

Buying behavior of premium beef products in Bangkok

Opal Suwunnamek*, Poramate Asawaruangpipop*, and Takashi Toyoda**

King Mongkut's Institute of Technology Ladkrabang, Thailand*

Tokyo University of Agriculture and Technology, Japan**

ABSTRACT: Beef husbandry is the traditional occupation in Thai culture for a long time. However, beef consumption in Thailand was still low at 2.6 kgs/person/year. The encouragement of more domestic beef consumption to maintain the cattle production system in the rural Thailand is the goal amid the competition from imported beefs. In addition, food safety issue is another point that beef production and distribution at the present is risky of disease and contamination. To improve the production for safe food, "premium" beef was promoted. It is called of the carcass that antibiotics during feeding was controlled, operated at standard slaughterhouse, delivered and sold at controlled temperature shop. This is the first attempt to set up the quality supply chain for Thai beef products. The study attempted to examine the consumption side, whether or not we might improve the consumption behavior of beef products, eat more for safer food. This study was aimed to examine demographic and marketing mix factors which influenced the buying quantity of premium beef. Logistic Regression Analysis was applied for 147 samples who ate beef. The result showed that most of them were female, single, about 30 years of age, income not more than 20,000 baht a month, bachelor degree, performing as employee at private enterprises, and their lifestyle was leisure at home. Demographic factor that had an influence on buying quantity was level of education. Higher education tended to buy for more quantity. Recommendations on softness, having marbling, brands, and knowledge on how to buy were fit for a "buy more" group. To stimulate the market for a "buy less" group, color and flavor quality, softness, brands or trademarks, education on how to buy safer beef, beef cooking service were recommended.

KEYWORDS: buying behavior, premium beef products

1. INTRODUCTION

Beef husbandry is the traditional and original occupation in Thai culture for a long time, Thai people has been consuming beef and its products such as pickled meat sausage (*naam*), sour sausage, big sausage (*mum*), etc. as the lives and folk wisdom of each region in the country. Meanwhile, beef consumption per capita per year at present is 2.6 kg on average, regarding very low. However, beef production in Thailand is not enough for domestic consumption¹⁾. Premium beef and beef products therefore are imported from foreign countries 1.3

million kg/year for hi-end restaurants and hotels.

Beef market can be divided into 3 levels from beef quality classifications, that is, high quality, middle quality, and low quality markets. At high quality market, consumer buys the high quality beef to make steak, when focusing on beef softness such as Thailand's best beef of Phon Yang Kham Cooperative, and imported expensive and quality beef such as Kobe or Matsuzaka beef of Japan, etc. Middle quality beef is traded at general department stores and modern trade, etc. Low quality market, on the contrary, trained and untrained beef butchers are

found in general outdoor food market – the beef sold in this market comes from cows fed with grass such as native cows, old cows, etc. (Sethakul and Opaspattanakij, 2005)

This study attempts to explore the buying behavior of premium beef products in Bangkok, Thailand. It is expected to help increase the demand side to “buy more”, when improving the supply side to produce safer products from disease and contamination.

1.1 Objectives

Our main theme is to explore the buyers’ characteristics and their behavior on premium beef purchase. In addition, marketing factors that influence the “buy more” and “buy less” groups will be analyzed.

2. METHODOLOGY

This study is a survey research, using questionnaire to collect data, reliability test by Cronbachs’ alpha Coefficient, and convenience sampling.

2.1 Data collection

Of the total 300 customers that were interviewed at restaurants, department stores, hotels, premium beef butcher in Bangkok area such as at Choke Chai Steakhouse (Rangsit and Sukhumvit Branches), Saraburi Steakhouse, Khun Ying Restaurant, The Mall Bang Kapi, Siam Paragon, Emporium, Amari Atrium Hotel, Miracle Grand Hotel, Pon-Yang-Khram Livestock Breeding Cooperative NSC.LTD., and Kamphaengsaen Beef Cooperative, 147 samples were collected and used for the analysis. Period of the survey was between January and March 2008.

Questionnaire for the study had both close-ended and open-ended questions. It was divided into 3 parts, as follows;

Part I: Personal/family data of the consumer of beef and processed beef products

Part II: Buying Behavior of beef and processed beef products

Part III: Opinion of beef and processed beef products.

