

CHAPTER IV RESULTS AND DISCUSSIONS

4.1 Main study of the questionnaire survey

The study survey was conducted during the month of December 2005 up the mid of January 2006, nearly five weeks were consumed because of the numbers of needed respondents was over 200. By randomly selected the names out, the marketing service staff of the company then phoned the selected candidates in person, explained the concept of this research work and asked for their consent to response to the questionnaire. After we get the consent to answer the questionnaire we then send it out to the prospective users. We received 208 questionnaires back within five weeks. Sampling method was similar to the detail shown in figure 3.1.

4.1.1 The pattern of receiving the questionnaire back

We have sent the first questionnaire out from December 4, and started to get the first response back by December 14, 2005. We had recorded the date and numbers of the mails sent back to be used as the information for future study since to get the responses back is the most important part of the mailing survey.

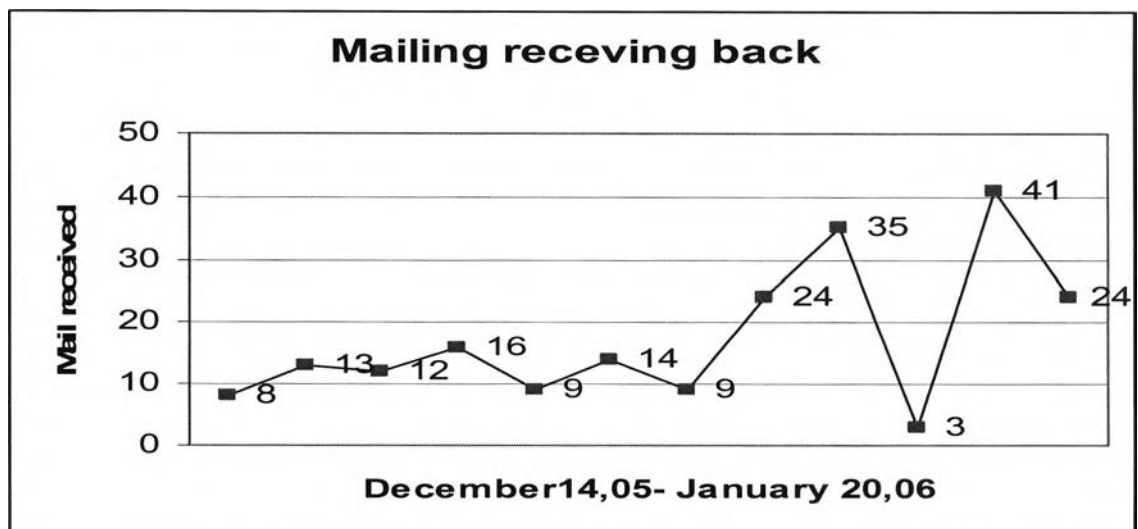


Figure 4.1: Number of mailing receiving back during December 14, 2005- January 20, 2006

We received 208 questionnaires back within 5 weeks and the response rate seemed to be higher after New Year holidays where the consumers were now getting back to their work completely.

4.1.2 Descriptive data of the samples

Section 1: the first section covered items on knowledge, understanding, general information and consumption of CLA 600 and CLA Advance. This included the perception of current respondent shape by themselves together with those of their friends/ surrounding, the consumption pattern of CLA both 600 and Advance, the expense used for the product, the other weight controlling measures pursued by the CLA users together with the frequency of usage, the other types of DS usage and frequency, place to buy CLA, medias exposure and the influence of these medias, sales promotional program and their favorableness to these programs and ending by the influential persons so to have a decision making on CLA and how strong these reference others were.

4.1.2.1 The current perception of the respondent shape

With the scale of 7, ranking from very thin to very obese, the respondents tended to perceive themselves on the overweight side (74.4%) where they accepted that their friends/ surrounding colleagues don't comply congruently with their perception (62.1%). Detail of this shape perception was shown in table 4.1:

Table 4.1: The current perception of the respondent shape: self and friends

	Self perception		Friend perception	
	Frequency	Percent	Frequency	Percent
Very thin	0	0.0	1	0.5
Thinner	1	0.5	6	2.9
Thin	10	4.8	15	7.3
Average	42	20.3	56	27.2
Overweighed	63	30.4	50	24.3
Obese	56	27.1	45	21.8
Very obese	35	16.9	33	16.0

We have conducted the Chi-square test for these two perceptions (self and friend) and the result was significant (Chi-square value 299.643, degree of freedom 30 and $p < 0.000$). Somehow, it seemed that people tend to be stricter to themselves.

4.1.2.2 Type of CLA used and the quantity consumed

The consumption quantity of CLA 600 (600 mg of CLA) and CLA Advance (1000 mg of CLA) were shown in Table 4.2. There were certain numbers of respondents who consumed both presentations of CLA. The most frequencies for consumption for both type of CLA were similar i.e. 1-2 capsules per day (43 or 52.4% for CLA 600 and 97 or 61.0% for CLA Advance). CLA Advance is getting more popular than CLA 600 as we can see from the respondents of CLA Advance were 159 against 82 for CLA 600. It is also the current strategy of the company to focus more on CLA Advance consumption since the effective dosage could be better achieved.

