

# **HOUSEHOLD AND BUSSINESS CONSUMERS PERCEPTIONS TOWARD FROZEN BEEF**

(Case Studies in Jakarta and Bogor)

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# Background

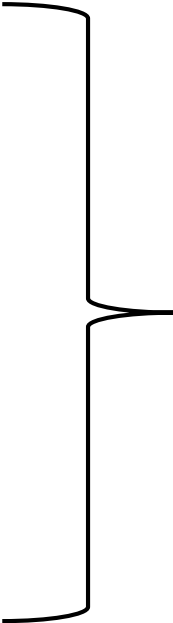
- Beef has become a more important component of the Indonesian diet in the last few years.
- However, per capita beef consumption in Indonesia is still low, even towards ASEAN countries beef consumption. Therefore, Indonesian government made some policies to increase beef consumption into minimum 20 kg beef/capita/year by increasing beef supply with encouraging domestic beef production (especially beef from NTT), and importing frozen beef.
- The beef demand in Indonesia is higher than the domestic beef supply. Therefore, the government made policy to import frozen beef from other countries for supporting the high beef demand in Indonesia.
- Indonesian society in general prefers “warm beef” (freshly slaughtered beef). Warm beef, which is sold and marketed in room temperature, will be very vulnerable and has a very short shelf life.
- There is also another problem in beef consumption pattern of the most Indonesian society, that is the low public awareness in health problem, especially the dangerous of consuming the warm beef.
- Therefore an analysis of consumer perception and behavior towards frozen beef is very useful for determining market segmentation and establishing the right marketing strategy for frozen beef.

# Objectives

- This research project was designed to examine the household and bussiness consumers perceptions in Jakarta and Bogor toward the purchase and consumption of frozen beef.
- This research project was expected to clarify which factors that contribute the consumers preference, consumption, and behavior in consuming warm and frozen beef.

# Sample of Respondents

## 1. Jakarta

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- a. 90 business consumers of frozen beef:
- 240 restaurants
  - 8 caterings
  - 6 hotels
  - 11 supermarkets
  - 7 frozen beef suppliers
  - 18 meat shops in traditional market

## 2. Bogor

- b. 200 household consumers (women over 18 years old, who purchase frozen beef or warm beef. In addition, it also depends on the willingness of respondents to be interviewed. Determination of the number of samples of household consumers was done by the Slovin method)

# Methodology

- The research project was started in March 2018 until September 2018 was conducted in Jakarta and Bogor.
- Data which was processed in the research project are both primary data and secondary data. The primary data was collected using questionnaire as a tool and guidance in conducting interviews. The questionnaire was consisted of open and closed questions. The secondary data was collected from the BPS of Jakarta and Bogor, *Dinas* of Trade and Industry of Jakarta and Bogor, and other literatures.
- The questionnaire was divided into 3 parts, 1<sup>st</sup> part about characteristic of respondents (age, level of education, income, number of family, etc), 2<sup>nd</sup> part about purchasing behavior, and the last part about respondents perceptions toward frozen beef.

# Data analysis

- The data analysis used in this research project was descriptive analysis. The descriptive analysis used to describe perceptions, consumer characteristics, and purchasing decision processes. The process of purchasing decisions is based on Kotler (2005), namely the needs recognition, information retrieval, alternatives evaluation, purchasing decisions, and post-purchasing behavior.
- The data was presented as frequency, mean, percentage, and average score.
- The relationship between perceptions and characteristics of business consumers was analyzed using Rank Spearman correlation test (Silalahi, 2012).

# Results and Discussion

# Characteristics of Frozen Beef Consumers

## A. Characteristics of household consumers

- The characteristics of household consumers in this research project was consisted of **age, education, occupation, income, and number of family members.**
- Research on consumer characteristics was needed to analyze the general description of household consumers characteristics in Bogor and Jakarta.
- The number of respondents were 200 people consumers who had bought both frozen beef or warm beef.

