Exploring Prospective Buyer Behavior of "NB Plus" Brand of Beef Products in Thailand

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Abstract. Thai native beef consumption is still low. In order to boost the consumption of quality beef, and to motivate native beef cattle husbandry, "NB Plus" brand has been set up and undertaken by the university as a pilot project. This study attempts to investigate which marketing mix factors influence buyer behavior at the retail shops, aiming at finding tools to increase sales from the probability of whether prospect will buy, in accordance with the effect of marketing mix strategies. A buyer survey was conducted, 200 respondents were interviewed at retail shops where "NB Plus" was displayed. The result indicated that product mix factor was found positively important to bring the buyer "buy more," while promotion mix factor was found negative. The findings provide insight for "NB Plus" sellers the tool to increase sales from prospect, with the effect of product and promotion mix strategies.

Keywords: prospective buyer, beef products, NB Plus

1. Introduction

Thai Native cattle have been with Thai rural households for a long time. They are a source of household's revenues, as farmers can use them in the farm, and can exchange for money for their household consumption. Native cattle are usually sold to low line market, with substandard slaughterhouses, and open air selling areas. As Thai native beef is gained from natural feeding cattle, with fine texture and only 1 % of intramuscular fat (from 100 grams of tenderloin), it has nutritional benefits and minerals such as high protein, low fat, CLA, Zinc, and Iron, etc [1]. Thai native beef can be processed to various western beef products such as salami, sausage, air dried beef, beef loaf, ham, and bologna, etc. However, it is evidenced that these products have been imported, while beef consumption in Thailand is still low at about 3 kilograms per capita.

Beef products from "NB Plus" brand was set up in King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok, Thailand, since 2009, with the aim of its action research to level up food safety standard of native beef in the chain. Together with the improvement of native cattle raising technology and standard slaughterhouse, marketing of beef products needs to be undertaken, in order to ensure the chance that native beef can be sold in the medium- to high- line marketplaces. This pilot project is expected to attract and to help entrepreneurs do right marketing strategies for quality beef products.

2. Research methodology

In this study, a questionnaire and in-depth interview were conducted during June-December 2010. Utilizing non-probability sampling method, 200 respondents were recruited from 6 retail shops in Bangkok and Saraburi provinces where "NB Plus" brand was placed. Buying behaviour and attitudes towards factors relating marketing mix strategies were interviewed.

This paper was attempted to find out demographic data and buying behaviour of prospective buyers using frequency count, mean score, and ranking. Logistic regression analysis was used to examine factors of

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four Ps marketing mix strategies, which Kotler mentioned in his book [2], that they might influence prospective buyer behaviour of "NB Plus" brand. This analysis was employed as the distribution of the respondents' buying behaviour was nonlinear with the marketing mix strategies. Furthermore, it is able to analyse a mix of all types of the independent variables [3]. Reliability was examined by the Cronbach's Alpha of 0.866. Independent variables were the marketing mix strategy of the followings:

- Product. It includes taste, quality, nutritional value, reliable brand, packaging, clear label, and variety,
- Price. It is special price offer,
- Place. It includes a prime location, open hours, and numbers of branches,
- Promotion. It includes free sample tasting, service of the sales person, poster ads, and price reduction.

Dependent variables were gained from buying expenses of "NB Plus" brand (in baht value). After that, the expense of each respondent was grouped into 2 groups, using median at 160 baht. The first group, "buy more" indicated the expense from 160 baht and above, while the latter group, "buy less" indicated the expense below 160 baht.

The linear regression equation is the natural log (loge) of the probability of success divided by the probability of not success. In this case, the probability of success predicted by the independent variables (product, price, place, and promotion mix factors) and the rate of change in the probability of the occurrence of an event (buy more or buy less) with a change in a given predictor is determined [4]. A model developed was shown as follow:

$$\ln [P_i / (1-P_i)] = a + \Sigma \, b_j \, X_{ij} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots..(1)$$

or it can be rewritten as,

$$\ln (odd) = a + \Sigma \, b_j \, X_{ij} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots..(2)$$

where Pi is the estimated probability that i case (i = 1,…,200) is in one of the categories with constant a, coefficients bj, and predictors Xij, when j indicates 4 independent variables.