Table 4.2: CLA 600 and CLA Advance consumption per day

Capsule/day	CLA 600		CLA Advance	
	Frequency	Percent	Frequency	Percent
1-2	43	52.4	97	61.0
3-4	25	30.5	49	30.9
5-6	14	17.1	13	8.1

4.1.2.3 CLA monthly expense for the users

The expense for CLA users per month were ranged from 225 to 12000 baht where as the mean was 1487.66 baht and standard deviation was 1248.42 baht. This result was tally with the result that we got from group interview (1300-1500 baht/month)

4.1.2.4 Other weight controlling methods used simultaneously with CLA consumption.

Duangtim (1999) indicated that about 70% of weight control dietary supplements customers used the products together with the other weight controlling measures i.e. diet control or exercise or both and the balance 30% used only weight control dietary supplements without any other measures. The result from this survey revealed the same pattern as shown in the table 4.3.

Table 4.3: Other weight controlling measures prevalence

Other Weight controlling measures	Percent of respondents
Diet control	81.7
Exercise	72.1
Other weight controlling DS	37.5
Slimming belt	16.3
Massage	15.9
Acupuncture	1.0
Other measures	2.9

4.1.2.5 Other dietary supplements usage

Together with the consumption of CLA products, these samples also used other type of DS. We had specified the other DS into three categories i.e. vitamins, weight controlling DS and skin health/ beauty DS. Majority of the samples used these other DS (141 or 69.5%). Of these numbers, 76 or 37.4% used vitamins, 64 or 31.5% used other weight controlling DS and 94 or 46.3% used skin health/beauty DS, the most popular other DS used by the respondents. More details were shown in Table 4.4.

Table 4.4: Other Dietary Supplement usage

Other Dietary Supplement	Frequency	Percent
Skin health/beauty DS	94	46.3
Vitamins	76	37.4
Weight Controlling DS	64	31.5

4.1.2.6 Place to buy CLA products

The information on place to buy CLA products was next investigated. We found out that majority of the respondents confined

their place to buy the products on drug stores (132 or 64.7%) and modern / franchise drug stores (114 or 54.8%). The rest of other channels to buy the products i.e. fax or telephone (19), internet (1) mail order (6) or others (11) were not high at all.

4.1.2.7 Advertising campaign or company communication to consumers

The exposure of company communication and the respondent perception were then examined. Similarly to the result from Market Research Magazine Vol 3, no3 (1998) on the effective media for healthcare business that TV shared 68%, our result also showed the importance of TV for brand awareness at 171 or 83.4%. This followed by magazine, poster/brochure, radio, newspaper and internet respectively. The result of the communication influence on consumers was shown below in the table 4.5.

Table 4.5: Media awareness for CLA

Communication media	Frequency	Percent
Television	171	83.4
Magazine	165	80.5
Poster / Brochure	139	67.8
Radio	105	51.2
Newspaper	95	46.3
Internet	75	36.6
Others	4	1.9

Not only the awareness for TV was the highest among all media, the influence of TV was also ranking the highest as well. The ranking on influence revealed that on the high side of influence (combining the frequency of 3 scales on the most influenced) showed that TV got

57.6% compared to the second and third influence of magazine and newspaper at 53.4% and 20.7% respectively.

This finding had just confirmed the phrase that seeing is believing, so radio media got less interest and internet, even though considered as interactive media, was a far reach media for Thai society, at least for the time being, mainly because of the complexity of the technology and the high cost to own the equipment.

4.1.2.8 Promotional campaign awareness and influence

Promotional campaign subject was the items that received strong responses and also the interest from the respondents. The results of this promotional campaign were shown in Table 4.6.

Table4.6: Promotional campaign awareness

Promotional campaign	Frequency	Percent
Free gift as CLA product	162	77.9
Duo or Trio packs	155	74.5
Discount	147	70.7
Mail on pack leaflet for gift exchange	141	67.8
Other free gifts	128	61.5
Lucky draw	123	59.1
Others	3	1.4

When we investigated the influence in the same way as we did with media subject, the ranking on influence revealed that on the high side (combining the frequency of 3 scales on the most influenced) showed that the free gift as CLA product got the highest at 66.9%, followed by discount (66.8%), duo or trio package (59.7%), mail on pack leaflet for gift exchange (44.7), other free gift (33.7%) and lucky draw (33.2%) respectively.



4.1.2.9 Influence from people surrounded the respondents

We have specified 11 sets of people surrounded the respondents that might influence them to use CLA and reported the influence, again, on the high side (combining the frequency of 3 scales on the most influenced) as table 4.7 shown below.

Table 4.7: Influential people for decision making on CLA

Influential people	3 scales on the most influenced (cumulative %)
Pharmacist	57.7
Friends	47.2
Product consultant	46.6
Doctor	45.7
Nutritionist	38.5
Lover/ husband	32.2
Cousins / relatives	30.8
Parents	21.7
Celebrity that you like	21.1
Your offspring	15.8
Others	9.7

The result had shown that pharmacist ranked the first influential person (57.7), followed by friends (47.2), product consultant (46.6) and doctor (45.7). Although the frequency of the high scales were different but at least, in general term, we could see how influential people play a role in product consumption decision making.