No	Characteristics	Variable	Frequency	Percentage (%)
1.	Age	< 20	1	0.5
		21-30	24	12.0
		31-40	53	26.5
		41-50	44	22.0
		>50	78	39.0
	Total		200	100.0
2.	Educational Status	SD	2	1.0
		SMP	10	5.0
		SMA/Sederajat	63	31.5
		Diploma	32	16.0
		Bachelor	74	37.0
		Post Graduate	9	4.5
	Total		200	100.0
3.	Occupation	Housewife	81	40.5
		Employee	49	24.5
		government employees	50	25.0
		entrepreneur	10	5.0
		Total		200
4	Income	< 3 500 000	39	19.5
		3 500 000-7 000 000	86	43.0
		7 000 000-20 000 000	54	27.0
		>20 000 000	21	10.5
	Total		200	100.0
5	Number of Family Members	2	26	13.0
		3-4	108	54.0
		5-6	63	30.5
		7	3	1.5
	Total		200	100.0

**Age:** Most of beef consumers are above 50 years old. The older consumers, the higher ability to pay more expensive food, in this case is beef.

**Educational status:** Most household consumers have a high level of education, namely bachelor. The higher education of consumers, the higher awareness of the nutritional value of a food, in this case beef.

**Occupation:** 40.5% of respondents are housewives. The high number of respondents who are housewives could be related to the high percentage of respondents with age above 50 years old and has retired.

**Income:** 43% of respondents have a monthly income above minimum wage so they have the ability to buy beef.

**Number of Family Members:** 54% of respondents have small family members which are consisted of 3-4 people.

# Characteristics of Frozen Beef Consumers

## B. Characteristics of bussiness consumers

Bussiness consumers were divided into 2 categories:

- Business consumers who sell frozen raw beef; and
- Business consumers who sell processed beef.

Characteristics	Frequency	Percentage (%)
<b>Type of Bussiness</b>		
Restaurant	40	44.44
Catering	8	8.89
Hotel	6	6.67
Supermarket	11	12.22
Supplier	7	7.78
Traditional market	18	20.00
Total	90	100.00
<b>Income per year (Rp)</b>		
≤ 300 000 000	29	32.22
300 000 001-2 500 000 000	34	37.78
2 500 000 001-50 000 000 000	27	30.00
Total	90	100.00
<b>Consumption of beef per month (kg)</b>		
<10	6	6.67
11-50	16	17.78
51-200	24	26.67
201-500	14	15.56
501-1 000	7	7.78
>1 000	23	25.56
Total	90	100.00
<b>Period time of bussiness (year)</b>		
< 5	35	38.89
5-10	23	25.56
10-20	25	27.78
> 20	7	7.78
Total	90	100.00

- Most of respondents who buy and process frozen beef are **Restaurant.**
- Most of respondents (37.78%) are **small business**
- Most of respondents consumed beef in the range 51-200 kg/year.
- Most of respondents (38.89%), who are restaurants, have period time of business **less than 5 years.** Only 7.78% respondents who has time period of business more than 20 years.

# Consumers Behavior in Purchasing Frozen Beef

Consumer behavior is a behavior that shows the process of consumers in finding, buying, consuming, evaluating, and spending products and services that they expect to satisfy their needs (Sumarwan, 2014).

In this research project, consumer behavior consist of the reasons in consuming beef, consumer information source, consideration attribute in consuming beef, the person in family who responsible in making decision to consume beef, and the place to buy beef.

# Purchasing Behavior of Household Consumers

## 1. The reasons for consuming frozen beef

The Reasons for Consuming Frozen Beef	Frequency	Percentage (%)
Good in Nutrition Content	145	72.5
Price	5	2.5
Good in taste	46	23.0
Other	4	2.0
Total	200	100.0

## 2. Consumer information source

Information Source	Frequency	Percentage (%)
Consumers experiences	146	73.0
Family	29	14.5
Friend	10	5.0
Newsprint and television	15	7.5
Total	100	100.0

# Purchasing Behavior of Household Consumers

## 3. Consideration attributes in consuming frozen beef

Attributes	Frequency	Percentage (%)
Nutrition	84	21.48
Microbial contents	57	14.58
Tenderness	37	9.46
Flavour	77	19.69
Appearance	65	16.62
Colour	71	18.16
Total	391*	100.00

## 4. The person in family who responsible in making decision to consume beef

Responsible Agent	Frequency	Percentage (%)
Mother	177	88.5
The oldest children	8	4.0
Servant	15	7.5
Total	200	100.0

## 5. The place to buy beef

Producer	Frequency	Percentage (%)
Traditional market	120	60.0
Supermarket	79	39.5
Slaughterhouse	1	0.5
Total	200	100.0

