

# *Supply Chain Framework of Vertical Cooperation of Qinghai Tibet Yak Industry*

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**Keywords:** Yak Industry, Supply Chain Framework Analysis, Vertical Cooperation Mode, Animal Husbandry in Qinghai Tibet Plateau

**Abstract:** Yak is an indispensable means of production for the Tibetan people and plays an important role in the national economy of the Qinghai Tibet Plateau. From the perspective of supply chain, this study takes yak industry as the main research object, points out the challenges faced by yak supply chain in China by studying the status of each link and the different types of supply chain operation, and puts forward the plans for improving development and management, fundamentally improving the quality of yak supply chain, and promoting the construction of yak supply chain in China make countermeasures. After 2010, the number of Yaks in the Qinghai Tibet Plateau rose steadily from 3.516 million in 2010 to 6.2498 million in 2018, with an average annual growth rate of 5%, twice the national average. Similarly, the yak meat production in the Qinghai Tibet Plateau has grown rapidly, from 119000 tons in 2002 to 211700 tons in 2018, with a growth rate of 178%, far ahead of the national average of 194800 tons (2018). From a macro perspective, the development of yak beef industry in China has an important impact on the macro-economic goals such as economic promotion, adjustment of agricultural supply and demand, financial subsidies and taxes. In view of the importance of yak beef to the national economy and people's life, it is a very meaningful topic to study yak beef industry in depth.

## **1. Introduction**

Yak is a special species distributed in the Qinghai Tibet Plateau and the alpine areas nearby. China has about 14 million heads, accounting for more than 95% of the world. Yak is an indispensable means of production for the Tibetan people and plays an important role in the national economy of the Qinghai Tibet Plateau. Due to the low production level of yak industry, the history, environment and lifestyle make it difficult to use resources. However, yak production is

mainly natural grazing, which is a real green product with unique biological value and broad development and utilization prospects.

Yak is a kind of cattle that can adapt to alpine climate and continue to this day. It is a rare animal resource, mainly growing in the alpine plateau area with an altitude of 3000-6000 meters. Due to the special growth environment of yaks, yak products are recognized as one of the "green" livestock products with the least pollution. However, yak industry has never been able to develop and grow. The Qinghai Tibet Plateau, which is dominated by yaks, is still relatively poor and backward. Therefore, it is very urgent and important to study various factors that restrict the development of yak industry, explore the industrialization path to accelerate the development and promote the healthy development of the whole economy of the Qinghai Tibet Plateau.

Van conducted 10 semi-structured interviews to study the structure of the supply chain. Representatives of all parties in the supply chain were asked about their views on supply chain collaboration, trust and the role of local communities. The purpose of his interviews is to obtain the so-called "hidden" information, that is, the truth of nonverbal encoding in social networks. Without generalizing, it provides benchmarks to monitor how different areas affect chain cooperation: community values, network participation and corporate capacity, and outlines the socio-economic factors that hinder and strengthen chain cooperation at the corporate and community levels. In the close network, the close relationship between family and enterprise, the high degree of social control, the autonomy of entrepreneurs and the loyalty as a community norm hinder the cooperation in the supply chain. This method analyzes the management mode of supply chain, but lacks effective data support [1]. ASEM conducted a survey of cattle breeders in order to study the beef supply chain, and obtained information about the size and characteristics of cattle herds, grazing management, feed and feed sources, and marketing. According to the results of ranch survey, 44% of beef cattle operate from 5 to 10000, and most of the cows (79%) are raised in the operations that have completed at least part of the cattle, while most of these operations are cattle that are fed without concentrated feed. Cattle are kept on natural pastures of 16 to 52610 hectares per pasture, with a stocking rate of 2.4 HA / head for calves, including 2.0 HA / head for older growing animals. More ranchers often sell beef cattle through wholesalers or distributors (34%) rather than directly to consumers (24%), retailers (20%) or other channels (17%). This method collects relevant data, but lacks the analysis of supply chain on the whole level [2].