2.2 Data analysis

Applied questionnaire already provided to pre-test with the population in Ladkrabang district and Bueng Kum district. Validity and reliability were examined by the alpha coefficient of 0.7078 (Nunnally, 1978). Data was analyzed by means of descriptive statistics and logistic regression.

3. RESULTS

3.1 General characteristics of the respondents

The result showed that their income was ranged from lower than 10,000 baht (about 36,000 yen) to 30,000 baht (about 108,000 yen). Their expense for food was about 160.9 baht (579.24 yen) a day on average. Most of them were female (56.5%), single (59.2%), bachelor degree (42.9%), being private employee (65.3%), and lifestyle pattern was to stay at home (33.3%) as shown in Table 3.1.

3.2 Buying behavior of beef and beef products

The result showed that the respondents indicated their “seldom” frequency for all varieties of beef products. However, from the products available, namely, fresh meat, ready-to-eat steak, jerky, meat ball, local style sour sausage, western sausage, and bologna, the three most frequent bought products were meat ball, fresh meat, and ready-to eat steak, respectively. They usually bought at the supermarket in the department store and fresh marketplace. Most of them bought for household consumption. Average buying quantity was about 1.34 kg/time, and the expense for beef products was about 275 baht/time.

Table 3.1 General characteristics of the respondents
(N=147)

| Personal Characteristics | No. of persons | % |
|-----------------------------|----------------|------|
| Sex | | |
| Male | 64 | 43.5 |
| Female | 83 | 56.5 |
| Marital status | | |
| Single | 87 | 59.2 |
| Married and others | 60 | 40.8 |
| Age | | |
| Lower than 30 years of age | 60 | 40.8 |
| From 30 years of age | 87 | 59.2 |
| Income/person/month | | |
| Less than 10,001 baht | 42 | 28.6 |
| 10,001-20,000 baht | 48 | 32.7 |
| 20,001-30,000 baht | 26 | 17.6 |
| 30,001-40,000 baht | 10 | 6.8 |
| 40,001-50,000 baht | 7 | 4.8 |
| 50,001 baht up | 14 | 9.5 |
| Education | | |
| Lower than primary school | 3 | 2.0 |
| Primary school | 6 | 4.1 |
| Junior high school | 43 | 29.3 |
| Vocational | 15 | 10.2 |
| Bachelor degree | 63 | 42.9 |
| Master degree | 14 | 9.5 |
| Doctoral degree | 3 | 2.0 |
| Occupation | | |
| Students/no occupation | 26 | 17.7 |
| Government service | 14 | 9.5 |
| Own employment | 11 | 7.5 |
| Private employee | 96 | 65.3 |
| Pattern of lifestyle | | |
| Sporting | 24 | 16.3 |
| Travelling | 23 | 15.6 |
| Entertaining | 16 | 11.0 |
| Working | 35 | 23.8 |
| Staying at home | 48 | 33.3 |
| Average food expense (baht) | 160.88 | |

3.3 The opinion towards marketing mix items

The respondents informed their opinion towards various marketing mix items regarding product, price, distribution, and promotion. Their opinion was collected by rating 0-10, from not important to the most important. The average important level was about 6.98. It was indicated that they placed their important level towards these marketing mix items at high degree.

Ten most concern items were the safeness and cleanliness of products, the cleanliness of the outlets, the convenience of the outlets, the softness, nutrition, the certification from the reliable institutions such as Thai FDA, product shelf life, color-odor quality and storing, beef parts, and cooking varieties.

Table 3.2 Important level of opinion towards marketing mix items (N=147)

| Marketing mix items | Mean | Standard. Deviation |
|--|--------|---------------------|
| Safeness and cleanliness of products | 8.2313 | 1.95170 |
| Cleanliness of outlets | 8.1020 | 1.96104 |
| Convenience of outlets | 7.8503 | 1.69752 |
| Softness | 7.7075 | 1.78353 |
| Nutrition | 7.6054 | 2.03247 |
| Certification from reliable institutions such Thai FDA | 7.5850 | 2.50436 |
| Product shelf life | 7.4966 | 2.06197 |
| Storing | 7.4354 | 1.86925 |
| Color and odor quality | 7.4354 | 1.96569 |
| Beef parts | 7.2177 | 2.06907 |
| Cooking varieties | 7.1429 | 1.85797 |
| Packaging | 7.0272 | 2.32893 |
| Product guarantee | 6.9932 | 2.51433 |
| Price | 6.9592 | 1.98583 |
| Production source | 6.9116 | 2.27832 |
| Marbling | 6.6327 | 2.17420 |
| Branding | 6.6259 | 2.35602 |

