

# Consumers' Purchasing Behavior Towards Fresh Meat in Davao City, Philippines

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## Abstract

Meat remains one of the most consumed commodities throughout the world, and it has long occupied a special place in the food intake of consumers. In the Philippines, meat volumes are predicted to increase because of the rapid increase in population and the growth of the food service sector in the country. Understanding the purchase behavior of consumers for meat products is essential in addressing inefficiency and market issues in the meat industry. This study aimed to assess the purchase behavior of consumers towards the three major meat products (i.e., beef, dressed chicken, and pork) that are consumed in Davao City, Philippines. The key respondents of this study were household decision makers of the meat purchase. The study specified a choice model with a binary or dichotomous dependent variable representing the consumer's final choice to be explained by a set of variables including socio-demographic and socio-economic factors. Results of the logistic regression model showed that beef purchase choice was significantly affected by average monthly income, working status, household size, number of employed household members, and number of children in the household. For chicken and pork purchase choice, area and number of employed household members were the factors significantly affecting consumer purchase decision. Following consumers' fresh meat purchase decision, meat sellers may take advantage of the higher demand on beef for income class AB and the pork and chicken demand for income classes C and DE.

**Keywords:** consumer behavior; Davao City; meat products; purchase choice; logistic regression

## Introduction

Meat is one of the most widely consumed agricultural commodities throughout the world. The world meat consumption has increased from 44 million tons in 1950 to 284 million tons in 2009. It is observed that whenever income rises, so does meat consumption (Early Policy Institute, 2011). A larger disposable income of households in developing countries would definitely shift their consumption of grains and legumes towards meat and animal proteins.

In developing countries, consumption of meat increased by 70 million metric tons from the beginning of the 1970s to the mid-1990s (Delgado, 2003). This increase of meat consumption in developing countries is actually three times as much as the increase in developed countries. The demand for meat in developing countries continues to rise as household income increases. Furthermore, this growing demand for meat has also been paralleled by increasing interest in food quality, safety, and nutritional aspects.

In the Philippines, meat is one of the most significant fresh products consumed. Meat volumes are predicted to grow in the country, putting great emphasis on reasons such as the rapid increase in population and the growth of the food service sector in the country (Australian Trade Commission, 2010). The Philippine retail sector for fresh and frozen meats is dominated by wet markets with 90% market share while supermarkets share is only 10% (Abuel-Ang, 2006). This might mean that consumers in the country are more concerned with meat product attributes, including price, than convenience attributes of the place of purchase.

In general, the demand outlook for meat products in the Philippines is optimistic due to the anticipated growth of the population and food service sector in the country. However, the meat industry faces problems of inefficiency. In particular, the poultry industry in the country still lags behind as the world's major poultry producers continue to promote their products through product innovations and aggressive marketing strategies (Chang, 2007). As for the swine and beef cattle sectors, imports of pork and beef also pose a threat to local suppliers as these products become cheaper and compete in the domestic market (NAFC, 2009).

One known approach to addressing this problem is through the study of consumer purchase behavior. As Perner (2010) puts it, understanding and knowing when, why, how, and where consumers purchase certain commodities is essential in evaluating the impacts that these actions or processes have on the consumer and on society. It is therefore important to assess the purchase behavior of consumers towards the major meat products. Moreover, there is no existing literature on the said topic following an empirical analysis of consumers' purchase behavior on meat products in any major city of the Philippines. This study aimed to evaluate the effects of different factors on

the decision of consumers to purchase meat products and to determine what meat product is most preferred by consumers from different income classes in Davao City, Philippines. The meat products considered were beef, chicken, and pork since these are the three major meat types consumed and produced in the country.

