Buying Intention and Menu Labeling in QSRs: The Role of TPB

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Abstract

This research aims to understand customer buying intention and menu labeling in quick service restaurants (QSRs) by using the theory of planned behavior (TPB). To achieve this aim, a self-administrated questionnaire was directed to a random sample of QSRs customers in the investigated restaurants. A number of 380 forms was distributed, among them 308 forms (81.1%) were completed and valid for analysis. The findings supported that attitude, subjective norms and perceived behavioral control have direct effect on customers buying intention.

Introduction

The theory of planned behavior (TPB; Ajzen, 1985, 1991), as an extension of the theory of reasoned action (Ajzen and Fishbein, 1980) by adding perceived behavioral control, has been widely applied to predict various types of human behavior with numerous empirical support (Conner and Armitage, 1998).

The restaurant industry has been the target of regulations intended to reduce obesity by providing relevant nutrition information at the point of purchase as a tool to encourage healthier food choices (U.S. Food and Drug Administration [FDA], April 6, 2011). Despite the expense of these menu nutrition labeling requirements (Almanza, *et al.*, 1997), the impact of nutrition labeling on Customers' food choices has to be conclusively established (Swartz *et al.*, 2011) as a result this research aims to recognize the customer buying intention by using the attributes of the theory of planned behavior.

The Literature Review

1- The Theory of Planned Behavior

The theory of planned behavior (TPB) (Ajzen, 1985, 1991) identifies the influences that predict and change behaviors. Behavioral intention is influenced by: a person's attitudes; beliefs about whether individuals who are important to the person approve or disapprove of the behavior; and perceived control over performing the behavior. Attitude refers to the degree of favorable or unfavorable evaluation towards a behavior and captures attribute dimensions such as important – not important, harmful – beneficial and pleasant – unpleasant (Ajzen, 2001). Subjective norms refers to the perceived social pressure to comply with expectations, while perceived behavioral control (PBC) is the feeling of being in control or the confidence in performing a behavior (Syed and Nazura, 2011). Generally speaking, the more positive the attitude, the higher the social expectations and control an individual feels about performing a behavior, the more likely it is that the individual will do so (Ajzen, 1985). However, not all the behaviors are fully under volitional control and it is assumed that only

those behaviors of interest in the domains of personality and social psychology fall into the volitional category (Ajzen, 1988). Closer examination reveals that even the mundane activities that could be executed at will are sometimes subject to the influence of factors beyond one's control. That is why the theory of planned behavior was developed as compared to the theory of reasoned action, which only represents the pure volitional behaviors that people could perform if they are inclined to, or refrain from it if they decide not to, the theory of planned behavior is a more generalized model (Ajzen, 1991). However, the theory of planned behavior does not deal directly with the amount of control a person actually has in a given situation. Instead, it considers the possible effects of perceived behavioral control, which is taking into account some of the realistic constraints that may exist in achieving behavioral goals. To the extent that perceptions of behavioral control correspond reasonably well to actual control, they should provide useful information over and above expressed intentions (Ajzen, 1991). The theory of planned behavior is shown in Figure 1.

Figure 1: Theory of Planned Behavior (Ajzen, 1991)

As shown in the figure, the theory of planned behavior has two unique features. First, the theory assumes that perceived behavioral control has motivational implications for intentions. Those who believe that they do not have the resources or the opportunity to perform certain behaviors are unlikely to form strong intentions to engage in it even if they have favorable attitudes toward the behavior and believe that those that they are close to, such as friends and family, would approve of their performing
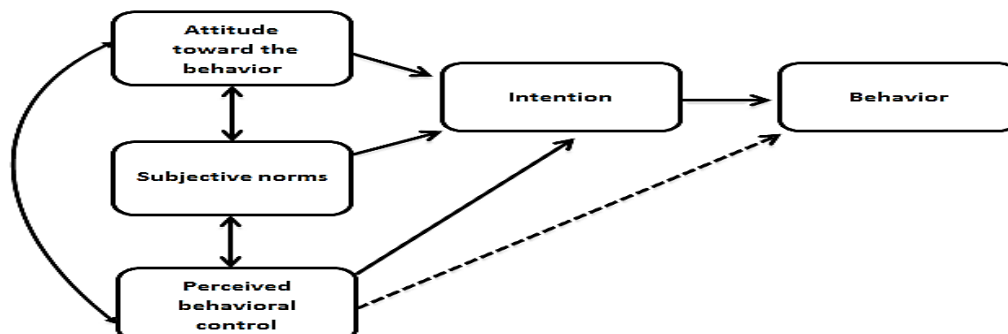
the behavior. This is represented by the arrow from Perceived Behavioral Control to intention in Figure 1 (Ajzen, 1991).