Taking yak beef industry as the main research object, this paper studies the current situation of yak beef supply chain and supply chain operation, points out the existing problems, and finally puts forward corresponding measures and suggestions to improve the development and level of yak beef industry. Management will fundamentally improve the quality of yak beef supply chain, improve the quality of yak meat, stabilize domestic trade, improve international competitiveness, and move towards a more stable, healthy and modern direction. The innovation of this paper is to look at yak beef and other special products from the perspective of supply chain. Based on the case study of industrial economy and management, yak beef supply chain itself and supply chain, this study systematically studies the operation of yak beef supply chain in China, classifies yak beef supply chain into different types, and provides development measures in line with these characteristics.

## **2. Current Situation and Vertical Cooperation Mode of Yak Industry in Qinghai Tibet Plateau**

### **2.1. Advantages of Yak Industry**

#### **(1) Characteristic Advantages**

Yak is a unique species adapted to the harsh environment of the plateau. It is called "the boat of

the plateau", which provides a unique yak product with low cost, low pollution and high quality for human beings [3]. Yaks have high protein content (58.7% higher than bulls), low fat content (69.8% lower than cattle), low calorie content (19.7% lower than cattle), and more amino acids content (2 kinds more than bulls). Due to its biological characteristics, it is possible to process a variety of unique products [4]. Yak fat rate is high (6.73% - 7.2%), high-quality milk powder, yak cashmere fiber is excellent, good heat preservation performance, can develop a series of hair, bone and blood related products. Yak products are real green food with good market prospects [5].

#### (2) Production Advantages

Yaks basically rely on natural grazing, and the feed cost is very low [6]. If the conversion rate of feed can be improved, the cost of feed will be reduced, the labor input for production is very small, and the labor cost is also very low [7]. Production cost advantage ensures that yak products have obvious competitive advantage in the international market [8].

#### (3) Policy Advantages

With the development of the western region and the construction of a well-off society, the state has implemented a priority development policy for the western region. The priority investment environment is very conducive to attracting technology and capital at home and abroad. After entering the rapid development period, the western economy will be greatly improved, and the external environment for the development of yak industry will also be improved [9].

## 2.2. Composition of Core Competitiveness of Yak Industry in Qinghai Tibet Plateau

When the expansion of core competitiveness extends from enterprises to local industries, its connotation should be transformed from a kind of unique technology and technology that can bring special benefits to customers, and the optimization and integration of core resources and core competitiveness with competitive advantage [10]. Therefore, the core competitiveness of the industry is the local industrial policy, which guarantees the development supported by production capacity, industrial development capacity and resources [11].

#### (1) Core Competitiveness of Industrial Elements

The core competitiveness of factors is the unique composition of the core competitiveness of Qinghai Tibet Plateau industry and yak industry [12]. The core competitiveness of yak industry elements in the Qinghai Tibet Plateau, that is, the unique competitive advantage of the Qinghai Tibet Plateau in terms of resource elements, is reflected in the benefits of industrial natural resources, location characteristics and factor costs. The essential resources of yak industry in Qinghai Tibet Plateau are stable and non-renewable, which are mainly reflected in the advantages of natural resources, the advantages of essential cost and the characteristics of location. Among them, the advantage of natural resources is that Qinghai Tibet Plateau is one of the most comprehensive areas for yak production. The cost advantage is that Yaks in Qinghai Tibet Plateau mainly adopt natural stocking mode, which has obvious advantages due to the low local per capita wage. At the same time, the Tibetan Plateau Yak style has a long history, with profound economic, cultural, religious background and distinctive regional characteristics.

#### (2) Core Competence

The ability core competitiveness is the micro foundation and focus of the yak industry core competitiveness in the Qinghai Tibet Plateau, which is the most promising and abundant component. The main body of the construction of core competence is the enterprises and individuals engaged in yak industry in the Qinghai Tibet Plateau, which includes product competitiveness, sales competitiveness and culture. The yak industry in the Qinghai Tibet Plateau has unique advantages in product competitiveness, such as no pollution, unique quality and flavor, rich nutrition, delicious meat, which is a typical high-quality food, and the price of beef in China is 80% lower than that in

the international market with obvious price advantage. Although yak products have product advantages, due to the low degree of commercialization, the sales competitiveness of yak products in the Qinghai Tibet Plateau is very poor, and the modern marketing ability in sales concept, market positioning, marketing network, promotion means is extremely lacking, let alone the cultivation of high-level cultural ability.