4.1.3 Demographic data of the respondents

Demographic data of the respondents were shown in Table 4.8. Nearly all of the respondents were female as compared to male i.e. 206 against 2 or 99% against 1%. This dominance of gender for this particular product usage was similar to other studies i.e. Duangtim (1999); Sakunsonkdat (2003) which indicated that majority of the weight controlling DS were more likely to be female and held bachelor degree. The education of the respondents were below bachelor at 51 (25.0%), bachelor at 133 (65.2%), master at 19 (9.3%) and just one doctorate level or 0.5%, which again seconded the finding of Duangtim (1999) and Sakunsonkdat (2003). We had categorized the age distribution into 4 groups i.e. 20-29, 30-39, 40-49 and 50-59 years of age and found out that the majority were with the first two categories at 32.2% and 38.1% respectively. The prevalence of age levels could be from the reasons of need to have a better shape is mostly confined to the younger consumers than that of the mature and the reasons why we had no data base on below 20 might be from, again, the need is less for teenagers who are more physically active with slender shape. The other reason is that DS is an expensive product, therefore, likely that the consumers must acquire their own income so to allocate the money to buy.

For occupation, majority of the samples were working as the private company staff (75 or 36.6%), privately owned business (54 or 26.3%) and the third group were house wife (32 or 15.6%). Much lesser were the government / state enterprise officer (23 or 11.2%) and the student (17 or 8.3%).

Marital statuses of the respondents were nearly equal between single (104 or 51.0%) and married (91 or 44.60%), likely that the marital status had no impact to product consumption. However, when we looked a bit deeper into the lover status, we found out that majority were with lover i.e. 138 or 75.4% against 45 or 24.6%.

Table 4.8 : Demographic data of the respondents (categorical data)

Demographic Characteristics	Frequency	Valid Percent
Gender		
Male	2	1.00
Female	206	99.00
Age range (20-59)		
20-29	65	32.2
30-39	77	38.1
40-49	48	23.8
50-59	12	5.9
Education		
< Bachelor	51	25.00
Bachelor	133	65.20
Master	19	9.3
Doctorate	1	0.5
Occupation		
House wife	32	15.6
Student	17	8.3
Company staff	75	36.6
Privately owned business	54	26.3
Government / State Enterprise officer	23	11.2
Other	4	2.0
Marital Status		
Single	104	51.00
Married	91	44.60
Divorced	5	2.50
Widowed	4	2.00
Lover Status		
Without lover	45	24.60
With lover	138	75.40

We investigated income distribution in two ways i.e. their own salary and their family income. With this topic we got the data that varied from 2000 to 100000 baht for their own salary, average was at 21753 baht/month. Moving in the same direction as own salary, the

family income ranged from 6800 to 2000000 baht/month, average was at 82463 and the standard deviation was high at 221514 (which could be the result of the outlier of 2000000 baht/month in one respondent). However, we had shown the detail of income distribution in table 4.9 but taking the outlier out of the analysis.

Table 4.9: Income distribution

Income (Baht)	Min.	Max.	Mean	Median	Mode	Std. Dev.
Self salary	2000	70000	20498	15500	20000	13920
Family income	6800	250000	58035	50000	50000	44235

We then moved to the age, height and weight in particular so to calculate the BMI of the respondents. From Duangtim (1999) and Sakunsonkdat (2003), the average BMI of the weight controlling DS users were less than 24 and 20.60 ± 2.7 respectively. The data from our respondents also showed the similar pattern of average BMI for CLA 600/CLA Advance users at 22.38 with standard deviation at 3.95. Majority of the respondents BMI were in the normal range in all age levels as shown in table 4.10 and 4.11.

Table 4.10: Age, Height, Weight and Body Mass Index (BMI) of the respondents

	Minimum	Maximum	Mean	Std. Deviation
Age	20	59	34.96	8.96
Height	142.00	174.00	159.39	5.84
Weight	40.00	99.00	56.88	10.81
BMI	16.30	34.66	22.38	3.95

Table 4.11: Body mass index by age range

Age range	Numbers	BMI		
		Thin <18.5	Normal 18.5-25.0	Overweight >25.0
20-29	70	18	39	13
30-39	77	10	61	6
40-49	48	2	31	15
50-59	11	1	5	6
Total	207	31	136	40

4.1.4 Data Analysis for the section 2 of the questionnaire

From the 208 questionnaires we got back from the respondents, we had input the data by using SPSS program to generate the statistical result. However, some independent latent variables might be multi-dimensional and as such, exploratory factors analysis (EFA) was used with the measurement items for each construct (10 items for perceived product quality, 4 items for perceived value for money or price, 3 items for perceived accessibility, 5 items for perceived effectiveness of advertising, 3 items for perceived effectiveness of sales promotion, 3 items for positive experience, 3 items for attitude, and 3 items for intention), one construct at a time, to check if the construct was uni-dimensional or multi-dimensional. If a construct was multi-dimensional, it would be represented by multiple constructs in the structural equation modeling analysis.

