PLS Path Modelling on Satisfaction of the Fair Trade Consumption Experience in Taiwan

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Abstract: With the support of Taipei's mayor and city hall, Fair Trade Taipei hopes to become an example to the rest of the Chinese-speaking world. However, the perception of FT consumption is new to most consumers in Taiwan. What are the determinants on FT consumption? And are there any relationships among these existing determinants and satisfaction? The purpose of this paper is to propose a Partial Least Squares (PLS) path model for determinants of and derived satisfaction on FT consumption experience from the perspectives of teachers and students at C University in Taiwan. According to the study results, perception recognition, product value and product label are the direct determinants on satisfaction with FT consumption experience; while product recommendation and external influences both play stimulator and bridging roles. The results provide reference to producers, distributors, consumers and the related authorities and parties.

Key-Words: - Satisfaction, Fair Trade (FT), Partial Least Squares (PLS), Taiwan

1 Introduction

As consumer awareness toward product information becomes increasingly important, products such as genetically modified-free corn and soybeans, child-labor-free clothing, cruelty-free cosmetics, or organic foods are well regarded by quality seekers and ethical consumers. The "Fair Trade" (FT) movement thus came to be by the need of many. According to FINE, which includes four FT organizations: Labelling Organization (FLO), The International Fair Trade Association (IFAT), Network of European Worldshops (NEWS), and European Fair Trade Association (EFTA), the definition of FT is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers especially in the South countries.

Until 2016, FLO standards cover 20 commodities including bananas, cocoa, coffee, cotton, flowers, sugar, tea, fresh fruit, gold, juice, honey, rice, spice and herbs, sports balls, wine, and composite products (FLO, 2016) [21]. In many European and North America countries, FT had acquired a substantial market (Kim, Lee & Park, 2010) [31]. FT products are now widely sold in conventional and specialized retail outlets, notably in specialized and conventional supermarket stores, which are becoming important purveyors of FT products. FT products are also marketed online and in catalogues (Moore, 2004) [38].

Recent literature acknowledges the significant growth in FT consumption (Ferran & Grunert, 2007; Hira & Ferrie, 2006; Ma & Lee, 2012; Morrell & Jayawardhena, 2010) [19, 26, 37, 39]. Eight years ago, Taiwan's FT movement started in cafes and shops. With the support of Taipei's mayor and city hall, FT Taipei hopes to become an example to the rest of the Chinese-speaking world. However, the perception of ethical consumption and FT is very new to most consumers in Taiwan.

FT addresses the following issues: What are the determinants on FT consumption? And are there any relationships among these existing determinants and consumption experience? The issues are important not only for the goal and orientation of FT producers, distributors and the related authorities but also for the expectation of consumers. This issue is important for academia, industry and government authorities and, thus, deserves further attention and discussion.

Who or what kind of people would like to purchase FT products? Huang (1996) [28] found that more health conscious and educated consumers are willing to pay more additional monies for organic products. Additionally, Blend & Van Ravenswaay (1999) [7] showed that educated and wealthier consumers are more likely to choose eco-labelled apples over regular-labelled ones. However, the variable of highly educated is not a statistically significant factor when it comes to organic coffee.

What factors matter on FT consumption? De Pelsmacker, Driesen & Rayp (2004) [14] found that the FT label is considered the second most important attribute, together with flavor, beaten only by brand, according to consumers intend to buy FT coffee. De Pelsmacker, Driesen, & Rayp (2005) [15] identified four clusters based on consumers'

preferences: the FT lovers, the FT likers, flavor lovers and the brand lovers. Ferran & Grunert (2007) [19] demonstrated that the specialized store purchasers are motivated by a wish to protect the environment and to participate in an alternative economy, whereas supermarket purchasers cared more about a respect for the human rights. Kirezli & Kuscu (2012) [33] focused on the triggering factors, awareness, price acceptability, and product accessibility, on Turkish consumer' attitude toward FT products. Kimura, et al. (2011) [32] suggested that ethical consumption, such as purchasing FT foods, is influenced not only by an individual's intrinsic motivations for ethical issues but also by extrinsic social factors. Ladhari & Tchetgna (2015) [34] examined the influence of personal values, self-directed, equality and social justice, and power and social status for FT consumption. Unfortunately, very little literature is devoted to a comprehensive perspective on the relationship among the determinants and satisfaction with FT consumption.

