Consumption Patterns of Urban Household: Case in Sarimas Regency, Sukamiskin, Bandung

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Abstract. Red chili was a strategic food commodity. Demand for red chili tends to increase, while production and prices fluctuate so as to affect the inflation rate was quite significant. Information about red chili consumer behavior can be used for product planning and price control. The purpose of this research was to know (1) the characteristics of red chili consumers, (2) the consumption pattern of red chili on household, and (3) the correlation between consumer characteristic and red chili consumption pattern. The research method was descriptive survey. Data collection with structured interviews and observation. Data analysis with cross tabulation and chi-square correlation test. Respondents were 69 housewives. The results showed all respondents used red chili for daily cooking. Average family income was 3-5 million/month. The pattern of red chili consumption was relatively stable on ordinary days and increased on feast days. There was a significant correlation between the number of families and the spicy taste with the consumption of red chili.

1. Introduction
Red chili is a food of commodity strategy’s. Red chili has a major impact on the dynamics of the national economy, in which this commodity included in the rank of the national affecting inflation in Indonesia. Based on the data of [1] in February 2014, red chili contributed to Indonesia’s economy amounted to 0.10% of total inflation of 6.75%.

Demand for red chili tends to increase, while production and prices fluctuate affecting the inflation rate significantly. Volatility in the price of chili that has occur in Indonesia, could not be separated from the factors of production and demand. Some things that affect the production and the request is the pattern of consumption, production, distribution, and government policies. Based on the consumption pattern Indonesia, most of the Indonesian people (70%) consumed chili fresh while the rest (30%) was consumed for industrial needs. This is because almost all Indonesian cuisine using fresh chilies as a spice. Few who use the processed chili such as chili sauce, instant sauce or chili powder.

| Table 1. Red Chili Consumption of Indonesian Households Year 2008-2012 (in tons) |
|-----------------|--------|--------|--------|--------|--------|
| Chili type      | 2008   | 2009   | 2010   | 2011   | 2012   |
| Red Chili pepper| 15.486 | 15.226 | 15.278 | 14.965 | 16.529 |
| Cayenne pepper  | 14.444 | 12.879 | 12.984 | 12.097 | 14.026 |

Source: National Social Economic Survey 2008-2012

Big chili has consumed more than small chili as popular as spice in cooking. Chili has a flavor that is not spicy and has an attractive color, so that it can make the display bright and cuisine to be able to increase appetite. The need for big chili has been increasing during the years due to the increasing
number of people, variety of dishes, hotel, restaurant, cafe, thriving culinary and lifestyle of parties or celebrations are often held urban communities.

The consumption analysis of red chili on households is expected to represent consumer behavior as a whole red chili. Households have different cultural background (customs), social and economic status. The practice, education, and income are variables that can affect the formation of consumer attitudes and behavior. Information about consumer behavior of red pepper can be used for producing plant planning and price controls. This study aims to: 1) identify the characteristics of consumers of red pepper on the urban households; 2) analyze the consumption pattern of red chili in urban households; 3) analyze the relationship between consumer characteristics and consumption patterns on a large red chili urban households.

2. Methodology
The research method was quantitative descriptive survey, because the study aims to determine the relationship between variables and emphasizes the analysis on numeric data (numbers). Descriptive method was a method in researching the status of a group of people, an object, a system of thought or a class of events in the present. The object of research is the consumption pattern of red chili in urban households. Research was conducted in Sarimas Regency, Sukamiskin Village, Arcamanik Subdistrict, Bandung City. The selection of research area was because of the area has been a residential prototype ethnically diverse region of origin, in which red chili preferences also vary.