Ajzen (1988) mentioned that another feature is the possibility of a direct link between perceived behavioral control and behavior; perceived behavioral control can help predict goal achievement independent of behavioral intention to the extent that it reflects actual control with some degree of accuracy. Since perceived behavioral control can be a partial substitute for a measure of actual control, it can be used to predict behavior directly. However, there are cases when people have little information about the behavior, or limited resources to go on, so a measure of perceived behavioral control may add little to the accuracy of behavioral prediction because there is little agreement between perceived behavioral control and people's actual control over the behavior. That is why there is a broken arrow from Perceived Behavioral Control to behavior in Figure 1.

People with stronger intentions tend to engage in a certain behavior since the motivation factors exist in performing the behavior (Ajzen, 1991). The theory proposes three determinants that explain a person's behavioral intention: attitude, subjective norm, and perceived behavior control (Ajzen, 1991). Attitude is "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991, p. 188). Subjective norm represents social influence in the theory and is defined as "the perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991, p. 188). In other words, it is "a person's beliefs about whether significant others think he or she should engage in the behavior" (Conner and Armitage, 1998, p. 1431). Perceived behavioral control refers to "the perceived ease or difficulty of performing the behavior" (Ajzen, 1991, p. 188) and thus it is a reflection of previous experience and anticipated barriers (Ajzen, 1991). Therefore, the theory postulates that a person with a more favorable attitude, greater subjective norm related to a behavior, and higher perceived behavioral control is more likely to display a stronger intention to perform the behavior (Ajzen, 1991).

The TPB has successfully predicted pro-environmental behavior in the field of hospitality and tourism, such as hotel guests' intention to visit a green hotel (Han *et al.*, 2010; Teng *et al.*, 2015), patronizing ecofriendly restaurants (Kim *et al.*, 2013), and engaging in bicycle tourism (Han *et al.*, 2017). However, the TBP has also been applied in a variety of context beyond hospitality and tourism such as predicting purchasing intentions of genetically modified foods in customer grocery shopping (O'Fallon *et al.*, 2007). Relationships among constructs and relative importance of the determinants, nevertheless, vary across behaviors and contexts (Ajzen, 1991).

2- Customer Buying Intention in QSRs

Studies in quick service restaurants (QSR) have shown no significant impact of posting calorie counts for menu items. For example, a before-and-after study of King County's (Washington, United States) implementation of menu labeling in a chain restaurant showed no effect on diners' purchases based on calorie content (Finkelstein *et al.,* 2011). Similarly another QSR study indicated that menu labeling may have a positive effect on what parents order for their young children but not for themselves (Tandon *et al.*, 2010). Based on a systematic review of menu labeling research conducted since 2008, Swartz and colleagues found that only two of seven studies reported a statistically significant reduction in calories purchased among customers using a calorie-labeled menu (Swartz *et al.*, 2011). These findings suggest an inconclusive impact of calorie labeling in encouraging healthier food choices or decreasing calorie consumption in QSR restaurant settings.

Insights from literature on nutrition labeling on packaged food products suggest that the effectiveness of nutrition labels on customer decision processes lies in their ability to provide the appropriate nutrition information to specific customer segments (Caswell and Padberg, 1992). It is also believed that labels are likely to be effective when they address specific informational needs and make sense to their target audience (Verbeke, 2005). Similarly, menu labeling studies have shown a strong association between the target audience and the effectiveness of nutrition

labeling on customers' food choice. In that regard, a QSR menu calorie labeling study found a decrease in calories selected only on the part of non-overweight individuals (Wisdom *et al.*, 2010), suggesting the effectiveness of calorie information for those actively seeking it. Similarly, a study in a fine-dining setting found that menu calorie labeling was most valued by health conscious and older customers and was effective in reducing their calorie consumption (Yepes, 2011).