The purpose of this paper is to propose a PLS path model for determinants of and derived satisfaction on FT consumption experience, from the perspectives of teachers and students of C University in Taiwan. The paper is organized as follows: Section 2 describes the methodology, Section 3 is hypotheses of the model, and Section 4 presents a case study in Taiwan. Finally, Section 5 presents the conclusion from the findings.

2 Methodology

PLS path modeling and linear structural relations (LISREL) are two major structural equation modeling (SEM) approaches to modeling relationships between latent variables. Unlike LISREL, with its assumption of homogeneity in the observed population, PLS path modelling is more suitable for real world applications, and is particularly more advantageous with complex models.

More importantly, PLS path modeling is better suited for analyzing exploratory models with no rigorous theory grounding, because it requires minimal assumptions about the statistical distributions of data sets. Moreover, it can work with smaller sample sizes' causal relationships, small samples (minimum sample size is 30), missing values, or display of co-linearity (Wixom & Watson, 2001) [52]. Such a general and flexible framework also enriches data analysis methods with non-parametric validation procedures (such as bootstrap, jackknife, and blindfolding) for estimated parameters; the framework fits indices for different blocks that are more classical in a modeling approach than in data analysis (Fornell & Bookstein, 1982) [23]. PLS gained popularity in chemo-metric research, and later in industrial applications, e.g. computer information and management, marketing, and social sciences (Chiang, 2013, 2016) [10,11].

A PLS path model is composed of two models: (1) a measurement (outer) model relating the manifest variables (MVs) to their own latent variables (LVs) and (2) a structural (inner) model relating some endogenous LVs to other LVs. The measurement model is also called the outer model (MVs→LVs) and the structural model called the inner model (LVs→LVs). Arrows show the assumed causal relations.

In the measurement model, reliability and validity are tested by examining (1) the reliability of individual items, which is called the composite reliability (CR), and (2) the convergent validity of the measures associated with the individual constructs, which is called the average variance extracted (AVE). In general, CR should be greater than 0.7 and AVE greater than 0.5 (Fornell & Larcker, 1981) [22]. In the structural model, it is determined by estimating the paths between pairs of constructs in the model. For this study, statistical significance was defined as T Statistics (t) greater than or equal to 1.96 (p = 0.05, two-tailed).

3 Hypothesis

Why do consumers purchase FT products? The theory of reasoned action (TRA) of Fishbein & Ajzen (1975) [20] and the theory of planned behavior (TPB) of Ajzen (1985, 1991) [2, 3] are two known models on individuals' behavior intention. These models indicated that FT consumption is influenced not only by consumer's own perception and attitude but also by perceived social norms, which are beliefs about other key people's (such as parents, colleagues, and close friends) normative expectations, and perceived behavioral control (such as perceived difficulty or ease in buying FT products). According to literature review, determinants regarding FT consumption are divided into five LVs and described as follows: perception recognition, product value, product label, product recommendation and external influences.

3.1 Perception Recognition

Wright & Heaton (2006), De Pelsmacker & Janssens (2007) and Murphy & Jenner-Leuthart (2011) [16, 40, 53] emphasized that consumer knowledge has substantial and significant effects on product likeability, product interest, perception of price acceptability, and purchase behavior. Shaw,

Shiu & Clarke (2000), Shaw & Shiu (2003), De Ferran & Grunert (2007), Adams & Raisborough (2010), Zander & Hamm (2010), Langen (2011) and van Dam & van Trijp (2011) [1,16, 35, 48, 49, 51, 54] all focused on motivation of FT consumption being increasingly responsive to trends of the economic, environmental, and social consequences of global trade with purchase behavior and products preference as part of respecting specific ethical standards. Moreover, some studies emphasize that altruistic behaviors (helping producers) can be enhanced by cues from others and the potential reputational consequences (Hoffman, McCabe & Smith, 1996; Bateson, Nettle & Roberts, 2006; Goig, 2007; Piazza & Bering, 2008a; Piazza & Bering, 2008b) [6, 24, 27, 43, 44]. Given the above-mentioned viewpoints, the following hypothesis is proposed:

