

A STUDY OF THE FACTORS INFLUENCING CUSTOMERS' IMPULSE BUYING BEHAVIOR IN RESTAURANTS

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ABSTRACT

Nowadays, while facing the intense competition in restaurant business, in order to increase sales revenue and customers' average check, understanding how to encourage customers' impulse buying behavior is very important. The main objectives of this study were to analyze the influence of dining environment and reference group on customers' impulse buying behavior, and the relationships of dining environment, reference group and customers' impulse ordering behavior in restaurants. The findings showed that influence of reference group, social factors and extraversion were three major factors that affect customers' impulse buying behavior. It was suggested that impulse buying behavior could be a research topic worth of being explored in hospitality industry, and significant managerial and theoretical implications were proposed.

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INTRODUCTION

As economic downturn has led customers to keep less disposable income in hand and make consumption more prudently, for restaurants it usually results in the decrease of average check and lower sales revenue. In order to enhance the customers to spend more money, it's important to realize which circumstances cause customers to order more dishes; namely, to

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have impulse buying behaviors such as ordering additional dessert and beverage. It's crucial to increase sales revenue of the restaurants. Hence, to figure out the factors of influencing customers' impulse buying behavior is imperative to restaurant management.

Regarding the factors which influence customers' impulse buying behavior, while most research in customer behavior emphasized the relationship of customers' perception, attitude and their decision, some research has indicated that other factors might also influence their behaviors. Previous research proposed that the ambience, design and social factors were three major factors affecting customers' impulsive behavior (Baker, 1987; Baker, Parasuraman, Grewal, & Voss, 2002). And, the reference group usually has significant effect on a person's acceptance of new behavior, lifestyle, his/her attitude towards and choice of products and brands (Kotler, 2003). As previous researchers pointed out, in the environment where customers would have certain contact with other customers while receiving service, their consuming experience was shaped by their interaction with other customers (Baker, 1987; Bitner, 1992; Martin, 1996). When a person goes shopping with a group of friends, the larger the group is, the more probable he/she would have impulse buying behavior (Bearden & Woodside, 1978; Belk, 1974; Granbois, 1968). Additionally, personality traits were found to be a factor in deciding consumers' purchase behavior (Stern, 1962). Summing up the above, the dining environment (ambience) of the restaurant, customers' reference group and personality traits are the factors that would affect customers' impulse buying behavior proposed in previous research. Thus, the problems of this research are formed as follows:

1. Whether the dining environment of the restaurant would enhance the likelihood of customers' impulse buying behavior?
2. Whether customers' reference group would affect the tendency of their impulse buying behavior?
3. Whether different personality traits would incline customers toward impulse buying behavior differently?

As it's shown above, there is already extensive literature in impulse buying behavior. Nevertheless, little attention has been paid to impulse buying behavior in the restaurant, which is termed in this study "impulse ordering behavior". Therefore, this study brings up this issue to analyze the factors that influence impulse ordering behavior in the restaurant. To be summarize, the main objectives of this study are as follows:

1. To analyze the influence of dining environment and reference group on customers' impulse ordering behavior in restaurants;
2. To analyze the influence of personality traits on customers' impulse ordering behavior in restaurants;
3. To analyze the influence of personality traits on the relationships of dining environment, reference group and customers' impulse ordering behavior in restaurants.

LITERATURE REVIEW AND HYPOTHESES

The literature of impulse buying behavior and the influential factors of impulse buying behavior will be reviewed in the continuation. In addition, the interpretation of hypotheses would be addressed.

Impulse Buying Behavior/ Impulse Ordering Behavior

Impulse buying behavior was defined as the behavior that takes place due to the "purchase impulse" resulted from the "attraction of product," which is unplanned, hasty, thoughtless, and irrational purchase behavior. It is the purchase behavior more of "emotion" than of "rationality," and of "irresistible drives" (Rook, 1987; Rook & Fisher, 1995; Weinberg & Gottwald, 1982). Mowen and Minor (1998) referred to impulse buying as an uncontrollable reaction, which arouses the desire to acquire and possess, and entice customers to have impulse buying behavior.