# Purchasing Behavior of Household Consumers

## 6. The quantity of beef that they bought

Beef Quantity	Frequency	Percentage (%)
<1 kg	57	28.5
1 kg	59	29.5
2 kg	79	39.5
3 kg	5	2.5
Total	200	100.0

## 7. Frequency for buying beef

Purchasing Frequency	Frequency	Percentage (%)
Everyday	41	20.5
Once a week	70	35.0
Once a month	58	29.0
One a quarter	16	8.0
Every Religious Holiday	31	15.5
Total	200	100.0

## 8. Respondents opinions about the effect of the freezing process

Respondents Opinions about The Effect of The Freezing Process	Frequency	Percentage (%)
Positif	67	33.5
Negatif	83	41.5
Tidak berpengaruh	50	25.0
Total	200	100.0

# Purchasing Behavior of Business Consumers

## 1. The reasons for buying frozen beef

The Reasons for Consuming Frozen Beef	Frequency	Percentage (%)
Availability	30	21.74
Affordable Price	26	18.84
Storage	34	24.64
Quality	18	13.04
Consumer Demand	30	21.74
Total	138 *	100.00

## 2. Consumer information source

Information Source	Frequency	Percentage (%)
Consumer Experience	81	66.94
Producer Promotion	26	21.49
The Others Recommendation	14	11.57
Total	121*	100.00

## 3. Consideration attributes in consuming frozen beef

Attributes	Frequency	Percentage (%)
Quality	68	46.58
Price	33	22.60
Grading	27	18.49
Others	18	12.33
Total	146*	100.00

# Purchasing Behavior of Business Consumers

## 4. The place to buy beef

Producer	Frequency	Percentage (%)
Traditional market	32	34.04
Supermarket	4	4.25
Slaughterhouse	50	53.19
Import	4	4.25
Slaughterhouse	4	4.25
<b>Total</b>	94*	100.00

## 5. Frequency for buying beef

Purchasing Frequency	Frequency	Percentage (%)
Everyday	52	57.78
Every 2-4 day	14	15.56
Every 5-7 day	14	15.56
Every 2 week	7	7.78
One in a month	1	1.11
Irregular	2	2.22
<b>Total</b>	90	100.00

## 6. Respondents decisions in reconsuming frozen beef

Respondents Decisions	Frequency	Percentage (%)
Reconsuming	81	90
Not Reconsuming	9	10
<b>Total</b>	90	100

# Consumer's Perception of Frozen Beef

## 1. Perception of household consumer towards frozen beef

No	Aspects	Sub Aspects	Variables	Average Score
1.	Nutrition	Nutrition	Frozen beef has good nutritional content	2.30
		Health	Frozen beef is good to be consumed	2.26
Average aspect score				2.28
2.	Product Quality	Physical Quality	Frozen beef has good quality	2.24
			Frozen beef has soft texture	2.20
			Frozen beef has good taste	2.30
			Frozen beef has typical fragrance of meat	2.23
		Cleanliness	Frozen beef has attractive colour	2.13
			Frozen beef is a clean and hygiene meat	2.61
Average aspect score				2.29
3.	Product Handling		Frozen beef is not easy to rot	2.60
			Frozen beef could be stored for a long period	2.39
Average aspect score				2.50
4.	Price		Frozen beef has economies price	2.40
			Average aspect score	
Average Final score				2.37

The result shows that consumer perceptions of frozen beef meat from several aspects, such as nutrition and health values, product quality, product handling, and prices have low scores (average final score 2.37) and categorized as not good enough perceptions.

