

# Risk Management and Supplier Selection in International Procurement -- Taking International Engineering as an Example

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**Abstract:** With the development of economic globalization, international procurement has become an important part of the operation of multinational enterprises. It can highlight its unique advantages in the process of enterprise operation, greatly control the production cost and optimize the allocation of resources, so as to improve the market position and enhance the overall strength. However, due to some restrictions and obstacles, there will be many and various risks in the process of international procurement. Therefore, if purchasing enterprises want to make great progress, it is extremely important to reasonably and correctly select high-quality suppliers. In the procurement of international projects, enterprises are equipped with targeted procurement risk countermeasures, such as accurate selection of suppliers to deal with some possible risks, so that enterprises can move forward steadily in the new era.

**Keywords:** International procurement, Risk management, Supplier selection, International Engineering

## 1. Overview of International Procurement

### 1.1. Meaning and Characteristics of International Procurement

International procurement refers to the process of purchasing products, goods or services in one or several market areas across borders. The key lies in determining product specifications and rules and obtaining market access rights, setting the agreement standard so that the goods can be purchased at an appropriate price and ideal redistribution can be carried out in the logistics link, achieving the best optimal configuration in terms of actual receiving quality, purchase price, delivery date and conditions, after-sales service, etc, controlling the cost and maximizing the profit.

There are four main steps in international procurement: clarifying procurement objectives, selecting appropriate suppliers, implementing procurement transactions and evaluating procurement performance.

Compared with domestic procurement, international procurement has several special characteristics: first, due to the long distance between the procurement location and the local market, it is difficult to accurately select the appropriate supplier, and the logistics process is complicated; Second, the international procurement process is complex and needs relevant knowledge of international trade to be solved, such as preparation before procurement, negotiation, signing and performance of sales contracts and settlement of procurement disputes; Third, international procurement is risky. Due to the long journey, there will be many location risks in the transportation process, and the change of international exchange rate will affect the procurement cost and lead to settlement risk.

### 1.2. The Inevitable Trend of International Procurement

Procurement is not only the source of an enterprise's supply chain, but also the starting point of production and operation. For some manufacturing enterprises, the purchase cost accounts for more than half of the total cost. Increasing procurement costs can directly and effectively maximize the profits of enterprises. Therefore, at present, the main strategy of many enterprises is international procurement.

The impact of domestic economic conditions and the higher labor and logistics costs in production

and manufacturing, coupled with the fierce competition among enterprises around the world, domestic enterprises must carry out international procurement even if they understand that there are certain risks in international procurement. International procurement has gradually become an inevitable trend. Enterprises tend to purchase in countries with low labor and transportation costs and less market regulation, so as to gain competitiveness and maintain their position.

## **2. Chapter II Risk Management in International Procurement and Selection and Evaluation of Suppliers**

### **2.1. Risk Management in International Procurement**

Because there are many potential risks and uncertain factors in the process of international procurement, it is of great significance to understand the risks that may be encountered in international procurement and manage them effectively.

There are four main factors affecting international procurement risk: advance of procurement period, fluctuation of raw material price and foreign exchange rate, environmental difference and enterprise reputation.

- Risk management of advance of procurement period

Today's market is a consumer demand-oriented buyer's market. Enterprises improve the response speed of the whole dolphin choir by shortening the procurement lead time, but this will increase the inventory and cost of enterprises. Therefore, most manufacturing enterprises adopt JIT system or flexible production system to produce according to the needs of customers, and use the central computer control system to realize timely production and shorten the production cycle.

- Risk management of fluctuation of raw material price and foreign exchange rate

First, build a price information platform, establish a price early warning mechanism, and timely grasp the price change information. Secondly, the futures market hedging method is used to avoid the possible risk of commodity price fluctuation in the future.

Based on the prediction of exchange rate changes, enterprises can use financial derivatives and natural hedging method to avoid exchange rate risk.

- Risk management of the differences in environment

Due to the differences in the market environment between the purchasing country and its own country, it is necessary to fully understand the political, economic, social and cultural, legal environment, market policy and procurement control of the supplier's country before procurement, and whether there are trade barriers, so as to avoid risks as much as possible.

- Risk management of enterprise reputation

First, use reputation survey to avoid risks and understand each other's reputation ability, so as to lay a good foundation for further cooperation. Second, avoid risks by formulating standardized and reasonable procurement contracts, and carefully consider and review the terms of procurement contracts.