The FDA's (April 6, 2011) menu labeling regulations suggest calorie information as the recommended nutrition labeling format on menus for all chain restaurants, despite the failure of research to show any effect of calorie labeling on food choices (Swartz *et al.*, 2011). One hopeful development, however, was a recent review study on front-of-package food labels which suggested that a "traffic light" labeling system was most effective in helping customers identify healthier products, with red, green, and amber traffic-light symbols to indicate fat, saturated fat, sugar, and salt levels according to recommendations (Hawley *et al.,* 2013).

The impact of a traffic-light format has been supported by findings from menu labeling studies, in which researcher's coded food and beverages in a cafeteria with traffic-light colors and observed increased sales of green-coded items and decreased sales of red-coded items (Thorndike *et al.*, 2012). In another experimental study of different menu labeling formats (using various combinations of kilojoule, percentage daily intake, and traffic-light labeling), respondents most commonly reported using traffic-light labels in making their selections. The groups with traffic-light labeling information selected meals with a significantly lower mean energy content, which constituted a reduction of around 500 kJ (Morley *et al.,* 2013).

Similarly in an online survey study (Liu *et al.*, 2012), four different labels were used (no calorie labels, rank-ordered calorie levels, and red and green circles indicating higher and lower calorie choices). Participants presented with a rank-ordered calorie listing and those shown the colored circles ordered items with fewer calories than those in the no-labels group. The results of these studies suggest that presenting calorie information in

attractive and useful formats may increase effectiveness of menu labeling (Liu *et al.*, 2012; Thorndike *et al.,* 2012).

Looking at the meta-analysis by Swart and colleagues, most studies involved a limited number of food categories, as typically found on QSR menus (Swartz *et al.*, 2011). Similarly, - several studies in quick service settings have indicated that not all customers or participants were aware of calorie labels due to the speedy QSR ordering process (Finkelstein *et al.*, 2011). In contrast, there have only been a few studies looking at full-service restaurants with many categories of dishes (Josiam and Foster, 2009; Pulos, 2010; Yepes, 2011; Yepes, 2013;). Studies of full-service restaurants would address the speed of ordering issue by offering more time for food selection and the processing of available nutrition information, as well as allowing guests more food tradeoffs.

On this basis the following hypotheses have been supposed:

H1: Attitude Factors positively affect Buying Intention.

H2: Subjective Norms Factors positively affect Buying Intention.

H3: Perceived Behavioral Control positively affect Buying Intention.

Methodology

In this study McDonald's and Subway's firms conducting nutrition labeling in Egypt were concerned. A questionnaire investigation was conducted among a randomly selected customers who visiting these firms. The present paper is limited in illustrating how the demographic data of the customers effect their using nutrition information when making purchase decision in QSRs.

	Item	Distributed Forms	No.	%
1	**Subway Zamalek**	10	10	100
2	**Subway Nasr City**	10	9	90
3	**McDonald's Haram**	40	35	87.5
4	**McDonald's Tahrir**	40	38	95
5	**McDonald's Manial**	40	30	75
6	**McDonald's Mall of Egypt**	40	35	87.5
7	**McDonald's Mall of Cairo Festival**	40	33	82.5
8	**McDonald's Mall of Arabia**	40	38	95
9	**McDonald's Maadi**	40	30	75
10	**McDonald's Shoubra Misr**	40	20	50
11	**McDonald's El Mohandessin**	40	30	75
Total		380	308	81.1

Table 1: The Sampled Fast Food Operations Customers in Cairo and Giza

Results and Discussions
1- Demographic Data Analysis

The profile data of the respondents included their age, gender, educational level, monthly income, current occupation, as well as their diet status (see Table 2).

Table 2: Respondents' Profile		Freq.	%
Age	Under 21 Years	50	16.2
	From 21 less than 30 Years	216	70.1
	From 30 less than 40 Years	40	13.0
	From 40 Less than 50 Years	2	6.0
	50 Years and Over	0	0
Gender	Male	140	45.5
	Female	168	54.5
Level of Education	Secondary School Diploma or less	88	28.6
	Bachelor's Degree	172	55.8
	Master's Degree	42	13.6
	Doctor's Degree or Equivalent	6	1.9
	Other	0	0
Monthly Income	Below EGP 2,000	120	39.0
	EGP 2,000 to EGP 5,999	162	52.6
	EGP 6,000 to EGP 9,999	22	7.1
	EGP 10,000 or more	4	1.3
Current Occupation	Student	106	34.4
	Unskilled worker	4	1.3
	Skilled worker	24	7.8
	Self-employed	24	7.8
	Professional / executive / manager	134	43.5
	Unemployed	12	3.9
	Retired	4	1.3
	Others	0	0