4.1.4.1 Exploratory factors analysis outcome

The exploratory factor analysis or EFA (by SPSS) of the ten items of perceived quality of the product showed that there were two dimensions: perceived reputation of the brand (which could be represented as Confidence, (Q9, Q10, Q7, Q8, Q3, Q1) and perceived packaging quality (or the extrinsic characteristics of the product) (Q5, Q6, Q4, Q2). As such, two constructs were used to represent perceived quality of the brand in the SEM model. The EFA of all other

constructs showed that they are uni-dimensional constructs. Details of this factor analysis were shown in the following tables.

Table 4.12: Perceived product quality or attributes, 10 items (2 constructs outcome)

	Short description	Component	
		1	2
Q9	Long time available	.820	
Q10	Number one in sales	.758	
Q7	Natural composition	.742	
Q8	Certified by Thai FDA	.661	
Q3	Highly effective	.628	
Q1	Very safe		<0.500
Q5	Attractive packaging		.815
Q6	Good packaging		.743
Q4	Good image		.708
Q2	Convenient to consume		.629

Table 4.13: Perceived value for money, 4 items (1 construct)

	Short description	Component
		1
P3	Compare to the money spent	.878
P2	Compare to the price of other DS	.854
P1	Compare to my income	.826
P4	Compare to the efficacy delivered	.806

Table 4.14: Perceived convenience in accessibility, 3 items (1 construct)

	Short description	Component
		1
D2	Broadly available	.943
D3	So many outlets	.939
D1	Easily to buy	.910

Table 4.15: Perceived effectiveness of advertising,
5 items (1 construct)

		Component
	Short description	1
AD5	Easily remembered	.821
AD3	Seen/listen to ad regularly	.814
AD2	Seen/listen to ad so often	.804
AD1	Ad is very effective	.761
AD4	Ad is easily to understand	.728

Table 4.16: Perceived effectiveness of sales promotion,
3 items (1 construct)

		Component
	Short description	1
SP2	So many types of campaign	.922
SP1	Attractive campaign	.912
SP3	Campaigns suit my requirement	.884

Table 4.17: Perceived positive experience/satisfaction,
3 items (1 construct)

		Component
	Short description	1
E2	Can control weight as required	.858
E3	Like when compare to other weight control DS	.845
E4	Satisfied when compare to other methods	.827

Table 4.18: Independent variables: Attitude and Intention,
3 items each (1 construct)

		Component	
	Short description	1	2
Y1	Overall attitude is positive		.856
Y2	Overall attitude is very good		.866
Y3	Overall like the product		.796
Y4	Continue to use	.836	
Y5	Intend to continue to buy	.850	
Y6	Highly likely to buy in the future	.895	

4.1.4.2 Structural Equation Modeling (SEM) statistical analysis

In the following sections, the structural equation modeling results of the conceptual model were firstly discussed. The modified conceptual model was then proposed and tested.

Structural equation modeling results

The discussion of the results of the structural equation model proceeded in two stages. First, we examined the measurement model and then followed by the discussion of structural model results. The correlation matrixes of the observed variables were shown in the Appendix E.

Measurement model results

The measurement model specifies how the latent variables or hypothetical constructs are measured in terms of the observed variables, and it describes the measurement properties (validities and reliabilities) of the observed variables. A good measurement model should have high and statistically significant indicator coefficients (λ^x s and λ^y s), high reliabilities (i.e. high Cronbach's alpha), and high validities including the convergent and discriminant validities (i.e., high proportion-of-variance-extracted indices). We had then started to check the full model (model I) which comprised of all constructs, followed by the modified models (model II, III, IV) which were the reduced forms of the full model and the results were as follow.

4.3.4.2.1 Measurement model I result

The indicator coefficients (i.e. standardized factor loadings), reliabilities, and proportion-of-variance-extracted indices of the constructs in the measurement were shown in table 4.19. The indicator coefficients were generally high and statistically significant. Reliability levels of the constructs were moderately high to high

(ranging from 0.7465 to 0.9496). All of them exceeded 0.7, the threshold recommended by Nunnally (1978). However, when we looked at the more conservative proportion-of-variance-extracted indices, Fornell and Larcker (1981), which indicated the amount of variance captured by a construct in relation to the amount of variance due to measurement error, demonstrated that some constructs had low validities (ranging from 0.3633 to 0.4175) and the other constructs had moderate to high validities (ranging from 0.5360 to 0.8767). Therefore, just some of the indices exceeded the minimal standard of 0.50, which indicated that the variances captured by these constructs exceed the variances due to measurement error.