Dholakia (2000) divides the factors that affect customers' impulse buying behavior into three categories. The first category is the optimum stimulation level—that is, the stimulation of the surroundings which includes design of shopping path, merchandise display and atmosphere, advertisement and promotion, demonstration of information, and attraction of certain products (Iyer, 1989). The second category is customers' impulsivity traits which include customers' personal traits, values (their moral judgment on impulse buying behavior) (Chang, 1998; Rook & Fisher, 1995), degree of enjoying window-shopping, ability of self-control, socio-economic status, and gender. And, the third category is the situational factors, which include time pressure and financial pressure (Iyer, 1989).

To sum up the above, impulse ordering behavior could be defined as an unplanned, unpremeditated, uncontrollable impulse buying behavior that takes place in a restaurant (it means that the customer ordered a meal under an unplanned or uncontrollable situation).

The Influential Factors of Impulse Buying Behavior/Impulse Ordering Behavior

Physical environment (dining environment) and impulse buying behavior

Ambient factors are those factors that can make customers feel thrilled, and enhance their willingness to prolong their stay and return to the same store (Milliman, 1982). Miao and Mattila (2013) addressed that primary food motives (like health, indulgence) and situational motives jointly affect impulse buying behavior in food consumption. These factors include, for example, background music, that keeps customers happy, can decrease their attention to the pass of time.

Design factors point to those factors that make the surroundings of a store comfortable and aesthetically appealing. These factors increase the degree of customers' excitement, get them more involved, and encourage them to appreciate the value of merchandise. Hence, customers will be less aware of risk, tend to extend their shopping time, and be inclined towards impulse buying (Babin & Darden, 1995; Baker, Grewal, & Levy, 1992; Baker et al., 2002; Beatty & Ferrell, 1998; Chaudhuri, 2001; Donovan & Rossiter, 1982; Donovan, Rossiter, Marcolyn, & Nesdale, 1994; Mano, 1999). Furthermore, Engel, Blackwell and Miniard (1995) found that display of merchandise and promotion event are positive factors to unplanned or impulse buying behavior.

Social factors mean, for instance, that customers would infer the quality of merchandise and service based on their observation of the type of customers and the number of servers. In addition, customers' stereotyped impression of servers can have impact on their processing of information and their emotion (Babin & Dardin, 1995). That is, the impression, professional ability and attitude of servers that influence customers' emotional reaction, their appreciation of value of merchandise, and their willingness of purchase are considered as social factors of a store (Yoo, Park, & MacInnis, 1998; Baker et al., 1992; Baker, Grewal, & Parasuraman, 1994, Baker et al., 2002). According to the above discussions and literature, store environment has significant influences on customers'

behavior. In other words, it will prolong customers' stay in a restaurant and thus increase the possibility of their impulse ordering behavior. For restaurants, the shopping environment is described as dining environment which includes ambiance. Therefore, this study proposes the following hypotheses:

H₁: Dining environment has significant influence on impulse ordering behavior in restaurants.

H₁₋₁: Ambient factors have significant influence on impulse ordering behavior.

H₁₋₂: Design factors have significant influence on impulse ordering behavior.

H₁₋₃: Social factors have significant influence on impulse ordering behavior.

The influence of reference group and impulse buying behavior

Kotler (2003) defined reference group as all of the groups that can directly or indirectly influence one's attitude or behavior. Laesser and Dolnicar (2012) addressed that impulse purchasing also occurred in tourism, and travel companion was a factor affecting the impulse purchasing behavior. Reference groups often put individuals under the pressure of accepting new behavior and way of life, adjusting one's attitude, and choosing certain kind of product. Reference groups include a wide variety of groups such as race, community, family, and company colleagues.

When making purchase decision, customers will be influenced by reference groups, service persons, other customers, family and friends, or other social factors (Kotler Armstrong, Saunders, & Wong, 1999). Arndt (1967) pointed out that when evaluating a new product or new service, customers would greatly rely on others' advice. When the number of the parties who go shopping increases, the probability of impulse buying also significantly increases (Bearden & Woodside, 1978; Belk, 1974; Granbois, 1968). When customers are in the environment where they have to share service with other customers, regardless of whether they are in a restaurant or on travel, customers will have different consuming experience because of their interaction with other customers (Baker, 1987; Bitner, 1992; Martin, 1996). According to theory and literature, customers are easily influenced by the advice of reference groups and, as a result,

have impulse ordering behavior in restaurants. Therefore, this study assumes:

H₂: The impact of reference group has significant influence on customers' impulse ordering behavior in restaurants.

