
Measurement Model for Understanding Thai Consumers buying behavior towards Store Brands

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Abstract: *The purpose of the study is to develop and validate a measurement scale for understanding Thai consumer behavior towards store brands. The target respondents of the study were chosen based on purposive sampling technique. The measurement scale was developed and framed with six variables through intensive literature review viz., Budget conscious, Value conscious, Health conscious, Familiarity, Impulsiveness and Deal proneness. The data was obtained from 282 respondents who shop at hypermarkets located in Klong 6 and 7, Rangsit-Nakhon Nayok Road, Thailand. The descriptive statistics revealed that majority of the respondents were women. Also, it was noted that major proportionate of respondents were low and middle income class consumers. Confirmatory factor analysis was performed to assess the validity and reliability of the measurement scale. The results indicated that scale is valid and highly reliable, as it satisfies the threshold criteria of convergent validity and discriminant validity. The measurement model obtained high factor loading for the constructs and the model is fit in all respect. The measurement scale would be more appropriate for understanding the Thai consumers buying behavior and further this research could be taken forward by using segmentation and predictive modeling techniques.*

Keywords: *store brands; measurement model; buying behavior; Thai consumers*

1. Introduction

Store brands, the well-known concept in US and Europe are gaining popularity in the developing countries in recent years. Modern retailing replaced traditional retailing in Thailand especially after the entry of major international hypermarket retail chains such as Tesco (UK), Big C (France) and Makro (Netherlands). Since then, retail industry has grown drastically with an average growth rate of 3-5% in the past 15 years and is estimated to be 4% in 2016. As per Thai Retailers Association report, the numbers of hypermarkets in Thailand have grown 10.6% in 2015, with Tesco Lotus (from 150 in 2014 to 190 in 2015) and Big C (from 118 in 2014 to 125 in 2015) sharing top two positions. 90% of the Thai urban retail consumers are shopping through hypermarket at least once in a week (Ngamprasertkit, 2016). According to Euro monitor International report (2017), majority of Tesco Lotus and Big C consumers are from middle and low income segment, hence they focused on low pricing and promotion strategies to stimulate the purchase in this market.

The Nielsen Company also reported that, private label in modern trade is a 15 years old concept in Asia especially Thailand with Tesco Thailand's introduction of private brands in 1998. In contrary to number of Hypermarket growth rate and its market share in comparison to traditional retail market; its private-label sales share even after aggressive promotional activities has increased at a very lower growth rate and has also regressed in the past few years. (Nielsen Report, 2014).

The majority of available literatures in private labels /store brands research address the attitude, preferences, and factors

influencing private labels purchase choice. However, only few studies focus on understanding consumers buying behavior of store brands. The research by (Senthilvelkumar & Jawahar, 2013) segmented the private label buyers based on their buying behavior. In their research, they classified the buyers into 3 categories based on their perception towards private labels viz. need match seekers, superior-functionality seekers and fringe-benefit seekers. Further, they classified the buyers based on their intention that is premeditated buyers and impulsive buyers. Similar relevant researches are very limited. Hence, the purpose of the study is to develop the measurement scale for understanding the consumer buying behavior. The scale would be validated for further applications in consumer behavior research with respect to store brands/private labels.

2. Literature Review

2.1 Store Brands

Store brands/Private labels are store-owned brands, an important component of competitive strategy among multi-product retailers, which can enhance their bargaining power over suppliers or helps in horizontal differentiation (Richards, Hamilton, & Patterson, 2010). Store brands are the important source of profits for retailers across different categories. It competes well against few national brands that spend less on advertising (Hoch & Banerji, 1993). However private labels are not simply a generic competitor, because the retailer that sells them is also the national brand's customer (Hoch, 1996). It attracts customers, build loyalty and increase sales margins, hence it is considered as greatest asset for retailers (Senthilvelkumar & Jawahar, 2013). Study by (Kumar & Steenkamp, 2007) indicated that as retailers have become more powerful and global, they have increasingly focused on their own brands at the expense of manufacturer brands. Rather than simply

selling on price, retailers have transformed private labels into brands. Luijten, Reijnders (2009) concluded that the store brand is used increasingly frequently as an instrument for store formula positioning.