Table 3.2 (con't)

| Marketing mix items | Mean | Standard. Deviation |
|---|--------|---------------------|
| Buying information | 6.6190 | 2.18442 |
| Cooking service | 6.1224 | 2.40973 |
| Advice from specialists | 6.0068 | 2.11484 |
| Product for testing | 5.7823 | 2.47872 |
| Advertising/PR | 5.7483 | 2.44625 |
| Sales promotion, i.e., free samples, discount, etc. | 5.1905 | 2.81710 |
| Average | 6.98 | |

3.4 The influence of personal characteristics and marketing mix items towards buying quantity

Logistic model was applied to analyze the influence of 2 main independent variables towards buying quantity as a dependent variable. It consists of 11 groups of demographic variables, using 0 for one group, and 1 for the other. In addition, 23 marketing mix items were analyzed by using their average rating score. The logistic regression equation was shown as follows:

$$Y = f(\text{demo}_i, \text{marketing mix}_i, e_i) \quad (3.1)$$

Where:

Y = buying quantity (kg/time)

Y = 1, buying quantity up to 1 kg/time.

Y = 0, buying quantity more than 1 kg/time.

demo₁ = sex

demo₁ = 1 male

demo₁ = 0 female

demo₂ = Marital status

demo₂ = 1 Single

demo₂ = 0 Married/others

demo₃ = Age

demo₃ = 1 from 30 years of age

demo₃ = 0 Lower than 30 years of age

demo₄ = income/person/month

demo₄ = 1 20,000 baht and more

demo₄ = 0 less than 20,000 baht

demo₅ = Food expense (baht/day/person)

demo₆ = Education

demo₆ = 1 Bachelor degree and higher

demo₆ = 0 Lower than bachelor degree

demo₇ = Occupation: if students and no occupation = 1 and 0 when if not.

demo₈ = Occupation: if own employment = 1, and 0 when if not.

demo₉ = Occupation: if private employee = 1, and 0 when if not.

demo₇ = demo₈ = demo₉ = 0 Government service/state enterprise

demo₁₀ = Pattern of lifestyle: if prefer sporting = 1, and 0, when if not.

demo₁₁ = Pattern of lifestyle: if prefer working = 1, and 0, when if not.

demo₁₀ = demo₁₁ = 0 prefer staying at home

marketing mix₁ = beef parts (rating score)

marketing mix₂ = Color and odor quality (rating score)

marketing mix₃ = Softness (rating score)

marketing mix₄ = Nutrition (rating score)

marketing mix₅ = Safeness/cleanliness (rating score)

marketing mix₆ = Marbling (rating score)

marketing mix₇ = Production source (rating score)

marketing mix₈ = Price (rating score)

marketing mix₉ = Cooking varieties (rating score)

marketing mix₁₀ = Storing (rating score)

marketing mix₁₁ = Product shelf life (rating score)

marketing mix₁₂ = Branding (rating score)

marketing mix₁₃ = Packaging (rating score)

marketing mix₁₄ = Sale promotion, i.e., discount, free sample (rating score)

marketing mix₁₅ = Certification from reliable institution (rating score)

marketing mix₁₆ = Advertising/PR (rating score)

marketing mix₁₇ = Cleanliness of outlets (rating score)

marketing mix₁₈ = Convenience of outlets (rating score)

marketing mix₁₉ = Advice from specialists
(rating score)

marketing mix₂₀ = Buying information (rating score)

marketing mix₂₁ = Cooking service (rating score)

marketing mix₂₂ = Product testing (rating score)

marketing mix₂₃ = Product guarantee (rating score)

3.4.1 The influence of personal characteristics towards buying quantity

The Result showed that personal characteristic factor that influenced buying quantity was education. It showed significantly close relationship between each other. The higher education, the “buy more” of premium beef and products because of sufficient knowledge and right information of buying and purchasing the products.