## Research Method

### Theoretical Model

In this study, the logistic regression procedure was used to analyze the effects of geographic, socio-demographic, and socio-economic factors on the purchase behavior of consumers for meat products. The model used in this study was adapted from a similar study on seafood products by Al-Mazrooei et al. (2003). This study specified a choice model with a binary or dichotomous dependent variable (Table 1) representing the consumer’s final choice to be explained by a set of variables. The logit model transforms the problem of predicting probabilities within a (0,1) interval to the problem of predicting the odds of an event occurring within the range of the entire real line (Al-Mazrooei et al., 2003). This model takes the following form:

$$\text{Choice} = f(\text{explanatory variables})$$

### Study Areas

All choice models shared the same explanatory variables (Table 2). The choice model for meat purchase behavior, including the set of explanatory variables, is indicated in the following equation.

$$\begin{aligned} \text{Choice} = & \alpha + \beta_1\text{AREA} + \beta_2\text{AGE} + \beta_3\text{GEN} + \beta_4\text{REL} \\ & + \beta_5\text{CVLSTAT} + \beta_6\text{EDU} + \beta_7\text{WRKSTAT} + \beta_8\text{HH} \\ & + \beta_9\text{EHH} + \beta_{10}\text{CHIL} + \beta_{11}\text{ELDR} + \beta_{12}\text{AMI} + e \end{aligned}$$

The factors included in the logistic regression model were either treated as continuous or dummy variables. Continuous variables include the consumer’s personal characteristics (i.e., age and educational attainment), the profile of

**Table 1.** Dependent variable names and coding values

| Meat purchase choice | Coding values |               |
|----------------------|---------------|---------------|
| Beef                 | 1 = Yes       | 0 = Otherwise |
| Chicken              | 1 = Yes       | 0 = Otherwise |
| Pork                 | 1 = Yes       | 0 = Otherwise |

**Table 2.** Independent variables coding and description

| Variables                                    | Code    | Description  |
|--|---------|--|
| Geographic factor                            |         |  |
| Area   | AREA    | 1 = Urban; 0 = Rural   |
| Socio-demographic and socio-economic factors |         |  |
| Age  | AGE     | Age of respondent in years                                     |
| Gender                                       | GEN     | 1 = Female; 0 = Male   |
| Religion                                     | REL     | 1 = Christian; 0 = Otherwise                                   |
| Civil status                                 | CVLSTAT | 1 = Married; 0 = Otherwise                                     |
| Education                                    | EDU     | Highest educational attainment (number of years studied)       |
| Working Status                               | WRKSTAT | 1 = Employed; 0 = Otherwise                                    |
| Household Size                               | HH      | Number of household members                                    |
| Number of employed household members         | EHH     | Number of employed household members                           |
| Number of children                           | CHIL    | Number of children in the household age 12 years old and below |
| Number of elders                             | ELDR    | Number of elders in the household age 60 years old and above   |
| Household income                             | AMI     | Average monthly income of the household (in PhP)               |

the household (i.e., household size, number of employed household members, and number of children and elders in the household), and the social class of the consumer (i.e., average monthly income in peso value). On the other hand, factors treated as dummy variables include the geographic location and the rest of the personal characteristics of consumers (i.e., gender, religion, civil status, and working status).

Other important factors included in the assessment of consumer buying behavior (i.e., preferences, values, perceptions, lifestyle, and attitudes of consumers) were presented and analyzed through cross tabulation analysis. Although personality is one of the important factors to be considered in studying consumer purchasing behavior, this was not included in the study since it is difficult to quantify or hold as constant. The same is true for the price variable since different consumers purchased meat at different places and at different times. However, the price effect was analyzed based on consumers' decision to increase meat consumption when its price would fall.

### **Sampling Procedure**

The study site is Davao City, Philippines, which has a total population of 1.4 million (NSO, 2007). Using Slovin's formula, a sample size of 156 respondents is needed. The margin of error was set at 8% with a confidence level of 92%. However, a total of 167 respondents, randomly selected from 74 *barangays* (villages) coming from different legislative and administrative units, were surveyed using a structured questionnaire.

Using stratified random sampling, the study's key respondents were those persons who made the decision in the household purchase or, in the absence of the household decision maker, any other household member of legal age who had sufficient knowledge about their meat purchases. The samples were well distributed across the city. *Barangays* that are highly populated were prioritized to obtain a population whose proportion is large enough relative to the total population of the city.