2.2 Budget Consciousness

Retailers price their store brands lower than comparable manufacturer's brands, thereby appealing to budget-conscious shoppers, especially in difficult economic times. And most shoppers believe that store brands are made by one of the larger manufacturers anyway (Kotler and Armstrong, 2004). Studies by (Baltas and Argouslidis, 2007; Richardson, Jain and Dick, 1996) mentioned that larger size of households allocates smaller budget for purchasing products, hence they are more prone to buy store brands. Richardson et.al. (1996) further corroborated with the hypothesis of Frank and Boyd (1965) that is relationship between family size of the grocery customer and private brand proneness. Kara, Rojas-Méndez, Kucukemiroglu, & Harcar (2009) considered budget consciousness as one of the important factor for consumer consciousness towards store brands. In a study by (Tochanakarn & Munkunagorn, 2011) respondents reported that they buy will buy the product they like even it is the not the best one; which depends on their budget and price of the product.

2.3 Value consciousness and Familiarity

Lichtenstein, Ridgway and Netemeyer (1993) referred value consciousness as reflecting a concern for price paid relative to quality received. Familiarity refers to how much the consumer knows about the brand. It is related to prior experience and knowledge with the particular brand. Another study by Stansbury (2005) stated that Private labels products have changed in a major way from the old more-economical choice to offering multiple price

points and features. Changes in buying habits regarding private label products are due to a number of factors including consumer familiarity, improved products, reduced producer domination, differentiation and variety, new types of private labels, tiered offerings, and more product information. The study by Nenycz-Thiel & Romaniuk (2012) found that there is a positive relationship between value-for-money perceptions of a supermarket and value-for-money perceptions of its private labels. Another study by Fall Diallo, Chandon, Cliquet, & Philippe (2013) indicated that store image perceptions, store brand price-image, value consciousness, and store brand attitude have significant and positive influence on store brand purchase behavior, whereas store familiarity positively influences store brand choice, but not store brand purchase intention. Jayakrishnan, Rekha, Chikhalkar, & Chaudhuri (2016) studied the consumer preference for private labels or store brands in breakfast cereals, snacks category (biscuits and traditional snacks) and measured the factors that determine the store brand purchase in these categories. It was found that private label brand price (PLB) and perceived quality have significant relationship, whereas, Price consciousness, private label brand price have considerable influence on value consciousness. Product familiarity impacted on value consciousness and perceived quality. (Richardson, Jain, & Dick, 1996) stated that Store brands play an important role in retail grocery strategy. The author conducted a research on grocery shoppers and investigated the factors influencing store brand proneness included familiarity, price and packaging to judge product quality, intolerance for ambiguity, perceived quality variation, perceived risk, perceived value for money, income and family size.

2.4 Impulsiveness and Deal Proneness

Deal proneness is defined by Webster (1965) as a function of both the consumer's buying behavior and the frequency with which a given brand is sold on a deal basis. Neslin (1990) mentioned that

consumers' response to promotions is deal proneness. Impulsiveness is the result of behavioral stimuli without related to prior plans & goals (Baumeister, 2002). Study by Martinez and Montaner (2006) reported that deal proneness is influenced by impulsiveness. Impulsiveness could also arise in response to deals. Shukla, Banerjee and Adidam (2013) examined the moderating influence of socio-demographic variables (gender, age, education, income and family size) on the relationship between psychographic measures (general deal proneness, price-related deal proneness, end-of-aisle display proneness, impulsiveness, smart-shopper self-perceptions and brand loyalty) and consumers' attitude towards private label brands. Study by Nandy (2013) identified the factors influencing consumers' attitude towards private labels. The author identified five factors viz. value for money, user experience, deal proneness, quality and smart shopper.

2.5 Health Consciousness

Gould (1990) reported that health conscious individuals are prone to have attention towards health related messages about ingredients on labels. Kaskutas and Greenfield (1997) stated that health conscious is seeking information about nutrition and health concerns. Jayanti and Burns (1998) referred Health consciousness as the degree to which health concerns are integrated into a person's daily activities. Nair (2011) analyzed the unique private label brand associations in the minds of customers that gauge the customer loyalty, consumer preferences and shopping behavior. The study by Jindabot (2015) reported the relationship between health consciousness and perceived value. The study found that the Thai consumers are highly health conscious, especially when searching for health related information in the product. And the study reported that the factors influencing the purchase of private labels were rated high by the customers viz. perceived quality, accessibility, price of PLB, trust in brand, freshness, packaging and health benefits.