This section describes some concepts and the measurement of the variables to be studied:

a) Factors affecting household consumption patterns: revenue (Resource Economics); motivation; attitude; taste; the number of household members; points of purchase

b) Factors that influence the consumption patterns of individual characteristics: age; gender; education; skills; origin ethnic

c) Consumption pattern: total consumption; frequency of consumption

The data consist of primary and secondary data. Primary data were obtained from interviews of respondents using closed and structured questionnaire. Questions in the questionnaire, among other household characteristics, frequency, volume purchasing and consumption patterns of red pepper. Secondary data were obtained from the literature, research reports, the data related agencies, and BPS Bandung. Respondents were interviewed were housewives with consideration that household food purchases are usually done the mother represents the sense of the whole family.

1. Sarimas Regency household population were of 279 families
2. The samples by means of random sampling. The number of samples was determined by Vincent Gaspertz (1991), can be taken 5 percent; 10 percent; or 25 percent of the total population, that is 69 families.

Data consumer characteristics, the red chili purchasing decisions and the factors that influence purchasing decisions, were analyzed using descriptive statistics (crosstab) or tabulation frequency. The frequency of the data was calculated as a percentage as follows:

\[ P = \frac{f_i}{\sum f_i} \times 100\% \quad (1) \]

where:

- \( P \): The percentage of respondents who chose a particular category
- \( f_i \): The number of respondents who chose a particular category
- \( \sum f_i \): Total answers

To test the hypothesis of comparative two independent sample means testing the significance of differences in the value of the two unpaired samples. Nonparametric statistics were used to test the hypothesis of comparative two independent samples when data are nominal is Chi Square.
Chi Square general formula used is as follows: \[ \chi^2 = \sum_{i=1}^{k} \sum_{j=1}^{b} \frac{(f_{ij} - f_{hij})^2}{f_{hij}} \] [2]

where:
- \( f_{ij} \): The number of observations for cases that fall within the i-th row j-th column.
- \( f_{hij} \): The number of cases expected under H0 to be categorized in the i-th row j-th column.

Chi Square Table = Chi Square \[0.05; (k-1)(b-1)\]

Testing Criteria:
- Reject Ho if the Chi Square test > Chi Square table, received in another case
- Reject Ho if significance < \( \alpha \), Received in another case

Measurement variable attitudes, opinions and perceptions of a person's social phenomenon, using a Likert scale is ordinal scale of 1, 2, 3, 4, 5. The greater the value, the better or positive means a person's perception [3]

3. Results and Discussion

3.1. Characteristics of Respondents
Respondent characteristics include age, education, income, cooking skills, and regional origin. The average age of respondents is 34-42 years, and consumed chili without health violated. Average education respondents graduated from high school and skilled enough to cook. The average family income of 3-5 million per month, more than the standard minimum wage of Bandung 3.2 million rupiah per month. The price increase does not affect the amount of the purchase chili for a sizable family income. Chili price increase occurred because production is reduced due to the rainy season, high demand during Ramadhan, Idhul Fitri, Idhul Adha, Christmas and New Year. Motivation of respondents buy chili, especially to increase appetite and seasoning in Indonesian cuisine.

Number of family members is on average 3-5 people. More and more members of the family, the more consumption of chili. Respondents generally family tastes like spicy, especially for sauce. An assortment of local origin, most of Sundanese who liked the menu chili sauce and vegetable mix.

| Table 2. The relationship between motivation purchase and the amount of consumption of red chili |
|-------------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Motivations for Purchase                        | Total consumption|                  |                  |                  | \( \chi^2 \) | P(5%) |
|                                                 | \(< 1 \text{ Kg} \) | \( 1 - 2 \text{ Kg} \) | \( > 2 \text{ Kg} \) | Total |                  |                  |
| To find out the benefits of red chili            | 3 | 4.35 | 8 | 11.59 | 2 | 2.90 | 13 | 18.84 |
| Red chili prices affordable                      | 13 | 18.84 | 3 | 4.35 | 6 | 8.70 | 22 | 31.88 |
| Bought as offered traders                        | 2 | 2.90 | 0 | 0.00 | 1 | 1.45 | 3 | 4.35 |
| Prices were falling                              | 4 | 5.80 | 2 | 2.90 | 3 | 4.35 | 9 | 13.04 |
| Red chili can increase appetite                  | 5 | 7.25 | 14 | 20.29 | 3 | 4.35 | 22 | 31.88 |
| Total                                           | 27 | 39.13 | 27 | 39.13 | 15 | 21.74 | 69 | 100 |