## **Results and Discussion**

### **Profile of Respondents**

It is important to clearly present and discuss the profile of the respondents when making consumer research studies since the analysis being inferred come from their sample population. Table 1 shows the socio-demographic and socio-economic profile of the respondents of this study. The profiling can provide a way of assessing the quality of data that are being analyzed. Good quality data should be able to take into account a well-distributed sample population in terms of the socio-demographic and socio-economic factors.

The various income groups should also be established since most of the analysis on consumer purchasing behavior is done across income groups. This study followed 3 classifications for income groups, namely, AB for high-income group, C for middle-income group, and DE for low-income group. In terms of income distribution, 96 (57.49%) respondents belong to income class DE. This class has an average monthly income of PhP15,000 and below. Income class C, whose average monthly income ranges from PhP15,001 to PhP30,000, comprised 30.54% of the total number of respondents. On the other hand, only 20 (11.98%) respondents belong to income class AB, whose average monthly income ranges from PhP30,001 and above (Aban, 2010).

### **Meat Purchase Choice**

Chicken is the most preferred meat product by the respondents in general, with pork the second most preferred and beef the least preferred (Table 2). Respondents belonging to class AB all purchase beef while majority purchase chicken and pork. On the other hand, 98% of the respondents belonging to class C purchase chicken meat while 94% of them purchase both beef and pork.

**Table 1.** Socio-economic and socio-demographic profile of respondents

| Profile                   | Frequency<br>( <i>n</i> = 167) | % to<br>total | Profile  | Frequency<br>( <i>n</i> = 167) | % to<br>total |
|---------------------------|--------------------------------|---------------|--|--------------------------------|---------------|
| Area                      |                                |               | Educational attainment (cont.)                               |                                |               |
| Urban                     | 106                            | 63.47         | College  |                                |               |
| Rural                     | 61                             | 36.53         | Undergraduate  | 63                             | 37.72         |
| Gender                    |                                |               | Graduate   | 29                             | 17.36         |
| Male                      | 42                             | 25.15         | Vocational school  | 4                              | 2.40          |
| Female                    | 125                            | 74.85         | Advanced studies   | 6                              | 3.59          |
| Religion                  |                                |               | Work status  |                                |               |
| Roman Catholic            | 142                            | 85.03         | Employed   | 32                             | 19.16         |
| Muslim                    | 2                              | 1.20          | Unemployed   | 39                             | 23.35         |
| Other Christian<br>groups | 23                             | 13.77         | Self-employed  | 66                             | 39.52         |
| Civil status              |                                |               | Household size   |                                |               |
| Married                   | 105                            | 62.87         | ≤3   | 23                             | 13.77         |
| Single                    | 46                             | 27.54         | 4  | 32                             | 19.16         |
| Widowed                   | 11                             | 6.59          | 5  | 36                             | 21.56         |
| Separated                 | 1                              | 0.60          | 6  | 31                             | 18.56         |
| Cohabiting                | 4                              | 2.40          | 7  | 15                             | 8.98          |
| Age (years)               |                                |               | 8  | 14                             | 8.38          |
| 18 to 25                  | 43                             | 25.75         | 9  | 10                             | 5.99          |
| 26 to 33                  | 24                             | 14.37         | ≥10  | 6                              | 3.60          |
| 34 to 41                  | 18                             | 10.78         | Number of children in household                              |                                |               |
| 42 to 49                  | 41                             | 24.55         | 0  | 52                             | 31.14         |
| 50 to 57                  | 23                             | 13.77         | 1  | 54                             | 32.33         |
| 58 to 60                  | 12                             | 7.19          | 2  | 36                             | 21.56         |
| >60                       | 6                              | 3.59          | 3  | 14                             | 8.38          |
| Educational attainment    |                                |               | ≥4   | 9                              | 6.59          |
| Elementary                |                                |               | Income class (average monthly income in<br>Philippine peso)* |                                |               |
| Undergraduate             | 1                              | 0.60          | Class AB<br>(30,001 and above)                               | 20                             | 11.98         |
| Graduate                  | 9                              | 5.39          | Class C<br>(15,001–30,000)                                   | 51                             | 30.54         |
| High school               |                                |               | Class DE<br>(15,000 and below)                               | 96                             | 57.48         |
| Undergraduate             | 19                             | 11.38         |  |                                |               |
| Graduate                  | 36                             | 21.56         |  |                                |               |