2.6 Thai Consumers Preference towards Private Labels

Daengrasmisopon (2004) studied the factors influencing Thai consumer's preference towards private labels and identified the potential factors as perceived saving, quality and risk factors. Soonthornsiri (2004) investigated the product attributes and consumer attitude towards private label products. Product attributes composed of product familiarity, perceived quality, perceived quality variation, cue utilization, and perceived risk. The study found that the three factors product familiarity, perceived quality, and perceived quality variation have statistically significant relationship with consumer attitude.

The literature presented the theory and about the research in store brands. However, this study is novel in its idea as it would focus on developing and validating the measurement scale for understanding consumer behavior towards store brands. The study identified 6 factors with respect to buying behavior of consumers towards store brands viz. Budget consciousness, Value consciousness, Health consciousness, Familiarity, Impulsiveness and Deal proneness. Also the constructs budget consciousness and health consciousness was included in this study, which are not addressed previously with much importance. Hence, the study attempted to address the research gap by developing and validating the measurement scale to understand the Thai consumers buying behavior towards store brands.

3. Methodology

The target population of the study was the consumers who purchase grocery from Hypermarkets at Klong 6 and 7, Rangsit - NakhonNayok Road, Thailand. The purposive sampling method was adopted for this study. The data was collected in the front portico and car parking areas of Hypermarkets from respondents who just finished their shopping. It was carefully observed that the

data has been collected from the consumers who purchased grocery category and ensured with the customers at least more than once they have purchased store brands/private labels in grocery category. The instrument was developed based on the rigorous literature review that deals with the theme of the research private labels/store brands. Common themes like consumer preferences towards private labels, attitudes, purchase intention, buying behavior were identified from literature. Further, it was carefully observed to fit with the Thai consumer buying behavior towards private labels at Hypermarkets. Based on the above literature review following types of consumer buying behavior towards private labels were identified viz. 1. Budget-conscious, 2. Value-conscious, 3. Health-conscious, 4. Familiarity, 5. Impulsiveness, and 6. Deal Proneness. Five subject-matter experts were interviewed, including 2 academicians and 3 retail managers to understand the buying behavior of consumers. Following this, the subject-matter experts were asked to evaluate the 30 constructs pertaining to the above mentioned types of buying behavior. The modified research construct was reduced to 28 items. Pilot study was conducted among 30 respondents to measure the relationship among the scale constructs. The factors with correlation score less than 0.4 was eliminated and finally the modified construct included 27 items in total (4 items for Budget-Conscious, 5 items for Value-Conscious, 4 items for Health-Conscious, 5 items for Familiarity, 5 items for Impulsiveness, and 5 items for Deal Proneness). The 5-point Likert Scale (5-Strongly Agree, 4-Agree, 3-Neither Agree Nor Disagree, 2-Disagree, 1-Strongly Disagree) was used in this study. The questionnaire was developed in English and translated into Thai with the help of the trained translator to make the respondents to understand easily. The data was collected during the month of February and March 2017. The researcher distributed around 500 questionnaires, and 282 valid responses was received. The factor analysis was used as a preliminary statistical tool to test the scale validity, and researcher takes cues to estimate the sample size using confirmatory factor analysis (CFA). Several studies in

past literature suggested for estimating sample size based on exploratory factor analysis and confirmatory factor analysis (CFA). Rule of Thumb for minimum sample size- Gorsuch (1983) and Kline (1979) recommended minimum 100 sample size (MacCallum, Widaman, Zhang & Hong, 1999). A profound understanding of the previous study on estimating sample size for factor analysis recommends that the minimum size of the sample around 170 is sufficient and more than 170 samples may yield better results. Hence sample size of 282 was concluded sufficient to conduct confirmatory factor analysis. The results of the analysis were presented below.

