologists,

Hans Eysenck just focused on a developed a model of personality based on a three-factor theory (Oliver and Srivastava, 1999). Moreover, Costa and McCrae (1985) distinguished between the five personality traits of neuroticism changes (neuroticism), extra version (extraversion), openness to experience (openness experience), agreeableness (agreeableness) and rigor (conscientiousness). The structure of the five personality traits to this development is illustrated as followed:

**Extraversion:**

*(Outgoing, Talkative, Active)*

Extraverts focus on the outside world. They like social interactions and feel comfortable with human relations. They always like to spend time with people and tend to be enthusiastic. Extraversion is characterized by assertive, talkativeness, outgoing, and gregarious (Costa and McCrae, 1992). Thus, extraverts are more sociable, assertive, and active. On the other hand, introverts are more reserved. They prefer it to be quiet and peaceful. They tend to be low key, and do not want to be involved in the social world (Rorhman and Coetzer, 2003).

Sharp (1987) said extraverts like to take adventure, enjoy travelling, go to meet new people, and go seeking new places. Zafar, Shahila and Meenakshi's (2012) studies have shown that extravert's have a greater advantage in second foreign language learning because they are cheerful, like to join groups and communicate with other people, which can make them have more advantages in learning.

As we mentioned earlier, extraverts tend to be outgoing, like social interactions and feel comfortable with human relationships. They always like to spend time with people and desire a variety of leisure (Costa and McCrae, 1995). In this case, for extraverts to

go to exhibition shows can be a very good opportunity for them to relax and have fun as they can go shopping, see new things and make new friends (Störmer and Fahr, 2010). Moreover, for this kind of person, they may like to accompany friends or family members to participate in different kinds of exhibitions. Therefore, we expect that people who have a high score in extraversion will be more likely to attend exhibition shows.

*Hypothesis 1: Extraversion will have a positive relationship with attending exhibition shows (public shows).*

**Agreeableness:**

*(Warming, Sympathetic, Friendly):*

Agreeableness is defined as the tendency to act in altruistic, sympathetic and helpful way to others. However, a disagreeable person is more skeptical and likes to be competitive rather than co-operative (Rorhman and Coetzer, 2003). Agreeable people always have a kind heart. They are generous, affectionate, cooperative and trusting. In contrast, low agreeable persons are more antagonistic, uncooperative, cold and suspicious (Bornsteina, 2007). Recent study found that those people who have a high score on agreeableness would be less likely to engage in workplace deviant behavior. Due to such characteristics: pleasant, helpful, when in the work they would rather be cooperative with others than argue with trusting and tolerance (Fatimah, Nasir, and Shahrazad, (2012). Therefore, we assume that this type of person is likely to participate in the exhibition when invited by colleagues and friends with their pleasant mind.

A previous study showed, agreeableness had a significant direct effect on volunteering. Highly agreeable people usually have a positive social value motive.



They are more willing to comply with requests to volunteer (Gustavo, Morris, Knight, and de Guzman, 2005). We can see that agreeableness is a trait that we find in very gentle and friendly people. They generally do not refuse the invitation of others and are good companions. Recent studies supported that agreeableness is cooperative and should be used more in constructive conflict resolution strategies such as pleasure induction and reason. There is evidence that cooperators are strongly affected by information about a partner's honesty (Jager, Berg, Vlek and Hofstee, 2001).

Agreeable people are relatively sympathetic, trust worthy, gregarious, humble and honest (Oliver and Srivastava, 1999). Therefore, we expect that people who have a high score in agreeableness will be more likely to attend exhibition shows.

*Hypothesis 2: Agreeableness will have a positive relationship with attending exhibition shows (public shows).*

### **Conscientiousness:**

***(Organized, Responsible, Hard-working):***

Conscientiousness tends to be self-disciplined, organized, dutiful and mindful of details. The conscientious person likes to plan things in life with determination (Oliver and Srivastava 1999). They are well-planned, organized, and purposeful, which leads to setting goals. They always work diligently, conscientiously complete their tasks, and fulfill their duties for the achievement of their goals (Barrick, Mount, and Strauss, 1993). Conscientious people do things that have a strong sense of purpose, so we assume that they will go to the exhibition shows for specific goal and objective. They will have a detailed plan in mind before they go. Bruck and Allen (2003)

explained that conscientious people can be good at planning, organizing and have good time management. They take on responsibilities and successfully deal with tasks in their work. At the same time they also can be good dealing with family things. They will not make a conflict between work and family. It has been proved that the planning and organizing skills associated with conscientious individuals helps them prevent family conflicts with work from occurring. Therefore, they may attend the exhibition shows when they have specific goals. We expect that people who have a high score in conscientiousness may tend to attend the exhibition shows.

*Hypothesis 3: Conscientiousness will have a positive relationship with attending exhibition shows (public shows).*

### **Neuroticism:**

***(Sensitive, Moody, Worrying):***

Individuals who have a high score in neuroticism have tendency to have anxiety, tension, emotional, insecurity, be inappropriate and melancholy. Bruck and Allen (2003) found people who are high on neuroticism find it difficult to handle the relationship between work and family. They are not good at handling the pressure in the work place. In other studies, researchers also found that neuroticism has been negatively associated with life satisfaction and positively associated with self-reported stress. In the study conducted by Fayombo (2010), which was to investigate the relationship between personality traits and psychological resilience among the Caribbean adolescents, he found that adolescents who have high score on neuroticism were negatively associated

with psychological resilience. Their ability to adapt to the environment is relatively poor. Störmer and Fahr (2010) found that one of the effects of neuroticism was its apparent effect on absenteeism in the work place. When staff encountered neurotic depression it affected their living conditions and the state of their work. That can interfere with their attendance decision but is not manifested in their health status (Störmer and Fahr, 2010).

Marzuki (2013) found that neuroticism was negatively correlated to well-being. He found lecturers who were always concerned with irrational ideas found it difficult to control and were poor in dealing with stress. Instability, anxiety and moodiness can lead to low psychological well-being. A negative emotional state because of neurotic traits can limit cognitive potential, create anxiety and depression (Najib Ahmad Marzuki, 2013). In a study, the results showed that the relationship between neurotic characteristics of people with anxiety and severe depression showed a significant positive correlation. The general trend was that they experienced negative effects, such as fear, sadness, embarrassment, anger, guilt and disgust. The results showed that neuroticism is actively related with two-dimensional health, anxiety, insomnia, and severe depression (Sharma, Kaveri, Sharma and Yadava, 2010). In Germeijs and Karine's (2011) study, neuroticism was found to be the strongest contributor of indecisiveness. One possible explanation is that individuals that score high in neuroticism are likely to experience negative emotions in a variety of situations, and therefore they may delay to make a decision or fail to decide,

in order to avoid errors (Germeijs and Karine, 2011).

Individuals who score high in neuroticism tend to have anxiety, tension and emotional insecurity. They also can tend to be very melancholy (McCrae and Oliver, 2006). In this case, people having neurotic characteristics might be looking for the opportunity to walk out and involve themselves in a different environment in order to relieve their negative depressed mood. It is also possible that their external environment can help them adjust their emotional problems.

*Hypothesis 4: Neuroticism will have a positive relationship with attending exhibition shows (public shows).*

#### **Openness to experience: (Creative, Imaginative, Adventurous):**

Individuals with a high score in openness tend to be seeking a variety of new experiences. They like adventure. They tend to come out with unusual ideas and are always brave to try new things with their non-traditional minds. They are always curious, interested in a wide range of creative activities, and fond of art and, imagination (Costa and McCrae, 1995). On the other hand, people with a low score in openness have a lack of interest in artistic activities. Individuals with a high score in openness to experience can accept what others do, say and think, with understanding (Liebert and Spiegler, 1994). The adolescents who were open to new experiences were reported to be more likely to accept new things and adapt to the new environments. Faced with a variety of different situations, they can hold enthusiasm and excitement rather than nervousness. It was not surprising

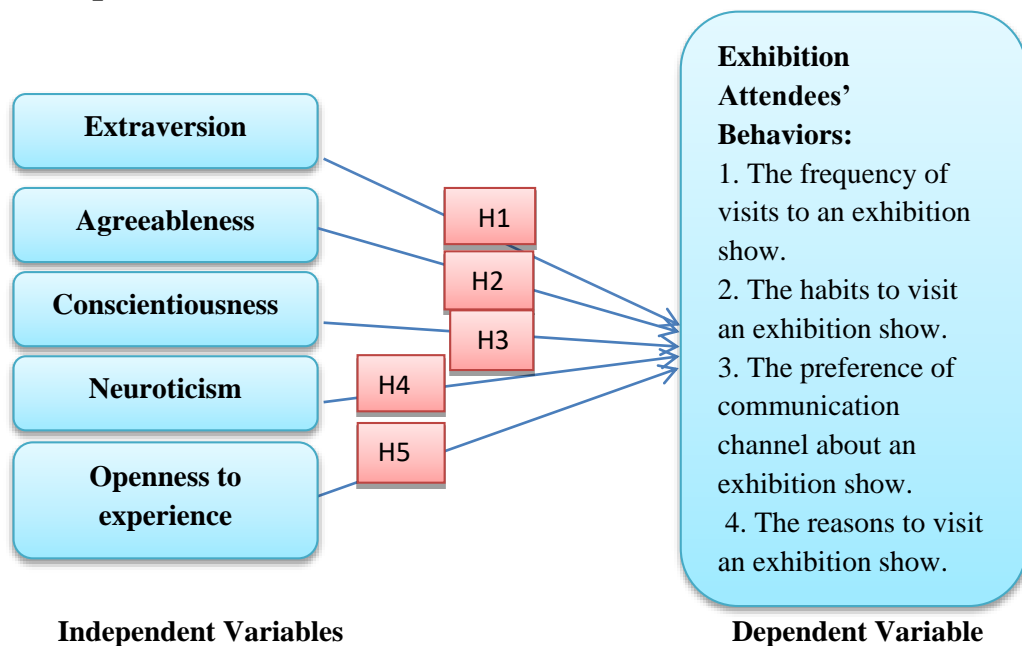
that they were found to be positively associated with psychological resilience because they know how to adjust their strategies in difference situations (Fayombo, 2010). Flynn (2005) suggested that openness people are divergent in their thinking and creativity. They are more willing to try and tend to get broader scope and experience. Openness individuals showed their flexibility or willingness to constantly be exposed to new ideas and conflicting information. It is possible for them to change their attitudes and behaviors (Flynn, 2005).

This type of person is very cheerful, and able to accept new things, with curiosity

and openness. Being more flexible, they have a wealth of imagination, and possess a sensitive artistic and nonconformist attitude. Different themes of exhibition shows would make them feel very comfortable. They could expand their experience in life and meet their need to be learning about new things. Therefore, we expect that people who have a high score in Openness to Experience tend to be more likely to attend the exhibition shows.

*Hypothesis 5: Openness to experience will have a positive relationship with attending exhibition shows (public shows).*

## Conceptual Framework



**Figure 1** The Framework of independent and dependent variable



To explore the relationship between different personality traits and exhibition attendance, we use the Big Five Personality traits as the basic theory. We treat different personality traits as independent variables, and exhibition attendance as the dependent variable.

## Methodology

**Sampling procedures:** A quantitative approach is used in this study. The study developed a questionnaire for this research. The 400 questionnaires were distributed in these major venues: Queen Sirikit National Convention Center (QSNN), Bangkok International Trade Exhibition Center (BITEC), Exhibition and Convention Center (IMPACT). By proportioning with the percentage from total numbers of questionnaires, the researcher divided the questionnaires for collecting data in venues: 100 questionnaires in Queen Sirikit National Convention Center (QSNCC), 200 questionnaires in IMPACT Arena, Exhibition and Convention Center (IMPACT), 100 questionnaires in Bangkok International Trade & Exhibition Center (BITEC). The details are shown below. The sample was collected from completed questionnaires of exhibition attendees. The questionnaires were distributed from November 2014 until December 2014.

**Participants:** In the 400 participants, the majority of the respondents were females with 231 or 57.75%, and the rest were males with 169 respondents or 42.25%. The majority of respondents were between ages 21-30 years (28.00%), the next group was between 31-40 years (26.25%), and the smallest group of respondents was older than 60 years of

age (3.75%). There were 58.8% of respondents who had Bachelor degrees and 17.25% of respondents were higher than bachelor. There were 34.75% of respondents who were private company officers and there were 16.75% of respondents who owned their own business. Most respondents' salary ranged between 10,000-20,000 baht (32.00%). From the demographics information, the respondents cover a variety of genders, ages, occupations, and salary ranges.

**Instrument and measurement:** The survey instrument was divided into three parts: Part A: Demographic Information, general information from attendees, collected such as gender, age group, education, occupation and income. Part B: Attendees' attendance behaviors, this part is to investigate exhibition attendance behaviors. Part C: Attendees' Personality Traits Types, the measurement is in order to define the attendees' personality trait types. In the part C, the study chose the Big Five Inventory which developed by Oliver and Srivastava (1999) as the measurement instrument. The Big Five Inventory is a widely used instrument for measuring the personality trait dimensions. The Big Five Inventory consists of 44 items in order to measure the Big Five Personality traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience, and will use a 5-point Likert scale from 1 = 'strongly disagree' to 5 = 'strongly agree'. In this study the Big Five Inventory have been adapted for the research the reduced to 28 items which decreased the reverse-scored items.



**Reliability:** Reliability testing will ensure the quality of the questionnaire in order to ensure a scale that produces consistent results. In order to obtain more accurate and stable test results, Cronbach alpha coefficients of internal consistency, will give coefficients

widespread use. This will test the degree of correlation between each item and the establishment of an internal reliability of the questionnaire. This is a commonly accepted rule for describing internal consistency using Cronbach's alpha as followed:

**Table 1** Reliability test by using Cronbach's alpha

Variables Items	Cronbach's alpha
Attendance Behaviors: Visit Exhibition hall and Exhibitions	0.913
Preference Behaviors: Visit Habits, the way to get information and Objectives	0.776
Extraversion	0.812
Agreeableness	0.899
Conscientiousness	0.867
Neuroticism	0.870
Openness	0.855

**Data Analysis:** This study utilized such techniques as descriptive statistics, multiple regression to investigate the relationships between the independent and dependent variables. The frequency statistics were used with discrete variables, such as in part A the questions of demographic information with proportions or percentages. The regression analysis is a statistical method to deal with the formulation of a mathematical model depicting a relationship amongst variables which are used for the purpose of prediction of the values of dependent variables, given the values of the independent variable. Multiple regression analysis is an

extension of simple regression analysis allowing a metric dependent variable to be predicted by multiple independent variables.

## Results

Linear Regression estimated of coefficients of the linear equation, involving one or more independent variables that best predict the values of the dependents variables. The model summary reports the strengths of the relationship between the model and the dependent variable.

**Table 2** Coefficients of The frequency of visit exhibition show

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.289	3.394		1.853	.065
Extraversion	.710	.164	.262	4.327	.000
Agreeableness	-.131	.167	-.051	-.782	.434
Conscientiousness	.176	.178	.065	.986	.325
Neuroticism	.240	.099	.117	2.424	.016
Openness	.140	.098	.078	1.437	.152

\* $p < .05$ , \*\*\* $p < .001$

From the table, it showed that there was significant linear correlation between Extraversion ( $p < 0.05$ ) and Neuroticism ( $pp < 0.001$ ) with the frequency of visits to exhibition shows. On the other hand,

there were no significant linear correlation between Agreeableness, Conscientiousness, Openness to experience and the frequency of visits to exhibition shows.

**Table 3** Coefficients of the habits to visit exhibition shows

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	16.616	1.083		15.346	.000
Extraversion	-.100	.052	-.119	-1.912	.057
Agreeableness	-.004	.053	-.006	-.084	.933
Conscientiousness	-.095	.057	-.114	-1.672	.095
Neuroticism	-.053	.032	-.082	-1.663	.097
Openness	-.027	.031	-.048	-.866	.387

\* $p < .05$ , \*\*\* $p < .001$

From the table, it showed the results: The significant values of the five traits are all more than the significant level 0.05. This implied that there were no significant

linear correlation between Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to experience and the habits to visit exhibition shows.

**Table 4** Coefficients of with the preference of communication channel about exhibition show

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.140	1.275		7.955	.000
Extraversion	-.047	.062	-.047	-.769	.443
Agreeableness	.027	.063	.028	.430	.667
Conscientiousness	.275	.067	.276	4.102	.000
Neuroticism	.044	.037	.058	1.195	.233
Openness	.034	.037	.050	.920	.358

\*\*\* $p < .001$

From the table, it showed the results: There was significant linear correlation between Conscientiousness, ( $p < 0.001$ ) and the preference of communication channels about exhibition shows. On the other hand, there was no significant

linear correlation between Extraversion, Agreeableness, Neuroticism, Openness to experience and the preference of communication channels about exhibition shows.

**Table 5** Coefficients of with the reasons to visit exhibition shows

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	13.192	1.365		9.667	.000
Extraversion	.091	.066	.082	1.374	.170
Agreeableness	-.139	.067	-.133	-2.072	.039
Conscientiousness	.214	.072	.196	2.984	.003
Neuroticism	-.003	.040	-.004	-.081	.936
Openness	.180	.039	.245	4.582	.000

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

From the table, it showed the results: There was a significant linear correlation between Agreeableness, ( $p < 0.05$ ); Conscientiousness ( $p < 0.01$ ); Openness to experience, ( $p < 0.001$ ); and the reasons

to go to exhibition shows. On the other hand, there was no significant linear correlation between Extraversion, Neuroticism and the reasons to visit exhibition shows.

**Table 6** The summary of results of Hypothetical

Hypothesis H1: Extraversion will have a positive relationship with attending to exhibition shows. (public shows)				
Hypothesis	Results	t-Value	Significant	
H1.1: Extraversion will have a positive relationship with the frequency of visits to exhibition shows.	Rejected H1.0	4.327	0.000	
H1.2: Extraversion will have a positive relationship with the habits to visit exhibition shows.	Accepted H1.0	1.912	0.057	
H1.3: Extraversion will have a positive relationship with the preference of communication channels about exhibition shows.	Accepted H1.0	-0.769	0.443	
H1.4: Extraversion will have a positive relationship with the reasons to visit exhibition shows.	Accepted H1.0	1.374	0.170	
Hypothesis H2: Agreeableness will have a positive relationship with attending exhibition shows. (public shows)				
Hypothesis	Results	t-Value	Significant	
H2.1: Agreeableness will have a positive relationship with the frequency of visits to exhibition shows.	Accepted H2.0	-0.782	0.434	
H2.2: Agreeableness will have a positive relationship with the habits to visit exhibition shows.	Accepted H2.0	0.084	0.933	
H2.3: Agreeableness will have a positive relationship with the preference of communication channels about exhibition shows.	Accepted H2.0	0.430	0.667	
H2.4: Agreeableness will have a positive relationship with the reasons to visit exhibition shows.	Rejected H2.0	-2.072	0.039	
Hypothesis H3: Conscientiousness will have a positive relationship with attending exhibition shows. (public shows)				
Hypothesis	Results	t-Value	Significant	
H3.1: Conscientiousness will have a positive relationship with the frequency of visits to exhibition shows.	Accepted H3.0	0.986	0.325	
H3.2: Conscientiousness will have a positive relationship with the habits to visit exhibition shows.	Accepted H3.0	1.672	0.095	
H3.3: Conscientiousness will have a positive relationship with the preference of communication channels about exhibition shows.	Rejected H3.0	4.102	0.000	

H3.4: Conscientiousness will have a positive relationship with the reasons to visit exhibition shows.	Rejected H3.0	2.984	0.003
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**Hypothesis H4: Neuroticism will have a negative relationship with attending exhibition shows. (public shows)**

Hypothesis	Results	t-Value	Significant
H4.1: Neuroticism will have a positive relationship with the frequency of visits to exhibition shows.	Rejected H4.0	2.424	0.016
H4.2: Neuroticism will have a positive relationship with the habits to visit exhibition shows.	Accepted H4.0	1.663	0.097
H4.3: Neuroticism will have a positive relationship with the preference of communication channels about exhibition shows.	Accepted H4.0	1.195	0.233
H4.4: Neuroticism will have a positive relationship with the reasons to visit exhibition show.	Accepted H4.0	-0.081	0.936

**Hypothesis H5: Openness to experience will have a positive relationship with attending exhibition shows. (public shows)**

Hypothesis	Results	t-Value	Significant
H5.1: Openness to experience will have a positive relationship with the frequency of visits to exhibition show.	Accepted H5.0	1.437	0.152
H5.2: Openness to experience will have a positive relationship with the habits to visit exhibition shows.	Accepted H5.0	0.866	0.387
H5.3: Openness to experience will have a positive relationship with the preference of communication channels about exhibition shows.	Accepted H5.0	0.920	0.358
H5.4: Openness to experience will have a positive relationship with the reasons to visit exhibition shows.	Rejected H5.0	4.582	0.000

## Discussion

The relationship between **Extraversion** and visiting exhibition shows: The results showed that Extraversion has a positive relationship with the frequency of visits to exhibition shows. Extraversion is characterized by outgoing people who like to travel and enjoy attending social events

(Costa and McCrae, 1995). The research showed that they prefer to go to different type of exhibition shows, and they would like to go with friends, family and groups. However, they do not have a positive relationship with the habits to visit exhibition shows, the preference of communication channels about exhibition shows and the reasons to visit exhibition shows.

The relationship between **Agreeableness** and visiting exhibition shows: The results showed that Agreeableness have a positive relationship with the reasons to visit exhibition shows. As previous study showed, agreeableness is associated with kindness, warm and helpful, involves being compliant with requests from others (Costa and McCrae, 1995). Agreeableness is defined as the tendency to act in altruistic, sympathetic and helpful way to others (Rorhman and Coetzer, 2003). Agreeableness is associated with kindness, warmth and being helpful. It involves being compliant with requests from others. They are more willing to comply with requests to volunteer (Gustavo, Morris, Knight, and de Guzman, 2005). In this case, they would like go to exhibition shows for same reasons that agreeableness suspended their own interests for the good of a social group and their friends. They go to exhibition shows for seeing new products, for shopping, for gathering new ideas and for seeking business opportunities. But they do not have a positive relationship with the frequency of visits to exhibition shows, the habits to visit exhibition shows or the preference of communication channels about exhibition shows.

The relationship between **Conscientiousness** and visiting exhibition shows: It's showed that Conscientiousness has a positive relationship with the preference of communication channels about exhibition shows and the reasons to visit exhibition shows. Conscientiousness is the tendency to be self-disciplined, organized, dutiful and mindful of details. They like to plan things in the lives with determination. That explains why that when Conscientiousness decides to go exhibition shows, they will do the research and look for the information before going to the show. Conscientiousness is well-planned, organized, and purposeful, which leads to setting goals. Individuals who are

high in conscientiousness are responsible, dependable, and persistent in the life (Barrick, Mount, and Strauss, 1993). Bruck and Allen (2003) explained that conscientious people can be good at planning, organizing and having good time management. They are responsible and deal with tasks in the workplace. Meanwhile they also can be good in dealing with family things. They will not make a conflict between work and family. They set goals and do things that have a strong sense of purpose. They go to the exhibition shows with specific goals and reasons. However, they do not have the positive relationship with the frequency of visits to exhibition shows and the habits to visit exhibition shows.