Table 4.19: Measurement Model Results (Model I)

A. Measurement Model Results	Standardized Factor Loading	Reliability	Proportion of Variance Extracted
Perceived Confidence (ξ_1)		0.8162	0.3633
Q ₁ ("safety")	0.44 ^b	0.19	
Q ₃ ("effectiveness")	0.76 ^b	0.58	
Q ₇ ("natural ingredient")	0.76 ^b	0.56	
Q ₈ ("endorsement")	0.55 ^b	0.43	
Q ₉ ("long establishment")	0.55 ^a	0.42	
Q ₁₀ ("number one in the market")	0.54 ^b	0.30	
Perceived Extrinsic Attributes (ξ_2)		0.7465	0.4175
Q ₂ ("convenience")	0.44 ^b	0.21	
Q ₄ ("image")	0.64 ^b	0.41	
Q ₅ ("attractive packaging")	0.64 ^a	0.58	
Q ₆ ("good packaging")	0.75 ^b	0.47	
Perceived Price (ξ_3)		0.8605	0.5900
P ₁ ("compare to income")	0.55 ^a	0.42	
P ₂ ("compare to other DS")	0.59 ^b	0.47	
P ₃ ("good value for money")	0.89 ^b	0.79	
P ₄ ("compare to result")	0.83 ^b	0.68	
Perceived Accessibility (ξ_4)		0.9226	0.7933
D ₁ ("easy to find")	0.84 ^a	0.71	
D ₂ ("widely distributed")	0.90 ^b	0.82	
D ₃ ("substantial outlet")	0.92 ^b	0.85	
Perceived Communication (ξ_5)		0.8449	0.5360
AD ₁ ("attractive AD")	0.57 ^a	0.45	
AD ₂ ("high frequency AD")	0.75 ^b	0.57	
AD ₃ ("regularly exposed AD")	0.80 ^b	0.64	
AD ₄ ("easy to understand AD")	0.57 ^b	0.45	
AD ₅ ("easy to remember AD")	0.75 ^b	0.57	
Perceived Promotion (ξ_6)		0.8904	0.7200
SP ₁ ("attractive promotion")	0.85 ^a	0.73	
SP ₂ ("various types promotion")	0.86 ^b	0.78	
SP ₃ ("suit requirement")	0.81 ^b	0.65	
Perceived Experience (ξ_7)		0.7925	0.5700
E ₂ ("control as need")	0.76 ^a	0.61	
E ₃ ("compare to other DS")	0.73 ^b	0.54	
E ₄ ("compare to other methods")	0.75 ^b	0.56	
Attitude toward the brand (η_1)		0.9187	0.7866
Y ₁ ("positive attitude")	0.89 ^a	0.80	
Y ₂ ("good attitude")	0.90 ^b	0.80	
Y ₃ ("favorable attitude")	0.97 ^b	0.76	
Intention toward the brand (η_2)		0.9496	0.8767
Y ₄ ("continue to use")	0.89 ^a	0.80	
Y ₅ ("continue to buy")	0.94 ^b	0.89	
Y ₆ ("buy in the future")	0.97 ^b	0.94	

Fixed at 1.00

^b p<0.001, 1 tailed

Since not all of the indicator coefficients were high and statistically significant and not all of the reliabilities and validities of the constructs exceeded the minimal standards required, we then examined the problems, mainly so to improve the convergent validities.

From the measurement model, some of the constructs had low R^2 , together with the priorities of the ranking from Varimax rotation of the first two constructs (confidence and extrinsic attributes) presented in EFA table, the following items in the first two constructs were then suitable to be the candidates for deletion i.e. Q1, Q2, Q3, Q4, Q7 and Q8. After the deletion of these items, we then ran the LISREL again without these items and got the result as Model II.

4.1.4.2.2 Measurement model II result

The indicator coefficients (i.e. standardized factor loadings), reliabilities, and proportion-of-variance-extracted indices of the constructs in the measurement were shown in table 4.20. The indicator coefficients were generally high and statistically significant. Reliability levels of the constructs were moderately high to high (ranging from 0.7351 to 0.9496). All of them exceeded 0.7, the threshold recommended by Nunnally (1978). The more conservative proportion-of-variance-extracted indices, Fornell and Larcker (1981), which indicated the amount of variance captured by a construct in relation to the amount of variance due to measurement error, demonstrated that all of the constructs had moderate to high convergent validities (ranging from 0.5650 to 0.8767). Therefore, all of the indices exceeded the minimal standard of 0.50, which indicated that the variance captured by the construct exceeds the variance due to measurement error. We then moved to investigate the discriminant validity measurement by checking the proportion-of-variance-extracted and the correlation matrix of the latent variables (Appendix E: Model II and the completely standardized solution of Model II). We found out that the positive experience and perceived value for money or price

were highly correlated (0.84, see Appendix E, Output Model II, Standardized Solution, Correlation Matrix of ETA and KSI: Experience and Price) and the square of this correlation coefficient was 0.7056 while the proportion-of-variance-extracted index of perceived value for money and that of positive experience were 0.745 and 0.573, respectively. However, for a good measurement model, the square of the correlation between any pair of the constructs/latent variables must be lower than the proportion-of variance-extracted index of these two variables which was not true for this case i.e. $0.7056 > 0.573$. So to get a better measurement model, one of these two constructs should be deleted. We then decided to delete positive experience from Model II because we were interested more in element of marketing mix. As well, one of the reasons why these two constructs were highly correlated was because the marketing mix had sent the direct impact to the experience of the consumer; therefore, they were the prerequisite of the experience. After we took the positive experience construct out and ran the LISREL again, we had then got the Model III.