\* Adapted from Aban et al. (2009)

**Table 2.** Number of respondents purchasing meat products with percent to total, by income class

| Income class                  | Beef      | Chicken   | Pork      |
|-------------------------------|-----------|-----------|-----------|
| AB ( <i>n</i> = 20)           | 20 (100%) | 19 (95%)  | 18 (90%)  |
| C ( <i>n</i> = 51)            | 48 (94%)  | 50 (98%)  | 48 (94%)  |
| DE ( <i>n</i> = 96)           | 77 (80%)  | 91 (95%)  | 90 (94%)  |
| All classes ( <i>n</i> = 167) | 145 (87%) | 160 (96%) | 156 (93%) |

While the previous two income classes have relatively high buying percentage on beef, respondents belonging to class DE generated a lower result. About 80% of these respondents purchase beef. Majority of them purchase chicken and pork.

There are several reasons consumers purchase meat products. The most common reason is household consumption. Respondents with children noted that meat purchased is for their children’s lunch at school. Others, on the other hand, purchase meat products for use in their food businesses, such as eateries and restaurants, or for retailing.

Dressed chicken and pork are the most commonly purchased meat products. Those who do not purchase chicken and pork cite health concerns as a reason, considering that many are allergic to chicken and both meat products contain high levels of cholesterol. On the other hand, beef has lower demand primarily due to high prices relative to chicken and pork. Also, the long duration needed to prepare beef dishes, not to mention the high gas consumption necessary to cook beef, had discouraged respondents from purchasing beef. This might also be the reason why only 80% of class DE purchase beef.

**Place of Purchase for Meat Products**

Most of the respondents belonging to classes C and DE (61% and 60%, respectively) purchase meat at public markets. For those belonging in class AB, 35% of the respondents purchase beef, 39% purchase pork, and 21% purchase dressed chicken in public markets.

Although many Filipino consumers still shop at wet markets for fresh vegetables and meat, many have shifted to shopping at supermarkets for reasons of convenience (Romo and Digal, 2009). Supermarkets ranked second among the choices for place of purchase for meat products. The respondents under class AB were mostly patronizing supermarkets in terms of beef (35%), pork (22%) and chicken (43%) purchase. Digal (2001) noted that supermarkets accounted for 68.2% of the total value-added of the food, beverage, and tobacco industry, compared to the combined share of market stalls, *sari-sari* (mom-and-pop) stores, and grocery stores with only 31.8%.

Other places of purchase noted include the *talipapa* (small community market), dressing plants, and meat processing plants while others purchase from their neighbors. Some of the respondents also purchase meat products from different sources. This means that consumers do not strictly buy from one place of purchase but from different retail outlets depending on ease and convenience.

In terms of the factors affecting place of purchase, both cleanliness of area and freshness of products were deemed extremely important by respondents from all classes. This is the reason public markets and supermarkets are on top in terms of the place of purchase indicated by the respondents. For those belonging to class AB, both factors garnered a mean score of 4.95. For those belonging to classes C and DE, cleanliness of area garnered a mean score of 4.95 and freshness of product garnered mean scores of 4.78 and 4.82, respectively. Good display of products also received relatively high ratings, earning mean scores of 4.50, 4.59, and 4.72, respectively, from respondents belonging to the different income classes.