H_1: *Perception recognition is positively related to FT consumption.*

3.2 Product Value

De Pelsmacker et al. (2005) [15] asked 808 Belgian participants to taste and choose among several coffee types and then identified four clusters based on preferences: the FT lovers, the FT likers, flavor lovers and the brand lovers. The study indicated that function of products is an important factor of consumption whether they are FT products or not. Nicholls (2002) [41] argued that ethical consumerism marks a shift in attitude toward a positive appreciation of the value of FT. Dickson (2000), Morrell & Jayawardhena (2010), and Pinto, et al. (2011) [17, 39, 45] all pointed out that personal values have been identified in the marketing literature as important predictors of consumer choices and preferences. Three classes of values, self-directed, equality and social justice, and power and social status, were identified by Ladhari & Tchetgna (2015) [34] to examine the influence of personal values on FT consumption. Many rational consumers select products based on price and quality, while other ethically concerned consumers, guided by a sense of ethical obligation and identification with ethical issues, are influenced by FT labels and will pay more for them (Shaw et al., 2000) [49]. As for price accessibility, several studies have suggested that consumers are willing to pay additional premiums for FT products labelled as FT and they show a preference for retailers perceived as more generous with their suppliers (Loureiro & Lotade, 2005; Arnot, Boxall & Cash, 2006; Trudel & Cotte, 2009; Langen, 2011; Reinstein & Song, 2012) [4, 35, 36, 47, 50]. Given the above-mentioned viewpoints, the following hypothesis is proposed:

H_2: *Product value is positively related to FT consumption.*

3.3 Product Labels

According to De Pelsmacker et al. (2005) and De Ferran & Grunert (2007) [13,15], four types of consumers are divided by taste and choice among several coffee types indicating that some like FT itself, and some emphasize their brand. Production-related variables such as manufacturing processes (Caporale & Monteleone, 2004) [8], origin of production (Caporale, Policastro, Carlucci & Monteleone, 2006) [9], quantity and quality information about FT (Kaynak & Cavusgil, 1983; Kimura et al., 2010) [30,32] are all important factors to consumer' purchase intentions. Kim et al. (2010) [31] suggested that FT corporate evaluation is also an influence factor. The study of Kimura et al (2012) [32] showed that six sensory and extrinsic attributes affected consumer intentions to purchase chocolate including fair trade, price, country of manufacture, taste characteristics, polyphenol content and caloric content. Given the above-mentioned viewpoints, the following hypothesis is proposed:

H_3: *Product label is positively related to FT consumption.*

3.4 Product Recommendation

Dufwenberg & Gneezy (2000) [18] suggested that there are different kinds of beliefs that affect the individual's behavior contributing to his or her perceptions about the products, including expectant or presumptive trust, experiential trust, etc. These three forms of trust are: (a) person-specific general trusting tendency, (b) previous accumulations of experiential trust with other advisors working in a similar role, and (c) trust based on secondhand knowledge or other indirect information sources. Thus, trust could be regarded as future-directed toward a person (or a product) within a particular organizational environment. Given the above-mentioned viewpoints, the following hypothesis is proposed:

H_4: *Product recommendation positively related to FT consumption.*

3.5 External Influences

Kimura et al (2012) [32] suggested that FT consumption is influenced not only by individual's intrinsic motives for ethical issues but also by extrinsic social factors such as reputation-enhancing opportunities. Several studies have suggested that

the perceived social norm has an impacted consumer intention to purchase certain products (Fishbein & Ajzen, 1975; Ajzen ,1985, 1991; Cook, Kerr & Moore, 2002; Arvola, et al, 2008; Olsen, Sijtsema & Hall, 2010) [2, 3, 5, 12, 20, 42]. De Pelsmacker & Janssens (2007) and Kirezli & Kuscu (2012) [16, 33] suggested the product accessibility or convenience is also an important factor to consumer' attitude towards FT products. Given the above-mentioned viewpoints, the following hypothesis is proposed:

H_5: *External influences positively related to FT consumption.*

3.6 Path relationship among LVs

Except for the relationship between LVs and FT consumption, there are some relationships that exist between LVs and LVs. PLS path modelling is better suited for analyzing exploratory models with no rigorous theory grounding because it requires minimal assumptions about the statistical distributions of data sets, and it can work with smaller sample sizes causal relationships or displays of co-linearity. Thus, the following hypothesis is proposed:

H_6: *Perception recognition is positively related to product value.*

H_7: *Perception recognition is positively related to product label.*

H_8: *Product label is positively related to product value.*

H_9: *Product recommendation is positively related to perception recognition*

H_{10}: *Product recommendation is positively related to product value.*

H_{11}: *Product recommendation is positively related to product label.*

H_{12}: *External influences is positively related to perception recognition.*

H_{13}: *External influences is positively related to product value.*

H_{14}: *External influences is positively related to product label.*

H_{15}: *External influences is positively related to product recommendation.*

The conceptual PLS path framework on FT consumption modelling is shown in Figure 1. Table 1 shows the manifest variables and latent variables in this model.