The relationship between **Neuroticism** and visiting exhibition shows: The study found that Neuroticism showed a positive relationship with the frequency of visit exhibition show. Individuals who are a high score in neuroticism have a tendency for having anxiety, tension, emotional, insecure, and being melancholy (McCrae and Oliver, 2006). They experience negative effects, such as fear, sadness; embarrassment, anger and guilt. The results showed that they would like to go different types of exhibition shows. Results also indicated they would like to go for relaxation and adjust their moods. In this way exhibition shows can help them get rid of their depression. But there is no positive relationship between neuroticism and the habits to visit exhibition shows, the preference of communication channels about exhibition shows and the reasons to visit exhibition shows.

The relationship between **Openness to experience** and visiting exhibition shows: The results showed that Openness to experience has a positive relationship with the reasons to visit exhibition shows. People

who have a high score in openness tend to be seeking a variety of new experiences like being adventure curious and being interested in wide range of creative activities (Liebert and Spiegler, 1994). Flynn (2005) emphasized that Openness to experience is more willing to try to get a broader scope and desire more experience. The previous study showed that the adolescents who were open to experience have been reported to be more likely to accept new things and adapt to new environments. Faced with a variety of different situations, they can hold enthusiasm and excitement rather than nervousness (Fayombo, 2010). They go to exhibition shows for seeing new products, for shopping, for gathering new ideas and for seeking business opportunities. These visits can increase their experience and help them to get updated information. However, there is no positive relationship between openness to experience, the frequency of visits to exhibition shows, the habits to visit exhibition shows and the preference of the communication channels about exhibition shows.

## Conclusion

This study found that the five personality traits do have impact on the exhibition attendees' behaviors and their decisions. Different personality traits of attendees have different needs. The results showed Extraversion and Neuroticism attendees would like go to visit different types of exhibition shows. Conscientiousness attendees like to do some research and planning before attending an exhibition show. Agreeableness and Openness attendees go to exhibition shows for the same reasons. They like to see new products and technology. They enjoy gathering new ideas, industry trends information. They enjoy

relaxing and having fun, talking to the experts and looking for business opportunities. All these results can help exhibition organizers and exhibitors to have a better understanding of their attendees. It can help organizers provide better service to their customers and help them raise attendance levels. They can better understand the attendees' needs and meet those needs. Providing quality service for the customers and improving the exhibition attendance are the main goals that organizers need to focus on. At the same time, improve business management and make suitable business strategies to face the challenges in an increasingly competitive market.

## Implication and recommendation

**For the exhibition exhibitors,** they should organize a variety of different industries of exhibition shows, in order to appeal to different personality traits of attendees to attend the shows. At same time, the exhibitors need to bring more new goods and technology advancements to the shows to meet the needs of the attendees. From the research results, we showed that the respondents who attended to the exhibition shows mostly travel with family. Exhibitors should accelerate product updates, especially for the daily life and household products. In order to increase the exhibition attendance, it should have more male-related products on display to attract male attendees' desires. Moreover, for the consumer exhibition shows, the exhibitors should make the appropriate different price levels to attract different income levels of the attendees. In order to meet their different shopping needs with different purchasing powers.



**For the exhibition organizers,** they need to build up a good corporate image to the public, like IMPACT and BITEC do now. The exhibition centers should improve the business management, and improve the quality of service in the exhibition halls. It aims to provide customers with a comfortable, convenient, casual environment to attract their interest. For the organizers, they should organize more different types of exhibitions, invite different industries of exhibitors to come to display their goods. The research showed that Agreeableness, Conscientiousness and Openness have a positive relationship with the objectives to go to exhibition shows in order to meet the different objectives of the different personality traits of attendees, such as shopping, seeing new products, gathering new ideas, relaxing, learning and business opportunities. Another important thing is the results showed that people who are older than 51 years of age also like to go to visit exhibition shows. The exhibition centers should provide free shuttle bus service for these older people. Help with their travel, can be a great aid for them and help increase the attendance.

**For the marketing activities,** we found that the top three ways for the respondents to get the information of the exhibition shows are: from TV advertisement, from the internet, and from billboards. Conscientiousness have a positive relationship with the ways to find out about exhibition show categories, this type of personality trait of people would like to go looking for the exhibition shows information from different channels. In the study, focus was on the public exhibition shows (consumer shows), so for the marketing strategies, the marketers first need to

continue to advertise on TV, and increase billboard advertisement. As for the internet, besides the development of blogs for Pre-Exhibition marketing, the marketers can use other social Medias to expand the marketing aspects, such as advertising on radio, hotel video programs and shuttle bus advertising. Marketing on Facebook, We Chat and Line can be very effective. Sponsorship is also a very good choice. It is a commercial investment for the exhibition organization's marketing purposes that do not require the purchase of the media channels directly for the exhibition shows and events. Besides, for trade fair or trade show, which is B-to-B exposition, there are still other pre-show-marketing strategies. Such as telemarketing, direct mail, newsletters, and advertising on World Wide Web sites, local and regional edition newspapers.

## Limitation and further research

The study area is only in the three Exhibition Centers and a Convention Center, covering only local citizens of Bangkok. The scope of the study, limits only the domestic public exhibition shows (consumer shows), which is B-to-C exposition. However, there are still trade fairs, trade shows (B-to-B exposition) and Mixed shows which are open for trade and public visitors. These types of exhibition shows are also worthy of study. Moreover, the Big Five personality traits also have limitations. These five personality traits can cover some the personalities of people. There are many theories of personality traits

also worth to explore. In addition to the five personality traits that can influence people's behavior, there are many other internal and external factors that can affect the attendees' behavior in the exhibition shows. The future study can expand the scope of the study, not just domestic exhibitions, but also the oversea exhibition shows, expand the type of research shows, not just the

public exhibition shows. Additionally, Future research can explore the other factors that can impact the attendees' behaviors in the exhibition shows, such as the aspects from the exhibition exhibitors or the organizers and try to study in depth, more personality traits and the theories to study the impact of the attendees' behaviors.

**Table 7** The list of table for all the questions for the factors

<b>Attendance Behaviors: Visit Exhibition hall and Exhibitions</b>
1) I have been to Impact Exhibition & Convention Center (IMPACT).
2) I have been to Bangkok, International Trade and Exhibition Centre (BITEC).
3) I have been to Queen Sirikit National Convention Centre (QSNCC).
4) I have been to Bangkok Convention Centre (BCC).
5) I go to Automobiles show.
6) I go to Food industry show.
7) I go to Furniture & Home Appliance show.
8) I go to Retailer Expo shows.
9) I go to Consumer Electronics (Information Technology) show.
10) I go to Fashion & Leather products show.
11) I go to Gifts and household goods show.
12) I go to Gems & Jewelry show.
13) I go to Book Expo show.
14) I go to Wedding Fair.
15) I go to Tourism Festival show.
<b>Preference Behaviors: Visit Habits, the way to get information and Objectives</b>
1) I always go to exhibition shows alone.
2) I always go to exhibition shows with friends.
3) I always go to exhibition shows with family.
4) I always go to exhibition shows with colleagues.
5) I often know about the exhibition shows from TV advertisement.



- 
- 6) I often know about the exhibition shows from the billboards.
- 
- 7) I often know about the exhibition shows from Internet.
- 
- 8) I often know about the exhibition shows from newspaper.
- 
- 9) I often know about the exhibition shows from friends.
- 
- 10) I often go to the exhibition shows for shopping.
- 
- 11) I often go to the exhibition shows for seeing new products and technology.
- 
- 12) I often go to the exhibition shows for gathering new ideas and industry trends information.
- 
- 13) I often go to the exhibition shows for relax and have fun.
- 
- 14) I often go to the exhibition shows for talk to the experts and learning deep of products.
- 
- 15) I often go to the exhibition shows for looking for business opportunities.
- 

**Extraversion**

- 
- 1) I am talkative
- 
- 2) I am full of energy
- 
- 3) I generate a lot of enthusiasm
- 
- 4) I have an assertive personality
- 
- 5) I am outgoing, sociable
- 

**Agreeableness**

- 
- 1) I am helpful and unselfish with others
- 
- 2) I have a forgiving nature
- 
- 3) I am generally trusting
- 
- 4) I am considerate and kind to almost everyone
- 
- 5) I like to cooperate with others
- 

**Conscientiousness**

- 
- 1) I do a thorough job
- 
- 2) I am a reliable worker
- 
- 3) I persevere until the task is finished
- 
- 4) I do things efficiently
- 
- 5) I make plans and follows through with them
- 

**Neuroticism**

- 
- 1) I am depressed, blue
- 
- 2) I can be tense
-



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3) I am worried a lot

---

4) I can be moody

---

5) I get nervous easily

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**Openness**

---

1) I am original, comes up with new ideas

---

2) I am curious about many different things

---

3) I am ingenious, a deep thinker

---

4) I have an active imagination

---

5) I am inventive

---

6) I value artistic, aesthetic experiences

---

7) I like to reflect, play with ideas

---

8) I am sophisticated in art, music, or literature

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## References

- Ceyhan Aldemir and Gül Bayraktaroğlu (2004), “Determining Effect of Personality Traits on Voter Behavior Using Five Factor Personality Inventory,” *Journal of Faculty of Business*, Vol. 5, No. 2, 129-147.
- Barrick R Murray., Mount K Michael, and Strauss P. Judy (1993), “Conscientiousness and Performance of Sales Representatives: Test of the Mediating Effects of Goal Setting,” *Journal of Applied Psychology*, Vol. 78, No. 5, 715-722.
- Borghans Lex, Duckworth L. Angela, Heckman J. James and Weel ter Bas (2008), “The Economics and Psychology of Personality Traits,” *NBER Working Paper No. 13810*.
- Bruck S. Carly and Allen D. Tammy (2003), “The relationship between big five personality traits, negative affectivity, type A behavior, and work–family conflict,” *Journal of Vocational Behavior* 63, 457–472.
- Carlo Gustavo, Okun A. Morris, Knight George, de Guzman T. Maria Rosario (2005), “The interplay of traits and motives on volunteering: agreeableness, extraversion and prosocial value motivation,” *Published in Personality and Individual Differences* 38, 1293-1305.
- Costa, Jr. T. Paul and McCrae R. Robert (1995), “Domains and Facets: Hierarchical Personality Assessment Using the Revised NEO Personality Inventory,” *Journal of Personality Assessment*, 64(1), 21-50.



- Engler Barbara (1999), *Personality Theories An Introduction*, 5th Ed. Houghton Mifflin College Div.
- Farhadi, H., Fatimah, O., Nasir, R. and Wan Shahrazad, W. S. (2012), "Agreeableness and Conscientiousness as Antecedents of Deviant Behavior in Workplace," *Asian Social Science*, Vol. 8(9),2-7.
- Fayombo Grace (2010), "The Relationship between Personality Traits and Psychological Resilience among the Caribbean Adolescents," *International Journal of Psychological Studies*, Vol. 2, No. 2, 105-116.
- Flynn, J. Francis (2005), "Having an Open Mind: The Impact of Openness to Experience on Interracial Attitudes and Impression Formation," *Journal of Personality and Social Psychology*, Vol. 88, No. 5, 816–826.
- Germeijs Veerle and Karine Verschueren (2011), "Verschueren Indecisiveness and Big Five personality factors: Relationship and specificity," *Personality and Individual Differences*, 50 (7) 1023–1028.
- Hede M.Anne, Jago Leo and Deery Margaret ( 2004 ), "Segmentation of Special Event Attendees Using Personal Values: Relationships with Satisfaction and Behavioural Intentions," *Journal of Quality Assurance in Hospitality & Tourism*, Vol. 5, No. 2/3/4, 33-55.
- Koole L. Sander, Jager Wander, van den Berg E. Agnes, Charles A. J. Vlek and Hofstee K. B. Willem ( 2001), "On the Social Nature of Personality: Effects of Extraversion, Agreeableness, and Feedback About Collective Resource Use on Cooperation in a Resource Dilemma," *Society for Personality and Social Psychology*, Vol. 27(3),289-301.
- Sharma Mandeep, Kaveri, Sharma R.Nov and Yadava Amrita (2010), "Personality Factors as Correlates of Health among Adults," *Journal of the Indian Academy of*
- Lee Daehui and Palakurthi Radesh (2011), "Marketing strategy to increase exhibition attendance through controlling and eliminating leisure constraints," *International CHRIE Conference*.
- Lee Myong Jae, Yeung Sylvester and Dewald Ben (2010), "An Exploratory Study Examining the Determinants of Attendance Motivations as Perceived by Attendees at Hong Kong Exhibitions," *Journal of Convention & Event Tourism*, Vol.11, 195–208.
- Liebert M.Robert and Spiegler D. Michael (1994), *Personality: Strategies and Issues*, 7th Ed. Brooks/Cole Publishing Company.
- Marzuki A.Najib (2013), "The impact of personality on employee well-being," *European Scientific Journal*, Vol.9, No.20, 43-52.
- McCrae R. Robert John P. Oliver (2006), "An Introduction to the Five-Factor Model and Its Applications," *Journal of Personality*, Vol.60(2), 175–215.

- Mondok Anita (2012), "Event Management Activity in SMES – Do They Need Educated Personal," *European Scientific Journal*, Vcol. 8, No.4, 127-151.
- Nunes, M.A. S. N., Cerri, S. A. and Blanc, N. (2008), "Improving Recommendations by Using Personality Traits in User Profiles," *International Conferences on Knowledge Management and New Media Technology*, Graz, Austria.
- Oliver P. John and Srivastava Sanjay (1999), "The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives," *In Handbook of Personality: Theory and Research*, 2th Ed. New York: Guilford, 102-138.
- Revelle William (2007), "Experimental Approaches to the Study of Personality," *Appear in Personality Research Methods B. Robins, C. Fraley and R. Krueger, eds Guilford*.
- Robbins P. Stephen and Judge Tim (2007), *Essentials of Organizational Behavior*, 9th Ed, Prentice Hall.
- Rorhmann, S. and Coetzer, E. P. (2003), "The Big Five Personality Dimensions and Job Performance," *Journal of Industrial Psychology*, Vol. 29 (1), 68-74.
- Schultz P. Duane and Schultz E. Sydney (2012), *Theories of Personality*, 10th Ed, Jon-David Hague.
- Severt Denver, Wang Youcheng, Chen Po-Ju and Breiter Deborah (2007), "Examining the motivation, perceived performance, and behavioral intentions of convention attendees: Evidence from a regional conference," *Tourism Management*, Vol.28, 399–408.
- Sharp Daryl (1987), *PERSONALITY TYPES Jung's Model of Typology*, 1st Ed, Inner City Books.
- Smith M. Timothy, Hama Kazuyo, Smith M. Paul (2003), "The effect of successful trade show attendance on future show interest: exploring Japanese attendee perspectives of domestic and offshore international events," *Journal of Business & Industrial Marketing*, Vol. 18 NO. 4/5 403-418.
- Störmer Susi and Fahr René (2010), "Individual Determinants of Work Attendance: Evidence on the Role of Personality," *IZA Discussion, Paper No. 492*.
- Triandis C. Harry and Suh M. Eunkook (2002), "Cultural Influences on Personality," *Annu. Rev. Psychol*, Vol.53, 133–160.
- Whitfield Julie, Dioko A. N. Leonardo (Don), Webber Don, and Zhang Lingue (2012), "Attracting Convention and Exhibition Attendance to Complex Mice Venues: Emerging Data from Macao," *International Journal of Tourism Research*, Vol. 16 (2), 169–179.
- Siu Noel Yee-Man, Wan Penny Yim King, Dong Ping (2012), "The impact of the services cape on the desire to stay in convention and exhibition centers: The case of Macao," *International Journal of Hospitality Management*, Vol.31, 236–246.



Shahila Zafar and Meenakshi, K (2012), “A study on the relationship between extroversion-introversion and risk-taking in the context of second language acquisition,” *International Journal of Research Studies in Language Learning*, Vol. (1), 33-40.





# **Bank-specific and macroeconomic factors related to bank profitability and stock return in Thailand**

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## **Abstract**

The study investigated the relationship of bank-specific and macroeconomic factors on bank profitability and stock return of commercial banks listed in Stock Exchange of Thailand (SET). The study used multiple regression of quarterly data from 2004-2013. Bank profitability and stock return were used as dependent variables. While, bank-specific and macroeconomic variables were used as independent variables. The dummy variable of Financial Sector Master Plan also used in the study.

The results showed that asset size, capital adequacy, liquidity, main source of banks funding have positive and significant relationship on bank profitability. Dummy variable has positive and significant relationship on stock return. While, operational efficiency, credit risk, inflation rate and real interest rate have negative and significant relationship on bank profitability and stock return. Asset quality and GDP are insignificant to bank profitability and stock return.

**Keywords:** Bank-Specific, Macroeconomic,  
bank profitability, stock return

## Introduction

Banking industry is important for an economic activity. Banks contribute to the allocation of funds from people who deposit money and those who need funds for their business activity and thus support the economic growth of a country. However, banking sector performance also might suffer both from the mistake decision of bank management and financial crisis that happened in a country. Therefore, the assessment on bank profitability and stock return is important because of its importance to financial stability and economic growth.

After the 1997 financial crisis, the Government of Thailand had an intention to bring Thai commercial banks back to profitability (ADB Report 2011). The implementation of Financial Sector Master Plan (FSMP) phase I and II (2004-2014) results few players in banking sector. The study aimed to know the extent to which bank internal and external factors related to Thailand commercial bank profitability and stock return during the period.

Bank's ultimate goal is to get profit and maximize shareholders wealth. Many literatures have done study on bank profitability before and after the crisis in Thailand. However, there is still little attention on the effect of the implementation of FSMP on both bank profitability and stock return. In addition, the study combined bank-specific and macroeconomic factors to see the relationship on bank profitability and stock returns in Thailand.

The research tried to identify the extent to which the bank-specific (such as asset size, capital adequacy, asset quality,

liquidity, main source of banks funding, operational efficiency and credit risk) and macroeconomic factors (such as GDP growth rate, inflation, real interest rate and dummy FSMP) have significant relationship on the Return on Assets, Return on Equity, Net Interest Margin and stock return. The scope of the study focused commercial banks listed in Stock Exchange of Thailand over the period of 2004-2013.

## Literature review

### Group of country studies on the determinants of bank profitability

Previous studies evaluate the determinants of bank profitability on group of country. Molyneux & Thornton (1992) used capital ratio, liquidity ratio and interest rate as determinants of bank profitability across 18 European countries between 1986 and 1989. Bonin et al (2005) used ROA as dependent variable on bank performance for 11 transition countries from 1996-2000. Albertazzi & Gambacorta (2009) found that GDP growth rate exerts a positive effect on ROE of 10 industrialized countries from 1981-2003. Karim et al (2010) found that economic growth and inflation have positive and significant effect on Islamic bank profitability in Africa from 1999-2009.

The study of 10 Middle East and North Africa countries during the period of 2000-2008 by Olson & Zoubi (2011) confirmed that bank size has positive impact on the bank profitability. Li (2013) in the study of accounting-based and market-based performance of banks in 8 Asian emerging markets showed that

ROA and NIM are significantly positively associated to capital adequacy. Perera et al (2013) showed that bank size is positively associated with bank profitability in South Asian countries. Yilmaz (2013) found that credit risk is important determinants of bank profitability in emerging markets. Finally, Almazari (2014) used comparative study between Saudi Arabia and Jordan to find the impact of internal factors on bank profitability from 2005-2011.

### **Single country studies on the determinants of bank profitability**

Others based their study of bank profitability on single country. Mamatzakis and Remoundos (2003) concluded that variables related to management decision have major impact on Greek commercial banks profitability. Athanasoglou et al (2008) found the evidence that the profitability of Greek banks is shaped by bank-specific and macroeconomic factors. Kosmidou et al (2005) found that efficiency in expense management and bank size are significant determinants of banks profitability in United Kingdom. Javaid et al (2011) showed that total assets, equity to total assets, deposit to total assets and loans to total assets are the major determinants of banks profitability in Pakistan. Some literatures showed positive relationship between size and bank profitability (Sufian, 2009; Davydenko, 2010; Sufian, 2011; Alper & Anbar, 2011; Muda et.al, 2013; Tabari et al., 2013). Other showed negative relationship (Ben Naceur & Goaied, 2008; Sufian & Chong, 2008; Syafri, 2012). Even effect on bank size is not important (Athanasoglou et al, 2008) or insignificant (Zeitun, 2012).

Capital adequacy used as internal determinants of bank profitability (Aburime, 2008; Athanasoglou et al 2008). Most literatures showed that capitalization have a positive impact on bank profitability (Sufian & Chong, 2008; Ben Naceur & Goaied, 2008; Sufian, 2009; Davydenko, 2010; Syafri, 2012; Tabari et al., 2013). Some study showed that better capitalized bank seems to be more profitable (Dietrich & Wanzenried, 2009). Ali et al (2011) find that ROA negatively affected by capital while ROE positively affected by capital. Bilal et al (2013) find that capital ratio has significant association with ROE.

Asset quality is important determinants of bank profitability. Some literature showed positive and significant on bank profitability (Kosmidou et al., 2005) while other showed negative and significant on bank profitability (Alper & Anbar, 2011). However, Sufian & Kamarudin (2012) concluded that all bank-specific determinants influence the profitability of the Bangladeshi banking sector except asset quality. Liquidity also used as the determinants of bank profitability. Some literatures show that liquidity has negative impact to profitability (Davydenko, 2010; Hasan et al, 2013) or positively related to profitability (Sufian, 2011). Other found that it is varied among the types of bank studied (Sufian, 2009).

Deposits are the main source for the financing of the banks. Some literatures showed the positive and significant relationship between deposit and profitability (Javaid et al, 2011; Gul et al., 2011). Other found the negative relationship (Davydenko, 2010). Cost-income ratio used to measure the impact of efficiency on bank profitability. Guru et al (2002); Kosmidou et al (2005) and Sastrosuwito & Suzuki (2011) showed that efficient expenses management is significant factor in explaining bank profitability.

Previous literatures showed that cost-income ratio has negative effect on profitability (Syafri, 2012; Tabari et al., 2013; Hasan et al, 2013).

Credit risk is used as determinants of bank profitability. Theory suggests that increased exposure to credit risk is normally associated with decrease firm profitability. Chantapong (2005) found that domestic and foreign banks in Thailand reduced their credit exposure during the crisis years and improved their profitability during the post-crisis years. Some literatures showed that credit risk is negatively related to bank profitability (Athanasoglou et al 2008; Sufian & Chong, 2008; Davydenko, 2010; Sufian, 2011; Ali et al, 2011; Bilal et al, 2013). Others found the positive relationship between credit risk and profitability (Sufian, 2009; Syafri, 2012)

Factors affect profitability of banking sector might change when there is changes in macroeconomic environment. Previous study showed macroeconomic factors as the profitability determinants (Abduh et al, 2012). Some study found positive relationship (Dietrich & Wanzenried, 2009; Sufian, 2011; Ali et al., 2011; Alper & Anbar, 2011; Gul et al, 2011). Others found negative relationship (Sufian & Chong, 2008; Sufian & Kamarudin, 2012; Hasan et al, 2013).