Personality traits and impulse buying behavior

The internal difference of customers comes from personality traits, value, background, and lifestyle. People of different personality traits must have different way of making their consumption decision. In the EKB Model (Engel-Kollat-Blackwell Model) of consumption decision-making, personality traits are considered as one of the most important internal factors in customers' purchase decision-making (Neyer & Voigt, 2004).

Impulse buying behavior is determined by the combination of the factors of economy, personality traits, time, place, and culture. Different kinds of people have different kinds of impulse buying behavior even if the same product is concerned. And, the same person can have different kind of impulse buying behavior in different shopping settings (Stern, 1962). Personal factors also play a decisive role in whether customers would be influenced by stimulation to do impulse buying (Dholakia, 2000). The customers of higher tendency toward impulse buying usually have higher degree of emotional activities when shopping. They also have more spontaneous and less rational reaction. Furthermore, positive sentiments encourage people to reward themselves better and to view shopping from a more appreciative way such that people in positive sentiment tend to fall to impulse buying (Beatty & Ferrell, 1998). If referred to the Big Five personality traits, what are described above can be categorized into two of the five dimensions of personality; that is, extraversion and openness to experience. According to theory and literature, different personality traits will entail different kinds of impulse ordering behavior in restaurants. Therefore, this study assumes:

H₃: Customers with extraversion or openness to experience personality traits are more likely to have impulse ordering behavior in restaurants.

H₃₋₁: Customers with extraversion personality traits are more likely to have impulse ordering behavior.

H₃₋₂: Customers with openness to experience personality traits are more likely to have impulse ordering behavior.

H₄: Personality traits have moderating effect on the relationship of dining environment and customers' impulse ordering behavior in restaurants.

H₄₋₁: Customers with extraversion personality traits has moderating effect on the relationship of dining environment and customers' impulse ordering behavior.

H₄₋₂: Customers with openness to experience personality traits has moderating effect on the relationship of dining environment and customers' impulse ordering behavior.

H₅: Personality traits have moderating effect on the relationship of the impact of reference group and customers' impulse ordering behavior in restaurants.

H₅₋₁: Customers with extraversion personality traits has moderating effect on the relationship of the impact of reference group and customers' impulse ordering behavior.

H₅₋₂: Customers with openness to experience personality traits has moderating effect on the relationship of the impact of reference group and customers' impulse ordering behavior.

METHODOLOGY

Research Framework

Arising from the literature review above, this study proposes that the dining environment (ambiance), influence of reference group and personality traits have positive influence on customers' impulse ordering behavior in restaurants. Thus, the research framework was conceptualized (see figure 1). According to this framework, five hypotheses were proposed in this research.