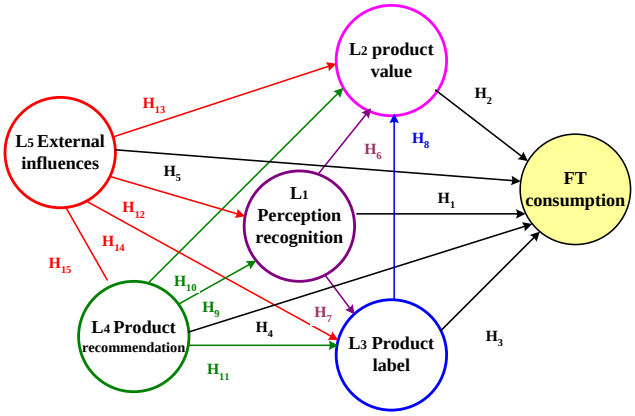

Fig. 1. The conceptual framework

Table 1. The LVs and MVs of the PLS model on FT consumption

LVs	MVs
L_1 Perception recognition	M_{11} My involvement of FT knowledge is high
	M_{12} My recognition of FT perception is high
	M_{13} Purchasing FT products can help producers
	M_{14} Purchasing FT products can protect the environment
L_2 Product value	M_{21} The function of FT products meets my need
	M_{22} My preference of FT products is high
	M_{23} The quality of FT products is reliable
	M_{24} The price of FT products is reasonable
L_3 Product label	M_{31} The label information of FT products is clear
	M_{32} The certificate label of FT products is reliable
	M_{33} The certificate label of FT products raises my purchase intention
	M_{34} The brand story of FT products raises my purchase intention
L_4 Product recommendation	M_{41} I had a good experience of FT consumption
	M_{42} Key persons recommended FT consumption
	M_{43} Reference groups recommend FT consumption
	M_{44} FT consumption can link with the related groups
L_5 External influences	M_{51} The package or model design of the FT products is attractive
	M_{52} The location of FT products is convenient
	M_{53} Purchasing FT products online and in catalogues is convenient
	M_{54} The service and the image of the FT store is good
L_6 FT consumption	M_{61} The quality of my FT products is reliable and satisfied
	M_{62} My repurchase intention of FT products is high

M_{63} My FT consumption experience is comfortable
M_{64} I will recommend the FT products that I had purchased

4 A case study in Taiwan

4.1 Background of FT in Taiwan

After an eight-year effort journey, FT campaigners in Taiwan celebrated the launch of the capital, Taipei, as an official FT City. From small beginning steps in Taiwan's only FT cafes and shops, the movement has grown to include a FT film festival, walking tour, workshops, and a world FT forum. Within the Taipei City area, there are now 4 FT license holders, 20 FT coffee shops, more than 100 retail stores selling FT products, two FT hotels and many schools that are holding FT promotional events. However, the concept of ethical consumption and FT are very new to most of consumers in Taiwan. They still have a long way to go, though the launch of FT Taipei City is an important milestone for the FT movement in Taiwan.

4.2 Demographic Profile

As Johnson & Kaye (2004) and Qian & Scott (2007) [29, 46] noted, many consumption studies have conducted surveys using convenience samples and many have adopted snowball-sampling techniques. In this study, similar techniques were adopted at C University in Hsinchu City in Taiwan. The respondents include teachers and students who had at least once consumed FT product. To investigate the viewpoints of determinants on FT products purchase, 50 respondents completed the questionnaire. 10 respondents were eliminated for incompleteness. Thus, 40 usable surveys were collected, including 20 teachers and 20 students. (1) Sex: 45% were males, 55% were female. (2) Education: 20% had PhDs 30% had Master's degrees, and 50% had Bachelor's degrees. (3) Family income: 35% were below one million NTD, 35% were 1-2 million, 25% were 2-3 million, and 5% were 3-4 million. (4) Marriage: 57.5% were single, 42.5% were married. (5) Purchasing frequency within the research period: 37.5% were one, two 20%, three 17.5%, four and above four were 25%. (6) Items: the top three products are coffee 65%, chocolate 42.5% and tea 25%. The valid response rate was 80%. The research period ranged from 2016/11 to 2017/02.