### **Previous studies on bank-specific, macroeconomic factors and stock return**

Stock return is the benefits enjoyed by the investor over an investment made. Return is the motivating factors that

cause investor to invest money in stocks. Return means the profit earned as a result of increase in stock prices (Jeyanthi & William, 2010, p. 86). Previous studies showed that bank-specific and macroeconomic factors are determinants of stock return. For example, Kasman & Kasman (2011) used some bank specific variables and efficiency to find the relationship for stock performance. Drobetz et al (2007) examined the importance of bank-specific fundamental variables in explaining the cross-section of expected bank stock return. In addition, macroeconomic factors are widely used on study of stock returns (Tangjitprom, 2012). There is significant relationship between macroeconomic factors and stock returns (Cole et al, 2008; Ibrahim & Agbaje, 2013; Saeed & Akhter, 2012). However, others found insignificant relationship (Tu & Li, 2013; Luthra & Mahajan, 2014).

## **Data and methodology**

### **Data**

The study used secondary data of 11 Thai commercial banks listed in Stock Exchange of Thailand. The data consists of 440 observations of quarterly data from 2004-2013 with some missing data. The bank-specific and stock return data were obtained from banks website and Stock Exchange of Thailand Market Analysis and Reporting Tool (SETSMART). Macroeconomic data were obtained from Bank of Thailand website.

## Methodology

The study used linear regression models with white heteroskedasticity consistent-standard errors and covariance based on the equations as follows:

**Model 1:** Bank-specific and macroeconomic determinants of bank profitability as measured by ROA

$$ROA_{i,t} = \beta_0 + \beta_1(\ln A_{i,t}) + \beta_2(CA_{i,t}) + \beta_3(LLR\_GR_{i,t}) + \beta_4(LQD_{i,t}) + \beta_5(DA_{i,t}) + \beta_6(CIR_{i,t}) + \beta_7(LLP\_TL_{i,t}) + \beta_8(GDPGR_t) + \beta_9(INF_t) + \beta_{10}(RI_t) + \beta_{11}D_t + \varepsilon_{i,t}$$

**Model 2:** Bank-specific and macroeconomic determinants of bank profitability as measured by ROE

$$ROE_{i,t} = \beta_0 + \beta_1(\ln A_{i,t}) + \beta_2(CA_{i,t}) + \beta_3(LLR\_GR_{i,t}) + \beta_4(LQD_{i,t}) + \beta_5(DA_{i,t}) + \beta_6(CIR_{i,t}) + \beta_7(LLP\_TL_{i,t}) + \beta_8(GDPGR_t) + \beta_9(INF_t) + \beta_{10}(RI_t) + \beta_{11}D_t + \varepsilon_{i,t}$$

**Model 3:** Bank-specific and macroeconomic determinants of bank profitability as measured by NIM

$$NIM_{i,t} = \beta_0 + \beta_1(\ln A_{i,t}) + \beta_2(CA_{i,t}) + \beta_3(LLR\_GR_{i,t}) + \beta_4(LQD_{i,t}) + \beta_5(DA_{i,t}) + \beta_6(CIR_{i,t}) + \beta_7(LLP\_TL_{i,t}) + \beta_8(GDPGR_t) + \beta_9(INF_t) + \beta_{10}(RI_t) + \beta_{11}D_t + \varepsilon_{i,t}$$

**Model 4:** Bank-specific and macroeconomic determinants on stock return

$$SR_{i,t} = \beta_0 + \beta_1(\ln A_{i,t}) + \beta_2(CA_{i,t}) + \beta_3(LLR\_GR_{i,t}) + \beta_4(LQD_{i,t}) + \beta_5(DA_{i,t}) + \beta_6(CIR_{i,t}) + \beta_7(LLP\_TL_{i,t}) + \beta_8(GDPGR_t) + \beta_9(INF_t) + \beta_{10}(RI_t) + \beta_{11}D_t + \varepsilon_{i,t}$$

Where,

$\beta$  = Co-efficient of regression;

ROE = Return on Equity (net income/total equity)

ROA = Return on Assets (net income/total assets)

NIM = Net Interest Margin (Net Interest and Dividend Income /Total Earning Assets)

SR = Stock Return (natural log of price at time t divided by price at time t-1)

LNA = Asset size (natural log of total assets)

CA = Capital adequacy (total equity/total assets)

LLR\_GR = Asset quality (loan loss reserve/gross loans)

LQD = Liquidity (total loans/total customer deposits)

DA = Main source of banks funding (deposit/total assets)

CIR = Operational Efficiency (total operating expenses/total operating income)

LLP\_TL = Credit risk (loan loss provision/total loans)

GDPGR= Quarterly real Gross domestic product growth rate

INF = Quarterly inflation rate (Consumer Price Index)

RI = quarterly real Interest rate

D = Dummy variables for FSMP (phase I equals to 0, and phase II equals to 1)

$\varepsilon$  = error term

The study also runs the regression of larger, medium and small banks in order to see the size effect on bank profitability

and stock return. Table 1 shows the category of banks according to its asset size:

**Table 1** Names, Abbreviation and Size of Thai Commercial banks Listed in Stock Exchange of Thailand

No	Name of the Bank	Abbreviation of the Bank	Size	Year of Observations
1	Bangkok Bank Public Company Limited	BBL	Large	2004q1-2013q4
2	Krung Thai Bank Public Company Limited	KTB	Large	2004q1-2013q4
3	Siam Commercial Bank Public Company Limited	SCB	Large	2004q1-2013q4
4	Kasikornbank Public Company Limited	KBANK	Large	2004q1-2013q4
5	Bank of Ayudhya Public Company Limited	BAY	Medium	2004q1-2013q4
6	TMB Bank Public Company Limited	TMB	Medium	2004q1-2013q4
7	Thanachart Bank Public Company Limited	TBANK	Medium	2004q1-2013q4
8	CIMB Thai Bank Public Company Limited	CIMBT	Small	2004q1-2013q4
9	Kiatnakin Bank Public Company Limited	KKP	Small	2004q1-2013q4
10	Land and Houses Bank Public Company Limited	LHBANK	Small	2004q1-2013q4
11	Tisco Bank Public Company Limited	TISCO	Small	2004q1-2013q4

Source: Bank of Thailand and Stock Exchange of Thailand.



## Result

### Descriptive statistics

Table 2 presents descriptive statistics of 11 Thai Commercial banks from 2004-

2013. The mean and standard deviation are as follows: ROA (M=0.31% and std. dev=1.04%), ROE (M=1.09% and std. dev= 16.52%), NIM (M=0.74% and std. dev= 0.25%) and stock return (M=0.004 baht and std. dev= 0.177 baht).

**Table 2** Descriptive statistics for the variables (All banks)

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Obs.
ROA (%)	0.311813	0.277345	8.627452	-9.738176	1.044303	424
ROE (%)	1.097587	2.787533	18.44371	-294.8919	16.52576	424
NIM (%)	0.745191	0.718391	2.914342	0.100217	0.258330	417
SR	0.004882	0.009132	0.693147	-0.559616	0.177845	387
LNA	20.34511	20.49317	26.90116	15.58090	1.947320	426
CA (%)	9.423572	9.266485	23.55120	0.692824	3.471764	426
LLR_GR (%)	4.638160	3.944792	18.92611	0.736721	3.129989	423
LQD (%)	<b>103.1510</b>	92.39290	472.8956	46.33655	48.99016	423
DA (%)	70.10208	73.72712	89.01517	17.99371	13.24599	426
CIR (%)	56.47683	49.65991	662.3022	-228.3687	<b>49.09812</b>	418
LLP_TL (%)	0.245834	0.162052	4.390573	-0.310925	0.345506	413
GDPGR (%)	3.920000	4.650000	19.10000	-8.900000	4.725288	440
INF (%)	3.107500	3.100000	7.500000	-2.800000	2.021257	440
RI (%)	<b>-0.402019</b>	-0.379426	2.614286	-3.025000	0.728288	440

Among independent variables liquidity (LQD) has the highest mean (M=103.15%), followed by main source of banks funding (DA), operational efficiency (CIR) and asset size (LNA). Operational efficiency (CIR) shows the highest standard deviation.

Table 3 shows the descriptive statistics of large banks with the mean and standard deviation as follows: ROA (M= 0.35% and std. dev= 0.12%), ROE (M=3.86% and std. dev= 1.37%), NIM (M= 0.78% and std. dev=0.11%) and SR (M= 0.017 baht and Std. dev=0.15 baht). Among the independent variables, liquidity has the highest mean (M=86.71%) and followed by

main source of banks funding and operational efficiency and asset size. Liquidity has the highest standard deviation. Table 4 shows the descriptive statistics for medium and small banks with the mean and standard deviation as follows: ROA (M= 0.28% and Std. dev=1.31%), ROE (M=0.58% and Std. dev =20.75%), NIM (M=0.72% and Std. dev =0.31%) and SR (M=0.004 baht and Std. dev =0.19 baht). Liquidity (LQD) shows the highest mean and standard deviation. It follows by main source of banks funding (DA), operational efficiency (CIR) and asset size (LNA).

**Table 3** Descriptive statistics for the variables (Large Banks)

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Obs.
ROA (%)	0.357131	0.354361	0.903490	0.028996	0.129601	160
ROE (%)	3.866516	3.849557	9.074298	0.374847	1.378490	160
NIM (%)	0.783135	0.777938	1.045453	0.477637	0.112599	160
SR	0.016798	0.027324	0.656172	-0.463347	0.147791	160
LNA	21.06745	21.06170	21.64066	20.42881	0.320576	160
CA (%)	9.276758	9.605197	12.29461	6.027822	1.613565	160
LLR_GR (%)	4.956696	4.288536	14.19797	2.660617	2.280264	160
LQD (%)	<b>86.71783</b>	87.93261	108.0425	64.79348	<b>8.247051</b>	160
DA (%)	77.98231	77.11576	89.01517	65.62941	4.886695	160
CIR (%)	44.75006	43.64254	62.12509	28.48289	5.571327	160
LLP_TL (%)	0.195974	0.153458	1.322520	0.033501	0.164321	160
GDPGR (%)	3.920000	4.650000	19.10000	-8.900000	4.734734	160
INF (%)	3.107500	3.100000	7.500000	-2.800000	2.025298	160
RI (%)	-0.402019	-0.379426	2.614286	-3.025000	0.729744	160

**Table 4** Descriptive statistics for the variables (Medium and Small banks)

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Obs.
ROA (%)	0.284348	0.191949	8.627452	-9.738176	1.319800	264
ROE (%)	-0.580552	2.008596	18.44371	-294.8919	20.75104	264
NIM (%)	0.721567	0.656389	2.914342	0.100217	0.314815	257
SR	-0.003517	-0.007491	0.693147	-0.559616	0.196171	227
LNA	19.91061	19.59551	26.90116	15.58090	2.348489	266
CA (%)	9.511881	8.582856	23.55120	0.692824	4.212780	266
LLR_GR (%)	4.444374	3.478054	18.92611	0.736721	3.538995	263
LQD (%)	<b>113.1484</b>	101.0671	472.8956	46.33655	<b>59.65892</b>	263
DA (%)	65.36209	69.16511	87.15188	17.99371	14.38814	266
CIR (%)	63.74924	55.71583	662.3022	-228.3687	61.26575	258
LLP_TL (%)	0.277366	0.176738	4.390573	-0.310925	0.418993	253
GDPGR (%)	3.920000	4.650000	19.10000	-8.900000	4.728366	280
INF (%)	3.107500	3.100000	7.500000	-2.800000	2.022574	280
RI (%)	-0.402019	-0.379426	2.614286	-3.025000	0.728763	280

## Correlation analysis

Table 5 shows the correlation among variables used in the regression analysis of all banks. The correlation matrix shows the multicollinearity problem between liquidity (LQD) and main source of banks funding (DA). Anderson et al. (2011) by using “rule of thumb” test

suggest that any correlation coefficient exceeds 0.7 or below -0.7 indicate potential problem with multicollinearity, which is the case here. It will be problematic to include both variables into the model. So, main source of banks funding (DA) was dropped from the model.

**Table 5** Correlation analysis (All banks)

	LNA	CA	LLR_GR	LQD	DA	CIR	LLP_TL	GDPGR	INF
CA	-0.023								
LLR_GR	0.119	-0.133							
LQD	-0.286	0.179	-0.325						
DA	0.348	-0.383	0.311	<b>-0.822</b>					
CIR	-0.050	-0.078	0.035	0.030	-0.058				
LLP_TL	-0.011	-0.184	0.065	-0.064	0.050	0.320			
GDPGR	0.027	0.011	0.079	-0.128	0.152	-0.088	-0.013		
INF	0.021	-0.004	0.091	0.068	-0.043	-0.039	-0.083	0.361	
RI	-0.014	-0.009	-0.046	-0.000	0.001	0.051	0.001	-0.008	0.079

Table 6 shows the correlation among variables of large banks. The multicollinearity problems found

between asset quality (LLR\_GR) and liquidity (LQD). Therefore, asset quality (LLR\_GR) was dropped from the model.

**Table 6** Correlation analysis (Large Banks)

	LNA	CA	LLR_GR	LQD	DA	CIR	LLP_TL	GDPGR	INF
CA	0.076								
LLR_GR	-0.386	0.180							
LQD	0.275	-0.204	<b>-0.764</b>						
DA	-0.606	-0.209	0.530	-0.639					
CIR	0.016	-0.320	-0.096	0.059	0.044				
LLP_TL	-0.005	-0.137	-0.117	0.117	0.050	-0.065			

GDPGR	-0.096	-0.011	0.185	-0.208	0.183	-0.082	-0.042		
INF	-0.170	0.006	0.067	0.058	0.089	-0.053	-0.059	0.391	
RI	0.069	-0.015	-0.001	0.006	-0.015	-0.005	0.029	-0.004	0.107

Table 7 presents the correlation among variables of medium and small banks. The correlation analysis shows multicollinearity problem between

liquidity (LQD) and main source of banks funding (DA). So, this study drops main source of banks funding (DA) from the model.

**Table 7** Correlation analysis: Medium and small banks

	LNA	CA	LLR_GR	LQD	DA	CIR	LLP_TL	GDPGR	INF
CA	0.001								
LLR_GR	0.183	-0.201							
LQD	-0.201	0.189	-0.336						
DA	0.189	-0.422	0.313	<b>-0.842</b>					
CIR	0.055	-0.085	0.055	-0.017	0.032				
LLP_TL	0.074	-0.199	0.110	-0.112	0.135	0.320			
GDPGR	0.058	0.019	0.021	-0.157	0.191	-0.114	-0.007		
INF	0.080	-0.010	0.108	0.081	-0.076	-0.057	-0.107	0.337	
RI	-0.027	-0.010	-0.075	-0.004	0.013	0.070	-0.009	-0.011	0.052

## Regression results

Table 8 shows the regression result of all banks using least squares with White heteroskedasticity-consistent standard errors & covariance. The AR terms were added to correct the serial correlation problem.

Asset size (LNA) has positive and significant relationship on ROE. It suggests that banks with large assets could have higher degree of product and loan diversification than small banks (Avaravci & Çalim, 2013) and thus achieves higher profitability (Alper & Anbar, 2013). Capital adequacy (CA) has

positive and significant relationship on ROA and NIM, indicates banks ability to absorb the potential losses and could increase bank profitability.

Operational efficiency (CIR) has negative and significant relationship on ROA, ROE and NIM. It is consistent with the previous studies (Almazari, 2014; Athanasoglou et al, 2008; Syafri, 2012 and Zeitun, 2012). It indicates that the efficient bank will generate huge profit than inefficient banks due to high expenses. Credit risk (LLP\_TL) has negative and significant relationship on ROA and ROE. This result is consistent

to previous study (Athanasoglou et al, 2008; Sufian 2011). The increased exposure to credit risk is normally associated with decreased profitability. However, credit risk is positively and significantly related to NIM. It is not as expected because the larger the credit risk, the higher the profitability (Syafri, 2012).

GDP is insignificant to bank profitability and stock return. Inflation (INF) and interest rate (RI) have negatively and significantly related to stock return. The dummy variable has positive and significant relationship on stock return; means the implementation of FSMP give favorable condition to increase bank stock return.

**Table 8** Regression result (All banks)

Independent variables	Dependent variables			
	ROA (Model 1)	ROE (Model 2)	NIM (Model 3)	SR (Model 4)
<b>Constant</b>				
Coefficient	-2.304528	-15.96007	0.633708	-0.089878
P-Value	(0.2061)	(0.2915)	(0.0008)***	(0.4963)
<b>LNA</b>				
Coefficient	0.118783	0.506589	0.000739	0.003897
P-Value	(0.1327)	(0.0703)*	(0.9241)	(0.5123)
<b>CA</b>				
Coefficient	0.038442	1.020928	0.020304	-0.000374
P-Value	(0.0007)***	(0.2138)	(0.0293)**	(0.9024)
<b>LLR_GR</b>				
Coefficient	0.029900	-0.026205	-0.005913	0.004598
P-Value	(0.2703)	(0.9509)	(0.3866)	(0.2342)
<b>LQD</b>				
Coefficient	-0.000336	0.004284	-0.000128	-0.000136
P-Value	(0.8969)	(0.6622)	(0.7999)	(0.4881)
<b>CIR</b>				
Coefficient	-0.006465	-0.057510	-0.000830	-0.000144
P-Value	(0.0225)**	(0.0058)***	(0.0029)***	(0.7105)
<b>LLP_TL</b>				
Coefficient	-0.426344	-8.919082	0.114655	-0.014788

P-Value	(0.0040)***	(0.0017)***	(0.0022)***	(0.5913)
<b>GDPGR</b>				
Coefficient	0.004700	-0.049914	-0.000193	0.003133
P-Value	(0.3922)	(0.4284)	(0.9197)	(0.1100)
<b>INF</b>				
Coefficient	0.001673	0.293149	0.000728	-0.020240
P-Value	(0.8710)	(0.2888)	(0.9292)	(0.0010)***
<b>RI</b>				
Coefficient	0.007328	-0.415626	-0.011753	-0.070887
P-Value	(0.7537)	(0.2226)	(0.3256)	(0.0001)***
<b>DUMMYFSMP</b>				
Coefficient	0.072203	2.411372	-0.069221	0.087144
P-Value	(0.4393)	(0.1854)	(0.2519)	(0.0003)***
R-Squared	0.572929	0.195202	0.384110	0.224007
Prob (F-statistic)	0.000000	0.000000	0.0000000	0.000000
Durbin-Watson	1.736005	2.028702	2.117681	1.986144
Observation	386	398	398	353

\*\*\*, \*\* and \* indicate significance level at 1%, 5% and 10% respectively.

**Table 9** Regression result of large and medium and small banks

Independent variables	Dependent variables							
	ROA (Model 1)		ROE (Model 2)		NIM (Model 3)		SR (Model 3)	
	Large banks	Medium & Small banks	Large banks	Medium & Small banks	Large banks	Medium & Small banks	Large banks	Medium & Small banks
<b>Constant</b>								
Coefficient	3.694106	-2.539684	39.09838	-22.72747	-0.828586	0.576012	1.932277	-0.086780
P-Value	(0.0093)***	(0.2009)	(0.0011)***	(0.2541)	(0.4645)	(0.0023)***	(0.1485)	(0.5606)
<b>LNA</b>								
Coefficient	-0.129478	0.121223	-1.125182	0.500039	0.016065	-0.004955	-0.057130	0.003235
P-Value	(0.0183)**	(0.1330)	(0.0079)***	(0.0882)*	(0.7439)	(0.4616)	(0.1768)	(0.6368)
<b>CA</b>								
Coefficient	0.014837	0.046918	-0.286881	1.179439	0.016861	0.026248	0.001125	-0.000988
P-Value	(0.0053)***	(0.0033)***	(0.0000)***	(0.2101)	(0.0216)**	(0.0026)***	(0.8999)	(0.7311)



LLR_GR								
Coefficient	0.026344		0.000278		0.001214		0.002639	
P-Value	(0.4204)		(0.9996)		(0.8304)		(0.4905)	
LQD								
Coefficient	0.000330	-0.000567	0.000869	0.001074	0.006250	0.000509	-0.001916	-4.21E-05
P-Value	(0.8089)	(0.8176)	(0.9560)	(0.9069)	(0.0000)***	(0.1091)	(0.4133)	(0.7875)
DA								
Coefficient	-0.002718		-0.023519		0.008166		-0.007630	
P-Value	(0.3482)		(0.4719)		(0.0003)***		(0.1188)	
CIR								
Coefficient	-0.010696	-0.006433	-0.131499	-0.038354	-0.001391	-0.000870	0.002041	-9.84E-05
P-Value	(0.0000)***	(0.0290)**	(0.0000)***	(0.0802)*	(0.0365)**	(0.0033)***	(0.3878)	(0.8050)
LLP_TL								
Coefficient	-0.411670	-0.431755	-5.208284	-9.024258	-0.001075	0.136231	-0.025400	-0.015721
P-Value	(0.0000)***	(0.0161)**	(0.0000)***	(0.0074)***	(0.9585)	(0.0042)***	(0.6371)	(0.6002)
GDPGR								
Coefficient	0.001629	0.006931	0.020417	-0.137411	0.000298	0.000244	0.003300	0.004065
P-Value	(0.2654)	(0.4595)	(0.2611)	(0.3068)	(0.6726)	(0.9427)	(0.2017)	(0.1442)
INF								
Coefficient	-0.002233	0.007487	-0.029331	0.787773	0.003065	-0.008108	-0.024483	-0.022462
P-Value	(0.5318)	(0.6638)	(0.4790)	(0.2414)	(0.2867)	(0.5482)	(0.0002)***	(0.0087)***
RI								
Coefficient	0.006197	0.006520	0.075515	-0.949017	-0.006863	-0.021143	-0.038890	-0.106685
P-Value	(0.1702)	(0.8670)	(0.2149)	(0.1214)	(0.0816)*	(0.3404)	(0.0358)**	(0.0000)***
DUMMYFSMP								
Coefficient	0.226987		5.935536		-0.052474		0.087191	
P-Value	(0.2318)		(0.1475)		(0.5009)		(0.0092)***	
R-Squared	0.762497	0.572005	0.702824	0.189876	0.818693	0.318723	0.184567	0.255909
Prob (F-statistic)	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000263	0.000000
Durbin-Watson	2.305994	1.752977	2.210029	2.018208	2.455756	2.215905	2.045864	1.958721
Observation	159	226	159	245	159	244	160	200

\*\*\*, \*\* and \* indicate significance level at 1%, 5% and 10% respectively.



Table 9 shows the regression result of large banks, medium and small banks using least squares with White heteroskedasticity-consistent standard errors & covariance. The AR terms were added to correct the serial correlation problem. Asset size (LNA) of large banks has negative and significant relationship on ROA and ROE. However, asset size (LNA) has positive and significant relationship on ROE for medium and small banks. This result is also consistent with previous study (Sufian & Chong, 2008; Syafri, 2012) which showed that the negative coefficient indicates that larger (smaller) banks tend to generate lower (higher) profits. While, positive coefficient shows the economies of scale for medium and small banks.

Capital adequacy (CA) has positive and significant relationship on ROA and NIM of large banks. In addition, capital adequacy (CA) has negative and significant relationship on ROE of large banks. It indicates that higher equity to asset ratio tends to reduce the risk of equity and therefore lower the equilibrium expected ROE required by investors (Staikouras & Wood, 2011). For medium and small banks, CA has positive and significant relationship on ROA and NIM. It indicates the ability to resist potential losses and generate higher profit.

