



# ANALYSIS ON THE IMPACT OF BEEF PRICE FLUCATION ON CONSUMERS' PURCHASING INTENTION IN HULUNBUIR-CHINA

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<p><b>Received:</b> 7<sup>th</sup> December 2021 <b>Accepted:</b> 6<sup>th</sup> January 2022 <b>Published:</b> 13<sup>th</sup> February 2022</p>	<p>Since reform and opening up, China's economy has developed rapidly and the income level of its population has been rising. The composition of food consumption has grown steadily with rising income levels, reflecting the increasing importance of meat in the daily consumption of the population. Beef is in high demand because of its high protein, high energy and low fat content, which fits many residents' modern concept of a healthy diet. Beef husbandry occupies an important position in Inner Mongolia. If beef prices change dramatically, it will not only affect local beef consumption and People's Daily life, but also further affect the dynamics of beef prices in China. In this regard, it is necessary to study the impact of hulun Buir beef price fluctuation on consumer purchasing behavior. With the increase of income level, hulun Buir's food consumption has also grown steadily. Beef meets consumers' demand for a healthy diet, high in protein, calories and fat, and the demand for beef is increasing among consumers. Urbanization provides a great opportunity for the development of beef consumption market, especially with the gradual strengthening of consumers' purchasing level, which generates a high demand for beef. Beef consumption in Hulunbuir is higher than the national average, but not enough to stimulate the industry. Therefore, it is necessary to systematically study the beef consumption of Hulun Buir population with appropriate economic theories. Research on beef consumption provides practical guidance for producers and traders, and has theoretical implications for the government in terms of industrial development, industrial regulation and sustainable consumption. The research methods of this paper mainly include theoretical analysis and empirical analysis. This document is applicable to hulunbuir residents. Through questionnaire survey, we find out and understand consumers' consumption demands and consumption characteristics related to beef, and analyze and summarize the impact of beef price increase on consumers' purchase through gender, age, education background, race, monthly family income and family population.</p>
<b>Keywords:</b>	Beef price fluctuations; Consumer willingness; influencing factors

## INTRODUCTION

Since the reform and opening up, China's economy has developed rapidly and the income level of the population has continued to rise. With the increase in income levels, the structure of food consumption has also grown steadily, which also reflects the increasing importance of meat in the daily consumption of the population. Because of its high protein, high energy, and low fat content, beef meets many residents' modern concepts about healthy eating, so there is a great demand for beef. Beef consumption increased from 405.1 tons in 1995 to 833 tons in 2019, and per capita beef consumption increased from 3.34 kg to 5.45 kg during the same period. The number of tons of beef in 1996 to 6.67 million tons in 2019. Because the supply of beef does not match the needs of consumers, we must import most of the beef every year. China accounts for 7.9% of the world's beef imports and is the fourth largest beef importer in the world. Due to the long-term imbalance between supply and demand, the price of beef in China remains high. Beef husbandry occupies an important position in important regions. If the price of beef changes dramatically, it will not only affect local beef consumption and people's daily life, but also further affect the dynamics of beef prices in China. In this regard, it is necessary to study the impact of Hulunbuir beef price fluctuations on consumer buying behavior.

### Study on beef consumer preference

Smith (2014) conducted a follow-up study on the eating habits of different races in Brazil and concluded that region, gender and income are the determinants of beef consumption. De-vism (2015) holds the same view: different consumer demographic characteristics, consumption habits, attitudes and preferences will affect the purchase of beef. Koujingya (2016) concluded that through the analysis of the choice of beef consumption location and influencing factors of urban residents in Yanji City, consumers are more willing to consume beef in supermarkets. Morales (2013) concluded that different meat cutting, beef classification grade or beef appearance are important factors affecting beef consumption due to different consumer preferences. Mmccarthy (2003) attitude and subjective norms affect people's willingness to eat beef, but this attitude is more important.