4.3 Results and Discussion

(1) AVE, CR, and R^2

SmartPLS 2.0 software, developed by Hansmann & Ringle (2005) [25], was used to estimate the model. Table 2 presents the descriptive statistics for these variables. Table 3 shows AVE, CR and R^2 for the model. All the CR and AVE values reach the threshold level for significance, suggesting that all the variables in the model are reliable and that each construct has high convergent validity. As can be seen in Table 3, average R^2 for the model is above 0.6, indicating that the explanatory power and each construct have good discriminant validity.

(2) The structural model

The path coefficients for the structural model and the weights for the measurement model are obtained by SmartPLS 2.0 software. The result of the bootstrap resampling technique (1,000 runs), which was used to determine the statistical significance of the paths, shows that seven of fifteen paths meet the $p < 0.05$ criterion. Table 4 shows the path coefficients and their significance levels. The highest three path coefficients are as follows: "$L_5 \rightarrow L_4$" (0.80), "$L_5 \rightarrow L_1$" (0.62), and "$L_1 \rightarrow L_3$" (0.47).

(3) The measurement model

The weights of applying the bootstrap resampling technique (1,000 runs) to the measurement model are shown in Table 5. Almost all the T Statistics (t) for the outer weights exceed 1.96, indicating that the measurement model is significant and thus confirmed by the data. A summary of the aggregate result for the PLS path model is presented in Table 6.

Table 2. Summary of descriptive statistics

Variable	M_{11}	M_{12}	M_{13}	M_{14}	M_{21}	M_{22}	M_{23}	M_{24}	M_{31}	M_{32}	M_{33}	M_{34}
M	4.4	5.7	6	5.2	5.5	5.3	5.5	4.9	5	5.8	5.5	5.1
Mdn	5	6	6	6	6	6	6	5	6	6	6	5
Min	1	2	3	1	1	1	1	2	1	1	1	1
Max	7	7	7	7	7	7	7	7	7	7	7	7
SD	1.9	1.6	1	1.8	1.3	1.6	1.5	1.4	1.9	1.5	1.6	1.4
Variable	M_{41}	M_{42}	M_{43}	M_{44}	M_{51}	M_{52}	M_{53}	M_{54}	M_{61}	M_{62}	M_{63}	M_{64}
M	5.2	5.3	4.7	4.8	4.5	5.2	5.7	5.3	5.7	5.3	5.7	5.3
Mdn	6	6	5	5	5	6	6	6	6	6	6	6
Min	1	1	1	1	1	1	1	1	1	1	1	1

Max	7	7	7	7	7	7	7	7	7	7	7	7
SD	2.1	1.5	1.4	1.6	1.6	1.7	1.6	1.3	1.6	1.3	1.6	1.3

Table 3 AVE, CR and the R^2 square values

	AVE	Composite Reliability	R Square
L_1 Perception recognition	0.58	0.81	0.60
L_2 Product value	0.51	0.78	0.72
L_3 Product label	0.67	0.86	0.75
L_4 Product recommendation	0.59	0.76	0.63
L_5 External influences	0.53	0.80	--
L_6 FT consumption	0.66	0.89	0.80

Table 4. Path Coefficients (Mean, Standard Deviation, T Statistics)

Structural model	M	STDEV	*t*		Structural model	M	STDEV	*t*	
$L_1 \rightarrow L_2$	0.24	0.12	1.98	*	$L_4 \rightarrow L_3$	0.36	0.18	1.98	*
$L_1 \rightarrow L_3$	0.47	0.17	2.80	*	$L_4 \rightarrow L_6$	0.31	0.29	1.06	
$L_1 \rightarrow L_6$	0.29	0.14	2.07	*	$L_5 \rightarrow L_1$	0.62	0.20	3.06	*
$L_2 \rightarrow L_6$	0.22	0.11	2.01	*	$L_5 \rightarrow L_2$	0.37	0.18	2.05	*
$L_3 \rightarrow L_2$	0.20	0.31	0.62		$L_5 \rightarrow L_3$	0.10	0.20	0.57	
$L_3 \rightarrow L_6$	0.27	0. 13	1.99	*	$L_5 \rightarrow L_4$	0.80	0.09	8.45	*
$L_4 \rightarrow L_1$	0.19	0.08	2.38	*	$L_5 \rightarrow L_6$	0.15	0.22	0.68	
$L_4 \rightarrow L_2$	0.31	0.11	2.81	*					