4. Analysis and Discussion

I. Descriptive Statistics- Table 1

Demographic Profile		Frequency	Percent
Gender	Male	86	30.5
	Female	196	69.5
	Total	282	100.0
Age	18-25	73	25.9
	26-32	106	37.6
	33-39	82	29.1
	40-47	14	5.0
	48-54	5	1.8
	55 & above	2	.7
	Total	282	100.0
Education	Below high school level	6	2.1
	High school	161	57.1
	Bachelor's degree	99	35.1
	Master's degree	16	5.7
	Total	282	100.0
Income	Less than 10000	66	23.4
	10001-20000	203	72.0
	20001-30000	11	3.9
	30001-40000	2	.7
	Total	282	100.0

Meena Madhavan

Occupation	Government Employee	37	13.1
	Private Employee	147	52.1
	Business/Self-employed	20	7.1
	House wife	26	9.2
	Student	48	17.0
	Retired	1	.4
	Unemployed	3	1.1
	Total	282	100.0
Household size	1	13	4.6
	2	36	12.8
	3	86	30.5
	4	100	35.5
	5 and more than 5	47	16.7
	Total	282	100.0
Marital Status	Single	126	44.7
	Married	138	48.9
	Widowed	17	6.0
	Divorced	1	.4
	Total	282	100.0
Monthly Expenses for Grocery	Less than 3000	208	73.8
	3000-6000	66	23.4
	6001-9000	6	2.1
	More than 9000	2	.7
	Total	282	100.0
Frequency of Visit and Purchase	Monthly once	78	27.7
	Monthly twice	91	32.3
	Monthly thrice	42	14.9
	Every week	68	24.1
	More than once in a week	3	1.1
	Total	282	100.0

It is found from table 1 that the major proportionate of the respondents contributed for the study were female around 69.5%. Majority 37.6% of the respondents fall under the age group of 26-32, followed by 29% of the respondents in 33-39 age group, and 25% in 18-25 age category; whereas rest of the respondents fall in above categories. The education level of the respondents indicates that 57.1% of the respondents qualified high school level, 35.1% of

the respondents were graduates, and 5.7% of the respondents are qualified at masters' level. The majority of the respondents who buy grocery at hypermarkets are low income and middle income groups. This is depicted in Table 1. 72% of the respondents' income level is 100001-20000 baht per month, 23.4% of the respondents income level is less than 10000, whereas only 4 percent earn above 20000 to 40000 baht per month.

The study included private employees (52.1%), students (17%), government employees (13.1%) and house wife (9.2%) for answering the questionnaires. The house hold size of the respondents are 4 (35.5%), 3 (30.5%), 5 and more than 5 (16.7%), 2 (12.8%), and 1 (4.6%).

The marital status of the respondents indicates that 48.9% were married, 44.7% were unmarried, and 6% were divorced. Major proportionate 73.8% of the respondents spend less than 3000 baht per month at hyper market for food and grocery items. 23.4% of the respondents spend around 3000-6000 baht per month, whereas 2% of the respondents spend from 6001-to 9000 baht per month. The respondents' frequency of visit and purchase has been classified into monthly once, monthly twice, monthly thrice, every week, and more than once in a week. 32.3% visit monthly twice, 27.7% visit monthly once, 24.1% visit every week, and 1.1% of the respondents visit more than once in a week.

II. Measurement Model- Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was performed to validate the measurement model by testing convergent and discriminant validity. CFA test how well the observed variables represent the latent variable in the construct. The results of the factors were used to analyze the dependability of the scale. The CFA was done using

AMOS 21V, and the results of the measurement model is shown in (Figure 1 and Table 2 & 3).

A. Reliability and Convergent Validity

The Cronbach alpha estimates were ranging from 0.80 to 0.92 (Table 2), which is acceptable and the measurement scale holds good reliability and internal consistency (Nunnally and Bernstein, 1994). The measurement model was developed to assess the reliability and convergent validity. The reliability of construct >0.7 indicates that the scale is reliable and good indicator of convergent validity, which meets the threshold level $AVE > 0.5$ (Table 2) Composite Reliability $>$ Average Variance Extracted (Hair, Black, Babin and Anderson, 2010).