### Study on the influence of price on beef consumption

Mokamura (1983) analyzed the impact of rising beef prices on Japanese consumers through the assumption of U.S. soybean embargo, and concluded that rising beef prices would lead to a decline in beef consumption and an increase in the consumption of other alternatives; FS beef brand (2015) analyzed the four main influencing factors affecting beef consumption and concluded that price is the main factor affecting beef consumption, which also holds the same view. Mjuhasz (2016) conducted a study on the beef consumption of Canadian residents and found that the rise in beef prices for 12 consecutive months led to the reduction of beef consumption by 36% of residents; However, bschnettler (2014) came to a different conclusion. Through the analysis of 800 consumers in Chile, he concluded that 52.3% of residents like high price beef. High price beef products will enhance consumers' confidence in product consumption. The place of production and price of beef are the main reasons affecting residents' beef consumption. Meat girgentiv (2018) investigated beef consumers in 16 meat stores in Piemonte, northwest Italy, and concluded that price is the most important factor affecting beef consumers' purchase in Piemonte. Marsh (2011) compared with the impact of price and expenditure and other possible factors that may affect demand, the impact of food safety may be very small.

## RESEARCH METHODS

This document is applicable to hulunbuir residents, through a questionnaire survey to find out and understand the consumer demand and consumption characteristics related to beef, and through empirical analysis summarized hulunbuir beef price increase on consumers' purchase impact. And aiming at: 1. What is the future trend of beef price? 2. What is the impact of beef price fluctuation? 3. What is the demand of beef consumption? 4. What are the factors affecting the expenditure of beef purchase by households? Four questions were investigated and analyzed.

## STUDY POPULATION

This survey was conducted for the benefit of hulunbuir city and meets the following requirements: (1) persons over 18 years of age and in principle not over 70 years of age. (2) The work and life of the respondents in Hulunbuir (mainly to eliminate inaccurate data caused by differences in consumption behaviors of tourists in different regions). The survey was based on a random distribution of questionnaires completed in the field.

This survey is based on the survey and a complete questionnaire questionnaire, for consumers who buy or want to buy beef random sampling survey. The questionnaires were received locally and the data obtained were reliable. A total of 130 questionnaires were sent out, and 121 questionnaires were recovered with effective recovery of 93.1%. SPSS software was used for further descriptive statistical analysis to identify variables such as age, literacy rate, monthly purchase cost, etc., and SPSS cross-table was used for analysis and validation cards. In crosstab analysis, since mutable rows and columns are not usually equally distant, card validation is commonly used.

The research methods of this paper mainly include theoretical analysis and empirical analysis. Theoretical analysis is the foundation, and only a deep understanding of classical theory can be valuable empirical analysis. At the same time, the correctness of theoretical analysis also affects the results of empirical analysis. Specific research methods are as follows:

## DATA ANALYSIS RESULT

### Analysis of basic characteristics of consumers

#### Gender characteristics

Among the respondents, there are fewer women than men. For beef, 56 are women, accounting for 46.3%, and 65 are men, accounting for 53.7%. Beef The study found that men are more likely to buy meat from cattle, mainly because people believe that men in the family will choose beef and have a more convenient machine to buy large amounts of meat from cattle and sheep.

#### Age distribution

Among the population surveyed, young people and middle-aged people account for a large proportion. 27.3% of beef are in the 20-30 age group; beef 37.2%-31-40 years old; beef 24%-41 to 50 years old; beef 9.1%-51-60 years old; beef 60 years and older The proportion of users in this segment is 7.4%. (Figure 4-1)

### Education level

Consumers in Hulunbuir have a relatively high level of education. In the survey, 69.4% of students have a middle school, university degree or above. Among the beef, 10 people, or 8.3%, have received elementary education; the beef has secondary education, 27, accounting for 22.3%; the beef, 47 people have received secondary education, accounting for 38.8%; the beef, higher education level 37 people, accounting for 30.6%. (Figure 4-2)

### Income characteristics

The consumption level in Hulunbuir is relatively high, and the income level is also higher than that in Hulunbuir. The surveyed households can receive up to RMB 5,000 to 10,000 per month, accounting for 57.9% of the total sample; 2 persons with monthly household income of more than RMB 2,000, accounting for the total 1.7% of the income; 19 people with a monthly family income of 2,000 yuan and 5,000 yuan, accounting for 15.7% of the total number of samples; a family monthly income of 10,000 to 20,000 yuan. Therefore, the proportion of people with lower and higher incomes is relatively small.