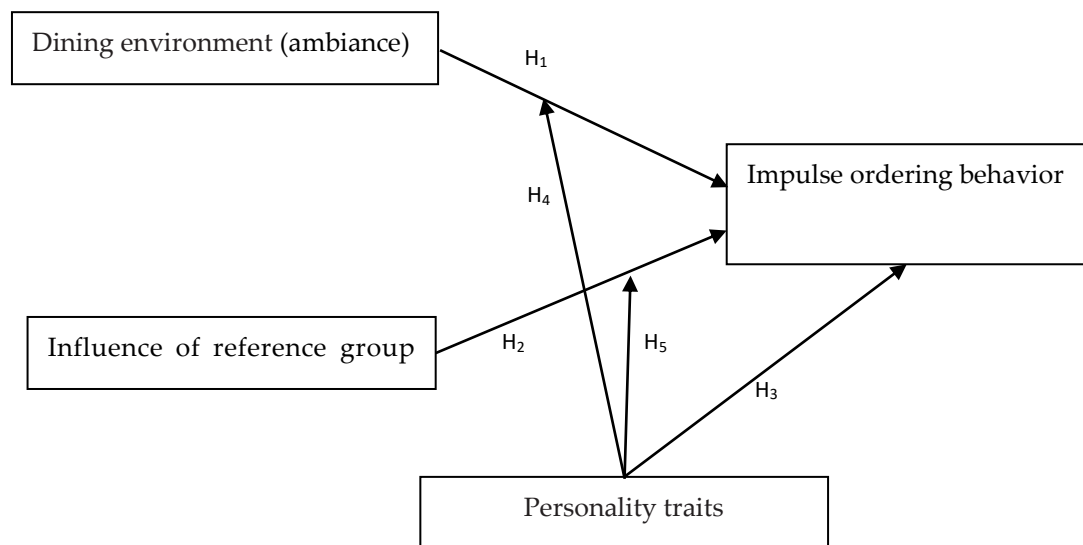


Figure 1. *Research framework*

Questionnaire Design

Based on the literature, the variables employed in the questionnaire include 21 items for dining environment/ambiance (there are three dimensions, including 7 items for ambient factor, 9 items for design factor, 5 items for social factor) (Baker, 1987; Baker et al., 1994; Dholakia, 2000; Liaw, Tsai & Lee, 2007; Wu, Lin & Wu, 2003), 3 items for the influence of reference groups (Kotler et al., 1999), 10 items for personality traits (McCrae & Costa, 1987) and 3 items for impulse ordering behavior (Donovan & Rossiter, 1982; Babin & Attaway, 2000). The five-point Likert-type scale was used in the first three sections, from “very agree” to “very disagree” (from 5 points to 1 point). Finally, socio-demographic data were collected. In order to obtain effective measurement tools, the questionnaire was modified during pre-test and pilot-test stages.

Regarding the examination of reliability, Cronbach’s α of the overall scale is 0.909 which is greater than 0.7 indicating a satisfactory level of reliability. For the dimensions of the scale, Cronbach’s α of dining environment/ambiance, the influence of reference group and personality traits are 0.882, 0.568 and 0.854 respectively. For the impulse ordering behavior, the Cronbach’s α is 0.661. The validity of this study was examined by content validity. Before the questionnaires were distributed, a pre-test is conducted to modify the questions. The experts in hospitality

were consulted to clarify the meaning of the questions. Therefore, this research was provided with considerably content validity.

Sampling

By applying random sampling, questionnaires were distributed to the customers of Japanese and American restaurants in Taipei City, Taiwan. Finally, 484 questionnaires were obtained. After eliminating invalid questionnaires (with incomplete answers), there are 477 usable samples (the valid questionnaire return rate is 98.1%). There were six interviewers standing in front of the restaurants to utilize personal interview to distribute questionnaires to the customers.

Data Analysis

The analyzing tool is SPSS for Windows 18.0 (Statistical Package for the Social Science). Descriptive Statistics Analysis, Reliability Analysis, Exploratory Factor Analysis, Correlation Analysis and Regression Analysis were employed in this research. This research tried to explain the effect of dining environment, the influence of reference groups and personality traits on impulse ordering behavior in restaurants.

FINDINGS

The Demographic Characteristics of Participants

As it's shown in Table 1, of the 477 valid questionnaires returned in this study, the majority of respondents were female (55.3%). Most of them were aged between 21 and 40 years old (82.4 %). In educational degree, most of them were bachelor degrees (72.5%). For occupation, most of them were students (47.6%), the followed is service industry (29.8%). When referred to income, most of the respondents' monthly income was below \$1,000 US dollars (70.6%). In marital status, most of them were single (82.6%).

Table 1. *The demographic characteristics of participants (n= 477)*

		Number	%
Gender	Female	264	55.3
	Male	213	44.7
Age	less than 20 and	68	14.3
	21-30	309	64.8
	31-40	84	17.6
	41-50	13	2.7
	51 and more than 51	3	0.6
Educational level	Junior high school	7	1.5
	Senior high school	82	17.2
	University(college)	346	72.5
	Graduate school	42	8.8
Occupation	Business/trading	36	7.5
	Education/government	24	5.0
	Student	227	47.6
	Service industry	142	29.8
	Professional expert	21	4.4
	Self-employed	8	1.7
	Others	19	4.0
Personal monthly income (US dollar)	Less than \$600	202	42.3
	\$600-\$1,000	135	28.3
	\$1,000-\$1,500	90	18.9
	\$1,500-\$2,000	28	5.9
	More than \$2,000	21	4.4
Marital status	Single	394	82.6
	Married	78	16.4
	Others	5	1.0

Results of Descriptive Analysis

Regarding the descriptive analysis of research variables, for dining environment/ambiance, the highest item is *“The pictures on the menu or the food samples stimulate me to order more dishes”* (Mean=4.17; SD=.852), and the lowest item is *“The server’s upselling makes me order more dishes”* (Mean=3.35; SD=.994) (see table 2).