Asset quality (LLR\_GR) is insignificant to bank profitability and stock return of medium and small banks. Liquidity (LQD) has positive and significant relationship on NIM of large banks. It possibly means that larger banks have more chance to invest in different kinds of short term liquid assets (Acaravci & Çalim, 2013). Moreover, main source of

banks funding (DA) has positive and significant relationship on NIM of large banks. It indicates that deposit for funds can achieve better profit. Therefore, banks normally should make a great effort to attract more deposit as source of banks funding (Acaravci & Çalim, 2013).

Operational efficiency (CIR) has negative and significant relationship on ROA, ROE and NIM of large, medium and small banks. It is consistent with previous studies of Almazari (2014), Athanasoglou et al (2008), Syafri (2012) and Zeitun (2012). The efficient bank will generate huge profit than inefficient banks. Next, credit risk (LLP\_TL) has negative and significant relationship on ROA and ROE of large, medium and small banks. It indicates that the increase exposure to credit risk normally associated with decreased bank profitability. However, credit risk has positive and significant relationship on NIM of medium and small banks. This is not expected since the larger credit risk, the greater the profit (Syafri, 2012).

GDP is insignificant for all models. Inflation is negatively and significantly related to stock return of large, medium and small banks. It indicates that constant increase in price would lead to the saving ability of people which in turn lead to a decrease in the demand of stock. Interest rate has negative and significant relationship on stock return of large, medium and small banks. It means the increase interest rate would result the low demand of people on buying stock. People prefer to save their money than make an investment on stock (Tu & Li, 2013). Lastly, dummy FSMP is positively and significantly related to stock return of medium and small banks.

## Conclusion and discussion

The study examines the relationship of bank-specific and macroeconomic factors on bank profitability and stock return in Thailand over the period of 2004-2013. The sample includes 11 commercial banks listed in Stock Exchange of Thailand. It is important to notice that regression result of asset size different between large banks and medium and small banks. It means that there are economies of scale for small (and medium) banks and diseconomies of scale for large banks (Sufian & Chong, 2008).

Capital adequacy of large banks also found to be negative and significant to ROE. Capital adequacy requirement limits the risk profile of investment of large banks and thus affect on its ability to reach their target level of profitability (Almazari, 2013). Liquidity of large banks has positive and significant relationship to bank profitability. It indicates that large banks have more opportunities to invest in short term liquid assets. In addition, DA of large banks is positive and significant to bank profitability. Banks normally should make great effort to attract more deposit as source of banks funding (Acaravci & Çalim, 2013). Larger banks possibly more involve in fulfilling depositor's obligations than investment (Ongore & Kusa, 2013).

Another important result is that operational efficiency is negatively and significantly related to bank profitability of large, medium and small banks. The inefficient banks will generate small profit even it is larger, medium or small

banks (Syafri, 2012). Credit risk is negatively and significantly related to bank profitability. The possibility is that banks in Thailand during the implementation of FSMP have increased their loan loss provision for future economic uncertainty due to large amount of non-performing loans. This argument is supported by the report released by Bank of Thailand which stated that banks increased the ratio of actual loan loss provision to regulatory loan loss provision to 168.3% (BOT press release No.4/2014).

The findings are considered important for policy makers and bank managers. Recommendations were given based on the empirical results: First, banks need to maintain its liquidity due to their ability to meet its obligations when depositors want to withdraw funds and also when borrowers want to make sure that their cash needs will be met by banks. Second, banks need to reduce the cost of operations as it will minimize the incidence of bank failure and thus strengthen shareholder confidence and the public through the better performance of banks. Third, the study recommends the necessity to improve other activities as sources of funds. Fourth, banks need to carefully identify the potential risks amidst growing economic risk and rising bad loans by maintaining higher loan loss provision as it will sustain banks for the worst scenarios in economic conditions.

This study only focuses on commercial banks listed in Stock Exchange of Thailand. For future study, all banks need to include in order getting more picture of the impact of the implementation of FSMP. Periods before the implementation of FSMP are also important to consider.

## References

- Abduh, M., Omar, M., & Mesic, E. (2012). *Profitability determinants of Islamic and conventional banks in Malaysia: a panel regression approach*. Paper presented at the Terengganu International Business and Economic Conference (TiBEC III), Malaysia.
- Aburime, T. U. (2008). Determinants of Bank Profitability: Company-Level Evidence from Nigeria. Available at SSRN 1106825.
- Acaravci, S. K., & Çalim, A. E. (2013). Turkish Banking Sector's Profitability Factors. *International Journal of Economics & Financial Issues (IJEFI)*, 3(1).
- Albertazzi, U., & Gambacorta, L. (2009). Bank profitability and the business cycle. *Journal of Financial Stability*, 5(4), 393-409. doi: <http://dx.doi.org/10.1016/j.jfs.2008.10.002>
- Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank-Specific and Macroeconomic Indicators of Profitability-Empirical Evidence from the Commercial Banks of Pakistan. *International Journal of Business and Social Science*, 2(6), 235-242.
- Almazari, A. A. (2013). Capital Adequacy, Cost Income Ratio and the Performance of Saudi Banks. *International Journal of Academic Research in Accounting, Finance & Management Sciences*, 3(4), 284-293.
- Almazari, A. A. (2014). Impact of Internal Factors on Bank Profitability: Comparative Study between Saudi Arabia and Jordan. *Journal of Applied Finance & Banking*, 4(1), 125-140.
- Alper, D., & Anbar, A. (2011). Bank specific and macroeconomic determinants of commercial bank profitability: empirical evidence from Turkey. *Business and Economics Research Journal*, 2(2), 139-152.
- Anderson, D. R., Sweeney, D. J., & Williams, T. A. (2011). *Statistics for Business and Economics, Eleventh Edition*: South-Western Cengage Learning.
- Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets, Institutions and Money*, 18(2), 121-136. doi: <http://dx.doi.org/10.1016/j.intfin.2006.07.001>
- Bank of Thailand (2013). Performance of the Thai Banking System in 2013 [Press Release]. Retrieved November 17, 2014, from [www.bot.or.th/English/FinancialInstitutions/New\\_Publications/KeyDevFI/PerformanceBank/Documents/n0457e.pdf](http://www.bot.or.th/English/FinancialInstitutions/New_Publications/KeyDevFI/PerformanceBank/Documents/n0457e.pdf)
- Ben Naceur, S., & Goaid, M. (2008). The Determinants of Commercial Bank Interest Margin and Profitability: Evidence from Tunisia. *Frontiers in Finance & Economics*, 5(1).

- Bilal, M., Saeed, A., Gull, A. A., & Akram, T. (2013). Influence of Bank Specific and Macroeconomic Factors on Profitability of Commercial Banks: A Case Study of Pakistan. *Research Journal of Finance and Accounting*, 4(2), 117-126.
- Bonin, J. P., Hasan, I., & Wachtel, P. (2005). Bank performance, efficiency and ownership in transition countries. *Journal of Banking & Finance*, 29(1), 31-53. doi: <http://dx.doi.org/10.1016/j.jbankfin.2004.06.015>
- Chantapong, S. (2005). Comparative Study of Domestic and Foreign Bank Performance in Thailand: The Regression Analysis. *Economic Change and Restructuring*, 38(1), 63-83. doi: 10.1007/s10644-005-4523-5
- Cole, R. A., Moshirian, F., & Wu, Q. (2008). Bank stock returns and economic growth. *Journal of Banking & Finance*, 32(6), 995-1007. doi: <http://dx.doi.org/10.1016/j.jbankfin.2007.07.006>
- Davydenko, A. (2010). Determinants of Bank Profitability in Ukraine. *Undergraduate Economic Review*, 7(1), 2.
- Dietrich, A., & Wanzenried, G. (2009). *What determines the profitability of commercial banks? New evidence from Switzerland*. Paper presented at the 12th Conference of the Swiss Society for Financial Market Researches, Geneva. Discussion Paper.
- Drobetz, W., Erdmann, T., & Zimmermann, H. (2007). Predictability in the cross-section of European bank stock returns.
- Gul, S., Irshad, F., & Zaman, K. (2011). Factors Affecting Bank Profitability in Pakistan. *The Romanian Economic Journal*, 39, 61-87.
- Hasan, N., Shaari, N., Palanimally, Y., & Haji-Mohamed, R. (2013). The Impact of Macroeconomic and Bank Specific Components on the Return of Equity in Malaysia. *Interdisciplinary Journal of Contemporary Research in Business*, 5(2), 106-126.
- Ibrahim, T. M., & Agbaje, O. M. (2013). The Relationship between Stock Return and Inflation in Nigeria. *European Scientific Journal*, 9(4).
- Javaid, S., Anwar, J., Zaman, K., & Gafoor, A. (2011). Determinants of Bank Profitability in Pakistan: Internal Factor Analysis. *Mediterranean Journal of Social Sciences*, 2(1), 59.
- Jeyanthi, B. J. Q., & William, S. J. M. A. (2010). Bank Stock Performance since the 2000s. *CURIE Journal*, 3(1), 82-93.
- Karim, B. K., Sami, B. A. M., & Hichem, B.-K. (2010). Bank-specific, Industry-specific and Macroeconomic Determinants of African Islamic Banks' Profitability. *International Journal of Business & Management Science*, 3(1), 39-56.
- Kasman, S., & Kasman, A. (2011). Efficiency, Productivity and Stock Performance: Evidence from the Turkish Banking Sector. *Panoeconomicus*, 58(3), 355-372. doi: 10.2298/PAN1103355K

- Kosmidou, K., Tanna, S., & Pasiouras, F. (2005). *Determinants of profitability of domestic UK commercial banks: panel evidence from the period 1995-2002*. Paper presented at the Money Macro and Finance (MMF) Research Group Conference.
- Li, L. (2013). Market-based vs. Accounting-based Performance of Banks in Asian Emerging Markets. *Asian Journal of Business Research*(Special Issue), 14-31.
- Luthra, M., & Mahajan, S. (2014). Impact of Macro factors on BSE Bankex. *International Journal of Current Research and Academic Review*, 2(2), 179-186.
- Mamatzakis, E., & Remoundos, P. (2003). Determinants of Greek commercial banks profitability, 1989-2000. *Spoudai*, 53(1), 84-94.
- Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal of Banking & Finance*, 16(6), 1173-1178. doi: [http://dx.doi.org/10.1016/0378-4266\(92\)90065-8](http://dx.doi.org/10.1016/0378-4266(92)90065-8)
- Muda, M., Shaharuddin, A., & Embaya, A. (2013). Comparative Analysis of Profitability Determinants of Domestic and Foreign Islamic Banks in Malaysia. *International Journal of Economics & Financial Issues (IJEFI)*, 3(3).
- Olson, D., & Zoubi, T. A. (2011). Efficiency and bank profitability in MENA countries. *Emerging Markets Review*, 12(2), 94-110. doi: <http://dx.doi.org/10.1016/j.ememar.2011.02.003>
- Ongore, V. O., & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252.
- Perera, S., Skully, M., & Chaudrey, Z. (2013). Determinants of Commercial Bank Profitability: South Asian Evidence. *Asian Journal of Finance & Accounting*, 5(1), 365-380.
- Saeed, S., & Akhter, N. (2012). Impact of Macroeconomic Factors on Bank Index in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4(6).
- Sastrosuwito, S., & Suzuki, Y. (2011). *Post Crisis Indonesian Banking System Profitability: Bank-Specific, Industry-Specific, and Macroeconomic Determinants*. Paper presented at the 2nd international research symposium in service management Yogyakarta, Indonesia.
- Staikouras, C. K., & Wood, G. E. (2011). The determinants of European bank profitability. *International Business & Economics Research Journal (IBER)*, 3(6).
- Sufian, F. (2009). Determinants of bank profitability in a developing economy: empirical evidence from the China banking sector. *Journal of Asia-Pacific Business*, 10(4), 281-307.
- Sufian, F. (2011). Profitability of the Korean banking sector: panel evidence on bank-specific and macroeconomic determinants. *Journal of Economics and Management*, 7(1), 43-72.



- Sufian, F., & Chong, R. R. (2008). Determinants of Bank profitability in a developing economy: Empirical evidence from the Philippines. *Asian Academy of Management Journal of Accounting and Finance*, 4(2), 91-112.
- Sufian, F., & Kamarudin, F. (2012). Bank-Specific and Macroeconomic Determinants of Profitability of Bangladesh's Commercial Banks. *Bangladesh Development Studies*, 35(4).
- Syafri. (2012). *Factors Affecting Bank Profitability in Indonesia*. Paper presented at the The 2012 International Conference on Business and Management 6-7 September 2012, Phuket-Thailand. [http://www.caalinteduorg.com/ibsm2012/ejournal/018Mix-Syafri-Factors\\_Affecting\\_Bank\\_Profitability.pdf](http://www.caalinteduorg.com/ibsm2012/ejournal/018Mix-Syafri-Factors_Affecting_Bank_Profitability.pdf)
- Tabari, N. A. Y., Ahmadi, M., & Toyeh, M. S. (2013). The Effective Factors on Profitability of Commercial Banks in Iran. *World of Sciences Journal*, 1(9), 1-9.
- Tangjitprom, N. (2012). The Review of Macroeconomic Factors and Stock Returns. *International Business Research*, 5(8).
- Tu, L., & Li, L. (2013). The Impact of Macro-Economic Factors on Banking Industry Stock Return in China. *Journal of Finance, Investment, Marketing and Administration*, 3(1), 200-218.
- Yilmaz, A. A. (2013). *Profitability of Banking System: Evidence From Emerging Markets*. Paper presented at the WEI International Academic Conference, Turkey.
- Zeitun, R. (2012). Determinants of Islamic and Conventional Banks Performance in GCC Countries Using Panel Data Analysis. *Global Economy and Finance Journal*, 5(1), 53-72.





# The impact of social media on hospitality brand and image

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## Abstract

Social media is one of the most important and cost-effective tools for businesses to promote their brand. Brand equity is known to have influence on the consumer's decision to adopt the brand. This paper examines consumers' perception towards social media used by hospitality firms (e.g. hotels and airlines) in order to create corporate image and to support brand equity. The author used data from semi-structure interviews. The samples are business travellers having experiences with the social media application of the hospitality firms. The results indicated that using social media has crucial role in determining the corporate image and brand equity. Hospitality firms used several types of social media, including text and video formats in order to convey intended information to the customers. Findings are discussed with regard to their implications for the image and brand promotions through the social media of the firms.

**Keywords:** Social media, Corporate image, Brand equity



## Introduction

In today's business world, new technology can change the way of communication between the businesses and the customers. With social media, a company can send the information and share news to their customers much faster with much less cost. In response to the trend of adopting social media, hospitality firms participate and make friends with their users or potential customers. In the past recent years, the competition in hospitality has never been more intense and the customers have several new choices of companies for the hospitality products and services that they can support. Therefore, as a tool to strengthen their strategy, a large number of hospitality firms- ranging from airlines, hotels to restaurants- introduced their social media tools, such as Facebook, YouTube and Twitter, through the Internet websites and mobile applications, in the attempt to familiarize with the customers and to build long-term relationship with their customers. Schivinski & Dabrowski (2016) noted that the communication through social media communication has been systematically applied by most businesses to improve the impression of the brands towards the target customers.

With the extensive uses of social media, however, little research has been conducted about the application of social media towards corporate image and brand equity from the perception of the customers (Dailey, 2009). Due to the increasing importance of social media in branding and corporate image building, it is essential for hospitality managers to understand more clearly about how to

better use the social media to achieve business objectives.

## Literature review

### Definition of social media

Social media are new information network and information technology using a form of communication utilizing interactive and user-produced content, and interpersonal relationships are created and maintained (Diga & Kelleher, 2009). Typical social media network services could be content sharing, web communities, and Internet forums (Sensis, 2011). According to Eysenbach (2008), at least five major features of social media are easy to identify, including social networking and social interaction, participation, the use of different providers (e.g. search engines, blog spaces, etc.) openness, and collaboration (between both users and user groups).

The most popular social networking sites have changed over the years. Here is a few of the popular sites based on communication and brand exposure criteria, including Facebook, LinkedIn, MySpace, and Twitter (Turner & Shah, 2011). Nevertheless, YouTube is one of the trendiest social networks people are using both on the web and mobile right now (Miletsky, 2014).

Various usage of social media to promote the brand, including the crisis, for example, from the study of Hsu & Lawrence (2016), social media can be a highly effective tool to deal with the product recall crisis and to regain trust from the customers. In addition, Bruhn, Schoenmueller, & Schäfer (2012) noted that the impact of social media on the

firms can divide into two levels of communication, including firm-created and user-generated social media communication.

## Brand equity

Brand equity is known as one of the important concepts in marketing literature. In addition, the concept is also adopted in the financial studies, where researchers attempt to quantify the brand equity of the corporation and further to be compared and to explore the change of the brand equity over time (Simon and Sullivan, 1993). Brand awareness is a predecessor of brand equity and the brand equity can be considered the market outcome of the firm (Huang, & Sarigöllü, 2014; Silverman, Sprott, & Pascal, 1999). The monetary value of the brand is reflected in the response of the consumers to the brand, including how much they are willing to pay for the particular brand (Christodoulides and de Chernatony, 2010; Hemsley-Brown, Melewar, Nguyen, & Wilson, 2016).

Bruhn et al., (2012) suggested that social media can be useful for the firms to promote the brand equity. Khanna, Jacob, & Yadav (2014) indicated that usage of social media can improve the touch points with the customers through many channels of social media, such as Facebook and YouTube. The frequent visibility of the brand can directly affect perception of the customers.

This study focused on the consumer perspective, which is based on the foundation that the influence of brands lies in the minds of consumers (Leone et al., 2006). The early work of Aaker (1991) provided the definition of brand equity as the viewpoint of customers

towards the combination of many characteristics of the brand, including brand awareness, perceived quality, brand associations, brand loyalty and other proprietary assets.

## Corporate image

Keller (1993) defined corporate image as perceptions of an organization reflected in the associations held in consumers' memory. Nguyen and LeBlanc (1998) defined corporate image as a subjective knowledge, or attitude such as ideology, corporate name, reputation and quality of delivery system. All of these characteristics contribute to build the corporate image. Kandampully and Hu (2007) further stated that corporate image consisted of two main components. The first aspect is functional component, such as the tangible characteristics that can be measured and evaluated easily. The second one is emotional component, including feelings, attitudes and beliefs that people have towards the organization. The emotional component is considered a consequence from accumulative experiences that customers have with the passage of time with the organization.

In addition, corporate image is defined as the overall impression left in the customers' mind as a result of accumulative feelings, ideas, attitudes and experiences with the organization, stored in memory, transformed into a positive/negative meaning, retrieved to reconstruct image and recalled when the name of the organization is heard or brought to ones' mind (Kazoleas et al., 2001; Hatch et al., 2003). Thus, corporate image is a result of communication

process in which the organizations create and spread a specific message that constitutes their strategic intent included mission, vision, goals and identity that reflects their core values that they cherish (Leuthesser & Kohli, 1997; Van Riel & Balmer, 1997).

## Research methodology

The main investigation is based on qualitative methods. The samples of the study were the 20 business travellers who are associated with hospitality firms through social media, including adding the company as the Facebook friends and subscribing to the YouTube Channel of the hospitality firms. Snowballing technique was used to identify the samples. The semi-structured interview questions were developed to inquire many key points, such as the frequency

of using social media, types of social media adopted, the influence of social media towards the corporate image as well as the brand equity (including brand awareness, perceived quality and brand association).

## Results of study

Samples are 20 experienced business travellers who have at least five-year association with from hospitality firms, through Facebook, twitter and YouTube. The characteristics of the interviewees were as shown in the table 1. The purposive sampling was adopted for the study. Face-to-face interviews with the respondents provided useful data to explain the research objectives. The average time for each interview was 30 minutes.

**Table 1** Characteristics of interviewees

Respondents	Age (years)	Years of association with hospitality firms (through social media)
Interviewee 1	30	6
Interviewee 2	50	8
Interviewee 3	26	7
Interviewee 4	35	5
Interviewee 5	41	7
Interviewee 6	52	9
Interviewee 7	26	8
Interviewee 8	40	10
Interviewee 9	32	7
Interviewee 10	44	6
Interviewee 11	36	8
Interviewee 12	30	7
Interviewee 13	26	6
Interviewee 14	28	6
Interviewee 15	55	7
Interviewee 16	34	9
Interviewee 17	40	6

Interviewee 18	29	9
Interviewee 19	38	7
Interviewee 20	43	10

## Respondents' usage of social media of the hospitality firms

From 20 respondents, the findings show that the three most frequency used social media by respondents are Facebook, Instagram, and Twitter. The reasons in using of social media of most respondents included communicating and connecting with friends, relatives, and other people; sharing information such as photos, thoughts, and feelings; and updating news, trend, and upcoming events. For example, one respondent said like *"I use social media to keep connect with friends and family, to share information, and to get to know the news or things happen in daily"* (Interviewee 1). Another respondent stated *"Social media is a good way to contact friends, stay updated with new trends and fashion, and stay on track with work for college and personal businesses"* (Interviewee 6).

In terms of the frequency of using social media, the results indicated that every respondent use social media in everyday and for many times a day. As one respondent said that *"I use social media most of the time a day. I always check for up-to-dated newsfeed every time if I am free. I can say I access to Facebook every hour (at least once) and I watch some videos on YouTube every day as well"* (Interviewee 20). Another respondent also said that *"I use social media on a daily basis and multiple hours a day because I am always curious what my*

*friends and family are up to"* (Interviewee 5).

## Hospitality firms on social media

The majority of respondents identified that hospitality firms, particularly hotel chained businesses, used social media to promote their brands. The most popular social media used by those hospitality firms are Facebook and Instagram. For example, *"Hotel firms like Hyatt, Starwood, IHG released their own mobile apps. Also many businesses have used Facebook, Instagram, and other social media to promote their businesses"* (Interviewee 9), said by one respondent. Another respondent stated that *"Starwood promotes their brands on Instagram because nowadays everyone uses this application. It helps them to attract more customers. Wyndham, Marriott and Hilton also have mobile application"* (Interviewee 12). *"This is one way to advertise their brand with less expense so many brands using this strategy such as Centara hotel group, Hilton, Marriott and Oriental"* (Interviewee 16), said by one respondent.

## Building corporate image through social media

When the hospitality firms use social media to promote their brands, most of respondents thought that the image of those firms would be high in technology, trendy, and helpful. For example, *"By*

*using online channel, which is cost-effective and easy to reach out people, it is very useful for both the firms and customers as it is very convenient. Moreover, it can be seen as being trendy and high tech to use this technology to promote their brands as well"* (Interviewee 3), said by one respondent. One of the interviewee said that *"I found these hospitality firms that promote their brands through social media are very high tech and helpful as it's very easy for me to see their properties in many pictures. At the same time, people who already went there can come and do comments on those pictures to share their experiences as well"* (Interviewee 19). Besides, one respondent also said that *"It is helpful as it will be easier and quicker to distribute the news to customers in different places at once"* (Interviewee 14).

## **Social media on brand equity**

Next findings further generate that half of respondents though the brand has higher value because they use social media, where as another half of respondent did not think so. For respondents who say yes, most of them agreed that the brand has higher value from using social media because they try to develop themselves to fit with today's trend. For example, one interviewee stated that *"I agree because it's like they do care their customers and try to develop their service all the times"* (Interviewee 2). Another respondent said that *"I think it can have higher value from utilizing social media as people can look at them as being trendy and adapt themselves to today's way of communication. Moreover, people can choose one brand over another if they see*

*their brand names more often"* (Interviewee 6). *"Using social media adds value to the brand because it implies customers that such brand keeps developing itself, follow the trend, and know how to reach the customers"* (Interviewee 13).