### **2.2. Selection and Evaluation of Suppliers in International Procurement**

#### **2.2.1. Factors to be Considered in Supplier Selection**

The key problem of effective procurement should be to reasonably select efficient and responsible high-quality suppliers. Appropriate supplier selection will directly affect the whole supply chain. Therefore, a set of strict criteria must be formulated to select suppliers. There are the following factors to select suppliers:

- The competitiveness of products

The competitiveness of products is the most important, so that enterprises can be more efficient and assured in quality management in procurement. We need to pay attention to the quality, cost and service of products.

- The capacity of supplier's supply capacity and R &D innovation

Supply capacity refers to the supplier's delivery of products with guaranteed quality and quantity within the specified time. We should not only evaluate the supplier's on-time supply ability, but also understand whether the supplier can meet the enterprise's follow-up services, including after-sales and maintenance services. We should also understand whether the supplier's R & D and innovation ability is consistent with the enterprise's strategic development concept.

- Production flexibility and time flexibility of suppliers

In order to minimize inventory, order driven purchase according to the actual order status has become a normal in the industry. It should be considered whether the supplier has the ability to carry out flexible production and control the delivery time in the face of urgent delivery time and large flow purchase orders.

- Supplier's production environment, safety production execution ability and humanization degree of internal management

Purchasing enterprises should try their best to choose suppliers with high humanization and strong implementation of safety production, so as to create a good international reputation and undertake good social responsibility.

### **2.2.2. System and Method of Supplier Evaluation**

Suppliers cannot be selected solely by the price list of products and services provided by suppliers. The purchaser needs to make a comprehensive evaluation of suppliers and carry out hierarchical management of suppliers, including high-quality suppliers, potential suppliers and non selected suppliers. Conduct a preliminary evaluation on the supplier before purchasing, and then make a secondary judgment according to the supplier's performance in the purchasing process after completing the procurement, so as to have a comprehensive evaluation.

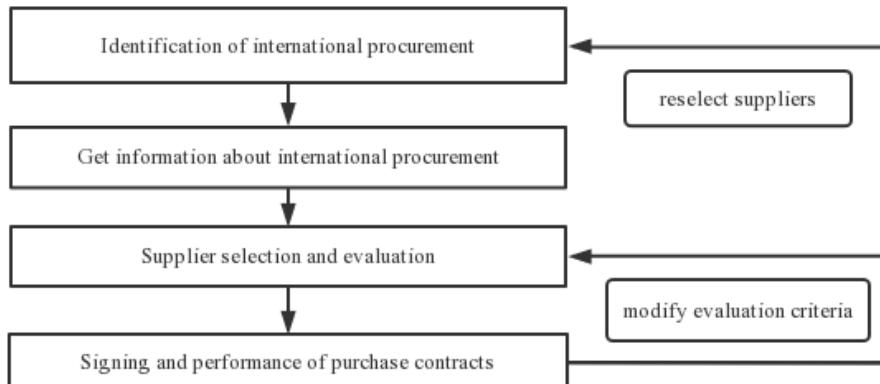
The evaluation of suppliers is mainly in terms of product competitiveness, supply capacity, R & D and innovation capacity, production flexibility and time flexibility, production environment, safety production execution and humanization.

Several common evaluation methods for suppliers include analytic hierarchy process, statistical analysis, cost analysis, classification and so on.

## **3. Chapter III Take International Engineering Procurement as an Example**

### **3.1. Connotation and Process of International Engineering Procurement**

International engineering procurement refers to the process in which engineering purchasers select and purchase engineering raw materials, engineering equipment, engineering machinery and other materials to meet the needs of overseas engineering projects.



*Figure 1: International engineering procurement process*

Generally, the procurement cost accounts for about 50-70% of the construction cost of the project, so the effective selection of suppliers must be carried out. Procurement management should be combined with project cost to a great extent, so as to deal with a variety of fierce competition and strictly prevent fraud or corruption, so that international projects can be completed and handed over on

time.