### **Frequency and Amount of Purchase for Meat Products**

Data shows that 30% and 23% of the respondents from classes AB and C usually purchase 1 to 3 kg of beef per week while 18% from class DE purchase the same amount but only twice a month. Clearly, income classes AB and C spend more on beef purchase than income class DE and that income class DE buys beef less frequently compared to the latter two classes. Due to the limited disposable income of households belonging to income class DE, they consume beef less by purchasing less amount or less frequently. This will also save transaction cost of going to public markets and supermarkets every once in a while.

For dressed chicken, 28% and 27% of the respondents from classes C and DE usually purchase 1 to 3 kg per week while 32% and 47% from class AB purchase the same amount once a week and 2 to 4 times a week, respectively. Class AB did not indicate any chicken purchase of less than 1 kg while 14% of class C and 12% of class DE purchase less than a kilogram of chicken once a week.

For pork, 38% of class AB, 46% of class C, and 28% of class DE purchase 1 to 3 kg per week. Similar to chicken, a total of 25% of class DE also buy less than a kilogram of pork for different time periods. Variations among the frequency and amount of purchase for meat products are quite transparent across different income groups. This means that the income of households serves as a limiting factor in terms of the amount of meat that a household can purchase and on the frequency of their purchase since buying meat has underlying transportation or transaction costs.



## Meat Purchase Behavior

*Attitude.* Majority of the respondents from classes AB (56%), C (58%), and DE (61%) usually choose specific parts or cuts of beef, dressed chicken, and pork that are readily available at stalls. They buy the meat parts that are commonly sold in the market (e.g., soup bones for beef, wings and drumsticks for chicken, and belly for pork) or buy meat products that are precut into different forms (e.g., cubes, ground, fillet, etc.). Some of these respondents, particularly those buying from supermarkets and meat shops, choose to buy meat products that are already packed. On the other hand, the rest of the respondents who buy meat products at public markets and *talipapa* usually choose specific parts of meat products and let the butcher or the meat vendor slice, cut, or grind it for them depending on the kind of dish it will be used in. These consumers want to lessen the time it takes to prepare meat dishes. A study on household demand for chicken done by Yu and Hailu (2010) revealed that convenience-oriented consumers, such as those under the high- and middle-income groups, might spend more on most convenience chicken products.

Moreover, some respondents ensure that the meat products they are buying are of good quality by picking the products themselves and checking its color, texture, and smell. Conversely, other respondents just let the meat vendor pick the meat products for them. This kind of attitude is apparently based on trust while the former is based more on quality. Public market vendors usually provide their loyal customers, popularly known as *suki* in Filipino culture, with good quality products and even discounts on prices.

*Meat attributes rating.* Using a 5-point Likert scale (1 – not at all important; 5 – extremely important), the respondents were asked to rate the importance of 10 attributes of meat products. For beef purchase, mean scores for leanness (less fat) were found significantly different at 5% level of significance between classes C and DE, which means that leanness in beef is more important for the former than for the latter, with corresponding means of 4.24 and 3.48, respectively. On the other hand, respondents from classes AB, C, and DE rated color as the most important attribute, with mean scores at 4.65, 4.33, and 3.71, respectively. This suggests that consumers see physical appearance as highly important when it comes to buying beef, particularly the color, which serves as an indicator of freshness.

Classes AB and DE also rated color as the most important meat attribute for chicken and pork. As for class C, it was smell and tenderness that were rated the highest, with mean scores of 4.63 and 4.39, respectively. However, there are no significant differences among the importance ratings of the different income classes when it comes to buying chicken and pork.

*Nutritional considerations.* Using a 5-point Likert scale (1 – never considered; 5 – always considered), the respondents were asked to rate how frequently they consider nutritional factors in buying meat products. These nutritional factors were divided into two categories: undesirable and desirable nutritional factors. In terms of the undesirable nutritional factors, the amount of fat present in meat garnered the highest consideration from classes AB and DE, receiving mean scores of 3.65 and 3.07, respectively, while cholesterol level was highly rated for class C.

On the other hand, in terms of the desirable nutritional factors, all classes sometimes considered the amount of protein and number of vitamins and minerals present in the meat products as indicated by a lower average mean score. This implies that consumers focus more on the undesirable nutritional factors of meat rather than the desirable nutritional factors.