## ANALYSIS OF BUYING BEHAVIOR

### Resident beef consumption characteristics

According to research, this population mainly buys beef in winter and holidays. In winter, there are 37 beef consumers, accounting for 30.6% of the total sample, mainly because beef meat has warm additions, preferably in winter, and also due to the demographic characteristics of Hulunbuir, spring holidays are the number of Muslims in winter ; During the holiday, 68 people (accounting for 56.2% of the total beef samples) should be related to the long time needed to cook beef and consumers have more free time during the holiday. Choose only one person in spring, that is 0.8% of the total, prefer to buy meat.

#### Purchase frequency

Only 1.6% of the population (mainly eating beef) bought beef within 4 days and 30 days, of which 67.7% (within 7 days), 38.7% (within 10 days) and 11.3% (within 5 and 6 days).

### Consumer expenditure and price selection

According to this study, consumption of beef accounts for 14.7% of food costs. Beef 3.3% of households spend less than 100 yuan per month on meat, 41.3% of households spend 100-300 yuan per month on meat, and 40.5% of households spend 300-5-00 yuan per month. The consumer price of beef fluctuates within the range of 56 yuan/kg of beef 60 yuan/kg, 61 yuan/kg, 52.1% beef 55 beef 60 yuan/kg, 61 yuan/kg.

### Packaging preference

According to the preference for beef packaging, the most popular buyer is beef, which is currently processed in simplified packaging. Currently, 91 consumers choose simplified packaging, accounting for 75.2% of the total number of samples. There are 20 consumers who choose plastic box packaging, accounting for 16.5% of the total number of samples. This part of consumers said that the plastic box of beef box beef cut into various parts of the lamb is good, and it can already be purchased by price, weight, and Convenience... There were 8 unpackaged consumers, which accounted for 6.6% of the total number of samples, partly due to the large amount of beef purchased at the slaughterhouse. The options in the box are 2 people, accounting for 1.7% of the total sample. This part of consumers said that buying gift boxes is usually not a purchase.

## ANALYSIS OF BEEF CONSUMPTION

### Hulunbuir residents' willingness to consume beef

According to the survey, 81.8% of residents think beef is very expensive, 13.2% of residents think beef is acceptable, and no one thinks beef is cheap. According to residents, the reasonable average price of beef is 49.2 yuan/kg, and the average price of beef is 52.3 yuan/kg. Beef 66.9% think that beef price increase will affect their lives by less than 20%, while 28.9% think beef price increase will affect their lives by 20% and 40%. Despite this, 66.1% of the population said they could even buy meat. The main factor that residents buy is eating habits, and the rest are personal preferences, nutritional needs, healthy medical services and prices.

### Analysis of beef consumption expectations of residents in Hulunbuir

According to the survey, 82% of consumers believe that beef cannot be substituted, and only 18% of consumers believe that beef can be substituted. The investigation determined the constant prices of beef, chicken, duck and other meat products; the prices of beef cattle and chicken remained unchanged, and the prices of duck and other meat products decreased; If the price of beef does not change, the price of other meat products (such as chicken, duck, etc.) will increase by 10% relative to lamb, and the consumption of lamb will increase by 90%. Cattle will remain unchanged. And if the price of beef does not change, the price of other meat products (such as chicken, duck, etc.) will be reduced by 19% relative to lamb, while the consumption of lamb will be reduced by 81% and remain unchanged.