Moreover, most of respondents agreed that social media could raise the awareness of people in those brands. As one interviewee stated that *"I support using social media because it is convenient for firms to reach out people promoting themselves to raise their brand awareness. It is also faster and cost effective than traditional way"* (Interviewee 8). With social media, the hospitality firms not only provided information about services, special offers, and shared experiences of other customers, but also allowed and encouraged the customers to respond their feedback to the firms. In the end, the customers constantly help promoting and creating the brand and the image for these hospitality companies.

## **Discussions**

As portrayed in the results, social media has been adopted and widely used by hotels, because of several benefits, including cost effectiveness, high level of responsiveness with the customers, and brand and image creation. The findings show that the three most frequency used social media by respondents are Facebook, Instagram, and Twitter. This is supported by Kuvykaite and Piligrimiene (2013) and Tuten (2008), suggesting that the social media, including Facebook and Twitter, are highly used, based on communication and brand exposure.

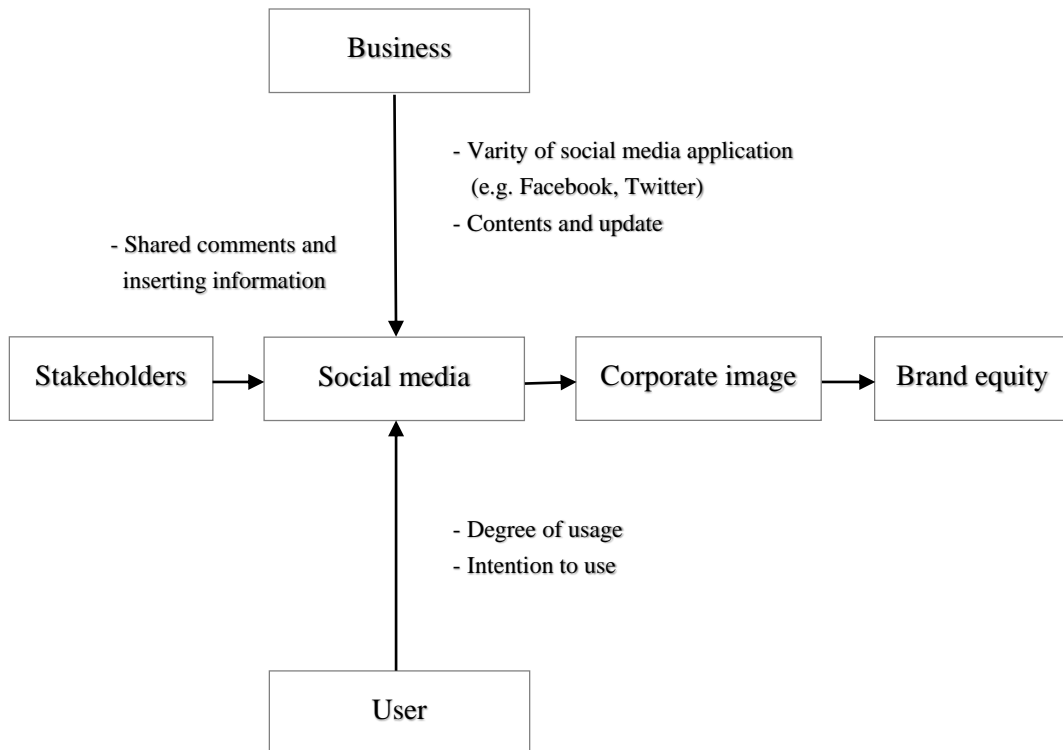
When the hospitality firms use social media to promote their brands, most of respondents thought that the image of those firms would be high in technology, trendy, and helpful. According to Gilpin (2010), many businesses expanded their use of social media to drive innovation in their products and services. Correa et al., (2010) further implied that businesses are already coming to terms with the need to integrate their social media efforts with their content strategy, and are seeing the impact of social media in terms of lead generation. Despite, people are more likely to communicate through both word-of-mouth and social media when they are engaged with the product, service, or idea.

Additionally, this study also found that most of respondents supported the idea of using social media to support the company image and brand equity,

comparing with the traditional media because social media can raise the awareness of people in those brands. Social media marketing concepts and techniques basically consist of increase brand awareness of services, increase sales, educate and inform customers, improve customer service, and monitor brand reputation (Bruhn et al., 2012; Khanna et al., 2014).

Figure 1 summarized the integrated relationship among several crucial factors. Firstly, stakeholders, including current customers and other social media users, contributed their data and information into the overall format of the firm's social media. Secondly, combined information through social media helped forming the corporate image. Thirdly, repeated and clear corporate image can develop the brand equity in the perception of the customers.





**Figure 1** The Contribution of User, Stakeholders and Businesses in Social Media Supporting the Formulation of Corporate Image and Brand Equity

## Conclusions and recommendations

Social media is a grate platform, allowing customers and others to share their stories, and experiences through the usage of text, image or video. Social media has obviously its presence and influence on forming corporate image (e.g. high technology, trendy and helpful) and creating brand equity for the hospitality firms. Applications of social media to support their business operations lead to the new approach to interact with the customers in the most efficient fashion, especially in providing useful information and in building closer

relationship with the customer. The results implied practical guidelines for the managers to increase the degree of social media usage in many dimensions. Firstly, applying variety of social media tools (e.g. Facebook and YouTube) can increase the brand equity and ensure that the customer receive the intended information from the company.

Secondly, the managers should focus on contents because these contents directly form the corporate image of the company in the mind of the customers. Thirdly, it is crucial to familiarize the brand by using different types of contents, such as text news, sales promotions, and video



clips, to encourage the customers to engage more with the brand, products and services. In addition, due to the effectiveness of using social media, the hospitality firms can offer special promotion through 'only' social media to encourage the customers to frequently visit the social media channels and to share the information with their friends.

## Directions for further research

There are many great opportunities for the research in the field of social media to investigate the specific types of social media and their influence on the image and brand equity. In addition, researchers can further conduct the quantitative study in order to understand more clearly about the strength of relationship among these factors. Additionally, the researchers

may study in other industries about different types of products or services so that the generalization of the findings can be enhanced. It is also interesting to conduct the more in-depth study among the firms in the same industry (e.g. airline) to find out about how the degree of using social media affects the corporate image and brand equity. Cultural aspects of adopting social media among consumers with diverse background can help the managers understand more about how to apply the social media tools to different groups of customers. Additionally, according to Bruhn et al., (2012), the levels of social media communication can be further explored in the deeper levels in terms of firm-level and consumer-level impacts and quantitative studies may be useful to investigate and compare the levels of impacts so that the companies can later improve their communication strategy to meet with their business goals.

## References

- Aaker, D. A. (2009). *Managing brand equity*. Simon and Schuster.
- Bruhn, M., Schoenmueller, V., & Schäfer, D. B. (2012). Are social media replacing traditional media in terms of brand equity creation? *Management Research Review*, 35(9), 770 – 790.
- Christodoulides, G., & De Chernatony, L. (2010). Consumer-based brand equity conceptualization and measurement: A literature review. *International journal of research in marketing*, 52(1), 43-66.
- Correa, T., Hinsley, A. W., & De Zuniga, H. G. (2010). Who interacts on the Web?: The intersection of users' personality and social media use. *Computers in Human Behavior*, 26, 247-253.
- Dailey, P. R. (2009). Social Media: Finding Its Way Into Your Business Strategy and Culture. *The Linkage Leader*, 1-20.
- Diga, M., & Kelleher, T. (2009). Social media use, perceptions of decision-making power, and public relations roles. *Public Relations Review*, 35(4), 440-442.



- Dijkmans, C., Kerkhof, P., & Beukeboom, C. J. (2015). A stage to engage: Social media use and corporate reputation. *Tourism Management*, 47, 58-67.
- Eysenbach, G. (2008). Medicine 2.0: social networking, collaboration, participation, apomediation, and openness. *Journal of medical Internet research*, 10(3) :e22. DOI: 10.2196/jmir.1030
- Gilpin, D. (2010). Organizational Image Construction in a Fragmented Online Media Environment. *Journal of Public Relations Research*, 22(3), 265-287.
- Hatch, M.J., Schultz, M., & Williamson, J. (2003). Bringing the corporation into corporate branding. *European Journal of Marketing*, 37(7/8), 1041-1064.
- Huang, R., & Sarigöllü, E. (2014). How brand awareness relates to market outcome, brand equity, and the marketing mix. In *Fashion Branding and Consumer Behaviors* (pp. 113-132). Springer New York.
- Hemsley-Brown, J., Melewar, T. C., Nguyen, B., & Wilson, E. J. (2016). Exploring brand identity, meaning, image, and reputation (BIMIR) in higher education: A special section. *Journal of Business Research*, 69(8), 3019-3022.
- Hsu, L., & Lawrence, B. (2016). The role of social media and brand equity during a product recall crisis: A shareholder value perspective. *International Journal of Research in Marketing*, 33(1), 59-77.
- Kandampully, J., & Hu, H.H. (2007). Do hoteliers need to manage image to retain loyal customers?. *International Journal of Contemporary Hospitality Management*, 19(6), 435 – 443.
- Kazoleas, D., Kim, Y., & Moffit, M. A. (2001). Institutional image: a case study. *Corporate Communications: An International Journal*, 6(4), 205-216.
- Keller, K.L. (1993). Conceptualizing, measuring and managing customer-based brand equity. *Journal of Marketing*, 57, 1-22.
- Khanna, M., Jacob, I., & Yadav, N. (2014). Identifying and analyzing touchpoints for building a higher education brand. *Journal of Marketing for Higher Education*, 24(1), 122-143.
- Kuvykaite, R., & Piligrimiene, Z. (2013). Communication in Social Media for Company's Image Formation. *Economics and Management*, 18(2), 305-317.
- Leone, R. P., Rao, V. R., Keller, K. L., Luo, A. M., McAlister, L., & Srivastava, R. (2006). Linking brand equity to customer equity. *Journal of Service Research*, 9(2), 125-138.
- Leuthesser, L., & Kohli, C. (1997). Corporate identity: the role of mission statements. *Business Horizons*, 40, 59-66.
- Miletsky, J. (2010). Principles of Internet Marketing: New Tools and Methods for Web Developers. Course Technology, Cengage Learning.



- Nguyen, N., & LeBlanc, G. (1998). The mediating role of corporate image on customers' retention decisions: an investigation in financial services. *International Journal of Bank Marketing*, 16(2), 52-65.
- Schivinski, B., & Dabrowski, D. (2016). The effect of social media communication on consumer perceptions of brands. *Journal of Marketing Communications*, 22(2), 189-214.
- Sensis. (2011). What Australian people and business are doing with social media. *Sensis Social Media Report*, 1-36.
- Silverman, S. N., Sprott, D. E., & Pascal, V. J. (1999). Relating consumer-based sources of brand equity to market outcomes. *Advances in Consumer Research Volume*, 26(1), 352-358.
- Simon, C. J., & Sullivan, M. W. (1993). The measurement and determinants of brand equity: a financial approach. *Marketing science*, 12(1), 28-52.
- Turner, J., & Shah, R. (2011). How to make money with social media: an insider's guide on using new and emerging media to grow your business. New Jersey: Pearson Education.
- Tuten, T. L. (2008). *Advertising 2.0: Social Media Marketing in a Web 2.0 World*. Greenwood Publishing Group.
- Van Riel, C.B.M., & Balmer, J.M.T. (1997). Corporate identity: the concept, its measurement and management. *European Journal of Marketing*, 31(5/6), 340-55.



# **The moderating role of residents' involvement on perception of mice impacts**

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## **Abstract**

The purposes of this paper were to examine the effects of residents' perceptions of positive/negative economic impacts, positive/negative sociocultural impacts, and positive/negative environmental impacts on their perception of the overall MICE impact and to analyze whether these effects vary according to residents' involvement in MICE development. Data was collected via survey with a convenience sample of 412 Khon Kaen's city residents in Thailand. The results of a structural equation modeling revealed that perception of positive economic, positive sociocultural, and negative environmental impacts significantly affect the perceived overall MICE impact. Furthermore, the findings revealed the difference in magnitude of those effects on the overall impact across different levels of residents' involvement. This study extends previous studies by providing a more insightful explanation of how the perceived overall MICE impact is shaped and whether that can be enhanced by residents' involvement.

**Keywords:** Residents' involvement, Resident' perceptions, MICE impacts, Social exchange theory, Multiple group analysis

## Introduction

Business events, including meetings, incentives, conventions, and exhibitions (MICE) contribute enormous economic impacts to host cities. Accordingly, local governments are encouraged to promote their cities as destinations for business events. To become an established MICE destination requires huge investment in terms of a well-developed infrastructure system and other event facilities. As recognized by previous studies, the selection criteria for a MICE destination comprise ease of accessibility, venue space, variety of restaurants and entertainment, image and reputation of the host destination, local support, safety and security, and costs (DiPietro, Breiter, Rompf, & Godlewska, 2008).

In developing a MICE destination, and in a comparable manner to tourism, local residents are an integral element in the development process. This is because the MICE industry can bring both positive and negative impacts to the host community. It is generally perceived that MICE tourists generate economic benefits, such as income, job opportunities, and taxation revenue to local and central government, but they simultaneously increase sociocultural and environment problems, such as waste and pollution issues and environmental damage to the community (Almeida-García, Peláez-Fernández, Balbuena-Vázquez, & Cortés-Macias, 2016; Andereck & Nyaupane, 2011). Therefore, local government may face challenges gaining support from the community if the consequences of the development are perceived by local residents to be negative. Without active support from local residents, MICE

development cannot have success in the long term. Therefore, there is a need for local governments and policy makers to understand how local communities perceive the benefits and costs generated by the MICE industry, especially what aspects of those perceptions have the most weight on residents' overall evaluation of the MICE industry and under what conditions those perceptions can be altered.

Understanding local community perceptions and their support for tourism has been an ongoing research topic in the tourism literature (Almeida-García, et al., 2016; Styliadis, Biran, Sit, & Szivas, 2014). Many of the studies on this issue have long been focused on examining residents' perceptions of tourism impacts and their support for tourism development. These empirical studies have revealed that if residents perceive the overall tourism impacts to be positive, they are more likely to support tourism development (Almeida-García, et al., 2016; Gursoy, Chi, & Dyer, 2010; T. H. Lee, 2013; Nunkoo & Gursoy, 2012). The literature has revealed that residents' decisions on whether to support tourism developments depends on their overall judgment of the tourism impacts; although these findings can be applied in the MICE development context, several questions must be answered. These questions include what aspects of MICE impacts are perceived as positive or negative, how much each of those impacts influences residents' overall evaluation, and whether these effects vary depending on the level of residents' involvement. Yoon, Gursoy, and Chen (2001) recommended that community involvement should be considered when seeking to understand



what drives residents to support (or, conversely, oppose) MICE development.

To answer these questions within the context of MICE development, the objectives of this study were:

- (1) to test a conceptual model designed to explain how residents' perceptions of positive and negative MICE outcomes concerning economic, sociocultural, and environmental impacts influence residents' perceptions of the overall MICE impact; and
- (2) to test the moderating effect of residents' involvement on those effects.

The results of this study provide a better understanding of how local residents perceive and feel about the MICE industry. The model helps local governments to identify which factors have more impact on overall judgments regarding the MICE industry. In addition, by testing the moderating effect, the study reveals whether the levels of residents' involvement can alter the strength and direction of those factors on residents' perceptions of overall MICE impacts.

## **Theoretical framework and hypotheses**

### **Perception of MICE impacts**

In tourism research, social exchange theory (SET) has been extensively used to understand why local communities support or resist tourism. Following this approach, this study applied SET as a

background framework: it has been considered the most influential theoretical perspective in explaining social behavior in both sociology and social psychology since the 1920s (Cropanzano & Mitchell, 2005). As discussed by Cook, Cheshire, Rice and Nakagawa (2013), within SET, an interaction among individuals in the society or within social behavior is considered as an exchange between at least two parties: in essence, individual or group interaction is formed based on an exchange of resources, either in tangible or intangible forms. Social exchange theory posits that two persons will enter an exchange if they believe or expect to gain more than they lose: i.e., individuals will contribute to society if they expect their future returns to be higher than their future obligations.

In the tourism context, SET explains that residents are more likely to favor tourism if they assess that benefits it offers are higher than the costs incurred therefrom (Gursoy, et al., 2010; Nunkoo & Ramkissoon, 2011; Wang & Chen, 2015). Assessment of tourism differs between residents who perceive future benefits and those who perceive future obligations (Gursoy, Jurowski, & Uysal, 2002). In essence, residents are more likely to evaluate the tourism industry positively if they believe they would benefit from it, whereas those who perceive unpleasant outcomes are more likely to assess it negatively (Andereck, Valentine, Knopf, & Vogt, 2005).

Building on SET, empirical studies over recent years have reinforced the theory that residents' attitudes toward tourism are influenced by their perception of the outcomes generated by the industry. Several studies have categorized the

outcomes of tourism development into the two aspects of positive and negative impacts, as perceived by local residents (Boley, McGehee, Perdue, & Long, 2014; T. H. Lee, 2013; Nunkoo & Ramkissoon, 2011; Vargas-Sánchez, Oom do Valle, da Costa Mendes, & Silva, 2015; Wang & Chen, 2015). Findings from these studies have revealed that residents' attitudes toward tourism development are positively related to perceived positive impacts and, conversely, are negatively associated with perceived negative outcomes (Ko & Stewart, 2002).

Numerous studies have examined the consequences of tourism development in three major dimensions: economic, sociocultural, and environmental (Almeida-García, et al., 2016; Andereck & Nyaupane, 2011; Dyer, Gursoy, Sharma, & Carter, 2007; Kim, Uysal, & Sirgy, 2013; Styliadis, et al., 2014). Regarding the economic aspects, past studies have revealed that local residents perceive economic impacts in both positive and negative senses (Dyer, et al., 2007; Yoon, et al., 2001). Specifically, job opportunities, income generated from tourism activities, taxation revenue, and investment for small business are often perceived as positive economic outcomes, whereas increasing costs of living and housing are viewed as negative consequences of the tourism industry. Regarding the effects on residents' support for tourism development, several studies have revealed that residents' perceptions of economic impacts are positively related with attitudes toward tourism (Dyer, et al., 2007; Styliadis, et al., 2014). As regards the sociocultural impact, the majority of local communities have been found to view tourism development as

not only providing benefits to the community in terms of the quality of life, cultural exchange, residents' sense of community, and the preservation of local culture and history, but also resulting in more crime and vandalism in the community, traffic problems, and overcrowdedness in public areas (Almeida-García, et al., 2016; Kim, et al., 2013; Styliadis, et al., 2014). Concerning the relationship between the perceived sociocultural impacts and attitudes toward tourism development, mixed findings have been revealed in the previous studies. Several of them reported positive effects of sociocultural aspects on residents' support for tourism (Styliadis, et al., 2014); other studies found no significant effects of negative social impacts on residents' attitudes toward tourism (Dyer, et al., 2007; Yoon, et al., 2001). Regarding the environmental impacts of tourism, local people have been found to believe that their community would benefit from the industry in terms of improving public facilities, living utilities systems, and preserving the environment, but would, conversely, face the costs of environmental pollution and damage to the local ecosystem and natural environment (Almeida-García, et al., 2016; Ko & Stewart, 2002). Residents' perceptions of environmental consequences have been found to influence attitudes toward tourism, through direct and/or indirect effects (Almeida-García, et al., 2016; Styliadis, et al., 2014; Yoon, et al., 2001).

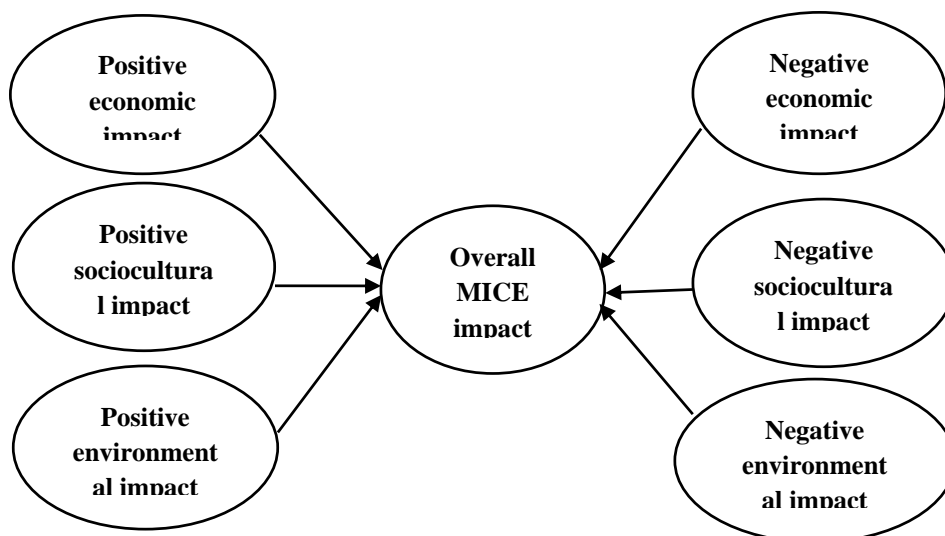
Furthermore, several studies (Carmichael, 2000; Chen, 2016; Vargas-Sánchez, et al., 2015; Yoon, et al., 2001) have observed that residents' perceptions of outcomes from the tourism industry may not directly influence attitudes

concerning or support for tourism. For instance, as discussed in Carmichael (2000), residents' attitudes towards tourism activities and development are directly influenced by their perception of the overall tourism impacts and the positive and negative outcomes of the industry on matters of personal importance to them. Similarly, undertaken through structural equation modeling, Yoon et al. (2001) observed that the effects of residents' perceived tourism outcomes – economic, social, cultural, and environmental impacts – on residents' support for tourism development are mediated by residents' perceptions of the overall tourism impact.

Drawing on above background, in the context of MICE development, this study focused on verifying which factors contribute to residents' perceptions of the overall MICE impact; the following hypotheses were proposed.

- H1. Perceived positive economic impacts influence the perceived overall MICE impact.
- H2. Perceived negative economic impacts influence the perceived overall MICE impact.
- H3. Perceived positive sociocultural impacts influence the perceived overall MICE impact.
- H4. Perceived negative sociocultural impacts influence the perceived overall MICE impact.
- H5. Perceived positive environmental impacts influence the perceived overall MICE impact.
- H6. Perceived negative environmental impacts influence the perceived overall MICE impact.

All six hypotheses above were combined in the conceptual model and is presented in Figure 1.



**Figure 1** Proposed conceptual model

## **Moderating role of residents' involvement**

It has been suggested that to succeed in tourism development, the government and policy makers should involve local community in the process (Sheldon & Abenoja, 2001; Styliadis, et al., 2014; Tosun, 2000). Involvement is a construct that has been used to explain human behavior in several disciplines. An explanation of the involvement concept varies according to the context in which it is explained. In tourism perspectives, residents' involvement refers to residents' voluntary participation in community activities or working cooperatively with other residents on community projects (Tosun, 2000).