### (3) System and Policy Core Competitiveness

The formation process of industrial core competitiveness is the process that the government effectively integrates the core competitiveness of all enterprises in the industry. The main tools of integration are industrial system and industrial policy. The formation of industrial core competitiveness is inseparable from the formation of industrial system and industrial policy competitiveness. In recent years, Chinese governments at all levels have accelerated the establishment of systems and policies related to animal husbandry, forming a formal and informal institutional environment conducive to the development of yak industry, including political, economic, legal, moral, cultural, custom and other aspects. The local government also actively formulated a variety of specific policies to help the sustainable development of yak industry, promote the diversification of industrial investment system, enhance the core position of yak industry, and form the market competitiveness of agricultural products and agricultural products. However, in view of China's weak position in yak industry, there is still a long way to go to establish core competitive advantage in terms of system and policy.

## 2.3. Vertical Cooperation Relationship of Yak Industry Chain

If measures are taken at every stage of the industrial chain to improve the overall profitability of the industrial chain, the coordination of the industrial chain will be improved. Industrial chain coordination should take into account the influence of each stage of industrial chain on its behavior in different stages. But in fact, on the one hand, because different stages of the industrial chain belong to different owners, each step pursues the maximization of its own profits, thus damaging the overall profits of the industrial chain. On the other hand, because the information is distorted in the process of transmission, it is exaggerated between different steps in the upstream of the industrial chain. Therefore, the fundamental challenge facing the current industrial chain is how to organize cooperation in all aspects of the industrial chain to achieve the coordination of the industrial chain.

### (1) The Basic Model and Related Theory of Vertical Cooperation

Vertical collaboration refers to the contact method adopted in the vertical value-added system of the industry to realize the coordinated operation of continuous steps, including vertical integration and adjustment method of all vertical links from production to marketing. Therefore, vertical collaboration can be seen as a continuous relationship. The two extremes of this continuum are vertical integration with market transactions and other things, including strategic alliances, contractual relationships and joint ventures. The various forms in the middle are mixed governance models, which are collectively called contract models.

Vertical integration in market transactions, that is, from left to right. The power of one party to control the other gradually increases. The control factors are price, quantity, time, quality and exchange conditions.

Market transaction is a kind of spot transaction. Market price adjustment resources are transferred between different product links. This is the most loose form of cooperation in the industrial chain and the most uncontrolled. Vertical integration is a completely non market arrangement. In different stages of the production, processing and sales chain, the flow of products is the result of the company's internal management criteria, not the market pricing criteria. This is a

form of cooperation with the highest level of control. Merge some or all related parties under the control of the company's ownership through other links related to the company. The control power of different models lies between market form and vertical integration, but the control power of different models is different. For example, contracts can be divided into sales contracts and production contracts. Generally, sales contracts only stipulate the quality, quantity, trading time, price and place of products. The production contract not only stipulates the price and other conditions, but also provides inputs such as means of production. Of course, there are great differences in the level of control and risk sharing between the two types of contracts.

## (2) Vertical Cooperation Theory

The choice of the default model of vertical collaboration is affected by many factors, and transaction cost is an important reason for vertical collaboration. This problem can be expressed as explaining the existence and boundary of an enterprise, that is, the so-called manufacturing or purchasing decision. There are market operation or transaction costs. If the cost of obtaining production factors in market transactions is very high, it is meaningful to allocate resources through integration and education. The cost of resource allocation management including instructions increases with the expansion of production scale. To decide the scale or boundary of an enterprise is to replace administrative cost and market transaction cost. Therefore, to a large extent, the market and enterprises can consider two forms of competition, which is determined by the relative size of transaction cost and management cost. The basic logic is the equilibrium state, which extends until the cost of allocating additional transactions within a company is equal to the cost of using an open market exchange for transactions, or the cost of establishing another company. In other words, a company's decision to produce or buy depends on a comparison between transaction costs and management costs.