After the price of beef rises, 34% of consumers tend to reduce their purchases, while 66% of consumers tend to continue buying. According to the survey, 20% of consumers predict that beef prices will rise, and 44% of consumers predict that beef prices will fall. 66.9% of beef consumers believe that the increase in beef prices will affect their lives by less than 20%, and 28.9% of consumers believe that the increase in beef prices will affect their lives by 20% and 40%, and at the level of 1,7%. The increase in beef prices has an impact on their lives by 40% and 60%, while 2.5% believe that the increase in beef prices has an impact on their lives by 60% and 80%.

**ANALYSIS RESULTS**

Based on the above methods and variable selection, this article first uses the SPSS cross-tab analysis and verification card to analyze the impact of variables on the cattle and beef food in Huronbell.

Table Variable analysis

Influencing factors	Observation of test statistics		df		Progressive Sig.( bilateral)	
	Pearson	Likelihood ratio	Pearson	Likelihood ratio	Pearson Beef Card	Likelihood ratio
	Cards	Ratio	Cards	Ratio	Cards	Ratio
Gender	6.054 a	7.617	4	4	0.195	0.107
Age	a 29.884	33.113	16	16	0.019	0.007
Nationalities	8.556 a	9.845	4	4	0.073	0.043
Level of educated	a 23.465	23.759	12	12	0.024	0.022
Monthly household income	38.501 a	32.783	16	16	0.001	0.008
Number of households	a 21.263	19.955	12	12	0.047	0.068
Beef prices	a 27.261	24.42	16	16	0.039	0.081
Beef prices	a 25.127	27.727	16	16	0.068	0.034
Purchase frequency	a 17.907	21.405	12	12	0.119	0.045
Place of purchase	a 31.894	31.893	16	16	0.01	0.01
Packaging	a 11.873	12.243	12	12	0.203	0.129

Based on the empirical analysis of SPSS2.0 software, It can be seen from Table that the F value of the entire model is 6.42 (n beef = beef 0000), indicating that the regression model is very prominent. The adjusted total value is 0715, which shows that the proportion of the linear regression equation that can be explained by the spontaneous variable group is 71.5%, which is more convincing. Among the variables, the price of beef, the level of education, the monthly household income and the place of purchase have a significant impact on the monthly livestock and beef consumption of the population.

Table Impact Analysis

Independent variables	Coefficient	Standard deviation	T value
Beef prices	-10.696**	4.124	-2.594
Beef prices	9.643***	3.485	2.767
Age	-10.85	18.194	-0.596
Nationalities	-52.777	41.652	-1.267
Level of education	-43.416*	25.908	-1.676
Monthly household income	151.210***	32.503	4.652
Number of households	-5.578	27.611	-0.202

Place of purchase	■66.988**	27.059	-2.476
Constant term	340.454***	125.065	2.722
Obs	121	F value	6.42
P value	0	R-squared beef	Adj 0.715

According to the survey, 40.5% of households eat beef, 28.9% of households eat mutton, and the remaining 30.6% of households eat chicken, fish, meat, etc. Therefore, the residents of Hulunbuir prefer beef.

The following factors that affect the monthly consumption cost of beef and meat in Huronbel:

Beef First, the price of beef. The simulation results show that compared with beef and cattle, beef monthly consumer expenditure is negative, beef prices have risen significantly, and monthly beef and livestock expenditures tend to decline. This can be explained by reduced consumption and whether people prefer beef cattle. Consumption of beef in the face of rising beef prices; if it remains unchanged, the total cost of beef will decrease accordingly.

Second, the price of beef fluctuates. The simulation results show that the price of beef and beef is positive, which indicates that the price of beef and beef is rising, and the monthly consumption of beef and beef by consumers increases. This can be explained by the increase in beef prices. Residents still like to eat beef. Residents Buying beef in the usual way, the purchasing power of beef changes very little, which leads to an overall increase in the average monthly consumption of beef.