The confirmatory factor loadings are >0.5 (Table 3), which is significant with t-values ranging from 14.074 to 21.884 (The t-values for all attributed are greater than 1.96 and significant at p-value 0.05 level). Hence the evidence of convergent validity is found in the measurement model.

B. Discriminant Validity

In the consumer behavior research especially in understanding the buying behavior of consumers it is essential to estimate discriminant validity, as the constructs maybe very related. -This research adopted the approaches of (Fornell and Larcker, 1981) to assess the discriminant validity of the scale and used MS Office Excel for the calculations.

Table 2 Discriminant Validity

Factors	Budget Conscious	Value Conscious	Health Conscious	Familiarity	Impulsiveness	Deal Proneness	Average Variance Extracted
Budget Conscious	0.848528	0.295	0.295	0.176	0.16	0.443	0.72
Value Conscious	0.295	0.824621	0.26	0.103	0.11	0.254	0.68
Health Conscious	0.295	0.26	0.824621	0.043	-0.047	0.208	0.68
Familiarity	0.16	0.103	0.043	0.87178	0.186	0.159	0.76
Impulsiveness	0.081	0.11	-0.047	0.186	0.888819	0.313	0.79
Deal Proneness	0.443	0.254	0.208	0.159	0.313	0.8544	0.73

Discriminant validity was assessed using the correlations among the inter-constructs and average variance extracted. From the above table 2, it is evident that the average variance extracted is greater than the inter-construct correlations and the correlation within the construct was calculated using square root of AVE, which is greater than the inter-constructs correlations. Hence, the measurement scale meets the criteria of discriminant validity.

Table 3 Measurement Model results

Variable	Results of Measurement Model (Confirmatory Factor Analysis)					Cronbach Alpha
	Standard Solutions	Factor Estimates	t-value	Error Variance	R ²	
Budget-Conscious						0.88
I compare the price of store brands with national brands to ensure that I am buying for the best price	0.724	0.89	14.074	0.17	0.524	
I prefer to buy store brands to meet my needs as per my budget	0.954	1.15	18.779	0.03	0.909	

Meena Madhavan

My budget for food and grocery is standard for every month	0.849	1.121	14.0	0.09	0.524	
Value-Conscious						0.80
I prefer to buy store brands because it is of good quality and offers great value for money	0.797	0.96	14.239	0.19	0.635	
I am equally concerned about the quality and price	0.839	0.95	14.817	0.13	0.705	
I feel that store brands are at par in standards with national brands.	0.838	1.03	14.23	0.15	0.702	
Health-Conscious						0.86
I am concerned towards my health and prefer to buy store brands organic products in food and grocery category	0.766	0.86	14.361	0.18	0.587	
The shelf life of the products are well-preserved and packed accordingly	0.738	0.77	13.750	0.18	0.545	
Store brand labels clearly convey the ingredients of the products with expiry date.	0.950	1.16	14.360	0.04	0.903	
Familiarity						0.91
I am familiar with the name of the store and its products	0.869	1.07	18.001	0.12	0.756	
Few store brand products are imported and are popular	0.905	1.13	18.719	0.09	0.819	
I am familiar with the reliability or functional aspects of the products	0.848	0.933	18.001	0.13	0.720	

*Measurement Model for Understanding Thai Consumers buying behavior
towards Store Brands*

Impulsiveness						0.92
I make unplanned purchases, when there is a urge	.854	0.97	19.078	0.18	0.727	
Whenever I find a new product, I spontaneously make a purchase	.947	1.11	21.884	0.07	0.898	
I am tempted to make a trial purchase impulsively.	.869	1.02	19.078	0.17	0.756	
Deal Proneness						0.89
I respond to shelf space visual appeals when there is a great deal on savings	.844	0.95	14.934	0.10	0.712	
I respond to end of the sale offers	.939	1.13	15.912	0.05	0.881	
I am prone to respond to the offers mentioned in pamphlets and website of the store.	.763	1.05	14.934	0.19	0.583	