Transaction cost is a source of vertical cooperation. Without transaction costs, economic activity within the vertical value-added system is irrelevant. The transaction is no longer limited to the transfer of ownership. Many activities within or between organizations can be included in transaction analysis. In this way, transaction cost is divided into market direct transaction cost and enterprise internal transaction cost (enterprise organization adjustment cost). This makes the transaction cost more specific and analytical.

There are three basic dimensions to determine the transaction difference: the frequency of repeated transactions, the uncertainty that affects transactions, and the type and degree of assets. Among them, asset specificity is the most important characteristic of transaction cost economics which is different from other theories describing economic cooperation. Asset specificity refers to assets that can be reallocated for other purposes without sacrificing production value. If an asset is transferred from one purpose to another without loss or loss, the singularity of the asset is low and vice versa. The particularity of assets is different, and the transaction type is also different. For transactions with weak asset specificity, the market is the main form. Merger is the most effective form of transaction with strong asset specificity. There are two levels of asset specificity, where transactions between investors are regulated by a mix of bilateral, multilateral and market to business models.

Uncertainty is a common phenomenon in the real economy, which generally refers to the uncertainty of trading environment and traders' behavior. The uncertainty of trading environment is actually rational. This is because all parties cannot fully understand the complexity of the objective environment. In other words, the rationality of the parties is limited. The response to behavioral uncertainty and opportunism refers to the parties deliberately cover up and distort information, resulting in uncertainty. Generally speaking, the complexity of trading environment is greatly affected by the degree of uncertainty. Low asset specificity does not affect the choice of market trading methods, because even if there is uncertainty, it is easy to find new trading partners. If the

asset specificity is high and uncertain, and the market trading method is no longer applicable, you need to use other methods to organize transactions to reduce the very expensive transactions under market conditions.

Transaction frequency is the number of transactions in a specific period of time, which is a relative dimension. All regulatory structures are expensive to set up and operate. These costs can be compensated by benefits provided by multiple people, depending on the frequency of transactions occurring in this regulatory structure. Frequent transactions or multiple transactions are easier to compensate for regulatory structure costs than one-off transactions. The choice of the most appropriate regulatory structure is influenced by the frequency of transactions.

If the transaction cost is low, the appropriate form of supervision is the market. If the transaction cost is high, the supervision is carried out through integration. When the transaction characteristics discussed evolved from transaction cost to asset specificity, the regulatory model also changed from two to three, from low-level asset specificity to high-level asset specificity. This is applicable to the market, hybrid mode and integrated supervision mode respectively. This table also compares the trading relationship and trading mechanism of these three types of regulations.

Transaction cost theory provides an important perspective for vertical cooperation. The most effective transaction cost method should be adopted in the production processing sales chain collaboration. Transaction costs can be divided into three categories: 1) Information costs incurred before transaction start include cost of price search, cost of product comparison and cost of determining appropriate trading partners. 2) Negotiation and negotiation fees, including payment fees, negotiation fees of transaction terms and conditions, preparation of formal agreement and execution of transaction. 3) Supervision cost refers to the cost of ensuring the realization of transaction conditions, such as the quality standard cost that the third party supervision of the transaction must pay. Transaction costs are difficult to measure because they are not independent of other administrative costs. However, many scholars believe that it is difficult to measure transaction cost when choosing vertical cooperation method, but the importance of measuring transaction cost is possible and effective. Of course, in most cases, it is simpler and more effective to use three-dimensional transactions to determine transaction costs.

The theory of industrial organization takes a single industry as the research object, analyzes the market of a specific industry and why enterprises are organized in the existing form. Because the traditional SCP analysis paradigm contains the key content of industrial organization research in a simple framework, the impact of these organizational forms and structures on market operation and performance is still the main logical structure of industrial organization economic system. Market structure affects the choice of vertical cooperation. If there is no difference in products and the market concentration is low, then the market is the main cooperation mechanism. We can see a highly vertical form of cooperation and a highly controlled market focus.