Regarding influence of reference group, the means of three items are *“While dining with my relatives and friends, I usually order more dishes or dessert”* (Mean=4.01; SD=.808), *“While dining with female friends, I’m more*

likely to order more drinks and dessert" (Mean=3.92 ; SD=.918) and "Other customers' meals usually affect my order" (Mean=3.51 ; SD=1.010).

Table 2. Means of dining environment/ambiance (n= 477)

Items	Mean	S.D.
The server's upselling makes me order more dishes.	3.35	0.994
The server's good appearance stimulates me to order more dishes.	3.47	1.036
The route planning is appropriate.	3.52	0.836
The dining environment is clean and hygiene.	4.02	0.791
The promotion of this restaurant makes me order more dishes.	4.05	0.890
The pictures on the menu or the food samples stimulate me to order more dishes.	4.17	0.852

Regarding personality traits, the highest item is "I usually admire esthetic things" (Mean=3.21 ; SD=.744), and the lowest item is "Compared with my friends, I have rich life experience" (Mean=2.81 ; SD=.724) (see table 3).

Table 3. Means of personality traits (n= 477)

Items	Mean(\bar{X})	S.D.
Compared with my friends, I have rich life experience.	2.81	0.724
I'm courageous to do what others wouldn't do.	2.85	0.748
I like adventures.	2.92	0.740
I'd like to try novel or exotic food.	3.15	0.661
I like many friends accompanied.	3.15	0.701
I usually admire esthetic things.	3.21	0.744

Regarding impulse buying behavior, the means of three items are "I like to stay in this restaurant" (Mean=3.48 ; SD=.808), "I usually spent more money than expected in this restaurant" (Mean=3.47 ; SD=.940) and "I usually ordered more food and beverage in this restaurant" (Mean=3.26 ; SD=.923).

Results of Correlation Analysis

According to table 4, there were significant correlations between the six predictors and impulse ordering behavior. The most significant correlation existed between social factor and impulse ordering behavior ($\gamma= 0.476$, $p<.001$). Followed by ambient factor ($\gamma=0.468$, $p<.001$), design factor is

next ($\gamma = 0.455$, $p < 0.0001$), openness to experience factor has the lowest correlation with impulse ordering behavior ($\gamma = 0.338$, $p < 0.001$).

Table 4. *Results of correlation analysis*

	1	2	3	4	5	6	7
1 Impulse ordering behavior	1						
2 Design factor	0.455*	1					
3 Social factor	0.476*	0.562*	1				
4 Ambient factor	0.468*	0.708*	0.596*	1			
5 Influence of reference group	0.361*	0.430*	0.461*	0.326*	1		
6 Openness to experience	0.338*	0.425*	0.363*	0.311*	0.350*	1	
7 Extraversion factor	0.342*	0.287*	0.310*	0.273*	0.286*	0.735*	1

* $p < 0.001$

Results of Regression Analysis

In this study, six factors (design factor, social factor, ambient factor, influence of reference group, openness to experience, extraversion factor) were employed to examine the influence on impulse ordering behavior. In order to examine the collinearity among the variables, the variance inflation factor (VIF) was utilized as the criteria (Neter, Wasserman, & Kutner, 1989). The variance inflation factor is the reciprocal of tolerance. When the VIF value is smaller, the possibility of collinearity is lower. Moreover, the value of Durbin-Watson (DW) was used to examine the autocorrelation of residual value. The results revealed that the VIF of the variables (dining environment, reference group, personality traits and impulse ordering behavior) are between 1.39 and 2.49, and VIF value is less than 10. Namely, the collinearity doesn't exist among these variables. Besides, the value of Durbin-Watson is 1.875 which is close to 2, it means there's no self-correlated problem among the residuals.

The R^2 value reaches 0.331. According to Table 5, the predicting effect of dining environment factors upon impulse ordering behavior are significant. Design factors, social factors and ambient factors are positively significant to impulse ordering behavior ($\beta = 0.117$, $p < 0.05$; $\beta = 0.196$, $p < 0.001$; $\beta = 0.187$, $p < 0.001$). Thus, the H_{1-1} , H_{1-2} and H_{1-3} are supported (see Table 8). The predicting effect of reference group upon impulse ordering

behavior is significant ($\beta= 0.112$, $p<0.05$), the H_2 is supported. For personality traits, the predicting effect of extraversion factor upon impulse ordering behavior is significant ($\beta= 0.167$, $p<0.01$), but the openness to experience didn't reach statistical significance, Therefore, the H_{3-1} is supported, H_{3-2} is not supported.