Meena Madhavan

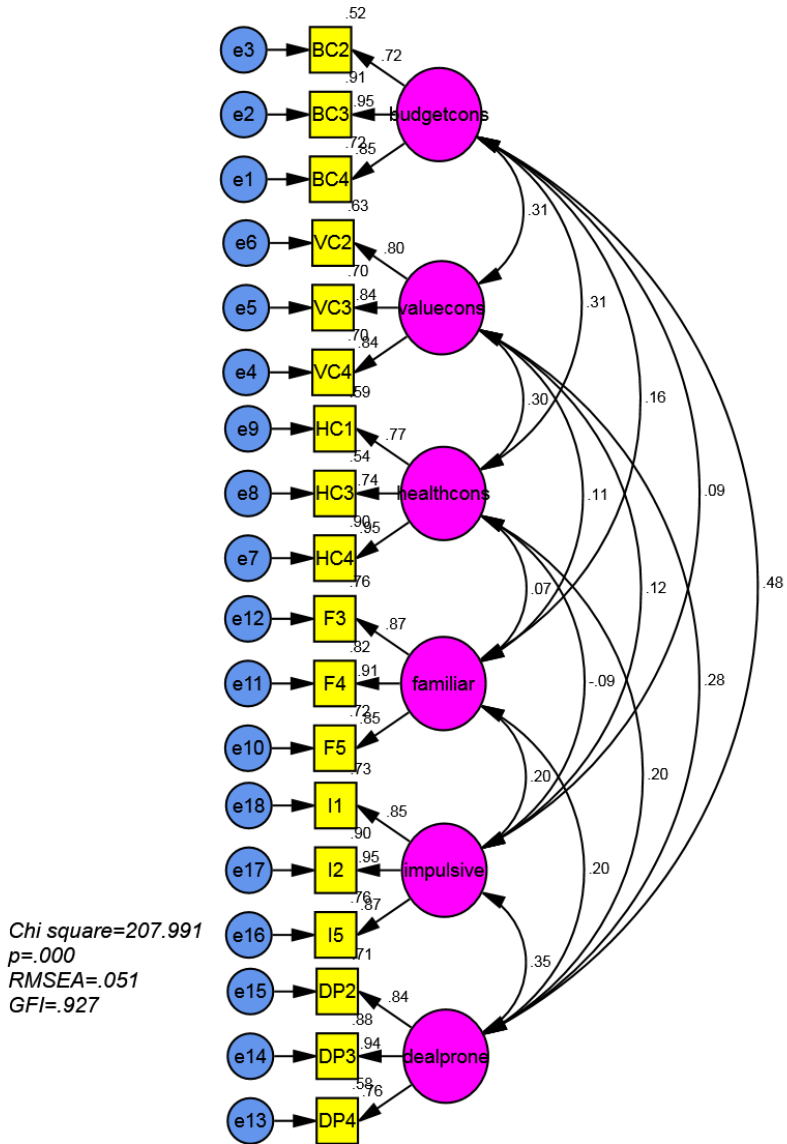


Figure 1 Measurement Model

C. Overall Fitness of the Model

From Table 3 it is found that the overall model fit is at $\chi^2_{(120)} = 207.991$, $P = 0.00 (< 0.05)$, $RMSEA = 0.051$. The six latent scales construct yielded better results. The CMIN/DF value of $1.733 < 3$ indicates a good fit and meets the threshold levels suggested by Hu and Bentler (1999), whereas the P-Value < 0.05 level. The Goodness of Fit Index (GFI) value of 0.927 is greater than 0.90 indicates a good fit (Ahire, Golhar, & Waller, 1996). The Adjusted GFI (AGFI) value of > 0.80 indicates a good fit (Joreskog and Sorbom 1984). The Root Mean Square Error of Approximation (RMSEA) is 0.051, which is of good fit and this indicates sufficient unidimensionality < 0.08 as stated by (Garver & Mentzer, 1999). Also he indicated that the value of comparative fit index (CFI) is 0.973, which is greater than 0.90 indicates a good fit. The value of Normed-fit index (NFI) is $0.938 > 0.90$, it is evident and proves the existence of convergent validity (Ahire, Golhar & Waller, 1996). Further Tabachnick & Fidell (2007) pointed out that small Root mean square residual (RMR) of 0.03 indicates that the model is good (Table 3). The result of fit indices confirms that the model is good fit by satisfying the major threshold indices.