The specific process of international engineering procurement is shown in the figure:

### **3.2. Risk Management in International Engineering Procurement**

#### **3.2.1. External Procurement Risk Management**

During the procurement process, there will be adverse situations such as the supplier can not meet the real needs of the purchaser, the performance of the contract is not in place, and the country where the project is located protects its own industrial products to a great extent. Moreover, it may be restricted by the local country, such as requiring purchasing enterprises to purchase at the price set by the government. If the Purchaser fails to take into account the cultural differences and national attributes between countries and pay attention to its industrial management mode when purchasing, the procurement risk will occur.

In the new era, the price mechanism of suppliers should be well controlled, so that the quotation of procurement can have enough limited period. It is necessary to conduct in-depth research on the technology, equipment and materials required by the owner, have a comprehensive understanding of their needs, and bring accurate direction and convenience to the follow-up work. In addition, the inquiry link of suppliers should be accurately transmitted to highlight the accuracy of procurement, Avoid some possible risks.

#### **3.2.2. Internal Procurement Risk Management**

First of all, for the risk of enterprise reputation, we should carefully review its qualification before signing the contract, complete the reputation investigation, and standardize the procurement contract. In particular, we need to add protective content in combination with the actual situation, so that contract disputes can be avoided under risk management.

Secondly, enterprises should build a price platform, strengthen the introduction of technicians who are very familiar with international standards, improve the price early warning mechanism, and deal with the purchase risk of price through real-time monitoring.

Finally, when selecting suppliers, we should not only consider the ability of their management and technical personnel, but also make a targeted analysis on the legalization of the local political and economic grammar of suppliers. It is worth mentioning that international engineering procurement should take the project as the main line, regularly evaluate suppliers, integrate the evaluation results at different stages, and strengthen the risk prevention of international engineering procurement as a whole.

#### **3.2.3. Selection and Evaluation of Suppliers in International Engineering Procurement**

The procurement process of international engineering is systematic, the process is complex and the procurement cycle is long. It needs to be considered from multiple angles in order to complete the selection of international engineering suppliers.

Specifically, one is to determine the strategic objectives of the enterprise, so that the selection criteria of suppliers are consistent with the decision-making of the enterprise. Enterprises need to select suppliers with a certain economic scale and low cost according to product differentiation and cost control, and understand the innovation ability of suppliers.

The second is to determine potential suppliers, that is, to complete the preliminary screening of suppliers through the data collected by multi-party investigation. According to the procurement objectives of multinational enterprises, they are combined with the market and synchronized with the market demand, and then the procurement personnel preliminarily determine the list of suppliers that can cooperate under the comparison of production process and management system by means of field investigation.

Third, select the best supplier through the evaluation link.

Among them, analytic hierarchy process is suitable for evaluating procurement suppliers in complex international engineering projects. The evaluation link should cover the supplier qualification, environmental protection certificate, annual inspection certificate and other materials, especially the enterprise credit rating. It should also understand its financial status, analyze its financial reports in recent three years, and then investigate the structural proportion of managers and technicians to assess

its supply performance and evaluation in international projects. There are certain differences between ISO, JIS and other standards and GB standards used in China in the past. Therefore, selecting suppliers with professionals familiar with international standards is not only the key to the evaluation, but also an additional item in the evaluation link, which can show the purchasing ability of suppliers.

#### 4. Conclusion

With the economic behavior of enterprises all over the world becoming more and more frequent, enterprises began to want to reduce costs to optimize the allocation of resources all over the world. Procurement is very important in international business, which can expand the economic benefits that enterprises should obtain, and strictly control the product quality to meet the diversified needs of society and international environment. International procurement is not only a simple way to buy products and services, but also a way for enterprises to enhance the attractiveness of products.

While managing the risks in international procurement, we should pay attention to the reasonable selection of suppliers, so as to reduce costs, improve quality and enhance customer satisfaction. In this process, enterprises should be familiar with the factors and processes of reasonable selection of suppliers, as well as the system and methods of supplier evaluation.

In addition, in the procurement of international projects, enterprises should consider internal and external factors from multiple angles, determine the selection of suppliers, and formulate corresponding countermeasures in combination with the evaluation link. In practice, due to the complexity of international engineering, enterprises should do a good job in internal and external procurement risk management, adjust the follow-up management scheme in combination with the needs of international engineering, regard the procurement link as the key, select suppliers that meet the actual needs, effectively manage and avoid a variety of different risks in the complex market atmosphere, and highlight their competitive advantages.

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