Table 4.20: Measurement Model Results (Model II)

A. Measurement Model Results	Standardized		Proportion of
	Factor Loading	Reliability	Variance Extracted
Perceived Confidence (ξ_1)		0.7351	0.6300
Q ₉ ("long establishment")	0.86 ^a	0.74	
Q ₁₀ ("number one in the market")	0.72 ^b	0.52	
Perceived Extrinsic Attributes (ξ_2)		0.7518	0.5750
Q ₅ ("attractive packaging")	0.79 ^a	0.63	
Q ₆ ("good packaging")	0.72 ^b	0.52	
Perceived Price (ξ_3)		0.8329	0.7450
P ₃ ("good value for money")	0.82 ^a	0.67	
P ₄ ("compare to result")	0.90 ^b	0.82	
Perceived Accessibility (ξ_4)		0.9226	0.7933
D ₁ ("easy to find")	0.84 ^a	0.71	
D ₂ ("widely distributed")	0.90 ^b	0.82	
D ₃ ("substantial outlet")	0.92 ^b	0.85	
Perceived Communication (ξ_5)		0.8317	0.5650
AD ₁ ("attractive AD")	0.70 ^a	0.49	
AD ₂ ("high frequency AD")	0.79 ^b	0.63	
AD ₃ ("regularly exposed AD")	0.79 ^b	0.62	
AD ₅ ("easy to remember AD")	0.72 ^b	0.52	
Perceived Promotion (ξ_6)		0.8904	0.7200
SP ₁ ("attractive promotion")	0.86 ^a	0.73	
SP ₂ ("various types promotion")	0.88 ^b	0.78	
SP ₃ ("suit requirement")	0.81 ^b	0.65	
Perceived Experience (ξ_7)		0.7925	0.5733
E ₂ ("control as need")	0.79 ^a	0.62	
E ₃ ("compare to other DS")	0.74 ^b	0.55	
E ₄ ("compare to other methods")	0.74 ^b	0.55	
Attitude toward the brand (η_1)		0.9187	0.7866
Y ₁ ("positive attitude")	0.89 ^a	0.80	
Y ₂ ("good attitude")	0.89 ^b	0.80	
Y ₃ ("favorable attitude")	0.87 ^b	0.76	
Intention toward the brand (η_2)		0.9496	0.8767
Y ₄ ("continue to use")	0.89 ^a	0.80	
Y ₅ ("continue to buy")	0.95 ^b	0.89	
Y ₆ ("buy in the future")	0.97 ^b	0.94	

^a Fixed at 1.00

^b $p < 0.001$, 1 tailed

4.1.4.2.3 Measurement model III result

The indicator coefficients (i.e. standardized factor loadings), reliabilities, and proportion-of-variance-extracted indices of the constructs in the measurement are shown in table 4.21. The indicator coefficients were generally high and statistically significant. Reliability levels of the constructs were moderately high to high (ranging from

0.7351 to 0.9496). All of them exceeded 0.7, the threshold recommended by Nunnally (1978). The more conservative proportion-of-variance-extracted indices, Fornell and Larcker (1981), which indicated the amount of variance captured by a construct in relation to the amount of variance due to measurement error, demonstrated that all of the constructs had moderate to high convergent validities (ranging from 0.5360 to 0.8767). Therefore, all of the indices exceeded the minimal standard of 0.50, which indicates that the variance captured by the construct exceeds the variance due to measurement error. We then moved to investigate the discriminating validity measurement by checking the proportion-of-variance-extracted and the correlation matrix of the latent variables (Appendix E: Model III and the completely standardized solution of Model III). We found out that all of the constructs were not highly correlated (<0.50). For a good measurement model, the square of the correlation between any pair of the constructs/latent variables must be lower than the proportion-of variance-extracted index of these two variables which was now true for this case.

Since the entire indicator coefficients were high and statistically significant and the reliabilities (Cronbach's alpha) and construct validities (both convergent and discriminant) of all the constructs exceeded the minimal standards required, no negative value of error variance and low number (<30) of iterations (12 iterations in Model III), it was reasonable to conclude that the measurement model was acceptable. We then moved to the Structural Equation Model testing.