* Significance of *t*

Table 5. Weights for the Measurement Model (Mean, Standard Deviation, T Statistics)

Measurement model	M	STDEV	*t*		Measurement model	M	STDEV	*t*	
$M_{11} \rightarrow L_1$	0.43	0.09	5.00	*	$M_{41} \rightarrow L_4$	0.57	0.12	4.73	*
$M_{12} \rightarrow L_1$	0.36	0.09	4.01	*	$M_{42} \rightarrow L_4$	0.37	0.14	2.65	*
$M_{13} \rightarrow L_1$	0.23	0.11	2.03	*	$M_{43} \rightarrow L_4$	0.41	0.10	4.06	*
$M_{14} \rightarrow L_1$	0.41	0.08	5.43	*	$M_{44} \rightarrow L_4$	0.27	0.13	2.00	*
$M_{21} \rightarrow L_2$	0.34	0.10	3.50	*	$M_{51} \rightarrow L_5$	0.28	0.08	3.37	*
$M_{22} \rightarrow L_2$	0.41	0.08	5.12	*	$M_{52} \rightarrow L_5$	0.40	0.07	5.60	*
$M_{23} \rightarrow L_2$	0.33	0.11	3.03	*	$M_{53} \rightarrow L_5$	0.37	0.07	5.34	*
$M_{24} \rightarrow L_2$	0.34	0.10	3.51	*	$M_{54} \rightarrow L_5$	0.28	0.09	3.27	*
$M_{31} \rightarrow L_3$	0.39	0.08	4.73	*	$M_{61} \rightarrow L_6$	0.31	0.09	3.29	
$M_{32} \rightarrow L_3$	0.43	0.06	6.88	*	$M_{62} \rightarrow L_4$	0.43	0.11	3.76	*
$M_{33} \rightarrow L_3$	0.33	0.11	3.16	*	$M_{63} \rightarrow L_6$	0.14	0.06	2.28	
$M_{34} \rightarrow L_3$	0.15	0.14	1.07		$M_{64} \rightarrow L_6$	0.32	0.13	2.41	

* Significance of *t*

Table 6. The **A**ggregate Result of PLS Path Model

Hypothesis	Parameter	Significance	Conclusion	Hypothesis	Parameter	Significance	Conclusion
H_1: $L_1 \rightarrow L_6$	0.29	$P<0.05$	Supported	H_8: $L_3 \rightarrow L_2$	0.20	$P>0.05$	Not Supported
H_2: $L_2 \rightarrow L_6$	0.22	$P<0.05$	Supported	H_9: $L_4 \rightarrow L_1$	0.19	$P<0.05$	Supported
H_3: $L_3 \rightarrow L_6$	0.27	$P<0.05$	Supported	H_{10}: $L_4 \rightarrow L_2$	0.31	$P<0.05$	Supported
H_4: $L_4 \rightarrow L_6$	0.31	$P>0.05$	Not Supported	H_{11}: $L_4 \rightarrow L_3$	0.36	$P<0.05$	Supported
H_5: $L_5 \rightarrow L_6$	0.15	$P>0.05$	Not Supported	H_{12}: $L_5 \rightarrow L_1$	0.62	$P<0.05$	Supported
H_6: $L_1 \rightarrow L_2$	0.24	$P<0.05$	Supported	H_{13}: $L_5 \rightarrow L_2$	0.37	$P<0.05$	Supported

H_7: $L_1 \rightarrow L_3$	0.47	$P<0.05$	Supported	H_{14}: $L_5 \rightarrow L_3$	0.37	$P<0.05$	Supported
				H_{15}: $L_5 \rightarrow L_4$	0.80	$P<0.05$	Supported

* Significance of *t*

(4) Discussion

If we delete the hypotheses that were not supported, the resultant path flow is shown as in Figure 2. Referring to the proposed PLS path model, the result is that perception recognition, product value and product label are direct determinant, and product recommendation and external influences are indirect determinants on satisfaction of FT consumption. The results indicate that product recommendation and external influences just act as stimulator roles, especially for the external influences.