## 2. Perception of Business consumer toward frozen beef

No	Aspects	Sub-Aspects	Variables	Average Score		
1.	Nutrition	Nutrition	Frozen beef has good nutrition	2.89		
			Freezing process does not reduce nutrition	2.49		
		Health	Frozen beef is good to be consumed	3.56		
			Consuming frozen beef is not dangerous for health	3.37		
Average aspect score				3.08		
2.	Product Quality	Physical Quality	Frozen beef has good quality	2.96		
			Freezing process does not affect beef quality	2.76		
			Frozen beef has good marbling level	2.94		
			Frozen beef has good texture	2.98		
			Frozen beef is tender after cooked	2.98		
			Frozen beef does not much shrinking after cooked	2.51		
			Frozen beef has less fat	2.59		
		Organoleptic	Frozen beef has good taste	2.84		
			Frozen beef has typical fragrance of meat	2.96		
			Frozen beef appears good and attractive	2.78		
		Cleanliness	Frozen beef is a clean and hygiene meat	3.10		
			Frozen beef is more hygiene	3.06		
		Average aspect score				2.87
		3.	Product Handling		Frozen beef is not easy to rot	3.31
Frozen beef is easier to store and handle	2.92					
Average aspect score				3.12		
4.	Religion		Frozen beef is easy to be halal proved	3.22		
			Frozen beef comes from healthy animal	3.22		
Average aspect score				3.22		
5.	Price		Frozen beef is more affordable	3.27		
			Average aspect score			
Average final score				<b>3.12</b>		

**Based on all aspects, it was found that the final score of perception was 3.12 which indicates that the perception of business consumers on frozen beef in Bogor and Jakarta was good/excellent**

# Perception Relationship and Characteristics of Consumers of Frozen Beef

## 1. Perception Relationships and Characteristics of Household Consumers

Based on the five characteristics, such as age, education, occupation, income and number of family members, the results showed a very weak relationship with perceptions of frozen beef and insignificant.

## 2. Perception Relationships and Characteristics of Business Consumers

The business scale has a significant relationship with consumer perceptions ( $P < 0.05$ ). This shows that the greater scale of business, the better perception of frozen beef.

The amount of beef consumption per month has a significant relationship ( $P < 0.05$ ) and in line with the level of consumer perceptions of frozen beef. Increasing consumption indicates that respondents have good perceptions. Consumers who often buy frozen beef will have more knowledges and experiences related to frozen beef.

# The Differences of Household Consumers and Business Consumers

Attributes	The Differences	
	Household Consumers	Business Consumers
Perception	<ul style="list-style-type: none"> <li>• Have a <b>not good enough perceptions</b> of frozen beef.</li> <li>• This is because household consumers are the final consumers who want to get the best quality beef for themselves and their family members.</li> <li>• Household consumers are <b>not profit oriented</b>, so they prefer to buy fresh (warm) beef.</li> <li>• In addition, household consumers are consumers who end up eating processed beef so that they are more <b>sensitive to taste</b>.</li> </ul>	<ul style="list-style-type: none"> <li>- Have a <b>good perception</b> of frozen beef because <b>the price is cheaper and continuous availability on the market</b>.</li> <li>- Business consumers are <b>profit oriented</b>, so they are looking for cheaper raw materials.</li> <li>- Business consumers assume that frozen beef has only a <b>slight change in quality and taste</b> if good in thawing process.</li> <li>- Business consumers are not consumers who directly eat processed beef, so they are <b>not too sensitive to the taste of the beef</b> because it will be covered by the spices usage.</li> </ul>
Behavior	<ul style="list-style-type: none"> <li>• The most of household consumers are <b>reluctant to buy frozen beef</b>, but they buy it in the form of fresh (warm) beef, then freeze it to store and to be cooked at other times.</li> <li>• <b>Purchase in small quantities</b> with a frequency of <b>once a week purchases</b>. The party who is responsible for purchasing beef in the family is the <b>mother</b>. Purchases are made directly on <b>traditional markets with cash payments</b>.</li> </ul>	<ul style="list-style-type: none"> <li>- Business consumers <b>buy beef in frozen pieces</b> because the price is cheaper, guaranteed quality, and easy to store.</li> <li>- The party who responsible for purchasing beef is the <b>business owner and manager</b>. Purchases are made by <b>direct method and booking by cash or tempo payment systems</b>.</li> </ul>

# Conclusions

1. Household consumers in the Bogor and DKI Jakarta regions have a not good enough perception of frozen beef.
2. Business consumers in the Bogor and DKI Jakarta regions have a good perception of frozen beef.

# Recommendations

1. Counseling about frozen beef is needed both for household consumers and business consumers, so that the quality of beef could be maintained and increases the consumers trusts in buying frozen beef.
2. Further research is needed on the physical, chemical, and microbiological qualities of frozen beef on the market in order to be comparable to consumer perceptions.

**THANK YOU  
FOR YOUR ATTENTION**