3.4.2 The influence of marketing mix items towards buying quantity

The marketing mix items that influenced the buying quantity were only those related to product mix and promotion mix. On the contrary, there was no significantly relationship between price mix and distribution mix towards buying quantity.

According to product mix issue, the respondents who bought more tended to pay attention to the softness, marbling, and branding. One of the reasons was that this group bought beef products for being production materials. They had to be aware of softness and having marbling. Branding was another factor that made them secure on the product quality

As for the respondent group who “buy less” paid attention to the color and odor quality, production source, and cooking service. One of the reasons was that this group bought beef products for own consumption. They preferred the convenience to eat. They had selection method by seeing and smelling, whether it was fresh or not. In addition, reliable

source of production and convenient cooking service would make them decide to buy more.

According to the promotion mix issue, it was found that the respondent group who bought more paid attention to buying information from the specialist or expertise on how to buy quality beef products or how to cook food from some specific beef parts. It was because each beef parts had its own specification from some particular foods, while the others might suit for other menus, depending on cooking method such as boiling, grilling, frying, etc. On the contrary, the respondent group who bought less paid more attention to advertisement and public relation. It might be due to the lack of education or buying information. Knowledge and information, therefore, influenced their buying decision of this group.

Table 3.3 Personal characteristic and marketing mix items that were significantly influenced buying quantity of beef and products

| Item | B | S.E. | Exp(B) | Sig |
|------------------------|---------|--------|--------|----------|
| constant | 5.5546 | 2.0561 | 0.0039 | 0.0069* |
| Education | 1.1824 | 0.6624 | 3.2623 | 0.0743* |
| Color and odor quality | -0.5269 | 0.2304 | 0.5904 | 0.0222** |
| Softness | 0.7297 | 0.2731 | 2.0745 | 0.0075** |
| Marbling | 0.2988 | 0.1658 | 1.3482 | 0.0715* |
| Production source | -0.2321 | 0.1388 | 0.7929 | 0.0946* |
| Branding | 0.5927 | 0.2281 | 1.8089 | 0.0094** |
| Advertisement/PR | -0.2879 | 0.1739 | 0.7498 | 0.0977* |
| Buying information | 0.6288 | 0.1962 | 1.8753 | 0.0013** |
| Cooking service | -0.4812 | 0.1644 | 0.6181 | 0.0034** |

* at 90% level of significance

** at 95% level of significance

Negelkerke R² = 0.445 Percentage correct = 78.2

4. CONCLUSION AND RECOMMENDATION

Beef husbandry is the traditional and original occupation in Thai culture for a long time. As cattle have close relationship with Thai agriculture, the reduction of cattle might bring difficulties to the agricultural sector and the change in rural lifestyle inevitably. In order to encourage the production of cattle on supply side, the demand side should be promoted as well. Meantime, the FTA may bring more imported beef products to the country. Strengthening both domestic supply side and demand side should be encouraged. However, beef consumption was still low at 2.6 kg per capita per year on average. The surveyed result also showed low buying quantity at 1.34 kg/time, when they bought at “seldom” frequency.

It is expected that beef business might be increased if marketing mix strategies are properly undertaken. This paper indicated the strategies to attract both the “buy more” and the “buy less” group. Promotion to the higher education group may let them “buy more” of premium beef and products. Marketing strategies towards product mix and promotion mix elements for the person who “buy less” should place an attention to the color and odor quality, production source, and cooking service, while for the person who buy more, promotional activities relating softness, marbling, and branding are important.

ACKNOWLEDGEMENT

The writers would like to thank Thailand Research Fund for the sponsorship.

REFERENCES

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., and Tatham, R.L. 2006. *Multivariate Data Analysis*, 6th edition, Prentice Hall, pp. 269-378. (book)

Kotler, P. 1998. *Marketing Management*. 8th ed. New York:Prentice Hall. (book)

Lattin, J., Carroll, J.D., Green, P.E. 2003. *Analyzing Multivariate Data*, Thompson Learning, pp. 474-517. (book)

Nunnally, J. 1978. *Psychometric Theory*. New York:McGraw-Hill. (book)

Sethakul, J. and Y. Opaspattanakij. 2005. *Khunnapaab Nue Kho paitai Rabob Karn Palid lae Karn Talad Khong Prates Thai* (Beef Quality by Thailand's production and Marketing System). Bangkok: Superior Printing House.