3.2. Relationship between motivations for purchase and a total consumption of Red Chili
In the study of consumer behavior, motivation is driven by the need [4]. Consumer motivation determines consumption patterns, the amount and frequency of purchase. If the motivation to buy for necessities, consumers tend to buy in bulk and routine every time. Although pepper prices are high, consumers will continue to buy even in small amounts. The dinner menu is available in the household who frequently Indonesia is a condiment. The respondents were predominantly motivated respondents buy red chili because it can increase appetite and consume as much as 1-2 kg in a week that as many
as 14 people (20%), followed by respondents buy red chili reasons affordable prices by consuming red chili <1 kg a week as many as 13 people (19%).

Based on statistical analysis obtained from Chi Square value of 17.743 with a P-Value of 0.023 where the value is smaller than $\alpha$ (0.023 > 0.05), in which $H_0$ is rejected, thus it can be concluded there is a relationship between motivation purchase and the amount of consumption of red chili, with a confidence level of 95%.

3.3. Relationship between number of family members and consumption of Red Chili
According to Berg (1986) in [5], the number of family members affects food and non-food consumption patterns. If income is low, then a great family food and nutrition potentially is less four times greater than small families.

Table 3. Relationship between number of family members by total consumption

| Number of Family Members | Total Consumption | Total | $\chi^2$ | $P(5\%)$ |
|--------------------------|-------------------|-------|---------|----------|
|                          | < 1 Kg | 1 - 2 Kg | > 2 Kg | f | % | f | % | f | % | f | % |
| < 2 People               | 2 | 2.90 | 4 | 5.80 | 0 | 0.00 | 6 | 8.70 |
| 2 - 5 People             | 25 | 36.23 | 23 | 33.33 | 13 | 18.84 | 61 | 88.41 |
| > 5 People               | 0 | 0.00 | 0 | 0.00 | 2 | 2.90 | 2 | 2.90 |
| Total                    | 27 | 39.13 | 27 | 39.13 | 15 | 21.74 | 69 | 100 |

Most of the families have 2-5 members and consuming red chili <1 kg in a week. Based on statistical analysis obtained from Chi Square value of 9.809 with a P-Value of 0.044 where the value is smaller than $\alpha$ (0.044 <0.05), in which $H_0$ is rejected, thus it can be concluded that the degree of 95% of the data shows that there is a relationship between the number of family members and the amount of consumption of red chili consisting of 2-5 people pretty much consume more chili. Based on the results of many studies more dominant family members consume lots of chili compared with family members who bit or the number of family members who are more relative.

With regard to characteristics mostly within a family, there are 2-5 people who consumed chili less than 1 kg. Generally, women are able to take into account the needs of red chili in daily to be taken into account when the chili will be depleted to meet the needs. Each family member has a number of different consumption.

Table 4. Relationship between taste and frequency of red chili purchase

| Taste          | Frequency of Purchase | Total | $\chi^2$ | $P(0.05)$ |
|----------------|-----------------------|-------|---------|----------|
|                | > 5 Times | 3 - 5 Times | < 3 Times | Total | % | % | % | % | % | % |
| Like Spicy     | 51 | 73.91 | 2 | 2.90 | 8 | 11.59 | 61 | 88.41 |
| Less Like it Spicy | 0 | 0.00 | 1 | 1.45 | 3 | 4.35 | 4 | 5.80 |
| Dislike Spicy  | 1 | 1.45 | 0 | 0.00 | 3 | 4.35 | 4 | 5.80 |
| Total          | 52 | 75.36 | 3 | 4.35 | 14 | 20.29 | 69 | 100 |