Third, education level. The modeling results show that it has a negative impact on the level of education, that is, the higher the level of education, the less consumers spend on cattle and beef, and the less they spend on beef, while educated consumers understand less about meat and beef. Less. This is due to long-term consumption of meat products. If the cholesterol content in the blood is too high, it will usually cause blood vessel blockage. This is the main cause of diseases such as high blood pressure, cardiovascular disease and plant food. It does not have harmful effects on the cardiovascular system. Substance, so vegetarians reduce the occurrence of vascular diseases. Well-educated consumers will continue to take care of sound knowledge, reasonable nutrition, reduce the consumption of meat (such as sheep and sheep), and increase the consumption of vegetarian food and grains. Therefore, the higher the literacy level of consumers, the higher they are in beef. The less cost.

Fourth, the monthly income of the family. The simulation results show that monthly household income has a significant impact, indicating that the higher the household income level, the higher the monthly consumption expenditure for cattle and beef. On the other hand, the household's monthly consumption expenditure for high-income beef exceeds the household's monthly consumption expenditure.

Beef is the fifth place to buy. Analysis of the model shows that the place of purchase is negative and compelling. The price of beef sold by slaughterhouses, wholesale markets, agricultural products trading markets, supermarkets, and cattle and beef companies gradually increases with the increase in turnover.

## CONCLUSION

### 1. Beef prices show an upward trend

An analysis of the changes in cattle and cotton beef prices from 2010 to 2019 shows that beef prices have increased steadily and are cyclical. The price of beef beef has increased more than pork and beef. Beef is seasonal. Beef prices in Hulunbuir are not seasonal. Beef is determined by population structure, eating habits, geographical conditions, etc.

### 2. Beef prices are greatly affected by production costs

The year-end stock of cattle and sheep in Hulunbuir and the year-end beef production are generally on the rise. The supply of beef is affected by the previous period's beef production, the previous period's beef price, and the cost of beef production. Beef prices are greatly affected by production costs.

### 3. Beef consumption presents rigid demand

According to the meat consumption structure of the residents of Hulunbuir, the meat consumption of the population of Hulunbuir is mainly a multiple of the consumption of lamb, cattle and chicken. 81.8% of residents think lamb is very expensive. The reasonable average price of beef is 49.2 yuan/kg, and the average price of beef is 52.3 yuan/kg. 66.9% of the residents of beef believe that the increase in beef prices will affect their lives by less than 20%. Despite this, 66.1% of the population said they could even buy meat. 84.30% of beef consumers believe that other meat products cannot replace beef, which is one of the reasons why beef prices continue to rise in Hulunbuir.

### 4. Outstanding beef supply and demand spear shops

Due to factors such as population structure, dietary habits and the increase in the number of immigrants from abroad, the demand for meat and beef in Hulumbel is still uneven. Beef In the next 20 years, the price of cattle and beef will continue to rise, and the output of beef meat may not meet the needs of the population's households.

### 5. The monthly beef consumption expenditure of households is affected by many factors

Some factors that may affect consumer spending as variables to determine the monthly household consumption expenditure of beef and sheep, depending on the beef price, beef price, education level, household monthly income, location procurement and other factors.