3. Results and discussion

The characteristics of the 200 respondents were shown in Table 1, 47.5 % were male and 52.5% were female. Average age was 37 years of age, mostly bachelor level of education and higher, and average monthly income was about 33,831 baht (about US$ 1,100). They mainly bought from 9.00 am to 3.00 pm., mostly bought on weekend. They mostly knew the brand from their own interest (62.5%), from friends (19.5%) and from the university's information (10.5%), respectively. The reason to buy was deliciousness (67.0%) and quality (21%). Main products that they bought were beef hot dog (75.0%) and beef loaf (18.5%). They usually bought for own satisfaction (56.5%) and household members (40%). The expense was around 244 baht (about US$ 8) a time, while buying frequency was only once in a week.

As for the logistic regression model in this study (Table 2), the Hosmer and Lemeshow goodness-of-fit was calculated [5], and was found acceptable with a Chi-square of 5.315 (df = 8, p-value =0.723). The overall correct prediction rate is 62.5%. Significant independent variables from Wald test, at 95% confidence level, was Promotion (p-value = 0.002), and at 90% confidence level was Product (p-value = 0.054). Both independent variables had coefficient bj at -0.627 and 0.498, respectively. On the contrary, Price and Place variables showed insignificant. The model in this case was as follow:

$$\ln [P_i / (1-P_i)] = -1.530 + 0.498 \text{ x Product} - 0.627 \text{ x Promotion} \dots\dots\dots\dots\dots\dots\dots\dots\dots(3)$$

Product variable showed positive effect, as the exp (0.498) was equal 1.646, which was more than 1. Therefore, by implementing product mix strategy to "buy more" group, the chance to increase sales was possible. On the other hand, the coefficient bj of the Promotion variable showed negative, the exp (-0.627) was equal 0.203, which was below 1. Therefore, implementing promotion mix strategy to the "buy more" might get loss. The focus of promotion mix strategy should be conducted with the "buy less" group, in order to urge them to buy more.

Table 1 Demographic characteristics of the 200 respondents

	Number	Percentage
Gender		
Male	95	47.5
Female	105	52.5
Average age 37.41 years of age		
Education		
High school and below	19	9.5
Below bachelor degree	10	5.0
Bachelor degree	129	64.5
Master degree and higher	42	21.0
Career		
Students	35	17.5
Government service	25	12.5
Employee	68	34.0
Own business	57	28.5
Housewife/no career	15	7.5
Average monthly income 33,831.34 baht		
Time to buy		
9.00-12.00	80	40
12.00-15.00	75	37.5
15.00-18.00	45	22.5
Day to buy		
Sunday	38	19.0
Monday	5	2.5
Tuesday	5	2.5
Wednesday	10	5.0
Thursday	31	15.5
Friday	30	15.0
Saturday	81	40.5
From whom you know NB Plus Products		
Friends	39	19.5
Own interest	124	62.0
Internet	5	2.5
Newspaper	11	5.5
University	21	10.5
Reason to buy		
Deliciousness	134	67.0
Nutritional values	9	4.5
Quality	42	21.0
Price	3	1.5
Others such as convenience, etc.	12	6.0
Products often bought		
Beef loaf	37	18.5
Beef hot dog	150	75.0
Thai style beef fermented beef loaf *"Nham"*	6	3.0
Others such as Jerky, fermented beef sausage, etc.	7	3.5
For whom you bought		
Own satisfaction	113	56.5
Household members	82	40.0
Relatives/friends	5	2,5
Buying expense 243.67 a time on average		
Buying frequency 1.11 time a week.		

Table 2 the effect of the four marketing mix strategies toward prospective buyer behavior

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Product	.498	.259	3.708	1	.054	1.646
Price	.239	.208	1.316	1	.251	1.270
Place	.054	.169	.104	1	.747	1.056
Promotion	-.627	.203	9.544	1	.002	.534
Constant	-1.530	1.648	.861	1	.353	.217

4. Conclusion

Beef products from "NB Plus" brand was set up in KMITL, Bangkok, Thailand, since 2009, with the aim of its action research to level up food safety standard of native beef in the chain. Marketing of beef products needs to be undertaken, in order to ensure the chance that native beef can be sold in the medium- to high-line marketplaces.

The findings indicated insight information and analysis for "NB Plus" retail shops to have them the tool to increase sales from the probability of whether prospect will buy, in accordance with the effect of product and promotion mix strategies. The implementation of product mix strategy may be suitable for the prospect who "buys more". On the contrary, to boost the "buy less" prospect, promotion mix strategy tended to be more suitable.

5. Acknowledgement

6. References

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