3.4. Relationship between taste and frequency of red chili purchase
A consumer tastes are respondents to the red chili can be connecting with the frequency of purchase of red pepper. According to [3] appetite will encourage consumers to buy more and more often. Respondents housewife tastes can be assumed to be equal to the tastes of the whole family.
The respondents who most often bought the chili is the respondents who liked spicy and bought as many red chili more than 5 times in a week, Chi Square correlation value of 22.519 with a P-Value of 0.000 where the value is smaller than \(\alpha\) (0.000 <0.05) \(H_0\) is rejected, thus it can be concluded that there is a relationship between the frequency of purchase and taste of red chili, with a confidence level of 95%.

The above data shows that consumers do not like spicy and less like spicy possessed the same total percentage of 11.6 percent. Consumers who liked spicy chili were affecting the intensity purchase as much as 88.4 percent. Chili demand increased because there was excessive consumption patterns with a high purchase frequency reached more than 5 times a week. This means that there is a relationship between the frequency of purchase and spicy taste of chili. The chili is known to increase appetite and therefore consumers buy more chili to meet the increasing frequency of purchase chili.

3.5. Relationship between Income and Frequency of Red Chili Purchase
Family income is the most decisive factor of the quantity and quality of food consumed. The low income causes the purchasing power of the food to be low and the family food consumption will be reduced [5]

| Income          | Purchase Frequency | Total |
|-----------------|--------------------|-------|
|                 | > 5 Times | 3 - 5 Times | < 3 Times | f | % f | % f | % f | % | \(\chi^2\) | P(0.05) |
| < 3 Million     | 9          | 13.04      | 0        | 0.00 | 2 | 2.90 | 11 | 15.94 |
| 3 - 5 Million   | 42         | 60.87      | 3        | 4.35 | 2 | 2.90 | 47 | 68.12 |
| > 5 Million     | 1          | 1.45       | 0        | 0.00 | 10 | 14.49 | 11 | 15.94 |
| Total           | 52         | 75.36      | 3        | 4.35 | 14 | 20.29 | 69 | 100  |

The respondents Consumption Patterns of Urban Household: Case in Sarimas Regency, Sukamiskin, Bandung most often bought chili is that family with income of 3-5 million per month and bought red chili more than 5 times in a week. Almost every day these respondents were shopping chili. Based on statistical analysis obtained Chi Square value of 42.115 with a P-Value of 0.000 where the value is smaller than \(\alpha\) (0.00 <0.05) \(H_0\) is rejected, thus it can be concluded that the 95% confidence level data indicate that there is a relationship between income and red chili purchase frequency. This means the family income related to the frequency of chili purchase. With sufficient income, the family will be able to meet the needs of food, including chili though expensive. These results are based on the value \(\chi^2\) count smaller than \(\chi^2\) table and the level of significance acquired greater significance.

4. Conclusion
The average income of red chili consumer was 3-5 million per month, with age of 34-42 years old, high school educational background, skilled cooking, like spicy, and ethnic Sundanese. Red chili consumption patterns include the amount of consumption of less than 1 kg per week and frequency purchase of more than 5 times per week. While the chili price raised, the amount and purchase frequency was not reduced.

There is a significant relationship between family income, purchase motivation, and the number of family members and the red chili consumption patterns. The reason for the purchase of red chili was for seasoning and increase appetite. The price increase does not affect the pattern of consumption of red chili. The consumption pattern includes the number and frequency of purchase. Membership many families red chili tend to consume in large quantities.
Acknowledgment
This publication is part of the research output of Participatory Plant Breeding Red Chili Unpad. Acknowledgements to DRPM, KemenRistek-Dikti which has provided funding of research through National Strategic Research (STRANAS) Competitive Grant scheme for fiscal year 2017.

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