Previous tourism development studies have revealed that the greater the level of residents' involvement in tourism, the more positive their attitudes toward it (T. H. Lee, 2013; Nicholas, Thapa, & Ko, 2009). Additionally, the literature has emphasized that attitudes toward tourism, particularly negative attitudes, can be improved if residents have greater involvement or engagement in tourism activities (Allen, Long, Perdue, & Kieselbach, 1988; Lundberg, 2016). Lee (2013) suggested that involvement has a direct effect on how residents perceive the benefits and costs generated by tourism, which in turn affects their support for tourism. However, Nyaupane, Morais and Dowler (2006) argued that residents' involvement does not directly influence perceptions of tourism's impacts, but rather influences them indirectly through interaction with other factors. This argument was supported by the recent empirical study of Lundberg (2016). With the underlying assumption that the relationship between

the importance of tourism impacts and resident group types is moderated by local involvement, Lundberg's study revealed that the effects of residence type on the perceived importance of economic impacts was moderated by the level of participation in the tourism development.

Based on the above discussion, this study postulated that the effects of residents' perceptions of the positive and negative MICE dimensions' impacts on perceptions of the overall MICE impact vary according to level of involvement. The underlying premise of this study is that the effect of residents' perceived positive impacts on the perceived overall MICE impact is stronger – and, concomitantly, the influence of perceived negative outcomes on perceived overall impact is weaker – in residents who have high involvement with MICE development than those who have low involvement.

## **Method**

### **Sample and data collection**

This study was conducted in Khon Kaen city in Thailand during May–June 2014. Khon Kaen is located in the northeast of Thailand and is the second-largest province in this region. According to the Tourism Authority of Thailand, Khon Kaen is not recognized as top destinations for tourism in Thailand. However, it was promoted by the Thailand Exhibition and Convention Bureau (TCEB) as Thailand's 5th official MICE destination in 2013. To create awareness of the residents and potential customers, a signing ceremony of the Memorandum of Understanding between TCEB and the city was held

with more than 350 participants from government agencies and local entrepreneurs. With the support of TCEB, the city created the 4-year roadmap to highlight Khon Kaen city as the hub of convention and exhibition in the Greater Mekong Sub-region (GMS). According to TCEB's statistics, 280,440 MICE visitors visited Khon Kaen and spent the equivalent of THB 730 million.

In order to satisfy the objectives of this study, a sample survey with self-report questionnaire was used to collect data. Following the suggestion of Hair, Black, Babin and Anderson (2010), this study required a minimum of 300 samples to ensure the collection of reasonably stable results for structural equation modeling. Based on convenience sampling, Khon Kaen city residents were approached and invited to participate in the survey. To ensure that all respondents qualified for the research, the field researchers asked the residents whether they had awareness of Khon Kaen as an official destination for convention and exhibition. After residents were informed of the purposes of the research, a self-administered questionnaire was distributed to those who qualified and agreed to participate. In total, 441 questionnaires were collected and checked for completeness. This process resulted in removing 29 questionnaires because they were incomplete and missing important information. After elimination, a sample of 412 responses was retained for analysis.

## Measurement

Data used to test the hypothesized conceptual model (Figure 1) were collected by a self-report questionnaire.

The study instrument comprised of scales measuring an endogenous construct, which was perception of the overall MICE impact (OMI) and six exogenous constructs including perceived positive economic impact (PE), perceived negative economic impact (NE), perceived positive sociocultural impact (PS), perceived negative sociocultural impact (NS), perceived positive environmental impact (PN), and perceived negative environmental impact (NN). The attributes of all constructs were identified from an extensive review of the related studies. Each exogenous construct was measured with multiple-item as presented in Table 1. These 18 statements (e.g., MICE industry increases employment opportunities for local residents; MICE industry increases the cost of living) were developed based on prior studies on residents' perceptions of tourism impact that employed well-established scales (Dyer, et al., 2007; Gursoy & Rutherford, 2004; Ko & Stewart, 2002; C. K. Lee, Kang, Long, & Reisinger, 2010).

To measure perception of the overall MICE impact (OMI), the participants were asked to express their level of agreement on a single statement "Overall, the MICE industry produces more positive impacts than negative ones". Operationalizing a single variable to measure the perceived overall impact was supported by prior studies (e.g. Assaker, et al., 2011; Chen & Tsai, 2007; Soon-Ho, et al., 2009). All of the measurement statements on perception of MICE impacts were scored on a five-point Likert scale in which 1 represented "strongly disagree", 2 represented "disagree", 3 represented "neutral", 4 represented "agree", and 5 represented "strongly agree". Further, residents'

involvement was captured by asking the participants to rate their level of involvement in development of the MICE industry in Khon Kaen on a five-point Likert scale, where 1 represented 'not at all involved' and 5 represented 'very highly involved'. The questionnaire also included the closed-ended questions regarding the respondents' demographic characteristics (e.g., gender, age, occupation and residence duration).

## Data analysis

The statistical analysis in this study was employed as follows. The frequency analysis was carried out to describe the respondents' demographic characteristics. A structural equation modeling (SEM) under the two-step modeling approach (Anderson & Gerbing, 1988) was employed to test the proposed conceptual model and its corresponding hypothesized relationships. As suggested by Anderson and Gerbing (1988), before testing the hypothesized conceptual model, the validity of the constructs and a good fit of measurement model was developed. This process was carried out by a confirmatory factor analysis (CFA). In addition, the reliability of the constructs were examined by Cronbach's alpha and composite reliability (CR). The validity of the constructs were tested by standardized loadings of the measurement items of each construct and average variance extracted (AVE). Once the study's theoretical model was tested by SEM, the moderating effects of involvement were analyzed by multiple group analysis.

## Results

### Demographic characteristics of respondents

Of the 412 samples, there were 233 female (56.6%) and 179 male (43.3%) respondents. The majority of the respondents (43.2%) were 31–40 years old. Approximately 26% of the respondents were 30 years old or less, while 23.5% were 41–50 years old. Concerning occupation, the largest category (34.7%) worked as public servants, while 28.6% of the respondents worked in the business sector. The third largest occupation category (27.7%) were self-employed. Regarding residence duration, most of the respondents (57.5%) had lived in Khon Kaen city for over 20 years. Approximately 13.6% of the respondents had been resident for 6–10 years, while 14.6% had lived in the city for 11–20 years. The remainder had lived in the community for 5 years or less.

### Measurement model

The reliability of the constructs was assessed by Cronbach's alpha and composite reliability (CR). As presented in Table 1, the analyses showed that all the constructs had a Cronbach's alpha value and CR higher than the suggested threshold of 0.70 (Hair, et al., 2010), signifying consistency among the multiple indicators of the construct. The constructs' validity was determined by standardized loadings of the measurement items of each construct and average variance extracted (AVE). The CFA results showed that all the standardized loadings had a value greater



than 0.6, statistically significant at 0.01 level. The AVE values of each construct ranged from 0.54–0.67. Both standard loadings and AVE exceeded the cutoff value of 0.5 (Kline, 2005), indicating convergent validity of the measurement model. In addition, the discriminant

validity was verified by comparing AVE with the squared correlation coefficients of the two constructs of interest. The results exhibited the discriminant validity as AVE values were greater than the squared correlation coefficients.

**Table 1** Results of reliability and validity of the measurement

Construct/ indicators	Standardized loading	CR	AVE
<b>Perceived positive economic impact</b> ( $\alpha = 0.790$ )		0.790	0.56
(PE1) MICE industry increases employment opportunities for local residents	0.775		
(PE2) MICE industry increase revenue for local residents	0.770		
(PE3) MICE industry provides economic benefits to small businesses in the community	0.691		
<b>Perceived negative economic impact</b> ( $\alpha = 0.812$ )		0.82	0.60
(NE1) MICE industry increases the cost of living	0.820		
(NE2) MICE industry increases the price of housing	0.770		
(NE3) MICE industry provides benefits to only some groups of people	0.737		
<b>Perceived positive sociocultural impact</b> ( $\alpha = 0.807$ )		0.81	0.59
(PS1) MICE industry improves the residents' quality of life	0.829		
(PS2) MICE industry enhances residents' sense of community	0.751		
(PS3) MICE industry increases demand for historical and cultural exhibits	0.718		
<b>Perceived negative sociocultural impact</b> ( $\alpha = 0.796$ )		0.81	0.58
(NS1) MICE industry increases the amount of crime in the community	0.796		
(NS2) MICE industry leads to more vandalism in the community	0.828		
(NS3) MICE industry increases traffic problems	0.654		
<b>Perceived positive environmental impact</b> ( $\alpha = 0.771$ )		0.78	0.54
(PN1) MICE industry improves public facilities	0.724		
(PN2) MICE industry provides incentives for the protection and conservation of natural resources	0.775		



(PN3) MICE industry improves water and electricity systems	0.694		
<b>Perceived negative environmental impact (<math>\alpha = 0.853</math>)</b>		0.86	0.67
(NN1) MICE industry results in more litter in the community	0.688		
(NN2) MICE industry causes more air pollution	0.864		
(NN3) MICE industry increases noise	0.897		

To test the overall measurement of the model, the CFA was analyzed using the maximum likelihood method estimation. The CFA results yielded the following goodness-of-fit statistics:  $\chi^2_{(120)} = 304.439$ ,  $p < .001$ ,  $\chi^2/df = 2.537$ , RMSEA = .061, CFI = .951, TLI = .938, SRMR = .045, indicating a fair fit of the overall measurement model to the data (Hair, et al., 2010; Hu & Bentler, 1999; Kline, 2005; MacCallum, Browne, & Sugawara, 1996).

## Structural model

Drawing on SET and the empirical results of prior research on tourism impact, this study hypothesized that residents' perceptions of the overall

MICE impact is influenced by their perceptions on each dimension, comprising positive/negative economic impacts, positive/negative sociocultural impacts, and positive/negative environmental impacts. These hypotheses were tested by SEM.

The results of the hypotheses tests are presented in Table 2. The SEM indicated that H1, H3, and H6 are supported at the 0.05 significance level, while H2, H4, and H5 are not supported. In essence, residents' OMI perceptions are influenced by PE, PS, and NN perceptions. The goodness-of-fit statistics of this model were  $\chi^2_{(132)} = 333.507$ ,  $p < .001$ ,  $\chi^2/df = 2.526$ , RMSEA = .061, CFI = .952, TLI = .937, SRMR = .044.

**Table 2** Hypotheses tests (N=412)

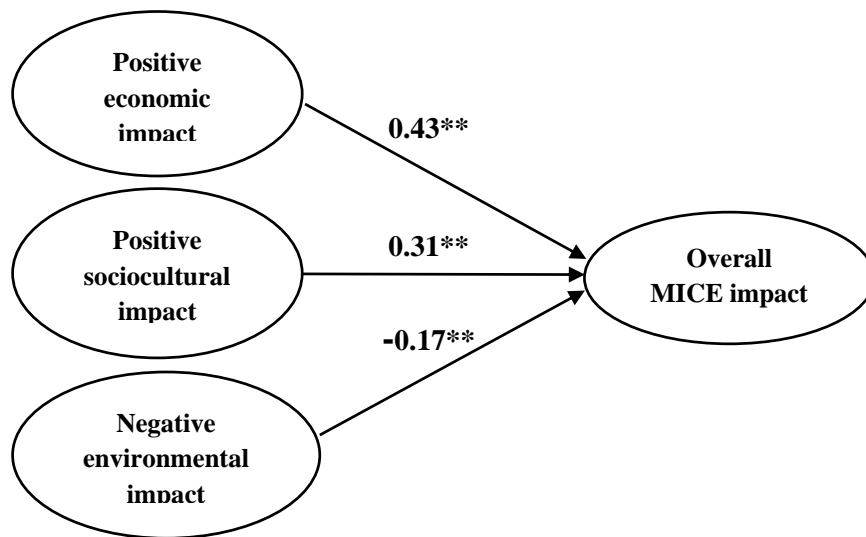
Research hypothesis	Standardized coefficients	t-Value	Results
H1: Positive economic impact → Overall MICE impact	0.382	3.458**	Supported
H2: Negative economic impact → Overall MICE impact	-0.056	-0.514	Not supported
H3: Positive sociocultural impact → Overall MICE impact	0.269	3.027**	Supported
H4: Negative sociocultural impact → Overall MICE impact	0.051	0.866	Not supported
H5: Positive environmental impact → Overall MICE impact	0.134	1.931	Not supported
H6: Negative environmental impact → Overall MICE impact	-0.127	-2.17*	Supported

\* $p < 0.05$ , \*\* $p < 0.01$

Based on a non-significant chi-square value at 0.001 and non-significant hypothesized paths, the original hypothetical model can be improved through revision (Yoon, et al., 2001). Thus, the non-significant paths were deleted for the revised model. Specifically, NE, NS, and PN were deleted from the original conceptual model. Deleting these three paths is consistent with prior studies (Dyer, et al., 2007; Yoon, et al., 2001).

The SEM results of the revised model yield the following goodness-of-fit statistics:  $\chi^2_{(30)} = 50.799$ ,  $p = 0.0102$ ,  $\chi^2/df = 1.639$ , RMSEA = .041, CFI = .990, TLI = .985, SRMR = .025, indicating a good fit of the revised model

to the data. In addition, all the paths in the model are statistically significant in the direction predicted at the 0.05 level. As shown in Figure 2, PE significantly influenced the OMI perception ( $\gamma = 0.43, \rho < 0.01$ ). Perception of positive sociocultural impact significantly influenced the OMI ( $\gamma = 0.31, \rho < 0.01$ ). Perception of negative environmental impact significantly influenced the OMI perception ( $\gamma = -0.17, \rho < 0.01$ ). These results indicated that as residents' PE and PS perceptions increase, their OMI perception increases. In contrast, as residents' NN perception increase, the OMI perception decreases.



**\*\* Significant at 0.01**

**Figure 2** The revised conceptual model

## The moderating effects of involvement

The basic premise of the moderating effects of involvement is that the effects of PE, PS, and NN on OMI differ according to the levels of residents' involvement. The multiple group analysis was performed to test the moderating effects. For this purpose, all 412 respondents were divided into two groups based on the mean of involvement.

As suggested by Kline (2005), the purpose of the first step of the multiple

group analysis was to develop the invariance measurement model across the groups. To test whether the full invariance model, which assumed the invariance of all the parameters across the groups, can be retained as the measurement model, a chi-square difference ( $\Delta\chi^2$ ) test between the configural invariance model and the full invariance model was performed. The results of testing measurement invariance are presented in Table 3. The insignificance  $\Delta\chi^2$  test ( $\Delta\chi^2_{(21)} = 35.933$ ,  $p = 0.02$ ) supported the full invariance model.

**Table 3** Testing measurement invariance

Goodness-of-Fit Statistics	Configural Invariance	Full Invariance
Chi-square ( $\chi^2$ )	64.781	100.714
Degree of freedom ( $df$ )	48	69
P-Value	0.053	0.007
Normed Chi-square ( $\chi^2/df$ )	1.349	1.459
RMSEA	0.041	0.047
CFI	0.990	0.982
TLI	0.985	0.981
SRMR	0.033	0.064

The next step of the multiple group analysis was to develop the structural model with the full invariance model. To evaluate whether the level of involvement moderates the effects of PE, PS, and NN on OMI, the unrestricted model in which the unstandardized path coefficients of PE→OIM, PS→OMI, and NN→OMI were free to estimate across the low and high involvement groups was compared to the equality-constrained model, in which the paths of interest were

constrained to be equal across the groups. The equality-constrained model with full invariance model yielded  $\chi^2 = 325.268$  with 87 degrees of freedom.

Table 4 presents the findings of the multiple group analysis. Regarding the path PE→OIM, there was a significant difference between the unrestricted model and the equality-constrained model ( $\Delta\chi^2_{(1)} = 104.99$ ,  $p < 0.01$ ). This outcome reveals that residents' involvement moderates the influence of

PE on the OMI. The effects of the positive impacts on the OMI were significantly stronger in the low involvement group ( $\beta = 0.62, \rho < .01$ ) than in the high involvement group ( $\beta = 0.32, \rho > .05$ ). Concerning the path PS→OIM, the significance  $\Delta\chi^2$  test ( $\Delta\chi^2_{(1)} = 117.648, p < 0.01$ ) suggested that the effect of the PS impact on the perceived OMI was significantly stronger in the high involvement group

( $\beta = 0.66, \rho < .01$ ) than in the low involvement group ( $\beta = 0.28, \rho < .01$ ). Regarding the path NN→OMI, the significance  $\Delta\chi^2$  test ( $\Delta\chi^2_{(1)} = 144.301, p < 0.01$ ) suggested that the effect of the NN impacts on the perceived OMI was significantly stronger in the low involvement group ( $\beta = -0.27, \rho < .01$ ) than in the high involvement group ( $\beta = -0.05, \rho > .05$ ).

**Table 4** Results of multiple group analysis: Unconstrained model with full invariance measurement

Path	Unstandardized estimate		$\chi^2$	$\Delta\chi^2$
	Low involvement	High involvement		
PE→OIM	0.62	0.32	220.46	104.99**
PS→OIM	0.28	0.66	207.62	117.64**
NN→OIM	-0.27	-0.05	180.96	144.301**

## Discussion and conclusion

This study contributes to the literature on MICE destination development by examining how residents' perceptions of the overall MICE impact are formed and whether it can be improved. Specifically, this study sought to verify the effects of perceived positive and negative MICE outcomes on evaluations of the overall impact of MICE and to test whether those effects are moderated by residents' involvement.

Drawing conclusions from the two-step SEM approach, the findings revealed that residents' perceptions of positive economic, positive sociocultural, and negative environmental impacts were found to significantly predict their

perception of the overall impact, whereas perceived negative economic, negative sociocultural, and positive environmental outcomes were found to have no significant effects on the perceived overall impact. This should not be surprising since the findings were consistent with those of prior studies (Almeida-García, et al., 2016; Dyer, et al., 2007; Styliadis, et al., 2014; Yoon, et al., 2001), in which residents' evaluations of the consequences of the MICE industry varied. Some perceive only positive aspects, others foresee only negative outcomes, and the remainder predict both positive and negative impacts.

As the SEM yielded a non-significant chi-square value at 0.001, the original conceptual model was revised to improve

the model's fit. Following suggestions from previous studies on tourism development, the non-significant paths were deleted. The results from the CFA and SEM revealed a good fit of the final model, which explains 64.5% of variance in perception of the overall MICE impact. The results of this study support prior studies in that positive effects of positive economic and positive sociocultural impacts on overall impact were found (Dyer, et al., 2007; Stylidis, et al., 2014; Yoon, et al., 2001). This implies that local residents are more likely to evaluate the overall MICE impact positively if they perceive that the MICE industry generates employment opportunities, income, and other economic benefits for the local community, in addition to improving residents' quality of life, increasing demand for historical and cultural exhibits, and providing cultural exchange. Furthermore, this study found that perceived economic benefits have stronger effects than perceived socioeconomic benefit on the perceived overall impact. This supports the argument of Gursoy and Rutherford (2004) that local residents are more likely to focus all their attention on positive economic outcomes over other positive aspects generated by the tourism industry when they perceive that the local economy is enduring poor conditions.

Regarding perceived environmental impacts, several studies have found that residents only predict negative environmental outcomes from the tourism industry (Stylidis, et al., 2014). As discussed by Dyer et al. (2007), if local residents become conscious of negative outcomes, they are more likely to focus attention on them when evaluating the overall impacts of the

tourism industry. Consistent with the prior literature, this study found that in the context of MICE development, residents' perceptions of the overall MICE impact are more likely to be diluted when residents believe that the MICE industry results in more environmental pollution in the community.

Further, the findings from the multiple group analysis reported the difference in the effects of perceived economic, sociocultural, and environmental impacts on the overall impact across different levels of involvement. The residents' perceptions of positive socioeconomic impact had a larger effect on the perceived overall impact when residents' involvement was high. Conversely, perceived negative environmental had more influence on the perceived overall impact when residents' involvement was low. These findings resemble the observation of Almeida-García et al. (2016) that residents who have positive attitudes toward tourism are those who often participate in local community groups or activities. Furthermore, in Lundberg's (2016) study, local involvement was found to influence how residents perceive sociocultural impacts as important aspects when evaluating tourism. In essence, involvement provides local residents with some control over activities in which they participate, leading them to more favorable perceptions of the overall impact (Boley, et al., 2014).

## Implications

The conceptual model developed throughout this study may help local government assess the community

perception of MICE impacts, especially for cities with similar features as Khon Kaen city. It is important to note that residents who perceive the overall impact of MICE to be beneficial, they are tend to support the development of the MICE industry in their communities (Almeida-García, et al., 2016; Gursoy, et al., 2010; T. H. Lee, 2013; Nunkoo & Gursoy, 2012). Drawing from the empirical results of this study, it implies that if local residents have confidence that the MICE industry will provide more jobs and income to the community or other economic benefits, they are more likely to favor MICE development. Even if they believe that the MICE industry has generated negative impacts to the community such as air and noise pollution. Therefore, local government may highlight positive economic benefits of the MICE industry when seeking to gain supports from the community. Having said that does not mean that local government should hide the negative impacts of the MICE industry from local residents. Instead, all possible outcomes should be addressed. MICE city planners should not concern that if residents know about negative impacts, they will against the development. As suggested by the current study, residents who involve in the process of development are tend to favor the MICE industry even if they aware about negative outcomes. Therefore, it is recommended that local governments should provide residents with opportunities to participate in or voice their opinions about MICE development. As being involved in any MICE activities or development processes can direct residents' attention

to the positive consequences of being a MICE destination as well as provide them with some control over activities causing negative outcomes to the community.

## Limitations and future research

It is important to note that there are issues that limit the generalizability of the current study. First, as is the case with convenience sampling, the sample may not represent the larger population. In addition, the study area of this research is restricted to only one city on a particular time. To overcome this aspect, the results of this study should be tested in other MICE cities. Further, this study assumed that the respondents understand the concept of MICE development. However, it has been suggested that the level of tourism knowledge is associated with resident's attitude toward the tourism development. Therefore, future research on this aspect should be extended to examine the backgrounds of residents in terms of the level of MICE knowledge. Moreover, it would be fruitful to examine other factors that can influence residents' perceptions and attitudes toward MICE development.

## Acknowledgments

The author wishes to acknowledge *Thailand Convention and Exhibition Bureau* (TCEB) for funding the fieldwork of this study.