### **3. Data Sources and Descriptive Statistics of Variables**

#### **3.1. Data Source**

The data comes from a survey of yak meat retailers (households) on the Qinghai Tibet Plateau. In this survey, 900 questionnaires were sent out, 732 of which were valid. The effective recovery rate was 81.33%. Supermarket samples accounted for 24.2% of the total samples. 43.0% of the farmers' market and 32.8% of the exclusive shops.

(1) Supermarket retailers. More than 50% of the samples have been operated for at least 3 years, with an area of more than 2000 m<sup>2</sup>. More than 69% of the samples have average annual sales revenue of yak meat and products accounting for less than 20% of the total revenue, which can also

be confirmed from the main types of products sold by the enterprise, and more than 70% of the samples with more than 300 types of sales. At the same time, the maximum storage capacity of these supermarket retailers is more than 5T. If you choose a supplier's cooperation mode, you are more willing to complete it by signing a sales contract.

(2) Farmer's market retailer. More than 50% of the samples have been operated for less than 5 years, and the operating area is concentrated in 50-100 m<sup>2</sup>. More than 95% of the samples have average annual sales revenue of yak meat and products accounting for more than 50% of the total revenue, which can also be confirmed from the main sales types of enterprises. The samples with sales types of less than 5 generally account for more than 64.4%. At the same time, the largest storage capacity of the cold storage owned by the retailers in the farmer's market is very small, below 0.5T. The choice of cooperation mode for suppliers is more likely to be completed through wholesale market sales.

(3) Specialty store retailers. More than 50% of the sample business years are concentrated in 1-5 years, and the business area is concentrated in 50-100 m<sup>2</sup>. Almost 100% of the samples have annual sales revenue of yak meat and products accounting for more than 50% of the total revenue. This can also be confirmed by the main types of goods sold by the enterprise. The samples with sales types less than 5 are generally 100%. At the same time, the maximum storage capacity of the refrigerator owned by the retailer of the exclusive store is 0.5 ~ 1.0T. The choice of cooperation mode for suppliers is more willing to be completed by signing agency or direct sales contract.

### 3.2. Descriptive Statistics of Variables

The characteristics of retailer's operation mainly refer to the scale of retailer's operation, the degree of specialization, the number and structure of employees, the sales revenue, etc. Specific variables include the proportion of annual sales revenue of yak meat and products in total revenue, whether it has its own store brand, and the maximum storage capacity of refrigerators. Retailers' different attitudes to risk may affect the choice of enterprises. The attitude scale is used to quantify the risk attitude of enterprises. The specific variables include the monthly average change range of sales price, the instability of supply channels, and the instability of sales price. Asset specific investment attitude variable in transaction cost mainly refers to asset specific investment. The international vertical collaboration in the field of agriculture is also widely concerned by scholars. Transaction cost is an important theoretical basis for analyzing the vertical collaboration in the supply chain of agricultural products. In view of the availability of data, this variable is mainly measured from two aspects: the need for funds to continue to expand the business area and the need to continue to invest in a large number of cold storage facilities. Supplier evaluation variables are mainly the quality of goods and the most important basis for selecting suppliers. The evaluation of supplier trust and satisfaction includes the evaluation of supplier satisfaction and the evaluation of the whole yak meat supply chain cooperation. All of these factors may have positive or negative effects on retailers' choice behavior of vertical cooperative relationship.

## 4. Data Analysis of Yak Industry Supply Chain in Qinghai Tibet Plateau

### 4.1. Distribution of Yak Production in China

The output value and proportion of animal husbandry in four provinces and cities of China in 2018 are shown in Figure 1.