Table (2) shows that 70.1% of the respondents were in the age between 21 less than 30 years; followed by the respondents whose under 21 years with a percentage of 16.2%. Moreover, 13% of the respondents were in the age from 30 less than 40 years, and only 6% of the respondents from 40 less than 50 years, which reflects the dominance of QSRs customers was youth. The sample was slightly skewed to female respondents 54.5% as compared to male respondents 45.50%. Since the skewed sample may

be an indicator that females are more willing to participate than males. Concerning the level of education distribution was obviously skewed toward the highly educated sector of the population, with the percentage of 55.8% of the sample having completed a bachelor's degree and about 13.6% of the sample having completed a master's degree and doctor's degree were 1.9%. Furthermore, 28.6 of the respondents were students.

With regard to monthly income may also be the reason that 52.6% of the respondents had a monthly income from EGP 2000 to EGP 5999. Moreover, 39% of the respondents had a monthly income below EGP 2000. Regarding respondents current occupation, 43.5% of respondent were professional, executive and manager. Moreover, 34.4% of respondents were students. While, both unskilled workers and retired employees' had the same percentage 1.3%.

Testing Research Hypotheses
Table 4 presents the results of hypotheses testing through the standardized path coefficients (ß), *t*-values, and the corresponding significance levels.

Table 3: Hypotheses Testing			Estimate	S.E.	C.R.	P	Label
Hypothesis			Estimate	S.E.	C.R.	P	Label
Attitude	→	IntBuy	0.097	0.037	2.612	0.009	Supported
Subjective	→	IntBuy	0.141	0.048	2.952	0.003	Supported
Perceived	→	IntBuy	0.407	0.048	8.516	0.000	Supported

Hypothesis 1 was concerned with the impact of attitude on customer buying intention. It was hypothesized that there would be a positive impact of attitude and customer buying intention. The result demonstrated positive and significant paths from attitude on customer buying intention (β = 0.097, p > 0.009). This implies that hypothesis 1 is supported. This result agrees with Ajzen (1991) and Syed and Nazura (2011).
Furthermore, hypothesis 2 was concerned with the impact of subjective norms on customer buying intention. It was hypothesized that there would

be a positive impact of subjective norms and customer buying intention. The results revealed that the relationships between subjective norms and customer buying intention were positive and statistically significant as it was hypothesized ($β= 0.141$, $p < 0.003$). This implies that this hypothesis is supported. This finding concurs with Shin *et al.* (2018) who stated that subjective norms among customers was influenced by their buying intention.

Hypothesis 3 dealt with the impact of perceived behavioral control factors on customer buying intention. It was hypothesized that there would be a positive impact of perceived behavioral control factors and customer buying intention. The results revealed the presence of positive and significant paths from motivators to OC ($β= 0.407$, $p < 0.000$). This implies that hypothesis 3 is supported. This result is consistent with O'Fallon et al. (2007) and Kim et al. (2013).

Conclusions and Implications

This research measured customer buying intention and menu labeling in QSRs by using the theory of planned behavior (TPB). The subjective norm positively influences customers' intentions to choose a nutritional labelled items. Therefore, restaurant marketers would benefit more from actively engaging not only potential customers, but also their reference groups in their marketing strategies. It is recommended that the marketing managers and restaurant owners emphasize the environmental benefits of nutritional labelled items through their marketing communication channels geared toward customers. Sharing the anticipated negative consequences of consuming nutritional labelled items products on the environment can be also effective. It may evoke customers' feelings toward the negative consequences of not choosing an organic menu item and influences personal norm directly and indirectly through ascribed responsibility.

Future studies may include these variables as antecedents of customers' intention to choose nutritional labelled items. This study revealed that attitude has a salient impact on intention to choose nutritional labelled items. Future research can address triggers of favorable attitude toward choosing organic menu items. This will be helpful in establishing effective

marketing strategies, which will ultimately generate additional revenue while meeting customer preferences. Finally, in this research, a specific timeframe was not defined when measuring customers' intention. According to Han et al. (2010), respondents may tend to answer positively on questions associated with intention if there is no timeframe specified. Therefore, it might be meaningful if future study examines target populations' dining-out frequency and then, measure intention relevant to the specific time frame. The use of specific occasion (e.g., "on my next dining-out") instead of timeframe could also be considered (Han et al., 2010).

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