### REFERENCES

1. Chen Tian, Xiao Haifeng. Research on China's mutton consumption status and influencing factors[J]. Chinese Journal of Animal Husbandry, 2016, 52(12): 15-20.
2. Ding Lina. Research on China's Lamb Market Supply and Demand Status and Future Trends [D]. China Agricultural University, 2014.
3. Fan Jing. Research on beef consumption behavior and influencing factors of urban and rural residents in Jilin Province [D]. Jilin Agricultural University, 2017.
4. Gao Qi. Analysis of the characteristics and influencing factors of meat consumption of urban and rural residents in my country [D]. Chinese Academy of Agricultural Sciences, 2016.
5. Geng Zhongzhong, Xiao Haifeng. An Empirical Study on the Impact of Increasing Lamb Prices on Residents' Lamb Consumption—Based on the Analysis of Provincial Panel Data from 2000 to 2011 [J]. Agricultural Economics and Management, 2015(01): 92-98.
6. Jiang Bing. Research on the characteristics and influencing factors of pork production and consumption in my country [D]. Nanjing Agricultural University, 2011.
7. Jia Jianwei. Comparative study on the cost and benefit of different beef cattle breeding models in my country[D]. Inner Mongolia Agricultural University, 2010.
8. Kang Haiqi, Xiao Haifeng. The economic effects of the recent increase in the price of mutton in my country[J]. Journal of China Agricultural University, 2020, 25(04):154-161.
9. Ke Jianjie. "SOLF": The Four Elements of Project Business Analyst Success[J]. Project Management Review, 2016(04): 16-19.
10. Li Jian. Research on China's beef consumption characteristics and its influencing factors[D]. Nanjing Agricultural University, 2006.
11. Li Li. Research on beef consumption behavior of residents in Hebei Province [D]. Hebei Agricultural University, 2019.
12. Li Li, Zhao Huifeng, Hao Yan. Research on the influencing factors of residents' beef consumption behavior: A survey of 1277 consumers in Hebei Province as an example [J]. Journal of Hebei Agricultural University (Social Science Edition), 2019, 21(03) :14-18.
13. Lu Hanggao, Zhang Feiyan, Jiang Sujian, Hu Jingjing. Analysis of the influencing factors of consumption expectations in the context of national policies to promote consumption and reduce taxes and fees[J]. Tianjin Social Insurance, 2019(01): 67-68+72
14. Lu Pin. Analysis of the characteristics and influencing factors of beef consumption in urban and rural residents in my country[J]. Chinese Food and Nutrition, 2012, 18(09): 45-49.
15. Lu Pin. Analysis of the Supply and Demand of Beef in my country [D]. Chinese Academy of Agricultural Sciences, 2010.
16. Mao Yanwei, Zhang Yimin, Zhu Lixian, Liang Rongrong, Dong Pengcheng, Luo Xin. The supply and demand status of beef and mutton in China and consumers' attitude and quality demand for beef and mutton[J]. Food and Fermentation Industry, 2016, 42(02): 244 -251.
17. Niu Donglai, Xing Weiwei, Chen Lianyi. Poultry consumption characteristics and influencing factors of urban and rural residents in my country[J]. China National Poultry, 2018, 40(22): 1-5.
18. Tong Lei. Jinjiang Metro Cash & Transport Co., Ltd. Simmental Cattle Fattening Farm Project Business Plan [D]. Donghua University, 2016.
19. Wu Qiuye, Xiao Haifeng. Analysis of the basic characteristics and influencing factors of mutton consumption of Chinese urban and rural residents[J]. Agricultural Outlook, 2013, 9(08): 71-75.
20. Xin Chenxu. Analyzing Mongolian elements in packaging design—Taking Inner Mongolia as an example[J]. Chinese National Art, 2017(04): 68-73.
21. Xue Jiao. Research on beef consumption behavior of residents in Jilin Province[D]. Jilin Agricultural University, 2016.
22. Yuan Dongmei. On improving rural financial services to prevent the price of agricultural products from rising too fast[J]. Journal of Shanxi Radio and Television University, 2008(06): 26-28.
23. Yang Ruihong. Research on the current meat consumption status and influencing factors of urban residents in Jilin Province [D]. Jilin Agricultural University, 2018.
24. Zhang Jujian. Pork consumption demand and influencing factors in Hebei Province[D]. Hebei Agricultural University, 2015.
25. Zhang Yiyi, He Xiaojing. Survey on beef consumption of urban and rural residents in Hebei Province[J]. Cooperative Economy and Technology, 2020(03): 90-91.

26. Zhao Xuefeng. The price of beef in Hebei Province may still go down slightly in the future, and mutton may be relatively stable[J]. Northern Animal Husbandry, 2017(11): 9.
27. Zhu Ning, Gao Kun, Ma Ji. An Empirical Analysis of Influencing Factors of Egg Consumption of Urban Residents in Beijing[J]. Chinese Food and Nutrition, 2012, 18(01): 45-48.