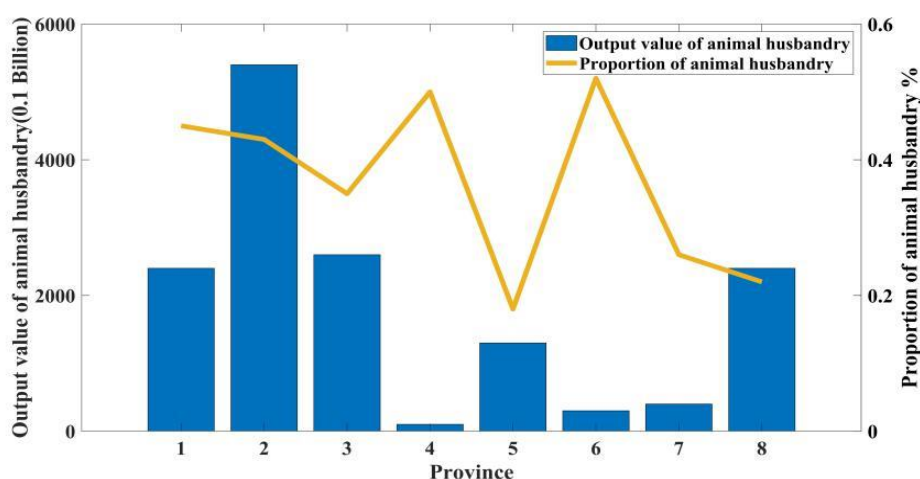


Figure 1. Output value and proportion of animal husbandry in four provinces and cities of China in 2018

As a big country of farming and animal husbandry, China has formed its own unique yak breeding area, and plays an unshakable role. It can be seen from Figure 1 that the output value of animal husbandry in Sichuan, Inner Mongolia, Yunnan and Xinjiang is significantly larger than that of other provinces and cities, and the proportion in the total agricultural output value of each province is also higher. In 2018, the output value of animal husbandry in Sichuan Province reached 226986 million yuan, ranking first in China. The output value of animal husbandry in Tibet and Qinghai is far less than that in other six provinces, but the proportion of animal husbandry in the total output value of agriculture and agriculture in these two provinces is relatively high, reaching 49.88% and 51.95% respectively.

The distribution of yak meat production in four provinces and cities of China from 2009 to 2018 is shown in Figure 2.

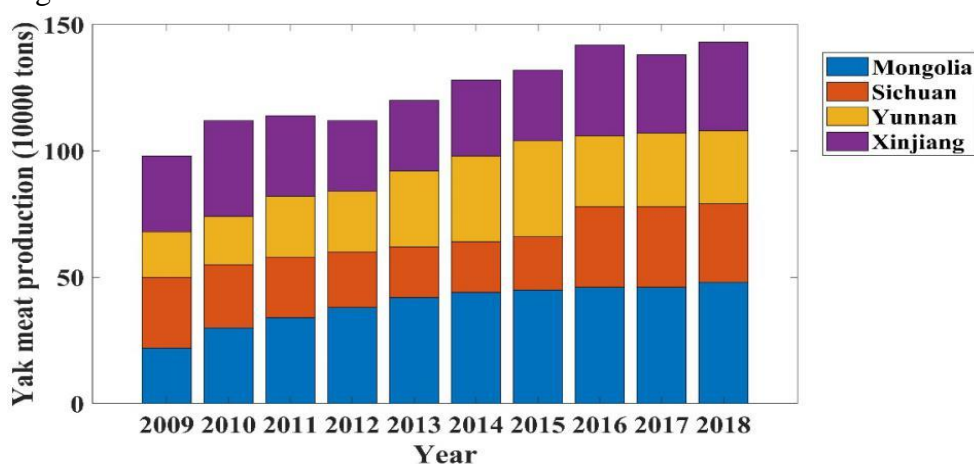


Figure 2. Distribution of yak meat production in four provinces and cities of China from 2009 to 2018

It can be seen from Figure 2 that the beef production of the four provinces is on the rise, and the beef production of Inner Mongolia accounts for the most in the four provinces over the years. Among them, the beef production of the four provinces reached 292800 tons, 511700 tons, 318600 tons and 3616000 tons respectively in 2018.