Table 5. *Results of regression analysis*

Input factors	R^2	Adjusted R^2	ΔR^2	F	β	t	p
design factors	0.331	0.323	0.331	38.792***	0.117*	1.999	0.046
social factors					0.196***	3.829	0.000
ambient factor					0.187***	3.273	0.001
influence of reference group					0.112**	2.529	0.012
openness to experience					-0.003	-0.056	0.956
extraversion factor					0.167***	2.966	0.003

*** $p<0.001$, ** $p<0.01$, * $p<0.05$

The moderating effect of personality trait-extraversion

Hierarchical regression analysis was used to explore the relationship of the variables (Cohen & Cohen, 1983). The main purpose is to examine the moderating effect of personality traits on the relationship of the impact of environment/ambient factors, reference group and customers' impulse ordering behavior. According to table 6, the model 3 revealed that dining environment factors and extraversion personality traits had positively significant influence on impulse ordering behavior ($\beta= 0.252***$, $t= 4.270$), and the explained variance increased 2.6% ($\Delta R^2= 0.026$). It means that more dining environment factors could stimulate more impulse ordering behaviors. Moreover, to be combined with extraversion personality traits, the people with more extraversion personality traits tend to express more impulse ordering behaviors. In model 4, reference group combined with extraversion didn't have positively significant influence on impulse ordering behaviors. Thus, the H_{4-1} is supported, and the H_{5-1} is not supported (see Table 8).

Table 6. *The moderating effect of personality trait- extraversion*

	Impulse ordering behaviors			
	Model 1	Model 2	Model 3	Model 4
Independent variables				
Age	-0.051(-.830)	-0.029(-.571)	-0.016(-0.325)	-.015(-0.298)
Education	-0.050(-1.068)	-0.049(-1.254)	-0.403 (-1.124)	-.042 (-1.096)
Occupation	0.028(.613)	0.010(.249)	0.010(0.260)	0.011(0.280)
Monthly income	-0.008 (-.139)	-0.099(-.182)	-0.012(-0.250)	-0.013(-0.267)
Marital status	0.099*	0.044(.904)	0.038(0.795)	0.038(0.790)
Environment/ambient		0.473*** (10.801)	0.296*** (4.941)	0.352* (1.890)
Reference group		0.136*** (3.096)	0.107*** (2.453)	0.033 (0.139)
environment/ambient factors x extraversion personality traits influence of reference group x extraversion personality traits			0.252*** (4.270)	0.144(0.417)
				0.120(0.318)
R^2 (F)	0.011(1.037)	0.311(30.302***)	0.337(29.768***)	0.337(26.420***)
Adjusted R^2	0.000	0.301	0.326	0.325
ΔR^2 (ΔF)	0.011(1.037)	0.301(102.349***)	0.026(18.233***)	0.000(.101)
Durbin-Watson			1.894	

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ ***The moderating effect of personality trait- openness to experience***

Hierarchical regression analysis was used to examine the moderating effect of openness to experience personality traits on the relationship of the impact of dining environment factors, reference group and customers' impulse ordering behavior. According to table 7, the model 3 revealed that dining environment factor and openness to experience had positively significant influence on impulse ordering behavior ($\beta = 0.216^{***}$, $t = 3.236$), and the explained variance increased 1.5% ($\Delta R^2 = 0.015$). It means that more dining environment factors could stimulate more impulse ordering behaviors. Moreover, to be combined with the personality of openness to experience, the people with more personality traits of openness to experience tend to express more impulse ordering behaviors. In model 4, reference group combined with openness to experience didn't have positively significant influence on impulse ordering behaviors. Thus, the H_{4-2} is supported, and the H_{5-2} is not supported (see Table 8).