## References

- Allen, L. R., Long, P. T., Perdue, R. R., & Kieselbach, S. (1988), "The Impact Of Tourism Development On Residents' Perceptions Of Community Life", *Journal of Travel Research*, 27: 16-21.
- Almeida-García, F., Peláez-Fernández, M. Á., Balbuena-Vázquez, A., & Cortés-Macias, R. (2016), "Residents' perceptions of tourism development in Benalmádena (Spain)", *Tourism Management*, 54: 259-274.
- Andereck, K. L., & Nyaupane, G. P. (2011), "Exploring the Nature of Tourism and Quality of Life Perceptions among Residents", *Journal of Travel Research*, 50(3): 248-260.
- Andereck, K. L., Valentine, K. M., Knopf, R. C., & Vogt, C. A. (2005), "Residents' perceptions of community tourism impacts", *Annals of Tourism Research*, 32(4): 1056-1076.
- Anderson, J. C., & Gerbing, D. W. (1988), "Structural equation modeling in practice: A review and recommended two-step approach", *Psychological Bulletin*, 103(3): 411-423.
- Assaker, G., Vinzi, V. E., & O'Connor, P. (2011), "Examining the effect of novelty seeking, satisfaction, and destination image on tourists' return pattern: A two factor, non-linear latent growth model", *Tourism Management*, 32(4): 890-901.
- Boley, B. B., McGehee, N. G., Perdue, R. R., & Long, P. (2014), "Empowerment and resident attitudes toward tourism: Strengthening the theoretical foundation through a Weberian lens", *Annals of Tourism Research*, 49: 33-50.
- Carmichael, B. A. (2000), "A matrix model for resident attitudes and behaviours in a rapidly changing tourist area", *Tourism Management*, 21: 601-611.
- Chen, C. Y. (2016), "The Impact of the Chinese Tourism Market on Taiwan Residents' Attitudes", *Journal of Quality Assurance in Hospitality & Tourism*, 17(1): 1-23.
- Chen, C. and Tsai, D. (2007), "How destination image and evaluative factors affect behavioral intentions?", *Tourism Management*, 28: 1115-22.
- Cook, K. S., Cheshire, C., Rice, E. R., & Nakagawa, S. (2013), Social exchange theory, *Handbook of social psychology*: 61-88: Springer.
- Cropanzano, R., & Mitchell, M. S. (2005), "Social Exchange Theory: An Interdisciplinary Review", *Journal of Management*, 31(6): 874-900.
- DiPietro, R. B., Breiter, D., Rompf, P., & Godlewska, M. (2008), "An Exploratory Study of Differences among Meeting and Exhibition Planners in their Destination Selection Criteria", *Journal of Convention & Event Tourism*, 9(4): 258-276.
- Dyer, P., Gursoy, D., Sharma, B., & Carter, J. (2007), "Structural modeling of resident perceptions of tourism and associated development on the Sunshine Coast, Australia", *Tourism Management*, 28(2): 409-422.





- Gursoy, D., Chi, C. G., & Dyer, P. (2010), "Locals' Attitudes toward Mass and Alternative Tourism: The Case of Sunshine Coast, Australia", *Journal of Travel Research*, 49(3): 381-394.
- Gursoy, D., Jurowski, C., & Uysal, M. (2002), "Resident attitudes: A Structural Modeling Approach", *Annals of Tourism Research*, 29(1): 79-105.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010), *Multivariate Data Analysis*, 7<sup>th</sup> Ed. Upper Saddle River, NJ: Prentice Hall.
- Hu, L. t., & Bentler, P. M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1): 1-55.
- Kim, K., Uysal, M., & Sirgy, M. J. (2013), "How does tourism in a community impact the quality of life of community residents?", *Tourism Management*, 36: 527-540.
- Kline, R. B. (2005), *Principles and Practice of Structural Equation Modeling*, 2<sup>nd</sup> Ed. New York: The Guilford Press.
- Ko, D.W., & Stewart, W. P. (2002), "A structural equation model of residents' attitudes for tourism development", *Tourism Management*, 23(5): 521-530.
- Lee, C. K., Kang, S. K., Long, P., & Reisinger, Y. (2010), "Residents' perceptions of casino impacts: A comparative study", *Tourism Management*, 31(2): 189-201.
- Lee, T. H. (2013), "Influence analysis of community resident support for sustainable tourism development", *Tourism Management*, 34: 37-46.
- Lundberg, E. (2016), "The importance of tourism impacts for different local resident groups: A case study of a Swedish seaside destination", *Journal of Destination Marketing & Management*.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996), "Power analysis and determination of sample size for covariance structure modeling", *Psychological Methods*, 1(2): 130-149.
- Nicholas, L. N., Thapa, B., & Ko, Y. J. (2009), "Residents' perspectives of a world heritage site: The Pitons Management Area, St. Lucia", *Annals of Tourism Research*, 36(3): 390-412.
- Nunkoo, R., & Gursoy, D. (2012), "Residents' support for tourism: An Identity Perspective", *Annals of Tourism Research*, 39(1): 243-268.
- Nunkoo, R., & Ramkissoon, H. (2011), "Developing a community support model for tourism", *Annals of Tourism Research*, 38(3): 964-988.
- Nyaupane, G. P., Morais, D. B., & Dowler, L. (2006), "The role of community involvement and number/type of visitors on tourism impacts: A controlled comparison of Annapurna, Nepal and Northwest Yunnan, China", *Tourism Management*, 27(6): 1373-1385.



- Sheldon, P. J., & Abenoja, T. (2001), "Resident attitudes in a mature destination: the case of Waikiki", *Tourism Management*, 22(5): 435-443.
- Soon-Ho, K., Hye-Sook, H., Holland, S., & Byon, K. K. (2009), "Structural relationships among involvement, destination brand equity, satisfaction and destination visit intentions: The case of Japanese outbound travelers", *Journal of Vacation Marketing*, 15(4): 349-365.
- Stylidis, D., Biran, A., Sit, J., & Szivas, E. M. (2014), "Residents' support for tourism development: The role of residents' place image and perceived tourism impacts", *Tourism Management*, 45: 260-274.
- Tosun, C. (2000), "Limits to community participation in the tourism development process in developing countries", *Tourism Management*, 21(6): 613-633.
- Vargas-Sánchez, A., Oom do Valle, P., da Costa Mendes, J., & Silva, J. A. (2015), "Residents' attitude and level of destination development: An international comparison", *Tourism Management*, 48: 199-210.
- Wang, S., & Chen, J. S. (2015), "The influence of place identity on perceived tourism impacts", *Annals of Tourism Research*, 52: 16-28.
- Yoon, Y., Gursoy, D., & Chen, J. S. (2001), "Validating a tourism development theory with structural equation modeling", *Tourism Management*, 22(4): 363-372.

# **The effects of experiential value, technology acceptance and satisfaction on users' intention to continue using - A case study of an English online dictionary in Guangxi, China**

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## **Abstract**

The This paper is a case study on the influence of three factors – experiential value, technology acceptance and satisfaction – on the activities of users of an English online dictionary. Variables of experiential value that were explored in this study include aesthetics, escapism, service excellence, and return on investment (ROI) for the consumer. Variables of technology acceptance that were explored in this study include perceived usefulness, perceived ease of use, and perceived enjoyment. Another variable, user satisfaction, was also measured. Data was collected from 384 English online dictionary user in Guangxi province, China via a questionnaire. The sample consisted of (160) men (41.2%) and (224) women (59.8%); a majority were aged 21 to 30 years, and a majority of them had studied at university. It was found using regression analysis that quality of service, consumer ROI, perceived ease of use and perceived enjoyment significantly influenced respondents' intentions to continue using the online English dictionary. However, some respondents also recommended that the online dictionary publishers should make interpretations more understandable, improve the correctness of pronunciation of words, and make the website more navigable and user-friendly. This paper provides an insight into how online English dictionary businesses could enhance user satisfaction among consumers in terms of experiential value and technology acceptance.

**Keywords:** satisfaction, continuance intention, Guangxi, China

Paper type: Research Paper

## Introduction and problem statement

Ever since the 1970s, the People's Republic of China has pursued a vigorous modernization program in an effort to attain the level of economic prosperity enjoyed by many western countries (Matron, Wen and Wong, 2005). One of the Chinese government's key modernization strategies has been educational reform (Ye, 2006). Under this reform, English language studies have been made compulsory (Zuo, 2008): in 2001, the ministry of education in China issued a foreign language policy, mandating that all elementary

school students must learn English (China Ministry of Education and State Commission of Education, 2001). College students in China are expected to possess both a basic knowledge of English and an understanding of different cultures around the world (Higher Education Department of the Chinese Ministry of Education, 2007).

Chinese students have been greatly encouraged to broaden their horizons and study abroad. Consequently, the number of Chinese students studying abroad has risen incrementally; this rose from 34,000 to 46,000 during a recent four-year period (Table 1).

**Table 1** Numbers of Chinese students studying abroad during the years 2011 through 2014. ne out of seven foreign students around the world are Chinese.

Years	The Incremental Number Of Chinese Student Studying Abroad (Ten Thousand)
2011	34
2012	40
2013	41
2014	46

The growing numbers of Chinese students who choose to study abroad constitute a market for businesses that provide instruction in learning the English language, including online dictionary providers.

Nowadays, there are online dictionary apps that can be installed onto and used on smartphones. Developers have made these apps convenient and user-friendly. The number of people using online dictionaries is increasing, and so the online dictionary industry is expanding:

new companies are entering this industry, and competition has become fierce. Most of these companies use loss-leader marketing strategies: they offer free services in an effort to attract more users. As a result, users' switching costs are very low, and so marketers in these companies mainly focus on the willingness of consumers to continue using their online dictionary apps.

The aim of this study is to investigate how experiential value, technology acceptance and satisfaction affect people's willingness to continue using an online dictionary.

## Literature review

### The relationship between experiential value and satisfaction

Mathwick et al. (2001) proposed that consumer value is largely built on experiential perception, which in turn is derived from the product consumption process. They advised that a multidimensional conceptualization is needed in order to understand comprehensively how consumers value a product or service. It is important for researchers to understand each individual dimension of consumer value exists and the ways in which they relate to one other. Mathwick et al. developed the experiential value scale (EVS) to measure the following four sub-

dimensions of consumer experiential value:

**Aesthetics.** This consists of two major features: visual appeal, and entertainment. In the EVS model, visual appeal is defined as the experience that is perceived through the senses (hearing, tasting, sighting, touching) of the specific environment. Entertainment is the value that is derived in a sensory way from the service environment or service itself; it is the extent to which those excite a consumer. Aesthetics have a strong influence on a consumer's intention to use a product or service.

**Escapism.** The escapism value is created by consumers themselves. It is an inner feeling, a sense of initiative and self-oriented experience along the consumption process. This induces a consumer to feel temporarily involved in a specific imaginary environment; the consumer essentially enters an imaginary world (Huizinga, 1955). The escapism value can induce a consumer to become addicted to a service or product.

**Service excellence.** A consumer detects this when a service provider offers good service performance and demonstrates expertise. Service excellence occurs when service providers meet the consumer's expectation.

**Consumer ROI.** This is a utilitarian concept: it consists of economic, temporal, behavioral, and psychological aspects of the process of consumption. Consumer ROI is defined as the amount of utility the consumer obtains from the

consumption activity in exchange for his or her money, time, and effort. Normally, the consumer expects the value of service to exceed his or her involvement (money, time, effort).

A consumer's satisfaction is affected by the consumer's perceived value. For example, when consumers encounter a higher quality product, they will believe they are obtaining a greater value for their involvement (or transactions, i.e. money, time, effort). This increase in the perceived value will lead an increase in overall satisfaction toward the product (Cottet and Plichon, 2006).

Experiential value has been emphasized as a new basis modern market value (Prahalad and Ramaswamy, 2013). Woodruff and Gardial (1993) claimed that value and satisfaction are intertwined in this perception of value. Satisfaction could be considered as the value derived from using a product, hence the term 'experiential' (ibid). Fundamentally, consumer satisfaction is a culmination of a series of consumer experiences, or the outcome of positive experiences minus negative experiences (Meyer and Schwager, 2007).

Consumer experience with products or services is associated with consumer expectation. An increase in consumer experiential value can actually make consumers feel more satisfied. The factors that affect experiential value might also have a positive influence on overall satisfaction (Petrick and Norman, 2001).

In this study, experiential value was chosen to measure consumer satisfaction, and the correlation between experiential value and consumer satisfaction was also explored. This paper addresses a significant knowledge gap: there have been few previous studies into the experiential value of online dictionary products.

## **The relationship between technology acceptance and satisfaction**

Around The technology acceptance theory (TAM) was proposed by Davis (1986). In marketing literature, TAM is widely used within fields such as information systems (IS), information technology (IT) and information services to either explain the adoption of a particular technology or to assess its usage (Kleijnen and De Ruyter, 2004). According to the TAM theory, there are two determinants – perceived usefulness (or PU), and perceived ease of use (or PEOU) – that determine a person's eagerness to adopt a technology:

Perceived usefulness is viewed as a utilitarian factor that has an impact on a user's willingness to use a technology (Davis, 1989). Perceived usefulness is the consumer's perception of the extent to which the technology improves working performance or efficiency (Klopping and McKinney, 2004). Since higher working performance or efficiency will return a higher reward, the

consumer will adopt a new technology with these properties (Ramayah, 2006). Perceived usefulness is a critical motivation factor: the more useful the consumer perceives a product to be, the more likely he or she will decide to adopt it (Bhattacharjee, 2001)

Perceived ease of use is a hedonic factor that has an impact on a consumer's decision on whether or not to use a technology (Davis, 1989). Perceived ease of use refers to the consumer's perception that it might be easy to interact with the specific technology (Koufaris, 2002). Technologies often enrich people's lives; however, the nature of technology is often complicated, and first-time users might encounter a steep learning curve or struggle in their efforts to use a technology.

For technology product marketers, it is important to consider the consumer's learning process toward a specific technology since complexity will deter him or her from adopting or continuing to use the product. The greater the perceived ease of use of a technology, the more likely and more frequently the consumer will use it (Wallace and Barkhi, 2007). Davis(1992) stated that perceived ease of use should be considered as one of the technology acceptance factors in the ATM model. According to the technology acceptance model, perceived ease of use is the extent to which the consumer is relieved of physical and mental effort involved in using the technology. PEOU is therefore

associated with user-friendliness: the less effort required to use a technology, the more user-friendly the consumer will perceive it to be. Some scholars have claimed that if the use of a technology is effortless, then users will consider it to be useful (Bruner, 2005).

Perceived enjoyment (or PE) is defined as perceived playfulness, a consumer's perception of having fun from using a specific technology (Davis, 1992). Within the technology acceptance model framework, perceived enjoyment is an intrinsic motivation that drives the performance of an activity (Nash, 2003). Moon and Kim (2001) introduced perceived enjoyment as a new factor that reflects users' intrinsic intentions to use the World Wide Web. The intrinsic factor in the technology acceptance model is defined as perceived enjoyment; an interchangeable term is perceived playfulness, although the former term is used throughout this paper.

Perceived enjoyment is the intrinsic factor that has a positive impact on a person's intention to use a product. It is a feeling of delight that could influence or generate that individual's attitude towards a specific technology (Venkatesh, 2000). Triandis (1979) claimed that feelings of delight, pleasure and joy have an impact on an individual's behaviour in such a way that he or she is motivated to use a product more frequently. In today's advanced economy, consumers often have a wide range of products to choose from, and



some scholars have argued that functionality is no longer a priority in their decisions on which products they intend to use (Calisir, 2004). The intrinsic factor has become more important in the consumer's decision-making process. 'Feeling free' will make the consumer perceive the whole process as pleasurable, which means that perceived ease of use has a positive impact on perceived enjoyment. Enjoyment is a reaction that determines the consumer's evaluation of the performance (Luo, 2005).

Recently, academics have investigated the relationships between technology acceptance factors and consumer satisfaction. Saade and Bahli (2004) claimed that, in the technology field, perceived ease of use is an essential element of consumer satisfaction; thus, consumer satisfaction could be estimated by measuring perceived ease of use. The higher the consumer's perceived ease of use, the more likely he or she will feel satisfied with and motivated into using a product (Chiu, 2009; Cheung and Lee, 2005; Mäntymäki, 2009). Technology acceptance factors influence what is termed 'e-satisfaction' (Teerling and Huizingh, 2010). Perceived usefulness is one part of consumer expectation, which in turn is related to consumer satisfaction (Chen, 2005). Perceived enjoyment determines the consumer's willingness to revisit a website, and it shares a direct positive relationship with consumer's satisfaction. As mentioned, there have been few previous studies in which the

technology acceptance model has been applied to the online dictionary industry.

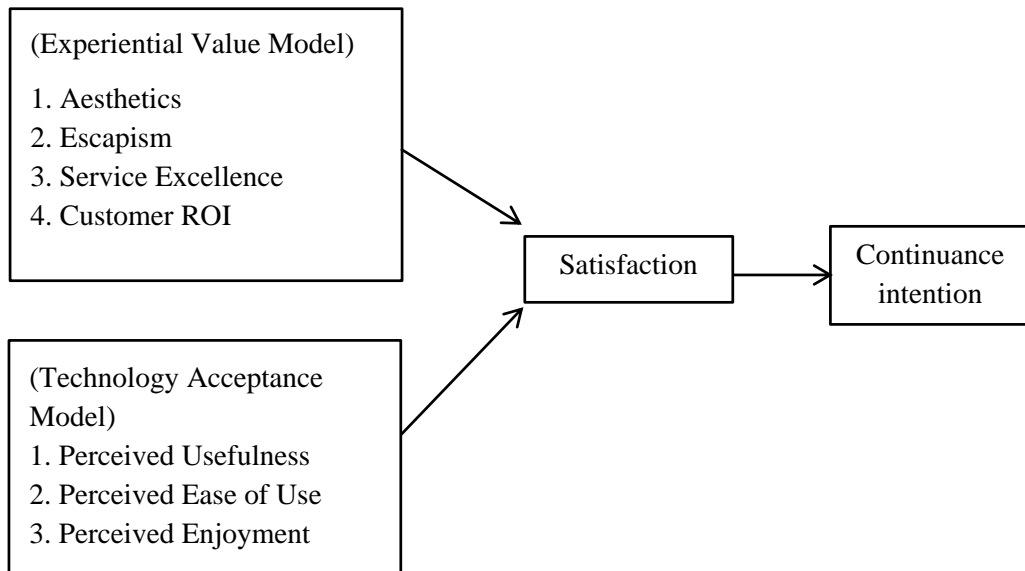
## **The difference between experiential value and technology acceptance**

Experience an online dictionary is a combination of application technology and services offered to consumers. Based on this understanding, technology acceptance factors relate to the technology aspects, and experiential value relates to services offered to consumers. If the dimensions for measuring satisfaction in a study are comprehensive, a more accurate prediction of consumer's intentions to continue using a product can be forecast.

In addition, the perception of escapism is similar to the perception of perceived enjoyment. But there are still some differences between these two perceptions; for this paper, these perceptions have been considered in the pursuit of different goals. The English online dictionary industry is highly specialized. Users who are not native English speakers value an amenable English-speaking environment. Online dictionary providers need to create a sense of escapism if they are to attract consumers; they need to create an attractive English environment, one in which consumers can immerse in an imaginary world (Huizinga, 1955).

In this paper, perceived enjoyment is treated as the entertaining function of an online English dictionary. In addition, the experiential value model and the

technology acceptance model are combined into a new conceptual framework (Figure 1):



**Figure 1** Conceptual framework

### **The relationship between satisfaction and the consumer's willingness to continue using a product**

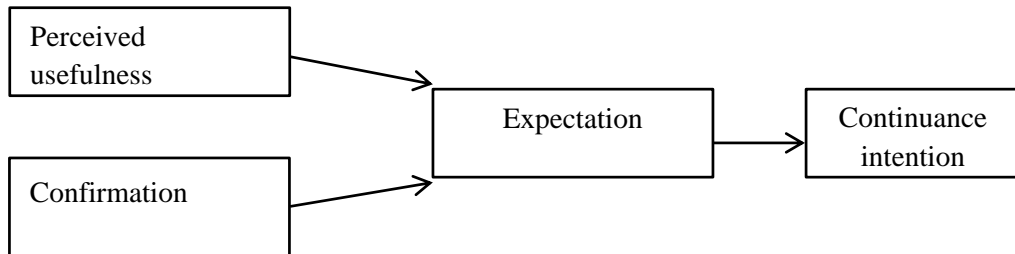
Continuance intention, i.e. the consumer's willingness to continue using a product, has become a very important subject in the information system field. In marketing literature, continuance intention refers to a user's decision to continually use a product with which he

or she has prior experience of using (Bhattacharjee, 2001).

Due to the long-term viability and the eventual success of an information system, such products mainly depend on continued usage rather than first-time usage. In this sector, continued usage is considered a crucial determinant of sustainable development, particularly for web-based services such as online retail and mobile services (Karahanna and Chervany, 1999).

The expectancy confirmation theory (or ECT) was introduced by Bhattacharjee in 2001 (Figure 2). The purpose of the theory is to investigate the relationship between users' product usage decisions and their intentions to continue using a product. Bhattacharjee tested the theory when he conducted a survey among

online banking users in an effort to explain how they develop continuance intention. He proved that continuance intention depends on two determinants: users' satisfaction with an information system, and their perceived usefulness of continuing to use that system.



**Figure 2** Framework of ECT

### Hypotheses

Three groups of hypotheses were tested in this study:

Hypothesis 1: experiential value affects user satisfaction;

- Sub-hypothesis 1a: aesthetics affect user satisfaction;
- Sub-hypothesis 1b: escapism affects user satisfaction;
- Sub-hypothesis 1c: service excellence affects user satisfaction;
- Sub-hypothesis 1d: consumer ROI affects user satisfaction.

Hypothesis 2: user technology acceptance affects user satisfaction;

- Sub-hypothesis 2a: perceived usefulness affects user satisfaction;
- Sub-hypothesis 2b: perceived ease of use affects user satisfaction;
- Sub-hypothesis 2c: perceived enjoyment affects user satisfaction.

Hypothesis 3: user satisfaction affects the user's intention to continue using a product (in this case, an English online dictionary).

## Methodology

### Research design

Data was collected using a questionnaire, which consisted of four sections as below table 2 showing. (1) Demographic. Respondents were asked to state their age, gender, education level, occupation and income level. (2) Variables affecting satisfaction. Respondents were asked questions that concerned technology acceptance and experiential value. In this

study, the four dimensions of experiential value were considered (aesthetics, escapism, service excellence and consumer ROI); each dimension was measured using three items. Technology acceptance among the respondents was evaluated in terms of their perceived usefulness, perceived ease of use, and perceived enjoyment. (3) Satisfaction. This section contained three items. (4) Continuance intention. This section contained three items.

**Table 2** Questionnaire

<b>Variables affecting satisfaction (I found that .....)</b>
<b>Aesthetics</b>
Online dictionary's website attractive
Online dictionary's website has a clean and simple presentation
the icon of online dictionary is beautiful
<b>Escapism</b>
online dictionary released me from the difficulty of studying
online dictionary involved me in English thinking
learning with online dictionary was just like playing a fun game
<b>Service excellence</b>
the interpretation on online dictionary is understandable
The online dictionary application is compatible with my phone
the pronunciation on online dictionary is precisely genuine
<b>Customer ROI</b>
using online dictionary is worthy of my time



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online dictionary has valuable information

---

online dictionary is convenient for my life

---

**Perceived usefulness**

---

Interpretation on online dictionary always helps me understand the context better.

---

The English news on online dictionary website makes me more interested in studying English.

---

The translation from online dictionary is always correct.

---

Online dictionary enhanced my effectiveness on the study.

---

**Perceived ease of use**

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Online dictionary is very easy to install on my phone.

---

Online dictionary website was easy to navigate.

---

Online dictionary is very easy to upgrade to the latest version.

---

People learned to use online dictionary very quickly.

---

**Perceived enjoyment**

---

I almost forgot the time while I was using online dictionary

---

the reading articles on online dictionary is entertaining

---

the audio material in online dictionary are enjoyable

---

the pictures in online dictionary are amusing

---

**Satisfaction** (How much are you satisfied with.....)

---

The translation of online dictionary

---

the experience of using online dictionary

---

the experience of using online dictionary

---

**Continuance intention**

---

I will continue to use online dictionary as my first choice for translation services

---

I will recommend online dictionary to my friends

---

I will use online dictionary more frequently than used to

---

## Sample

The target population in this study was Internet users living in Guangxi province, China. Since this population is large and it is almost impossible to determine how many people in Guangxi use English online dictionaries,

Cochran's (1953) formula for yielding a representative sample of an unknown population size was used.