#### 4.2. The Development Status of Yak Industry in Qinghai Tibet Plateau in China

The comparison of the proportion of animal husbandry in the total output value of agriculture, forestry, animal husbandry and fishery between the Qinghai Tibet Plateau and the whole country is shown in Figure 3.

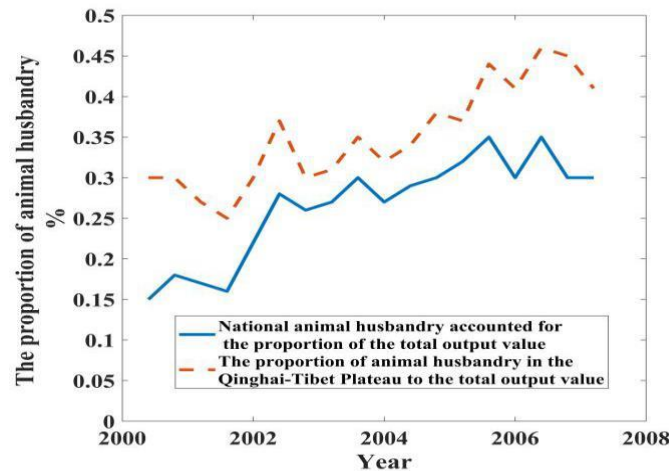


Figure 3. Comparison of the proportion of animal husbandry in the total output value of agriculture, forestry, animal husbandry and fishery between the Tibetan Plateau and the whole country

It can be seen from Figure 3 that animal husbandry is the pillar industry of the Qinghai Tibet Plateau. With the strong support of the government, the proportion of animal husbandry in the total proportion of agriculture, forestry, animal husbandry and fishery in the Qinghai Tibet Plateau has increased steadily in recent years. In 2018, it has exceeded 50%, higher than the national level of 30%. The total output value of animal husbandry in Qinghai Tibet Plateau is much higher than the national average. It can be seen that the animal husbandry in the Qinghai Tibet Plateau is more developed than that in most provinces, which contributes a lot to the development of the plateau and is the dominant industry of the plateau.

The comparison results of yak meat production between Qinghai Tibet Plateau and the whole country are shown in Figure 4.

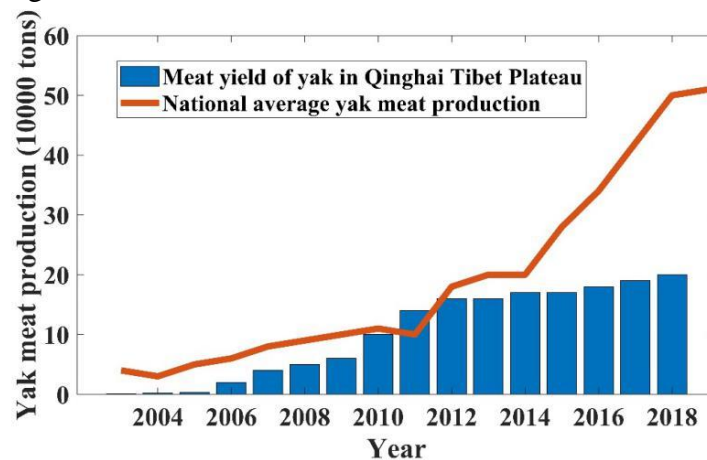


Figure 4. Comparison of yak meat production between Qinghai Tibet Plateau and China

From Figure 4, it can be seen that after 2010, the number of Yaks in the Qinghai Tibet Plateau

rose steadily from 3.516 million in 2010 to 6.2498 million in 2018, with an average annual growth rate of 5%, twice the national average. Similarly, the yak meat production in the Qinghai Tibet Plateau has grown rapidly, from 119000 tons in 2002 to 211700 tons in 2018, with a growth rate of 178%, far ahead of the national average of 194800 tons (2018).

The scale composition of yak farmers (households) in Qinghai Tibet Plateau is shown in Table 1 and Table 2.