*Increase in income.* Majority of the respondents (56.87%) stated that they would not buy or buy more beef if their income increased. For chicken and pork, an almost equal number of respondents answered affirmatively and negatively. Those who answered negatively reasoned that there are still other household expenditures (i.e., payment of different bills) that need to be prioritized. In general, the respondents from all classes (the highest percentage belonging to class AB) stated that they would not buy more meat products even if their income increases.

*Decrease in price.* Majority of the respondents said that they would not buy more meat even if its price would decrease. Specifically, 54.49% of class AB and 50.89% for classes C and DE said that they would not increase their purchase of meat. Respondents cited inadequate storage space and concern for health as basis for choosing to answer negatively. Respondents are aware of the health risks involved in eating meat products. Becker et al. (2000) revealed that the price of meat has a minor importance in assessing the eating quality as well as the safety of these meat products as consumers do not directly equate higher prices to higher quality of products.

### **Empirical Results of the Logistic Regression Model**

Three logistic regression models were run to analyze the purchase decision of consumers towards three meat products, namely, beef, dressed chicken, and pork. Specifically, each meat type was modeled using geographic, socio-demographic, and socio-economic factors as explanatory variables. Statistical tests were performed to check the validity and fit of each model.

For beef and dressed chicken, the logistic regression model were found to be valid and fit as the *p*-values of Likelihood-ratio test and the Hosmer and Lemeshow test satisfied the conditions used in assessing the validity and fit of the model. The prediction rates of the models for beef and dressed chicken are 88.6% and 95.8%, respectively. However, for pork, the model was found to be invalid as suggested by the Likelihood-ratio test, but no variables were dropped as these are considered important in the study of consumer purchase behavior. Also, the model was set as it is so as not to create bias against the other two models. Nevertheless, the data used in the model was still deemed fit as the *p*-value of the Hosmer and Lemeshow test shows. The prediction rate of the model for pork is 93.4% (Table 3).

In checking the probability that consumers will purchase fresh meat *i* (where *i* = beef, chicken, pork), the following formula was used:

$$P_i = \frac{1}{1 + e^{-(\alpha + \beta x_j)}}$$

The values of the coefficients from all the predictors used in the model were substituted in formula, and the median values of these predictors based from data were also used to get the actual probability.

*Beef.* Working status, household size, number of employed household members, number of children, and average monthly income were all found to significantly affect the decision of consumers to purchase beef. Among these factors, average monthly income generated the highest value for Wald statistic, and it is also highly significant at 99% level of confidence. Its coefficient, valued at 0.00013, implies that an increase of one unit in income will increase the log-odds in favor of purchasing beef by 0.00013. Next, the consumer’s working status has significant effect on beef purchase choice. Like the variable income, this factor is highly significant at 99% level of confidence, with Wald statistic value of 7.139 and a coefficient value of 1.727. This means that the log-odds in favor of purchasing beef will increase by 1.727.

Meanwhile, household size, number of children, and number of employed household members were significant at 95% and 90% level of confidence, respectively. However, while one unit increase in household size increases the log-odds in favor of purchasing beef by 0.455, the case for the number of children and number of employed household members was different as these factors have an opposite effect to consumer beef purchase choice. A similar study conducted by Verbeke et al. (1999) also revealed that the presence of young children was found to increase the probability of reducing fresh meat consumption. Accounting for all the socio-demographic and socio-economic factor, the probability that a consumer will purchase beef is 71.89%.