Table 7. *The moderating effect of personality trait- openness of experience*

	Impulse ordering behaviors			
	Model 1	Model 2	Model 3	Model 4
Independent variables				
Age	-.051(-.830)	-.029(-.571)	-.016(-.325)	-.015(-.298)
Education	-.050(-1.068)	-.049(-1.254)	-.403 (-1.124)	-.042 (-1.096)
Occupation	.028(.613)	.010(.249)	.010(.260)	.011(.280)
Monthly income	-.008 (-.139)	-.099(-.182)	-.012(-.250)	-.013(-.267)
Marital status	.099* (1.726)	.044(.904)	.038(.795)	.038(.790)
Environment/ambient		.473*** (10.801)	.296*** (4.941)	.352* (1.890)
Reference group		.136*** (3.096)	.107*** (2.453)	.033 (.139)
environment/ambient factors x openness of experience			.216*** (3.236)	.705* (1.903)
influence of reference group x openness of experience				-.553(-1.341)
$R^2 (F)$.011(1.037)	.311(30.302***)	.326(28.358***)	.329(24.450***)
<i>Adjusted R²</i>	.000	.301	.315	.316
$\Delta R^2 (\Delta F)$.011(1.037)	.301(102.349***)	.015(10.470***)	.003(1.799)
Durbin-Watson			1.875	

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 8. *Hypotheses examination*

Hypotheses	Result
H1: Dining environment has significant influence on impulse ordering behavior.	
H1-1: Ambient factors have significant influence on impulse ordering behavior.	Supported
H1-2: Design factors have significant influence on impulse ordering behavior.	Supported
H1-3: Social factors have significant influence on impulse ordering behavior.	Supported
H2: The impact of reference group has significant influence on customers' impulse ordering behavior.	Supported
H3: Customers with extraversion or openness to experience personality trait are more likely to have impulse ordering behavior.	
H3-1: Customers with extraversion personality trait are more likely to have impulse ordering behavior.	Supported
H3-2: Customers with openness to experience personality trait are more likely to have impulse ordering behavior.	Not supported
H4: Personality traits have moderating effect on the relationship of dining environment and customers' impulse ordering behavior.	
H4-1: Customers with extraversion personality trait has moderating effect on the relationship of dining environment and customers' impulse ordering behavior.	Supported
H4-2: Customers with openness to experience personality trait has moderating effect on the relationship of dining environment and customers' impulse ordering behavior.	Supported
H5: Personality traits have moderating effect on the relationship of the impact of reference group and customers' impulse ordering behavior.	
H5-1: Customers with extraversion personality trait has moderating effect on the relationship of the impact of reference group and customers' impulse ordering behavior.	Not supported
H5-2: Customers with openness to experience personality trait has moderating effect on the relationship of the impact of reference group and customers' impulse ordering behavior.	Not supported

DISCUSSION AND CONCLUSION

This study aims to analyze the influential factors of impulse ordering behavior by dining environment, influence of reference group and personality traits. It's the first attempt to use the variables of "store environment," "influence of reference group," and "personality traits" to predict customers' impulse ordering behavior. From the findings of this study, it could be concluded that "influence of reference group," "social factors," and "extraversion" are three major factors that affect customers' impulse ordering behavior. This conclusion corresponds to existing literature in impulse buying. It suggests that the research of impulse

buying is applicable to the field of hospitality and tourism. Below are the corresponding points between this study and existing literature:

(1) Store environment can predict customers' impulse ordering behavior

i. Social factors: The findings correspond to Babin's research (1995) that found serviceperson's professional performance and friendliness could increase customers' appreciation of the value of merchandises and their willingness of purchase.

ii. Ambient factors: The findings correspond to Milliman's (1982) major point that stated ambient factors could make customers excited about shopping, help prolong their stay in the store, and increase their willingness of return. It's also consistent with what other scholars have found: comfortable environment could increase the time customers stay in a store shopping, and their unplanned spending (Babin & Darden, 1995; Baker et al., 1992, 2002; Chaudhuri, 2001; Donovan et al., 1994; Donovan & Rossiter, 1982).

iii. Design factors: The findings correspond to the research by Mano (1999), Beatty and Ferrell (1998) discovering that excellent design of store environment could increase customers' excitement and involvement, and hence the probability of their impulse buying.

(2) Influence of reference group is certain to be a factor of impulse ordering behavior

The findings correspond to Baker's (1987), Bitner's (1992), and Martin's (1996) research whose points are that customers' shopping experience will be influenced by their interaction with other customers in the settings- in a restaurant or on vacation, where interactions between customers often take place.