*Table 1. Scale composition of yak raising households ( households )*

Years	1-2	3-4	5-9	10-19	20-29	30-49	50-99	100-199	Over 200	Over 500
2008	28300	23100	25700	16300	69300	5920	4930	2810	2930	/
2013	19300	17400	28300	15600	5390	4980	4630	2730	2180	/
2018	27900	/	18200	14200	19300	/	4280	2830	2630	790

*Table 2. Scale composition of yak raising households( 10000 )*

Years	1-2	3-4	5-9	10-19	20-29	30-49	50-99	100-199	Over 200	Over 500
2008	4.1	7.72	17.83	22.43	14.83	19.82	29.83	38.02	12.73	/
2013	2.8	5.72	15.62	21.73	13.23	18.92	29.72	35.82	12.58	/
2018	7.4	/	12.67	17.83	33.82	/	30.74	35.78	14.83	96.82

Generally speaking, there are many small and medium-sized farmers in Yak production in the Qinghai Tibet Plateau, but the feeding amount is concentrated in large-scale enterprises and cooperative organizations. Table 1 and Table 2 show that there are 65000 households under 50, accounting for 87% of the total number of households, but only 25% of the total number of households; while only 9800 households above 50, accounting for 13% of the total number of households, accounting for 75% of the total number of households. At the same time, it can be seen that in 2018, almost all the 3-4 breeding households withdrew from the beef cattle production field, while 30-50 breeding households began to expand the scale of breeding, and the number of breeding enterprises with more than 500 heads increased rapidly, reaching 760, which indicates that the yak breeding in the Qinghai Tibet Plateau is gradually moving towards large-scale and specialized operation.

## 5. Conclusion

The Qinghai Tibet Plateau, dominated by yaks, is still relatively poor and backward. Therefore, it is very urgent and important to study various factors that restrict the development of yak industry, explore the industrialization path to accelerate the development and promote the healthy development of the whole economy of the Qinghai Tibet Plateau. There are three basic types of yak beef supply chain in China: Traditional type, new type and mixed type. The traditional yak beef supply chain is dominated by market transactions, while the new and mixed supply chain leads to other forms of vertical cooperation, which has greater control over market transactions. The new supply chain has played a role to a certain extent through the integration mode of "enterprise + farmer" and "enterprise + base + farmer", and solved the contradiction between decentralization and centralization of yak production stage. This paper collected the data of yak industry supply chain in Qinghai Tibet Plateau, understood the current situation and existing problems of yak industry, and put forward solutions to promote the development of yak industry in Qinghai Tibet Plateau.

According to the diversity of yak beef supply chain in China, this study puts forward different development strategies. For the traditional supply chain, on the basis of defining the responsibilities of each department, dividing the control content, control theme and control theme of each link,

establish the quality safety system and Industry Association of farmers. For the new supply chain, the main development direction is to strengthen the contact mechanism with farmers, promote standardized production, establish yak beef quality and safety tracking system and certification system, strengthen technical innovation, and establish brand awareness. Mixed supply chain is the integration of production stage and new tradition in slaughtering process. This allows you to refer to the traditional supply chain and the new supply chain development strategy. However, the general trend is that the tradition and mixture continue to develop to a new type and gradually evolve into yak beef industry.

Through this study, we found that all links of yak beef supply chain in China have the following characteristics: the feeding link is still free range. In 2018, China's free range yak households accounted for 66% of the total number of yak households and yak households. At the same time, the amount of yak raising accounts for 75% of the whole country. In the short term, the amount of yak consumption in China will not change. In the slaughtering and processing stage, the urban slaughtering and processing industry continues to standardize, but still needs to be integrated. There are still a lot of self-slaughtering and illegal slaughtering in rural areas. The consumption of yak beef in China is mainly hot fresh meat at the stage of sales and consumption. Due to the change of consumption concept, cold and fresh meat began to increase, accounting for less than 20% of meat consumption. 80% of meat consumption is completed in the farmers' market, and new forms such as supermarkets and specialty stores are more and more popular.

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### Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

### Conflict of Interest

The author states that this article has no conflict of interest.

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