Table 4.21: Measurement and Structural Model Results (Model III)

A. Measurement Model Results		Standardized		Proportion of
Constructs and indicators		Factor Loading	Reliability	Variance Extracted
Perceived Confidence (ξ_1)			0.7351	0.6350
	Q ₉ ("long establishment")	0.87 ^a	0.76	
	Q ₁₀ ("number one in the market")	0.71 ^b	0.51	
Perceived Extrinsic Attributes (ξ_2)			0.7518	0.5700
	Q ₅ ("attractive packaging")	0.79 ^a	0.63	
	Q ₆ ("good packaging")	0.72 ^b	0.51	
Perceived Price (ξ_3)			0.8329	0.7400
	P ₃ ("good value for money")	0.82 ^a	0.68	
	P ₄ ("compare to result")	0.90 ^b	0.80	
Perceived Accessibility (ξ_4)			0.9226	0.7933
	D ₁ ("easy to find")	0.84 ^a	0.71	
	D ₂ ("widely distributed")	0.91 ^b	0.82	
	D ₃ ("substantial outlet")	0.92 ^b	0.85	
Perceived Communication (ξ_5)			0.8317	0.5360
	AD ₁ ("attractive AD")	0.70 ^a	0.49	
	AD ₂ ("high frequency AD")	0.79 ^b	0.63	
	AD ₃ ("regularly exposed AD")	0.79 ^b	0.62	
	AD ₅ ("easy to remember AD")	0.72 ^b	0.51	
Perceived Promotion (ξ_6)			0.8904	0.7233
	SP ₁ ("attractive promotion")	0.86 ^a	0.74	
	SP ₂ ("various types promotion")	0.88 ^b	0.78	
	SP ₃ ("suit requirement")	0.81 ^b	0.65	
Attitude toward the brand (η_1)			0.9187	0.7866
	Y ₁ ("positive attitude")	0.89 ^a	0.80	
	Y ₂ ("good attitude")	0.90 ^b	0.80	
	Y ₃ ("favorable attitude")	0.87 ^b	0.76	
Intention toward the brand (η_2)			0.9496	0.8767
	Y ₄ ("continue to use")	0.89 ^a	0.80	
	Y ₅ ("continue to buy")	0.94 ^b	0.89	
	Y ₆ ("buy in the future")	0.97 ^b	0.94	

B. Structural Model Results	Dependent Constructs	
	Attitude Toward the brand (η_1)	Intention toward the brand (η_2)
Independent Constructs		
Perceived Confidence (ξ_1)	0.19	
Perceived Extrinsic Attributes (ξ_2)	0.11	
Perceived Price (ξ_3)	0.60	
Perceived Accessibility (ξ_4)	-0.06	
Perceived Communication (ξ_5)	-0.00	
Perceived Promotion (ξ_6)	0.12	
Attitude toward the brand (η_1)		0.80
Proportion of Variance Explained (R^2)	0.64	0.63
Fit Statistics:		
Chi-square	315.60	
Degree of freedom	187	
Probability	$p < 0.001$	
RFI ^c	0.93	
NFI ^d	0.94	
CFI ^e	0.98	
IFI ^f	0.98	

^a Fixed at 1.00

^b $p < 0.001$, 1 tailed

^c Joreskog and Sorbom's (1989) "Relative Fit Index"

^d Bentler and Nonett's (1980) "Normal Fit Index"

^e Bentler's (1990) "Comparative Fit Index"

^f Bollen's (1989) "Incremental Fit Index"

4.3.4.2.4 Structural model III results

The structural model specifies the causal relations among the latent variables and describes the causal effects and the amount of unexplained variance. An initial matter, however, is whether or not the maximum likelihood estimate for the structural equation model provides a satisfactory fit to the data. The chi-square value (see Table 4.21, Part B) indicated that the model did not adequately account of the relationship between the observed sample covariance and the hypothetical population covariance ($\chi^2_{187} = 315.60$, $p = 0.00$). Since it is generally agreed that the chi-square test should be used as a guide

rather than an absolute index of fit, other diagnostics need to be examined (Bagozzi, 1981; Fornell, 1981; Bearden, 1982). Apart from an absolute fit index such as Joreskog and Sorbom's relative fit index (RFI), incremental fit indices such as Bentler and Bonett's normal fit index (NFI), Bentler's comparative fit index (CFI), and Bollen's incremental fit index (IFI), which are fit indices measuring how much better the model fits as compared to a baseline model (in this case, an independence model), are particularly useful in determining the overall model fit (Joreskog, 1989; Bentler, 1980; Bollen, 1989).

The NFI, CFI, and IFI for the model were calculated based on the chi-square value of the independence model with 231 degrees of freedom ($\chi^2_{231} = 5642.64$, $p = 0.00$, see Appendix E, Model III). Results (see Table 4.21; Part B) showed that the RFI, NFI, CFI and IFI were 0.93, 0.94, 0.98, 0.98 respectively. According to Joreskog and Sorbom's, Bentler and Bonett's, Bentler's and Bollen's heuristics, model fits of less than 90% are inadequate (Joreskog, 1989; Bentler, 1980; Bollen, 1989). As such, the structural model was adequately fit based on these indices.

Since the model fit could be considered adequate, we turned to the structural parameter estimates. It was hypothesized that the CLA 600/CLA Advance brand users' intention to continue to use the brand (H_7) is positively influenced by their attitude toward the brand, which is, in turn, positively affected by perceived quality (or product attributes/ confidence) (H_1), perceived price (or value for money) (H_2), perceived convenience in accessibility (H_3), perceived effectiveness of advertising (H_4), perceived effectiveness of sales promotion (H_5) and perceived positive experience (H_6).