(3) Personality traits can have impact on impulse ordering behavior

The findings correspond to Stern's findings that asserted the influence of economic, personality, time, space, and cultural factors on impulse buying. This study uses "Extraversion" and "Openness to Expression" as two predictors to impulse order behavior; however, this study found that "Openness to Experience" couldn't effectively predict impulse ordering. Perhaps it's due to the error of highly homogeneous samples. Yet, this study is an exploratory study and the R2 value is up to 33.8%. It indicates that there are other factors that have not been included, which merit further study.

IMPLICATIONS

According to the findings and conclusions of this study, to increase sales revenue by stimulating impulse ordering behavior in the restaurants is a way which could not be disregarded. Several managerial implications are proposed as follows:

To improve store environment is still a key. The advice is to pay more attention to these factors to make sure customers find the atmosphere of restaurant pleasant, have impression of high popularity, and feel its air-conditioning comfortable. While feeling comfortable, the customers would like to make more orders.

To emphatically show the signature dishes on the menu is critical. To emphasize the uniqueness of restaurant's signature dishes in the design of menu has proved positive in encouraging customers to order more. Try to design the menu to display the signature dishes for customers.

To train waiters/waitresses to make most of the group dining occasions by effectively introducing the specialties of restaurants. Since customers tend to be under the influence of reference groups, the waiters/waitress should know how to grasp the opportunities of group dining. It is especially important when there are female members in the group, because it is more likely to encourage impulse ordering if desserts and beverages are introduced in this kind of situation.

To train the waiters/waitresses' ability to respond to improvident situation. The point is to train the waiters/waitresses to pay attention to whether customers would be interested in what other customers have ordered or what other customers are having. The waiters/waitresses should know how to take advantage of this kind of opportunities to introduce the uniqueness of house specialties in order to encourage customers' impulse ordering behavior.

To introduce house specialties in different ways according to customers' personality traits. It is to train the waiters/waitresses' ability to tell customers' personality traits in order to introduce certain kinds of dishes to please them. For example, for customers with extraversion personality trait, to introduce novelty and exotic dishes for them to try will more likely succeed in increasing their impulse ordering behavior.

For the theoretical implications, the relationship of personality traits and impulse ordering behavior is a merit for academic research.

Customers' personality traits of extraversion or openness to experience had moderating effect on the relationship of dining environment and impulse ordering behavior. Namely, customers with the personality traits of extraversion or openness to experience would influence how the dining environment impacts their impulse ordering behavior. However, customers' personality traits of extraversion or openness to experience didn't have moderating effect on the relationship of reference group and impulse ordering behavior. Is it due to the fact that people with personality traits of extraversion or openness to experience tend to accept novelty things and display more impulse ordering behaviors? And, is it because of the people with personality traits of extraversion or openness to experience are more likely to insist on their opinions and not likely be influenced by the referees? These are important issues for customers' impulse buying behavior.

Finally, the limitations and direction of future research are addressed. Originally it was designed to conduct questionnaire survey in the restaurants; however, most of the chain restaurants required permission from their headquarters to do so, it was not allowed to complete this procedure. Therefore, this study modified the way of conducting survey to let the interviewers wait outside the restaurants and ask customers who had finished their meal to complete the questionnaire. Since it was inconvenient to fill out the questionnaire outside the restaurants, most customers refused to do it. It's probably the outcome of the homogeneous nature of interviewees- most of them are students because they were more accessible to our professionally trained interviewers, most of whom were also students. It's one of the limitations. Due to the limit of time and budget, in this study interviews could only be conducted in the area of Taipei City and New Taipei City. Other areas of Taiwan couldn't be approached. It's another research limitation.

This study has shown that the issue of impulse ordering is indeed important to restaurant management. There is large room for further research since this study is in a preliminary status. Regarding the suggestions for future research, below are some directions in which this study can be improved:

- (1) To find more moderating variables affecting impulse ordering behavior. For example, what impact does shopping mood have on impulse ordering behavior?
- (2) To find the moderating effects of impulse ordering behavior such as customers' intervention.

(3) To find what impacts do other probable variables, including stimulus factors (promotions, limit-time or limit-quantity promotions), customers' impulse personality traits, cross-cultural factors, experience marketing, situational variables (time, money, and so on.) - have on impulse ordering behavior.

(4) To compare impulse ordering behaviors in different types of restaurants.

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