The sample size of this study is calculated by using W.G. Cochran (1953) formula with 95% confidential level, the formula is presented as below:

Where:  $n_0$  Is size of sample,  $P$  Is proportion (0.5),  $q = (1 - P) = 0.5$ ,  $e$  is probability of error (0.5),  $z$  Represents confidence if the confidence is at 95%,  $z = 1.96$

$$n_0 = \frac{z^2 pq}{e^2}$$

The result of the sample size of this study is:

$$n_0 = \frac{z^2 pq}{e^2} \approx 384 \text{ people}$$

After substituting the numbers into the W.G. Cochran (1953) formula, the result numbers of the sample is 384 people.

## Data collection

384 questionnaires were proportionally distributed to English online dictionary users in all 14 districts of Guangxi province. Due to limited time and the expansive geographical area, the questionnaires were distributed only via social media (WeChat and QQ).

## Reliability test

The reliability test is a process to indicate the correlation among items, scale or instrument in each set variables. The reliability was measured by cronbach's alpha coefficient. The cut-off level of cronbach's alpha has to be at least 0.7 or greater than 0.7, that can keep an item in an adequate scale; additionally, the cut-off level that higher than 0.8 is considered a "good scale" (cronbach, 1951). The table 5 below presented the reliability of all factors in this survey questionnaire.

**Table 3** reliability test by using Cronbach's Alpha

NO	Variables	Amount of items	Cronbach's Alpha	
			Pre-test (30)	Final test (384)
1	Experiential value	12	.946	.952
	Aesthetics	3	.909	.884
	Escapism	3	.858	.879
	Service excellence	3	.909	.904
	Customer ROI	3	.918	.892
2	Technology acceptance	12	.970	.958
	Perceived usefulness	4	.908	.911
	Perceived ease of use	4	.927	.920
	Perceived enjoyment	4	.957	.933
3	Satisfaction	3	.940	.928
4	Continuance intention	3	.935	.922

## Data analysis

Multiple regression analysis was performed in order to examine the relationships between experiential value, technology acceptance and user satisfaction.

The multiple linear regression equation is  $y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$ .

The dependent variable (Y) is satisfaction, and the seven independent

variables are aesthetics ( $X_1$ ), escapism ( $X_2$ ), service excellence ( $X_3$ ), consumer ROI ( $X_4$ ), perceived usefulness ( $X_5$ ), perceived ease of use ( $X_6$ ), and perceived enjoyment ( $X_7$ ).

The multiple regression equation calculated to express the relationship between the dependent variable and the seven independent variables was as follows (individual values are shown in Table 3):

$$Y = 0.94 + 0.076X_1 + 0.056X_2 + 0.126X_3 - 0.128X_4 + 0.044X_5 + 0.268X_6 + 0.305X_7$$



**Table 4** Multiple regression results on the influence of experience and technology acceptance on satisfaction

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R <sup>2</sup>	F	Sig.
	B	Std. Error	Beta					
(Constant)	.197	.094		2.090	.037	0.792	212.858	0.000
X1	.073	.038	.076	1.937	.530			
X2	.049	.035	.056	1.398	.163			
X3	.123	.047	.126	2.635	.009			
X4	.122	.044	.128	2.784	.006			
X5	.041	.044	.044	.933	.315			
X6	.263	.045	.268	5.834	.000			
X7	.282	.040	.305	7.026	.000			

It was found using multiple regression that the data collected in the survey supported sub-hypotheses 1c and 1d: service excellence and consumer ROI were found to affect user satisfaction (Sig = 0.009 < 0.05,  $\beta$  = 0.126; and Sig = 0.006 < 0.05,  $\beta$  = 0.128, respectively). It can therefore be argued that experiential value does affect user satisfaction. The regression results also supported sub-hypotheses 2b and 2c (Sig = 0.000 < 0.05,  $\beta$  = 0.450 ; and Sig = 0.000 < 0.05,  $\beta$  = 0.400, respectively). Thus, technology acceptance was found to affect user satisfaction. However, sub-hypotheses 1a, 1b and 2a were not supported.

A linear regression analysis was performed in order to examine the relationship between user satisfaction and continuance intention. As shown in Table 4, the dependent variable (Y) is continuance intention, and the independent variable (X1) is user satisfaction. The following linear regression equation on the effect of user satisfaction on continuance intention was calculated:

$$Y = 0.894X + 0.468$$

**Table 5** The influence of user satisfaction on continuance intention – linear regression analysis results

	Unstandardized Coefficients	Standardized Coefficients					
	B	Beta	t	Sig.	R <sup>2</sup>	F	Sig.
(Constant)	.468		4.568	.000	0.731	1084.102	0.000
X1	.894	.855	32.926	.000			

These linear regression results support Hypothesis 3, that user satisfaction does affects continuance intention (Sig = 0.000 < 0.05).

## Discussion and conclusions

Among the respondents in this study, it was found that certain experiential values could affect user satisfaction. These results are consistent with the previous research findings. Petrick and Norman (2001) reported that there is a relationship between users' experience with products or services and their level of satisfaction with them: the higher the experiential value, the more satisfied a user feels. Wu and Liang (2009) also claimed that there is a directly proportional relationship between experiential value and consumer satisfaction. Likewise, Gallarza and Saura (2006) claimed that a high experiential value leads to a high level of satisfaction.

### Accepted hypotheses

As mentioned above, in this study a significant relationship between service excellence and user satisfaction among

the respondents was also found. This result is consistent with previous research findings of a positive link between service excellence and consumer satisfaction (Lee and Feick, 2001; Parasuraman and Berry, 2002). In this study, a significant relationship was also found between consumer ROI and user satisfaction. This result is also consistent with previous research findings: Yu (2007) reported that if a product exceeds a consumer's expectations, then this will strengthen his/her repurchase intentions; and Chen and Popovich (2003) stated that the higher the consumer ROI, the more satisfied a consumer will feel. A significant relationship between technology acceptance and user satisfaction was found in this study. This result is consistent with previous research findings by Teerling and Huizingh (2010) and Wixom and Todd (2005), who reported a positive relationship between the two parameters. In this study it was also found that perceived ease of use affects user satisfaction, a pattern that is consistent with previous research findings by Igbaria and Wieckowski (1994), Chiu (2009), Cheung and Lee (2005) and Mäntymäki (2009), all of whom claimed that the relationship is directly proportional. In this study, a significant

relationship between technology acceptance and user satisfaction was found. Similar results were reported by Koufaris (2002), and by Thong and Tam (2006).

## Rejected sub-hypotheses

Sub-hypothesis 1a was not supported by the regression results. This conflicts with some previous research findings that aesthetic value can influence consumer satisfaction (Petrick and Norman, 2001), particularly during an online service encounter (Wang and Minor, 2010). Sub-hypothesis 1b was also rejected. This too conflicts with previous research findings by Verhagen and Merikivi (2011) and Ha and Jang (2010), who claimed that hedonic aspects have a strong impact on consumer satisfaction. Sub-hypothesis 2a was also rejected.

The main reason why the findings in this paper are identical to those in many previous studies might be that this study also concerns consumer's satisfaction. However, there are some differences between this paper and previous studies. For instance, this paper is based on a survey in China, whereby the sample consisted of users who using English online dictionary.

## Recommendations

Online dictionary providers should ensure that they deliver excellent service and ensure good consumer ROI. Online dictionary providers should ensure that definitions of words in their dictionaries are easy to understand; they should attempt to explain the meanings of words using plain language (or 'layman's terms').

Some respondents in this study suggested that online dictionary providers should improve word pronunciation. They could source pronunciations of words such as "karaoke" from native speakers from authorized sources such as the BBC or VOA; they could also provide pronunciations of a word in different accents, e.g. British and American accents. Many respondents in this study felt that when visiting an online dictionary web page, it is always interrupted by a timed advertisement. Some respondents felt that online dictionaries do not often provide valuable information. However, this is a subjective assessment: a certain definition of a word might be useful to one reader, but not to another.

The results in this study also provide online English dictionary providers with a better understanding of how to enhance user satisfaction in terms of technology acceptance. It was found that perceived ease of use and perceived enjoyment affect consumer satisfaction. Online dictionary marketers therefore need to take these dimensions into account. Some respondents remarked that online dictionary providers should make their websites easy to navigate. The navigation process should be simple enough that the user can go directly to the service he or she wants. Some respondents also hinted that online dictionary providers should make it easy for users to upgrade to their latest versions, and provide notification reminding them when it is time to upgrade.

## Limitations of the study and recommendations for further research

1. This study was limited to users who were using online English dictionary in Guangxi China. Due to limitations in terms of population and time, the findings of this study cannot be generalized to other dictionaries'

destinations. Other destinations and different sampling territory should be considered in future studies.

2. In this study, experiential value and technology acceptance were identified as the antecedents of both satisfaction and user's continuance to continue using. However, there might be other factors that affect those two variables. Other predictors such as brand, motivation and expectation should be explored in future studies.

## References

- Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior.
- Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision sciences*, 30(2), 361-391.
- Amoroso, D. L., & Hunsinger, D. S. (2009). Understanding consumers' acceptance of online purchasing. *Journal of Information Technology Management*, 20(1), 15-41.
- Bhattacharjee, A. (2001). Understanding information systems continuance: an expectation-confirmation model. *MIS quarterly*, 351-370.
- Barsky, J., & Nash, L. (2003). Customer satisfaction application lying concepts to industry-wide measures. *Cornell Hotel and Restaurant Administration Quarterly*, 44(5-6), 173-183.
- Bollen, K. A. (1989). Structural equations with latent variables. *Series in probability and mathematical statistics*.
- Bruner, G. C., & Kumar, A. (2005). Explaining consumer acceptance of handheld Internet devices. *Journal of business research*, 58(5), 553-558.
- Calisir, F., & Calisir, F. (2004). The relation of interface usability characteristics, perceived usefulness, and perceived ease of use to end-user satisfaction with enterprise resource planning (ERP) systems. *Computers in human behavior*, 20(4), 505-515.



- Cardozo, R. N. (1965). An experimental study of customer effort, expectation, and satisfaction. *Journal of marketing research*, 244-249.
- Chea, S., & Luo, M. M. (2005). E-Service Customer Retention: The Roles of Negative Affectivity and Perceived Switching Costs. *AMCIS 2005 Proceedings*, 35.
- Chen, I. J., & Popovich, K. (2003). Understanding customer relationship management (CRM) People, process, and technology. *Business process management journal*, 9(5), 672-688.
- Cheung, M. K., & Lee, M. K. (2005). Research framework for consumer satisfaction with internet shopping. City University of Hong Kong, China. *Sprouts: Working Papers on Information Systems*, 5(26), 5-26.
- Chiu, C. M., Lin, H. Y., Sun, S. Y., & Hsu, M. H. (2009). Understanding customers' loyalty intentions towards online shopping: an integration of technology acceptance model and fairness theory. *Behaviour & Information Technology*, 28(4), 347-360.
- China Ministry of Education, & State Commission of Education. (1996). the opinion on the reform and development of teacher education. China: China Ministry of Education. State Commission of Education
- China Ministry of Education and Training. (March 16, 1999). The opinion on adjusting the structure of teacher education institutions. China: Ministry of Education
- Cottet, P., Lichtlé, M. C., & Plichon, V. (2006). The role of value in services: a study in a retail environment. *Journal of Consumer Marketing*, 23(4), 219-227.
- Cyr, D., Head, M., & Ivanov, A. (2006). Design aesthetics leading to m-loyalty in mobile commerce. *Information & Management*, 43(8), 950-963.
- Davis Jr, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation, Massachusetts Institute of Technology).
- Eggert, A., & Ulaga, W. (2002). Customer perceived value: a substitute for satisfaction in business markets?. *Journal of Business & industrial marketing*, 17(2/3), 107-118.
- Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience. *the Journal of Marketing*, 6-21.
- Gallarza, M. G., & Saura, I. G. (2006). Value dimensions, perceived value, satisfaction and loyalty: an investigation of university students' travel behaviour. *Tourism management*, 27(3), 437-452.



- Galletta, D. F., & Lederer, A. L. (1989). Some cautions on the measurement of user information satisfaction\*. *Decision Sciences*, 20(3), 419-434.
- Ha, J., & Jang, S. S. (2010). Perceived values, satisfaction, and behavioral intentions: The role of familiarity in Korean restaurants. *International Journal of Hospitality Management*, 29(1), 2-13.
- Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research*, 62(5), 565-571.
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: emerging concepts, methods and propositions. *The Journal of Marketing*, 92-101.
- Holbrook, M. B., & Corfman, K. P. (1985). Quality and value in the consumption experience: Phaedrus rides again. *Perceived quality*, 31(2), 31-57.
- Holbrook, M. B. (1994). The nature of customer value: an axiology of services in the consumption experience. *Service quality: New directions in theory and practice*, 21, 21-71.
- Holbrook, M. B. (2001). The millennial consumer in the texts of our times: Exhibitionism. *Journal of Macromarketing*, 21(1), 81-95.
- Higher Education Department of the Ministry of Education. (2007). *College English curriculum requirements*. Beijing: Tsinghua University Press.
- Huizinga, J. (1955). *Homo Ludens: A Study of the Play-element in Culture*. Beacon Press.
- Igbaria, M., Schiffman, S. J., & Wieckowski, T. J. (1994). The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. *Behaviour & Information Technology*, 13(6), 349-361.
- Igbaria, M., Zinatelli, N., Cragg, P., & Cavaye, A. L. (1997). Personal computing acceptance factors in small firms: a structural equation model. *MIS quarterly*, 279-305.
- Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS quarterly*, 183-213.
- Keng, C. J., Huang, T. L., Zheng, L. J., & Hsu, M. K. (2007). Modeling service encounters and customer experiential value in retailing: An empirical investigation of shopping mall customers in Taiwan. *International Journal of Service Industry Management*, 18(4), 349-367.
- Keng, C. J., & Ting, H. Y. (2009). The acceptance of blogs: using a customer experiential value perspective. *Internet Research*, 19(5), 479-495.



- Klopping, I. M., & McKinney, E. (2004). Extending the technology acceptance model and the task-technology fit model to consumer e-commerce. *Information Technology, Learning, and Performance Journal*, 22 (1), 35.
- Koufaris, M. (2002). Application lying the technology acceptance model and flow theory to online consumer behavior. *Information systems research*, 13(2), 205-223.
- Kuo, Y. F. (2003). A study on service quality of virtual community websites. *Total Quality Management and Business Excellence*, 14(4), 461-473.
- Lee, C. S., & Bang, S. B. (2004). The effects of shopping value on online purchasing intention: focus on product attribute importance as intervening variables. *Korean Marketing Research*, 19(2), 41-69.
- Lee, E. J., Uniremidy, C. A., & Overby, J. W. (2004). Creating value for online shoppers: implications for satisfaction and loyalty.
- Lee, H. J., Lim, H., Jolly, L. D., & Lee, J. (2009). Consumer lifestyles and adoption of high-technology products: a case of South Korea. *Journal of International Consumer Marketing*, 21(2), 153-167.
- Lee, J., Lee, J., & Feick, L. (2001). The impact of switching costs on the customer satisfaction-loyalty link: mobile phone service in France. *Journal of services marketing*, 15(1), 35-48.
- Lee, K., Khan, S., & Mirchandani, D. (2013). Hierarchical effects of product attributes on actualized innovativeness in the context of high-tech products. *Journal of Business Research*, 66(12), 2634-2641.
- Liao, Z., & Shi, X. (2009). Consumer perceptions of internet-based e-retailing: an empirical research in Hong Kong. *Journal of Services Marketing*, 23(1), 24-30.
- Lin, C.S., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information & management*, 42(5), 683-693.
- Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in human behavior*, 21(6), 873-891.
- Mäntymäki, M. (2009). Customer in social virtual worlds. *Proceedings from The 22<sup>nd</sup> Blede-Conference E-Enablement: Facilitating an Open, Effective and Representative e-Society*. Bled, Slovenia.
- Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential value: conceptualization, measurement and application in the catalog and Internet shopping environment☆. *Journal of retailing*, 77(1), 39-56.





- Mathwick, C., Malhotra, N., & Rigdon, E. (2002). The effect of dynamic retail experiences on experiential perceptions of value: An Internet and catalog comparison. *Journal of Retailing*, 78(1), 51–60.
- Marton, F., Wen, Q., & Wong, K. C. (2005). ‘Read a hundred times and the meaning will application ear...’ Changes in Chinese University students’ views of the temporal structure of learning. *Higher Education*, 49(3), 291-318.
- Meyer, C.; Schwager, A. 2007. Understanding customer experience, *Harvard Business Review* (2): 117–126.
- Miller, J. A. (1997). Exploring Satisfaction, Modifying Models, Eliciting Expectations, Posing Problems and Making Measurement of Consumer Satisfaction and Dissatisfaction.
- Min, Q., & Shenghua, X. (2007, September). An extended expectation confirmation model for information systems continuance. In *Wireless Communications, Networking and Mobile Computing, 2007. WiCom 2007. International Conference on* (pp. 3879-3882). IEEE.
- Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & management*, 38(4), 217-230.
- Muyile, S., Moenaert, R., & Despontin, M. (2004). The conceptualization and empirical validation of web site user satisfaction. *Information & management*, 41(5), 543-560.
- Nadiri, H. and Hussain, K. (2005), “Perceptions of service quality in North Cyprus hotels”, *International Journal of Contemporary Hospitality Management*, Vol. 17, No. 6, pp. 469-480.
- Nicholls, J. A. F., Gilbert, G. R., & Roslow, S. (1998). Parsimonious measurement of customer satisfaction with personal service and the service setting. *Journal of Consumer Marketing*, 15(3), 239-253.
- Oh, H. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management*, 18(1), 67-82.
- Oliver, Richard L. (1981). What is Customer Satisfaction, *Wharton Magazine*, 5, pp.36-41.
- Parasuraman, A., Zeithaml, V., & Berry, L. (2002). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Retailing: critical concepts*, 64(1), 140.



- Petrick, J. F., Morais, D. D., & Norman, W. C. (2001). An examination of the determinants of entertainment vacationers' intentions to revisit. *Journal of Travel Research*, 40(1), 41-48.
- Prahalad, C. K., & Ramaswamy, V. (2013). *The future of competition: Co-creating unique value with customers*. Harvard Business Press.
- Ramayah, T. (2006). Interface characteristics, perceived ease of use and intention to use an online library in Malaysia. *Information Development*, 22 (2), 123-133.
- Saadé, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: an extension of the technology acceptance model. *Information & management*, 42 (2), 317-327.
- Shang, R. A., Chen, Y. C., & Shen, L. (2005). Extrinsic versus intrinsic motivations for consumers to shop on-line. *Information & Management*, 42(3), 401-413.
- Shanka, T., & Taylor, R. (2005). Assessment of university campus café service: The students' perceptions. *Asia Pacific Journal of Tourism Research*, 10(3), 329-340.
- Shieh, K. F., & Ming-Sung, C. (2007). An empirical study of experiential value and lifestyles and their effects on satisfaction in adolescents: An example using online gaming. *Adolescence*, 42(165), 199.
- Shih, H. P. (2004). An empirical study on predicting user acceptance of e-shopping on the Web. *Information & Management*, 41(3), 351-368.
- Singh, J. (1991). Understanding the structure of consumers' satisfaction evaluations of service delivery. *Journal of the Academy of Marketing Science*, 19(3), 223-244.
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77(2), 203-220.
- Taylor, S., & Todd, P. (1995). Assessing IT usage: The role of prior experience. *MIS quarterly*, 561-570.
- Thong, J. Y., Hong, S. J., & Tam, K. Y. (2006). The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance. *International Journal of Human-Computer Studies*, 64(9), 799-810.
- Triandis, H. C. (1979). Values, attitudes, and interpersonal behavior. In *Nebraska symposium on motivation*. University of Nebraska Press.
- Van der Heijden, H. (2003). Factors influencing the usage of websites: the case of a generic portal in The Netherlands. *Information & management*, 40 (6), 541-549.



- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information systems research*, 11(4), 342-365.
- Verhagen, T., & Van Dolen, W. (2009). Online purchase intentions: A multi-channel store image perspective. *Information & Management*, 46(2), 77-82.
- Verhagen, T., Feldberg, F., van den Hooff, B., Meents, S., & Merikivi, J. (2011). Satisfaction with virtual worlds: An integrated model of experiential value. *Information & Management*, 48(6), 201-207.
- Wang, S.T., Cheng, M.S. (2003), *Experiential Marketing: the concept of effectively execute experiential value model from view point of people and strategic flow*, 2003 Conference on Elevating Executing Ability in Taiwan, Taoyang County: National Central University, Department of Business Administration.
- Wang, Y. J., Hernandez, M. D., & Minor, M. S. (2010). Web aesthetics effects on perceived online service quality and satisfaction in an e-tail environment: The moderating role of purchase task. *Journal of Business Research*, 63(9), 935-942.
- Wang, L. (2010). Higher education governance and university autonomy in China. *Globalisation, Societies and Education*, 8(4), 477-495.
- Wixom, B. H., & Todd, P. A. (2005). A theoretical integration of user satisfaction and technology acceptance. *Information systems research*, 16(1), 85-102.
- Wolfenbarger, M., & Gilly, M. C. (2001). Shopping online for freedom, control, and fun. *California Management Review*, 43(2), 34-55.
- Woodruff, R. B., Schumann, D. W., & Gardial, S. F. (1993). Understanding value and satisfaction from the customer's point of view. *Survey Of Business-University Of Tennessee*, 29, 33-33.
- Woodside, A. G., Frey, L. L., & Daly, R. T. (1990). Linking service quality, customer satisfaction, and behavioral intention. *Journal of health care marketing*, (9), 5-17.
- Wu, C. H. J., & Liang, R. D. (2009). Effect of experiential value on customer satisfaction with service encounters in luxury-hotel restaurants. *International Journal of Hospitality Management*, 28(4), 586-593.
- Xu, S., & Connelly, F. M. (2009). Narrative inquiry for teacher education and development: Focus on English as a foreign language in China. *Teaching and Teacher Education*, 25(2), 219-227.



- Xie, A. (2001). The Development and Reform of Teacher Education in China: Theoretical Issues. *Asia-Pacific Journal of Teacher Education & Development*, 4(2), 41-59.
- Ye, L. (2006). On" New Basic Education": Inquiry and understanding of contemporary Chinese school reform.
- Yu, S. H. (2007). An empirical investigation on the economic consequences of customer satisfaction. *Total quality management*, 18(5), 555-569.
- Yuan Yi-hua,(2003) "Research on the Relationship between Customers' Satisfaction and Experimental Marketing, Experimental Value" National Taipei University of Technology & science, Institute of Commerce Automation and Management, Master's Thesis.



## **Guide for authors**

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- New business management theory or techniques;
- Research explaining about business management thought and practice;
- Articles in subject areas which have significant current impact on thought and practice in business management.

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The UTCC IJBE will mainly consider for publication three types of articles:

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2. Articles that report on the development of methodologies and techniques that can enhance business management decision making.
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