Results (see Table 4.21, part B) showed that attitude toward the brand was a significant determinant of intention to continue to use the brand as hypothesized ($\beta_{21} = 0.95$, $p < 0.01$, one tailed). The proportion of variance explained, or R^2 of the function was 0.63. For attitude toward the brand, results show that only perceived

Confidence ($\beta_{11} = 0.21$, $p < 0.01$, one tailed), perceived price or value for money ($\beta_{13} = 0.54$, $p < 0.01$, one tailed), and perceived sales promotion ($\beta_{16} = 0.11$, $p < 0.01$, one tailed) were significant determinants of attitude toward the brand as hypothesized. Perceived extrinsic factor or packaging ($\beta_{12} = 0.13$, $p > 0.05$, one tailed), perceived convenience in accessibility ($\beta_{14} = -0.07$, $p > 0.05$, one tailed) and perceived advertising ($\beta_{15} = -0.00$, $p > 0.05$, one tailed), on the other hand, did not appear to be related to attitude toward the brand. The proportion of variance explained, or R^2 of the function, was 0.64.

4.1.4.2.5 The Modified Model or Model IV

Based on the above results, the conceptual model was modified to see whether improvement in terms of model fit could be achieved. In the modified model (model IV), the insignificant independent constructs (i.e. perceived extrinsic factor or packaging, perceived convenience in accessibility and perceived advertising) were deleted from the model. According to the modified model, intention to continue to use the brand was determined by attitude toward the brand which was, in turn, affected by perceived confidence, perceived price or value for money and perceived promotion. Table 4.22 showed the measurement model and the structural model results of the modified model for the CLA600 / CLA Advance brand users.

From Table 4.21 and Table 4.22, it was clear that the measurement models of the modified models were essentially the same as those of the full models. For the structural model results, the chi-square values of the modified model (model IV), was significantly improved over model III ($\chi^2_{diff} = 187-58 = 315.60-129.59$, $p < 0.001$), indicates that the fit of the modified model was adequate.

Besides, the modified model was then simpler than Model III since it could explain the overall model with less complicated (parsimonized).

Examination of RFI, NFI, CFI and IFI, as well, showed that modified model was adequately fit according to the heuristics of 0.90. In terms of model fit, it could be conclude that the modified model (model IV) was superior to model III.

In term of causal relations, it was found that attitude toward the brand was the significant determinant of intention to continue to use the brand for CLA 600/ CLA Advance users. Attitude toward the brand was positively affected by perceived confidence and perceived price or value for money and perceived sales promotion.

Table 4.22: Measurement and Structural Model Results (Model IV)

A. Measurement Model Results	Standardized		Proportion of
Constructs and indicators	Factor Loading	Reliability	Variance Extracted
Perceived Confidence (ξ_1)		0.8162	0.6400
Q ₉ ("long establishment")	0.91 ^a	0.82	
Q ₁₀ ("number one in the market")	0.68 ^b	0.46	
Perceived Price (ξ_3)		0.8605	0.7400
P ₃ ("good value for money")	0.82 ^b	0.67	
P ₄ ("compare to result")	0.90 ^b	0.81	
Perceived Promotion (ξ_6)		0.8904	0.7233
SP ₁ ("attractive promotion")	0.86 ^a	0.73	
SP ₂ ("various types promotion")	0.88 ^b	0.78	
SP ₃ ("suit requirement")	0.81 ^b	0.66	
Attitude toward the brand (η_1)		0.9187	0.7866
Y ₁ ("positive attitude")	0.90 ^a	0.80	
Y ₂ ("good attitude")	0.90 ^b	0.81	
Y ₃ ("favorable attitude")	0.87 ^b	0.76	
Intention toward the brand (η_2)		0.9496	0.8767
Y ₄ ("continue to use")	0.89 ^a	0.80	
Y ₅ ("continue to buy")	0.94 ^b	0.89	
Y ₆ ("buy in the future")	0.97 ^b	0.94	

B. Structural Model Results	Dependent Constructs	
	Attitude Toward the brand (η_1)	Intention toward the brand (η_2)
Independent Constructs		
Perceived Confidence (ξ_1)	0.19	
Perceived Price (ξ_3)	0.62	
Perceived Promotion (ξ_6)	0.15	
Attitude toward the brand (η_1)		0.80
Proportion of Variance Explained (R^2)	0.63	0.64
Fit Statistics:		
Chi-square	129.59	
Degree of freedom	58	
Probability	$P < 0.001$	
RFI ^c	0.95	
NFI ^d	0.97	
CFI ^e	0.98	
IFI ^f	0.98	

^a Fixed at 1.00

^b $p < 0.001$, 1 tailed

^c Joreskog and Sorbom's (1989) "Relative Fit Index"

^d Bentler and Nonett's (1980) "Normal Fit Index"

^e Bentler's (1990) "Comparative Fit Index"

^f Bollen's (1989) "Incremental Fit Index"