**Table 3.** Summary of empirical results for the three choice models

| Validity tests                                     | Beef          | Chicken       | Pork          |
|--|---------------|---------------|---------------|
| Prediction rate (%)                                | 88.6          | 95.8          | 93.4          |
| Likelihood-ratio test (chi-square) <sup>a</sup>    | 29.685 (.003) | 22.612 (.031) | 17.139 (.144) |
| Hosmer and Lemeshow test (chi-square) <sup>a</sup> | 7.321 (.502)  | 2.638 (.955)  | 6.548 (.586)  |
| Independent Variables                              |               |               |               |
| Area   | .026          | 4.313**       | .575          |
| Age  | 1.338         | .000          | .622          |
| Gender   | .081          | .037          | .880          |
| Religion   | .276          | .351          | 5.790**       |
| Civil status                                       | .067          | 1.503         | 2.553         |
| Education  | .971          | .024          | .111          |
| Working status                                     | 7.139***      | .661          | .913          |
| Household size                                     | 3.999**       | .311          | 1.620         |
| Employed household members                         | 3.581*        | 3.904**       | .008          |
| Number of children in the household                | 3.608*        | .023          | .069          |
| Number of elders in the household                  | 2.639         | .004          | .645          |
| Average monthly income                             | 8.483***      | 1.331         | .484          |
| Probability (%)                                    | 71.89         | 99.18         | 95.24         |

**Note:** <sup>a</sup> *P*-values are given inside parentheses.

*Dressed chicken.* Area and number of employed household members are the only variables that significantly affect the decision of consumer to purchase dressed chicken. Both variables are significant at 95% level of confidence. Meanwhile, area tends to have a higher effect on purchase choice than that of the number of employed household members since it has a higher value for Wald statistic. The value of the coefficient for area indicates that the log-odds in favor of purchasing dressed chicken will increase by 2.781, particularly if the consumer lives in an urban area. Moreover, there will be an increase in the likelihood of purchasing dressed chicken by 1.731 given there is an increase in one unit on the number of employed household members. Accounting for all the socio-demographic and socio-economic factor, the probability that a consumer will purchase dressed chicken is 99.18%.

*Pork.* While the other models have two or more significant variables, the model on pork purchase choice has only one significant variable. The predictor religion was found to significantly affect the decision of consumer to purchase pork at 95% level of confidence, with a coefficient value of 1.8. This means that the log-odds ratio in favor of purchasing pork will increase by 1.8 if the consumer's religion is Roman Catholic. A similar study by CIRAD (2010) on meat consumption patterns in India indicated that no respondent had preferred beef or pork due to religious sanctions. The number of respondents who do not belong to Roman Catholic, however, is relatively small. Muslim groups in particular are prohibited from eating pork due to their beliefs. Accounting for the entire socio-demographic and socio-economic factor, the probability that a consumer will purchase pork is 95.24%.

## Conclusions and Recommendations

Considering all the factors included in the logistic regression model, the actual probability that a consumer will purchase dressed chicken and pork is very high at 99.18% and 95.24%, respectively. However, the probability of purchasing beef is much lower at 71.89%, which is expected because of its high price. Given the high prediction rates for meat purchase, the meat industry can certainly take advantage of the demand, especially for chicken and pork.

In terms of the place of purchase, results revealed that majority of the respondents, especially those belonging to income classes C and DE, purchase meat at public markets, but most consumers have issues pertaining to cleanliness and safety. As such, there should be areas for improvement in places where consumers regularly buy meat products. In particular, those retailers selling meat products in public markets should improve the cleanliness of the area as it is one of the attributes rated to be important in the place of

purchase. Given the fact that majority of people still patronize public markets when buying meat products, addressing cleanliness issues will be very helpful in attracting more customers and making public markets competitive in terms of food retail.

Nutritional consideration was not at all that important for most consumers as indicated by the low ratings on its importance in meat purchases. However, in terms of the meat attributes, the color of the meat had the highest importance rating since consumers believed that freshness can be identified through the color of the meat. By improving consumer awareness on determinants of meat freshness and good quality, food safety is ensured for all consumers.

Lastly, given that consumers have high preference for choice cuts, meat sellers or those planning to enter into the meat business can focus on selling choice cuts that fit regular-sized lunch boxes. They have high potentials to succeed in selling these products due to the preference of consumers, particularly those with children in the household, across different income classes. Meat sellers may also take advantage of the higher demand on beef for income class AB and the pork and chicken demand for income classes C and DE.

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