There are 8 paths obtained on FT consumption:

(1) path 1: "$L_5 \rightarrow L_1 \rightarrow$ FT consumption"; the mediation effect of path 1= 0.62*0.29= 0.180.

(2) path 2: "$L_5 \rightarrow L_1 \rightarrow L_2 \rightarrow$ FT consumption"; the mediation effect of path 2= 0.62*0.24*0.22= 0.03.

(3) path 3: "$L_5 \rightarrow L_1 \rightarrow L_3 \rightarrow$ FT consumption"; the mediation effect of path 3= 0.62*0.37*0.27= 0.06.

(4) path 4: "$L_5 \rightarrow L_2 \rightarrow$ FT consumption"; the mediation effect of path 4= 0.37*0.22= 0.08.

(5) path 5: "$L_5 \rightarrow L_4 \rightarrow L_1 \rightarrow$ FT consumption"; the mediation effect of path 5= 0.80*0.19*0.29= 0.04.

(6) path 6: "$L_5 \rightarrow L_4 \rightarrow L_1 \rightarrow L_2 \rightarrow$ FT consumption"; he mediation effect of path 6= 0.80*0.19*0.24*0.22= 0.01.

(7) path 7: "$L_5 \rightarrow L_4 \rightarrow L_2 \rightarrow$ FT consumption"; the mediation effect of path 7= 0.80*0.31*0.22= 0.05.

(8) path 8: "$L_5 \rightarrow L_4 \rightarrow L_3 \rightarrow$ FT consumption"; the mediation effect of path 8= 0.80*0.36*0.27= 0.08.

The total effect is 0.53. The above data implies that despite external influences as an indirect determinant, the effect from path 1 and path 8 are the top two most powerful determining paths. That is, the external related factors play an important role on satisfaction with FT consumption. The result is consistent with the suggestion of Fishbein & Ajzen (1975), Ajzen (1985, 1991), Cook et al (2002), Arvola et al (2008); Olsen et al (2010) and Kimura et al (2012) [2, 3, 5, 12, 20, 42]. FT consumption is influenced not only by consumer's own perceptions and attitudes but also by perceived social norms, which are beliefs about other key people's normative expectations, and perceived behavioral control.

5 Conclusion

Motivated by the need to understand the FT consumption behavior in Taiwan, this study aims to propose a PLS path model to investigate the relationship between determinants and satisfaction with the FT consumption experience from an integrated perspective. Based on the results, we draw the following conclusions.

Thirteen of fifteen hypotheses in the structural model were supported; perception recognition, product value and product label are direct determinants on satisfaction of FT consumption experience; product recommendation and external influences both play stimulator and bridging roles regarding the FT consumption experience. Besides, the path effect from external influences to FT consumption, through perception recognition, is the most powerful. It indicates that the external influences including the package or model design of the FT products, product accessibility or convenience, good service, and image of the FT store, matter on FT consumption.

Most previous literature on FT issues focused only on some factors, paying little attention to the relationship among them or from a comprehensive perspective on the decision-making behavior of consumers. This study developed a PLS path model on determinants and satisfaction with FT consumption, by using an integrated perspective including perception recognition, product value, product label, product recommendation and outer influences. This approach contributes to the literature by providing an aggregate and cause-effect framework for consumer behavior of FT products, provides a reference for producers, consumers, distributors, and the authorities to further the mutual understanding of supply and demand sides. We encourage further research to increase the numbers of respondents or to apply the proposed model to analyze the FT consumption from different variables, thereby obtaining more generalized suggestions and reference for all related parties.

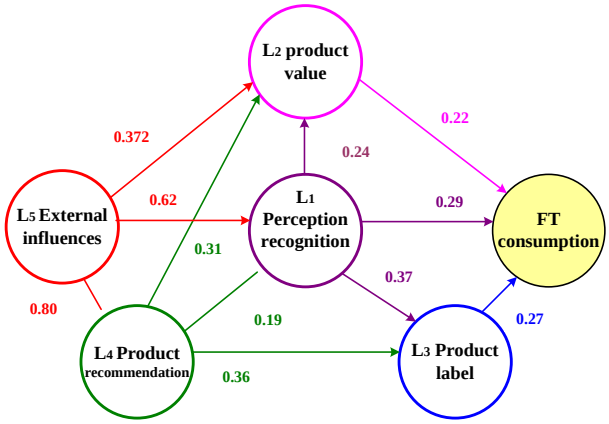

Figure 2. The result of the PLS path model

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