Table 3 Fit Indices and Threshold levels

Fit Index	Obtained Value	Threshold Level	Fit Indices
RMR	0.016	< 0.09	Good Fit (Hu and Bentler, 1999)
SRMR	0.0345	< 0.08	Good Fit (Hu and Bentler, 1999)
GFI	0.927	> 0.90	Good Fit (Hooper, Coughlan and Mullen, 2008; Joreskog and Sorbom 1984)

Meena Madhavan

AGFI	0.896	>0.80	Good Fit (Joreskog and Sorbom 1984)
PGFI	0.70	Values close to 1	Good Fit (Mulaik, et.al, 1989)
NFI	0.938	>0.95	Good Fit (Bentler and Bonnet, 1980)
RFI	0.921	Values close to 1	Good Fit (Hu and Bentler,1999)
IFI	0.973	Values close to 1	Very Good Fit
TLI/NNFI	0.965	>0.95	Good Fit (Hu and Bentler, 1999)
CFI	0.973	>0.95	Good fit (Hu and Bentler, 1999)
PNFI	0.736	Values Close to 1	Good Fit
PCFI	0.763	Values close to 1	Good Fit
RMSEA	0.051	<0.05-0.10	Good Fit (Hu and Bentler, 1999; Hooper, Coughlan and Mullen, 2008; MacCallum, Browne and Sugawara, 1996)

5. Discussion

It is obvious that retailing has been developed drastically in Thailand. The retailers have their own market share for their store brands. Recently, retailers are investing their time and effort to frame new marketing strategies to attract their consumers towards store brands. They import some product categories from United

Kingdom and other developed countries. They focus on the health conscious consumers by offering organic products in food and grocery category. The results of the study indicates that the major proportionate of the respondents participated in the study were female. The major groups of respondents who purchase private labels fall in the age group of 18-39. It was also noted that the less than 2 percent of the respondents' educational qualification was below high school level. And most of the respondents who participated in the study were private employees, students, and government employees.

Further, it was observed that majority of the respondents belong to low and middle income group. And the household size of half of the respondents contributed for survey was 4 and more than 5. The marital status of the respondents indicates that equal proportionate of the respondents fall in married and unmarried category. The monthly spending for food and grocery items at hypermarket was around less than 3000, and 3000 to 6,000 baht. It was observed that the frequency of visit and purchase at the hypermarket was monthly twice (32%), monthly once (27%) and every week (24%).

5.1 Measurement model for understanding buying behaviour

The measurement scale was developed based on appropriate theoretical support and pace of retailing in Thailand. The six latent variables (Budget conscious, Value conscious, Health conscious, Familiarity, Impulsiveness, and Deal Proneness) were identified and the constructs were developed accordingly through qualitative inquiry with subject matter experts. Confirmatory factor analysis was performed to test the measurement model. Initially, the scale was tested for convergent validity and discriminant validity. And it was observed that the measurement scale meets all the criteria of validity and reliability, hence the scale is highly reliable. From Table 2, discriminant validity matrix revealed that the variables were

strongly related to their own construct, which is greater than inter-construct correlations. The factors budget conscious and deal proneness, and impulsiveness and deal proneness were moderately correlated; whereas the factor health conscious is negatively correlated with impulsiveness. All the factors loaded high in CFA. It is evident that the measurement model satisfied the major threshold indices, which indicates the model is good fit.

6. Conclusion

This research was successful in its attempt in developing a measurement model for understanding buying behavior of Thai consumers. However, generalizability of the measurement scale in other region and different product categories should be duly considered. This scale is more appropriate for Thai consumers in food and grocery category with respect to store brands.

7. Further directions of future research

This measurement scale could be further used to segment the market using soft and hard clustering techniques, which would be more useful for the retailer to understand the buying behavior of consumers. Still, the stability of the segment is questionable for store brands. Further researches could be conducted in this area to segment the market; also predictive modeling could be done to classify the consumers based on the segment and their demographic profile.

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Meena Madhavan

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*Measurement Model for Understanding Thai Consumers buying behavior
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